

Gawler Rail Electrification Project

PROJECT BACKGROUND

The Australian and South Australian governments are jointly funding the electrification and modernisation of the Gawler rail line to deliver a faster, cleaner and more reliable service, delivering an electrified network through Adelaide from Gawler to Seaford.

What is the Gawler Rail Electrification Project?

The Australian and South Australian governments are jointly funding the \$842 million electrification and modernisation of the Gawler rail line which will deliver a faster, cleaner and more reliable service, delivering an electrified network through Adelaide from Gawler to Seaford.

What does electrification of the rail line involve?

The electrification works for the Gawler rail line between Adelaide and Gawler will occur largely within the existing rail corridor, however there may be some works that will require access to adjacent land to allow for construction and local traffic management.

The scope of the works include:

- *installation of the 25kV overhead wiring system including masts and gantries;*
- *construction of a combined services trench for the installation of new fibre optic communications cabling;*
- *installation of a new signalling system;*
- *services relocations; and*
- *fencing of the rail corridor for improved safety.*

What works are required as part of the project?

Installing the electrical infrastructure and improving safety are the key first steps in modernising the Gawler rail line. These works include:

- installation of the 25kV overhead wiring system including masts and gantries;
- construction of a Combined Services Trench for the installation of new fibre optic communications cabling;
- installation of a new signalling system;
- service relocations;
- fencing of the rail corridor for improved safety; and
- some vegetation/tree trimming and removals, with every effort made to minimise impacts.

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and Transport

The majority of works are occurring within the existing rail corridor, however there may be some works that will require access to adjacent land to allow for construction and local traffic management. If access is required, a member of the project team will communicate with the property owner.

When is the project going to be completed?

Gawler Rail Electrification Project is a highly complex project with multiple safety critical interfaces. Detailed planning, together with skilled resources are required to ensure the project is delivered safely, and in accordance with our obligations under the *Rail Safety Act 2012*.

Critical testing is underway on the Gawler Rail Line as the vital and long-awaited electrification project enters its final stages.

The Gawler Rail Electrification Project (GREP) was hit with unavoidable setbacks in 2021 caused by the COVID-19 pandemic including an inability to bring the required number of highly specialised workers across the border from interstate and manufacturing shutdowns during extended lockdowns in other states.

Following months of hard work by the project team to minimise the impacts, the project is now closer to completion with services expected to be commencing in April. The Department appreciates your co-operation and patience while these important works are undertaken.

What works have been undertaken to date?

The main civil works are complete, with 58km of new common services trench (CST) constructed, more than 350km of conduit and 456km of signalling cable, installation of the overhead wiring and the concrete foundations and masts which support the overhead wiring network have been completed.

The project is now focusing on completing the installation of the new signalling system, followed by testing and commissioning of the new infrastructure ahead of returning passenger rail services.

PASSENGER SERVICES

Why are changes to passenger services required as part of the construction?

While every effort has been made to minimise disruption to stakeholders, construction works require a full closure of the Gawler rail line, to enable works to be safely undertaken.

Substitute buses are in place to accommodate commuters during the line closure. For further information regarding the detours, changes to bus stops and timetables please visit www.adelaidemetro.com.au/

Will there be new trains on the Gawler line?

New electric trains are being procured which will enable an increase in capacity, as well as reliability and safety improvements. The new trains will be introduced in stages following completion of all the project works.

Will there be a new timetable following the recommencement of passenger services?

At this stage, there have been no changes to the Gawler rail line timetable, which is scheduled to be reviewed in mid-2022.

For information about timetables and passenger services, please visit Adelaide Metro www.adelaidemetro.com.au

Will there be any major station upgrades?

Stations along the Gawler rail line will not be upgraded as part of the Gawler Rail Electrification Project.

However, in June 2021, the State Government announced railway stations across Adelaide will receive makeovers as part of a commitment from the 2021-22 State Budget. The initiative provides \$99 million over 10 years to refresh railway stations in the metropolitan rail network, including 14 stations along the Gawler rail line.

For more information, please visit www.dit.sa.gov.au/station_refresh_program

TESTING AND COMMISSIONING

What is testing and commissioning?

Testing and commissioning is a process undertaken on the new electrification infrastructure, to ensure the line is operating safely before passenger services recommence.

As part of the testing process, the overhead wiring and signalling equipment are tested in the factory and then again on site, to ensure the individual components of the new infrastructure have been installed and are operating correctly.

Testing is followed by the commissioning phase, where the previously tested equipment is turned on and operated as part of the installed system. This includes turning on the technology which detects trains approaching level crossings and stations and generally manages safe train movements and electrical power supply. Test trains are used to ensure the system is operating safely. This is the final phase of work completed before passenger services can recommence.

What testing and commissioning is required after the infrastructure is built?

An extensive program of testing and commissioning of the new electrification infrastructure is the next phase of the project. This process is required to ensure the system is correctly configured and the integrity and correct operation of the safety critical systems is assured.

This is a detailed process of testing all the different components individually and as a complete system. The different stages include:

- connecting the new substations to the rail network to provide power for the electric trains;
 - testing and switching over control of the new signalling system, that will control the network; and
 - testing the power feeds to the electrification infrastructure.
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The testing and commissioning works will occur with small crews accessing equipment within the rail corridor. You may also notice test trains running along the line during this time. Test trains are not passenger services but are operated for the purposes of testing the operation of the line.

When will the line become electrified?

The Gawler rail line will be energised ahead of the return of passenger services. This means all electrification infrastructure, including overhead wires and their fittings should be considered live and carrying electrical current before the line opens to passenger services.

Overhead wires and attachments within the rail corridor will be dangerous if interfered with, as they carry 25,000 volts of electricity to power the new electrified line. Please 'Stay Switched On' and treat all wires within the rail corridor with the same respect and safety consciousness you do with suburban stobie poles and power lines.

Your safety is paramount and we appreciate your co-operation in helping us to keep everyone safe around our rail lines.

CONSTRUCTION

How is construction for the project being managed?

Construction works are being managed carefully and sensitively to minimise the potential impact to surrounding neighbours and businesses. Representatives from the Project Team continue to provide updates to neighbours and the broader community as work on the Gawler Rail Electrification Project progresses.

Will there be any disruption to road intersections along the corridor?

In order to construct the works and commission the new signalling and overhead wiring infrastructure some temporary road closures and traffic restrictions will continue to be required. To safely undertake these works, speed and lane restrictions will be in place during the works.

There will also be some impacts to other rail lines on the Adelaide Metro rail network, including some temporary closures.

Nearby properties and road users will be advised of upcoming level crossing closures and where required motorists are advised to plan ahead, allow extra travel time and observe signage.

Are night works required during construction?

Some night works have been required as construction has progressed. Advance notice will continue to be provided to residents, businesses and key stakeholders to advise advance notice of when these works will occur. Every effort will be made to minimise disruption to residents and businesses.

Follow www.facebook.com/DFITSA/ for project updates, or register your details to receive project updates directly by visiting www.dit.sa.gov.au/grep and selecting *Registration, Feedback and Suggestions*.

VEGETATION MANAGEMENT

Will vegetation and trees need to be removed as part of the electrification works?

The majority of the vegetation management required for the project is now complete, however should any further works need to occur, the project team will provide notice of this to local residents in advance.

Management of vegetation is an integral part of the safe operation of an electrified rail network. Vegetation management is required to ensure:

- vegetation does not encroach into the three (3) metre electrical clearance zone, to prevent contact with the electrical overhead wiring;
- safe construction and operation of a Common Services Trench to house the new signalling and communications systems; and
- the electrified area is fenced off to prevent intrusion.

The project team continues to work closely with the relevant authorities, local councils and interested parties to minimise and manage impacts to vegetation, trees and wildlife habitats.

Will vegetation management be required for the project?

Yes, vegetation management, including trimming and removal, is required as part of the project. Failure to effectively manage vegetation along the corridor presents a serious safety risk to the community, surrounding residents, train drivers and operators. *Reasons vegetation management may be required in your area include:*

- **Safety around electrical infrastructure** – vegetation must have a minimum of 3m clearance from the electrical Overhead Wiring System (OHW) to meet electrical safety requirements, reduce the likelihood of tree limbs interfering with wiring, falling on the track or onto the overhead wires.
- **Safety fencing** – new fencing is required to protect the newly electrified rail corridor. This is for the safety of the community and train operators. Vegetation along the existing fence may be impacted by either the removal of the old fence or construction of the new one.
- **Installation of the Common Services Route (CSR)** – the CSR is a buried signalling and rail services network that runs within the rail corridor to facilitate the new signalling system. In areas where the rail corridor is narrow, this trench may impact on root systems of existing trees to the extent they cannot survive.

What is the Department's policy on vegetation management?

The Department has developed a policy that is consistent with electrified rail systems in other states, as well as power line infrastructure. [The Department's Vegetation Removal Policy](#) sets out the parameters for managing vegetation along the electrified rail corridor and seeks to minimise trimming or removal of vegetation as much as possible, without compromising the safe operation of the rail network and electrical clearance requirements. To see a copy of the policy visit: <https://www.dit.sa.gov.au/> and search "vegetation removal policy".

The policy states that a vegetation Exclusion Zone of three meters is necessary between vegetation and the live electrical infrastructure, and a further two meter envelope required to ensure the Exclusion Zone is not breached and can be maintained. For more information visit <http://www.dit.sa.gov.au/grep> and go to Frequently Asked Questions.

How has the Project Team worked to minimise vegetation management?

Steps to minimise the extent of vegetation management required for the project are taken at all stages of the project planning and delivery. Only once this process is complete will vegetation be removed or pruned. Local Councils have been, and will continue, participating in this process and provide feedback to ensure vegetation of high value to the community is retained wherever possible. The stages of review include:

- **Design** – as the detailed design for the rail infrastructure is developed, the team identify opportunities to move infrastructure to reduce the impact on trees and vegetation. This includes the location of the CST and shifting electrical infrastructure further inside the corridor to limit the impact of the required clearance zone.
- **Survey** – prior to any removal or trimming, the required clearance and trimming area for the CST, fencing locations, construction accesses and required OHW clearances will be surveyed and pegged to identify which vegetation may be required for removal or trimming.
- **Construction** – the surveyed clearance and trimming area is reviewed with the Construction Team to determine if alternative construction methodologies can be used to reduce the impact. Councils are invited to also participate in this process.

How will vegetation be pruned to ensure tree health?

All vegetation will be pruned in accordance with Australian Standard (AS) 4373 Pruning of Amenity Trees in order to maximise the long-term health of the tree. A qualified arborist is involved in managing the pruning process to further support the health of the tree and ensure regrowth is carefully managed.

Will the trees removed as part of the project be replaced?

All vegetation removals will be offset following an agreement reached between the Department and each Council. A [Vegetation Planting Guideline](#) has been developed to assist in managing vegetation replanting along the electrified line, and can be accessed at <http://www.dit.sa.gov.au/grep>.

When can I expect vegetation management to occur in my area?

Vegetation management will occur progressively along the rail corridor as required by the construction works program. Residents in the vicinity of planned works will be contacted by the Project Team to notify them in advance.

Who can I contact for more information?

If you have any questions or would like to speak to a member of the project team, please call 1300 080 834 or email: dit.gawlerelectrification@sa.gov.au
