Automatic Train Protection Project
Frequently Asked Questions

Project overview

What is Automatic Train Protection?
Transport for NSW is improving safety across the electrified rail network by delivering a new technology called Automatic Train Protection (ATP).
ATP will provide additional safety benefits and more reliable services by ensuring trains operate within the permitted speed limit.

What does the project involve?
ATP is being installed on train fleets and tracks across the Sydney Trains and NSW TrainLink electrified network. This includes:

- installation of balises (small electronic transponders) in the rail corridor between existing trackside infrastructure to monitor train speeds
- installation of equipment on board all suburban and intercity train fleets that will collect information such as the train's speed, distance and direction travelled.

How does ATP work?
The ATP system monitors train speed and alerts the driver with indicator lights, flashing messages and audible alarms if the train is going too fast.
If the driver doesn't respond to the alerts, the system will apply the service brake and, if necessary, the emergency brake will automatically and safely bring the train to a stop.

Where will ATP be installed?
The system is being installed on the train fleets and on the tracks across the electrified rail network. ATP is being rolled out across the network including the South Coast Line as far as Kiama, the Blue Mountains Line to Lithgow, and the Central Coast / Newcastle Line.

What is installed next to the tracks?
Balises (small electronic transponders) will be installed in the rail corridor between existing trackside infrastructure.
The balise transmits speed and signalling information as the train travels over the top. An antennae under the train picks up messages from the balise and passes them to the ATP onboard computer.
What is installed onboard trains?
Wheel sensors and radar will be installed on train sets to continually calculate train speed, distance and direction travelled.
The driver will stay informed via a display in the driver’s cab.

Does ATP affect the role of the train driver?
No. Train drivers remain responsible for the operation of the train. ATP will provide an extra level of safety in emergency situations.

What type of ATP will be installed?
The European Train Control System (ETCS) was selected to deliver Automatic Train Protection across the electrified rail network and is a proven platform and technology.
To ensure the safety of customers and train crew, the project team will install, test and commission ETCS equipment trackside and on board the train fleets before the system becomes operational.
**When will construction work start/finish?**

Construction is currently under way in project Area 2 and Area 3 between Berowra and Wickham, with equipment being rolled progressively across the electrified network. More information will be included on the ATP project page about specific project areas as it becomes available.

**What are the hours of construction?**

Standard construction hours are 7am to 6pm Monday to Friday and 8am to 1pm Saturdays.

The majority of work will be undertaken during scheduled Sydney Trains trackwork weekends when trains are not running. This will minimise impacts to train customers and ensure the safety of our staff.

**Will construction activities affect me?**

Every effort will be made to minimise any construction impacts to the local community and businesses. We will keep the community and customers informed prior to any activities taking place. In addition to community notifications and signage along the works corridor, impacts on local communities will be minimised wherever possible. This will include completing the noisiest works during the day wherever possible, using the quietest available equipment, regularly monitoring noise levels, as well as keeping traffic from work vehicles and visual impacts to a minimum.

**When will ATP become operational?**

To ensure the safety of customers and train crew, the project team will install, test and commission ETCS equipment both trackside and on board the train fleets before the system becomes operational.

ATP technology is being rolled out progressively in stages across the electrified network.

**Who will maintain the ATP after completion?**

Sydney Trains and NSW TrainLink will maintain the ATP systems.

**Contact us**

For further information please contact us via the Project Infoline 1800 684 490, email projects@transport.nsw.gov.au or visit transport.nsw.gov.au/projects.

The project team will keep the community informed via regular notifications and updates on the Transport for NSW website.