Project overview

What is Automatic Train Protection?
Transport for NSW is investing in new technology to boost staff and customer safety on the Sydney Trains and New South Wales TrainLink networks. The Automatic Train Protection (ATP) project will contribute to a safer and more reliable rail network that will cater for the future customer growth and demand across Sydney and New South Wales.
ATP is providing additional safety benefits and more reliable services by ensuring trains operate within the permitted speed limit.

What does the project involve?
The ATP project is installing equipment 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 speed
- installation of on-board equipment on suburban and intercity train fleet which provides speed monitoring and signal information to the driver.

How does ATP work?
The Automatic Train Protection (ATP) is a train overspeed protection system which monitors train speed and provides driver alerts.
The system can apply braking interventions and bring the train to a stop if a driver is unable to respond to overspeed alerts.

Where will ATP be operational?
ATP is being rolled out across the electrified network including the majority of the Sydney Trains and NSW TrainLink fleet. The ATP rollout includes the Sydney Trains metropolitan area as well as the South Coast Line to Kiama, the Blue Mountains Line to Lithgow, and the Central Coast / Newcastle Line.

What equipment is being installed?
The main ATP trackside equipment being installed is balises (small electronic transponders). The balise sits within the track and transmits speed and signalling information as the train travels over the top.
What is installed on-board trains?
The main ATP on-board equipment being installed is a Driver Machine Interface (DMI). Drivers stay informed via the DMI. Other on-board equipment includes wheel sensors and a radar which continually calculate the train speed, distance and direction travelled.

Does ATP affect the role of the train driver?
No. Train drivers remain responsible for the safe operation of the train. ATP is an additional safety system and drivers will be trained on the operation of this system.

What type of ATP is being installed?
The system chosen to provide Automatic Train Protection is the European Train Control System (ETCS – Level 1) which is in widespread use internationally, including Europe. The TfNSW Digital Systems Program which has recently commenced will enhance the ETCS system implemented by ATP from Level 1 to Level 2.

When will construction work finish?
Construction is currently under way, with equipment being installed progressively across the electrified network. Please refer to the ATP project page for up-to-date information.

What are the hours of construction?
Standard construction hours are 7am to 6pm Monday to Friday and 8am to 1pm Saturdays. For the safety of our staff and customers, the majority of work is undertaken outside standard hours during scheduled Sydney Trains trackwork weekends when trains are not running, ensuring that we minimise impact to our customers and protect our staff.

Will construction activities affect me?
Every effort is being made to minimise construction impacts to the local community and businesses. We will continue to inform the community and customers prior to any activities taking place. In addition to community notifications and signage along the work corridor, impacts on local communities are being minimised wherever possible. This includes completing the noisiest work 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.

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 continue to keep the community informed via regular notifications and updates on the Transport for NSW website.