

Circle Line Enhancements

Component/System Upgrade	Function	Implementation timeline
Automatic Train Supervision (ATS) servers, software and hardware	<p>The ATS monitors and directs train operations to run on train timetable, by orchestrating the movement of trains under the control of the signalling system.</p> <p>The upgrade of the ATS system will enable it to run more trains on the CCL system when CCL6 commences service.</p>	2020 – 2022
Load Break Switch	<p>With the implementation of new Load Break Switch (LBS) in Tie Breaker Substation, the LBS can be closed to ensure continuity of traction power feed to the adjacent stations should there be an outage of the Tie Breaker Substation. This work will improve the resilience of the power supply system.</p>	2020 - 2022
Traction Safety Shutdown System	<p>The Traction Safety Shutdown System automatically cuts off traction power supply in the event of an emergency.</p>	2020 – 2022
Communications systems components upgrade	<p>Some components which are being upgraded include the replacement of communications backbone network, which transmits data between stations and control centre, and the radio communications systems, which facilitate wireless communications between users and the relevant control centres.</p>	2019 – 2021/2022