



Conductor Replacement Churton Park Deviation

What is the Churton Park Deviation?

The Oteranga Bay–Haywards A transmission line (“OTB-HAY A line”) forms part of the inter-island high voltage direct current (HVDC) link that helps provide the North Island with access to power from the South Island – so it is an important part of New Zealand’s grid.

The Churton Park Deviation section of the OTB-HAY A line was constructed in 1992 – deviating an existing section of line to accommodate the residential area known as Churton Park while also forming a single transmission corridor across State Highway 1 and the Main Trunk Line. It starts at Tower 45 of our OTB-HAY A line at the back of McLintock Street Johnsonville and finishes at Tower 68 near the end of Horokiwi Road east of Grenada North. The deviation traverses a mix of landholdings including Wellington City Council outer town belt, farmland, development, commercial premises and forestry blocks.

What is conductor replacement?

Conductor replacement, or reconductoring, involves replacing the existing wire (conductor) on the line with new conductor.

Why is this work being done?

Due to proximity to the coast the lines in this region are prone to corrosion from salt laden westerly winds. Condition assessment has confirmed it is now timely to replace the conductors so the line can continue to provide a reliable service.

The conductors will be replaced on a like for like basis (ie the same type of conductor will be used). You may notice that the new conductors are shiny initially but will dull as they weather.



What is the timing for the work?

Preparatory work, such as improving access tracks and general tower maintenance will commence this year. The reconductoring work itself will begin in January 2020 and continue until early April 2020.

What is being done?

The works will involve both preparatory works and reconductoring.

Preparatory works: Before we start replacing the conductors we will need to undertake some preparatory work or general maintenance on some towers, such as replacing corroded steel members in the towers and tower painting. Other preparatory works include: access track repairs and improvements; benching (creating flat work areas) at wiring sites; partial undergrounding of low voltage lines; replacement of some steel members in the tower structure with slightly thicker members to add strength; and construction of wooden hurdles (or other road protection) at road crossings to allow public roads to continue to be used during reconductoring.

The more visible work will be that needed to repair access tracks and create work areas to allow the significant heavy pulling and tensioning machines and cable drums to get to wiring sites and be deployed.

WORK OVERVIEW

Keeping the energy flowing

Reconducting works: This will primarily involve pulling the replacement conductors through running blocks or pulleys placed on each tower and then clamped into place. The conductor will remain suspended in the air during the course of their replacement.

We will set up wiring sites behind McClintock Street (Johnsonville), on each side of the SH1 crossing at Churton Park/Grenada, and in Horokiwi.

During the reconducting process each tower will need to be accessed and the existing (old) conductors de-clamped and suspended on running blocks and pulled from one end of the run by the puller machine. At the same time the insulators on each tower will be replaced, and some existing vertical hanging disc insulator strings will be converted to an Inverted V arrangement that are present elsewhere on the line.



The new conductor will be attached to the steel cables and pulled into position where it is then tensioned or sagged to the correct position and clamped into place.

Your safety during this time is important to us. While it is very unlikely that the conductor will drop to the ground, we do seek to limit public access underneath the line during the actual pulling process. To assist our contractors will monitor the area to ensure there is no access under the line during conductor pulling.



Health and Safety

Keeping everyone safe is our top priority. Our contractors will strictly adhere to health and safety management plans that identify general and site specific potential hazards and the associated mitigation.

Increased volume of heavy vehicles and machinery will be on 4WD tracks that access the towers.

Contact

Your Transpower Landowner Liaison contact for this Project is Trevor Gardner and he can be contacted on mobile 021 682 756 or email trevor.gardner@transpower.co.nz. Trevor will be contacting all landowners personally to discuss the project.