

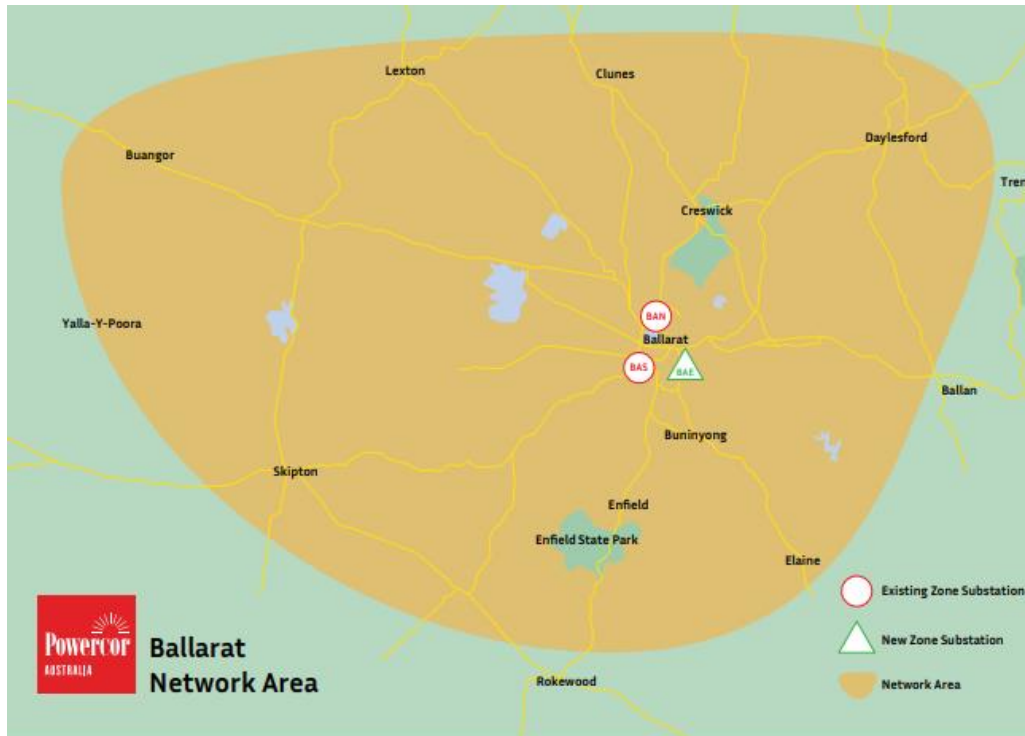
Ballarat East Zone Substation - update



*Artist impression only

7/8/24

This project is critical for the region



Map showing the site of the new Ballarat East zone substation, the existing substations and the broad area these sites will supply

- The Ballarat East Zone substation will provide reliability and safety benefits to about **82,000 homes and businesses** across the region.
- We will transfer **14,400 customers** from the existing substations, creating additional capacity to allow us to keep our bushfire safety devices operating effectively.
- **We must build this substation by the 2025-26 summer or risk turning off power to thousands of customers on high bushfire risk days.**

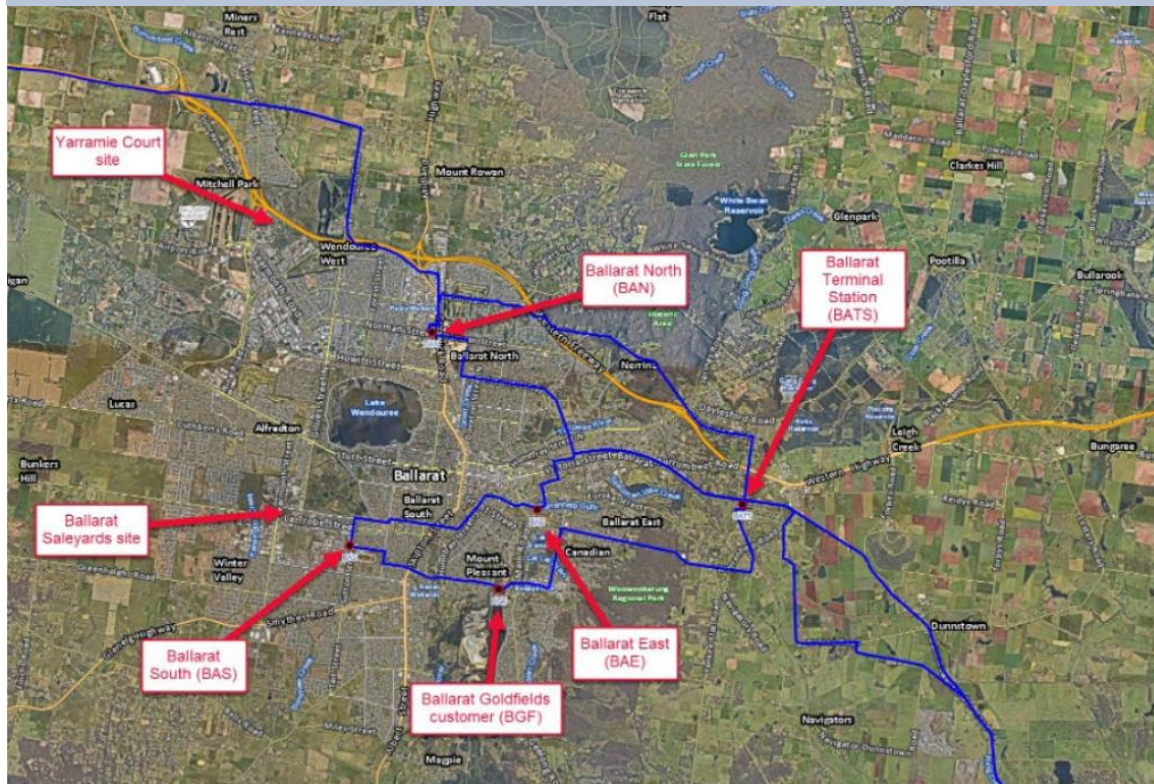
An extra 1,655 commercial premises and 12,754 residential premises have been connected to the electricity network within the Ballarat local government area since 2016. (As at 1 August, 2024)

We assessed many areas and sites

The two alternative sites proposed by City of Ballarat would cost an extra \$15.7m (Ballarat Saleyards) and \$21.7m (Yarramie Court), which would be passed through to customers.

Factors we looked at included:

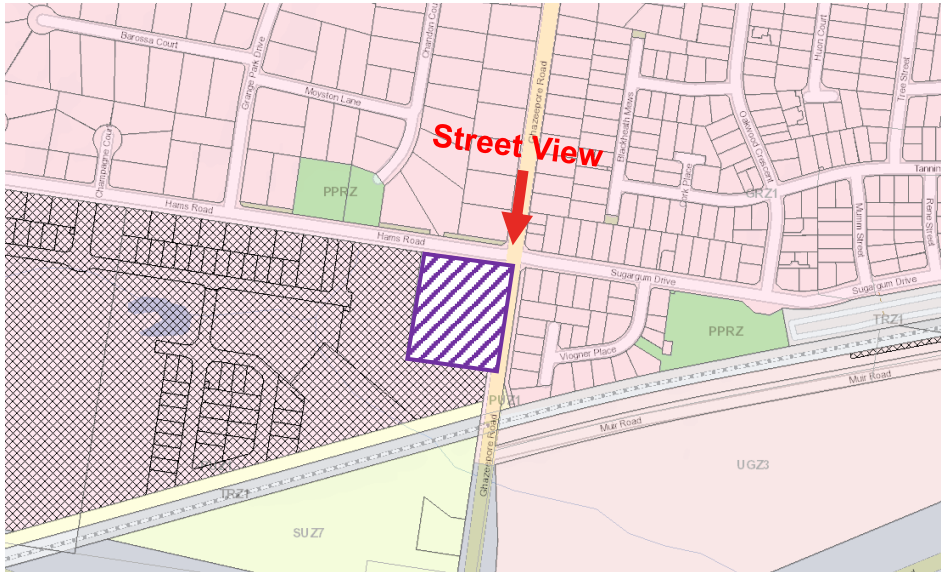
- Proximity to our existing network (66kV and 22kV powerlines)
- Capacity of the existing network (66kV and 22kV powerlines)
- Proximity to bulk customer demand
- Land availability, vacancy and zoning (both for existing and new sites)
- Spatial, architectural and environmental challenges to delivering the project



Zone substations are already located near residential properties

- Zone substations are typically located close to the populations they service.
- We have zone substations located close to residential properties in:
 - Geelong
 - Warrnambool
 - Bendigo
 - Werribee
 - Sunshine
 - Melton
 - Laverton
 - Waurin Ponds
 - Torquay
 - McKinnon
 - Kew
 - Patterson Lakes
 - Malvern East

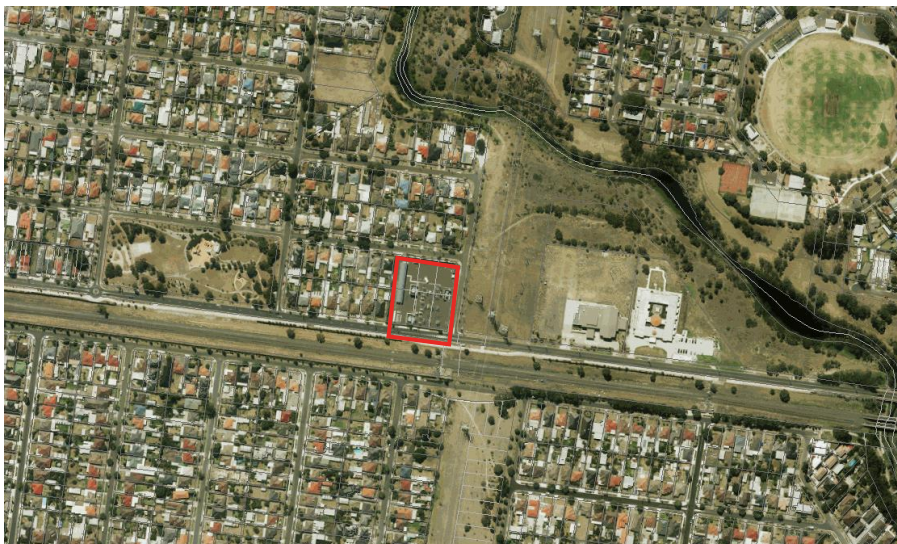
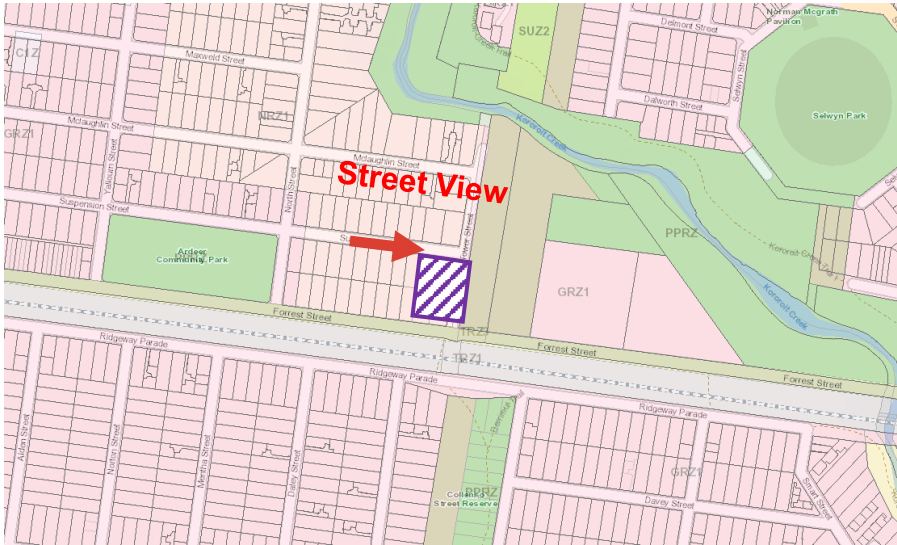
Waurn Ponds Zone Substation



- Located at this site since the 1960s.
- Residential areas located to site's northern and eastern sides, zoned as general residential (GRZ1).
- Block to the west is being rezoned to residential for new housing.



Sunshine zone substation



- Located at the site since the 1940s and rebuilt to increase capacity in 2014.
- The site has residential areas to the northern, southern and western sides, zoned either general residential (GRZ1) or neighbourhood residential (NRZ1).



We are speaking with the community

- Hosted four community drop-in sessions, with a range of specialists from network planning, health and safety, construction, property valuers and senior decision makers. Combined, these sessions ran for 10 hours and were attended by over 60 people.
- Held a webinar with independent EMF and water experts.
- Surveyed community members about the site's façade and sought ideas for the \$200k Community Legacy Fund.
- To date we have conducted over 12,000 engagements ranging from:
 - Direct letter drops, to up to 4000 residents at a time.
 - Sent and responded to over 200 emails.
 - Conducted over 30 face to face meetings.
 - Placed advertisements on local radio and newspapers.
 - Set up a dedicated webpage and engagement platform.



There's been strong take up of solar and direct payments

- Paid first instalment of direct neighbour payment to **17 of the 18 eligible residents**. Second and third payments to be made at start and end of construction.
- **44 residents** have signed up for the solar fund. We extended the package to the adjacent and adjoining neighbours, as well as those within 100 metre radius of the site.
- Working with Homes Victoria to roll out solar for public housing.
- Engaged specialist property valuation agency Urbis to help inform our **voluntary package**.

Benefit	Eligibility	Description
Direct Neighbours Payment	People who own property directly abutting or adjacent to the York Street site boundary.	One-off payment based on an independent assessment of the impact to property values.
Community Solar Fund	People who own a home that is materially within a 100-metre radius of the York Street site boundary.	Payment to support the installation of rooftop solar systems to help residents to reduce electricity costs.
Community Legacy Fund	Ballarat East community	Funding to support investment in areas such as parks, recreation or security within the community.

Health and safety central to our design

- Independent consultant, Magshield Products International, conducted a study to inform our design and planning.
- Predicted EMF levels around the site will be **well below the safe health exposure limits** recommended by the International Commission on Non-Ionizing Radiation Protection's (ICNIRP) guidelines.
- EMFs are also below the levels that might affect electronic devices, such as radios and TVs, used in homes, businesses and light industry.
- The site will be constructed using modern, new equipment, including transformers.
- Our inspection, maintenance and operations are governed by strict regulations that are overseen by Energy Safe Victoria.

The maximum average magnetic field level will not to exceed 4 milligauss (mG) along the closest western perimeter fence.

In comparison, everyday household items such as your computer, kettle, stove and hairdryer can emit EMF at higher levels.



Computer
2-20mG



Electric kettle
2-10mG

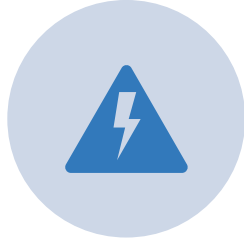


Electric stove
2-30mG



Hair dryer
10-70mG

We are addressing noise concerns



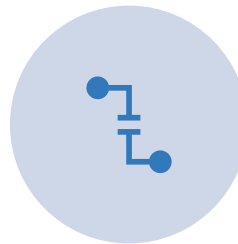
Selected transformers with low sound power levels.



Position transformers as far from the nearest homes as possible.



Enclosing transformers on three sides with solid masonry barriers with 100mm thick sound absorbing materials.



One transformer will be installed initially, with room for another two in future.

Noise from the zone substation will be below current baseline levels of ambient noise and will be within targeted noise limits under Environment Protection Authority (EPA) guidelines. (Watson Moss Growcott Acoustics report)

We're also addressing the flood risk

- Infrastructure on the site **will not increase flood risks** within this neighbourhood.
- Have engaged water experts to conduct independent technical assessments of our designs. They have:

Assessed what
currently occurs at
the site

The impact of a
new zone
substation

What flood
mitigation activities
need to occur.

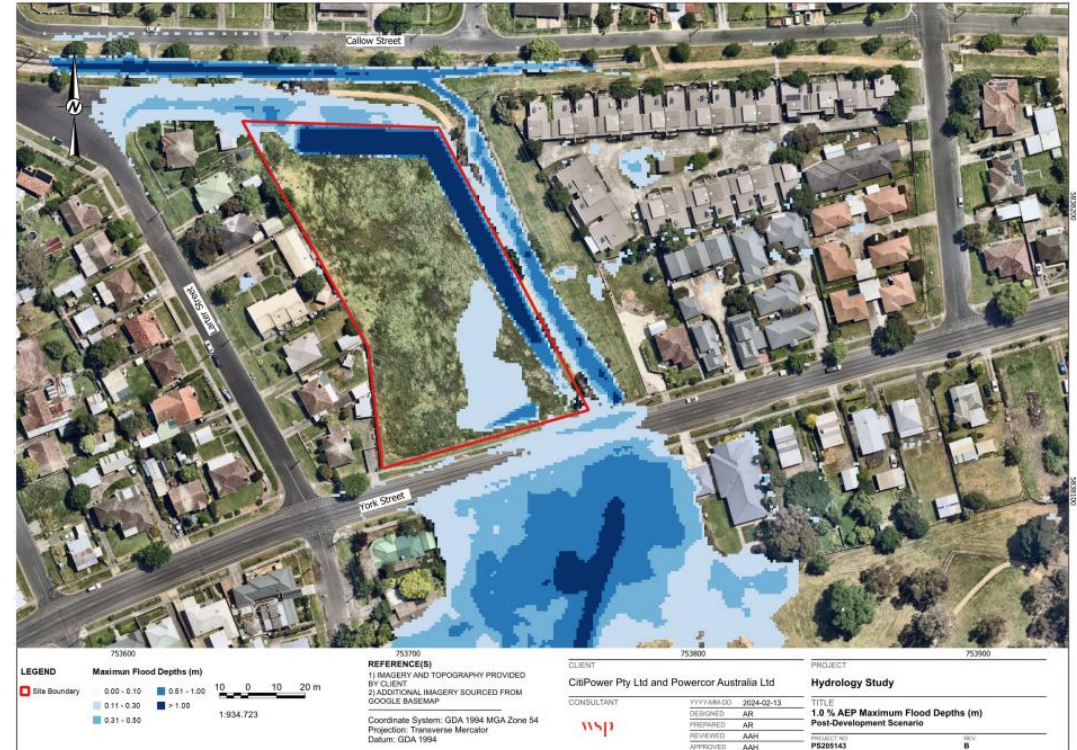
- Central Highlands Water and Corangamite Catchment Authority is currently reviewing our modelling.
- The substation is being designed to withstand major flooding events.

We're also addressing the flood risk

Current flood map



Post-construction flood map



Assessment conducted by independent technical advisor WSP

We are ahead of schedule

- To date, there has been more than 7,500 hours of planning and design work undertaken.
- We are finalising designs and the Cultural Heritage Management Plan process

What will happen during construction

- We will install a construction fence before work begins
- We expect the first 6-8 weeks to be the most visible, with large volumes of plant and truck movements (particularly on York Street).
- We will only conduct work that involves vehicles, plant and machines within the allocated working times prescribed by the EPA and council (7am – 8pm weekdays, 9am – 8pm weekends and public holidays).
- There will be major equipment deliveries on York Street (likely between May – August). This will be for a day at a time, not a prolonged period.

We will begin construction in Q4 this year.



Next steps



Two community information sessions to be held in September.



We will shortly announce shortlisted design options for community consultation.

We want to work with the council to shortlist ideas for the \$200,000 Community Legacy Fund.