

National Lifelines Forum

Lessons implemented – Canterbury earthquakes

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Orion building

- Armagh Location
 - Didn't meet seismic expectations
 - CBD access constrained
 - Susceptible to liquefaction
 - Poor foundations
 - Limited standby power
- Wairakei Rd Location
 - Designed to meet seismic expectations 1/2500 year event
 - Multiple access to ring road system
 - Raised foundation (local flood)
 - Sprinklers installed (fire)
 - Switch boards & data terminated at level 1
 - Good foundations
 - 3 – 7 days standby power



Control Centre

- Armagh St
 - Fixed location backup Control Centre
 - Paper based overview
- New Control Centre
 - Portable backup Control Centre
 - Real time overview



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Customer management

- Back up Contact Centre was located within our Armagh substation building
- Contact Centre backup is now portable and located 2km away



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Back up portable emergency management area includes :

Control Centre & Call Centre



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Mirrored data centres

- Fixed location
Armagh St
- Backup separation
100m
- Transportable
- Backup separation
10km



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Emergency Contractor location



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System spares

- Wolston location
- Potential tsunami zone
- Papanui, Addington & Waterloo locations
 - Multiple inland locations



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Zone substation Location

- Liquefiable soil foundation
 - Damaged - Brighton zone substation
- Coarse sand foundation
 - Rawhiti Zone substation



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Distribution substation location

- Flooded Basement substations
- New substations to be at ground level



Does your new building need electricity?

To save you time and money, talk to us early about your power supply.

Our equipment will ensure power goes to your property. You need to consider the size and location of our equipment to your design.



Key things to know

- you need to talk to us during the design stage about your building's electricity requirements to make sure you get it done and installed. Don't wait until you're on site.
- site safety and work equipment, such as scaffolding and ladders, to ensure equipment stays in or ground level.
- our network equipment must be accessible 24/7.
- you need to talk to us about the necessary safety measures that is required for the new substation.

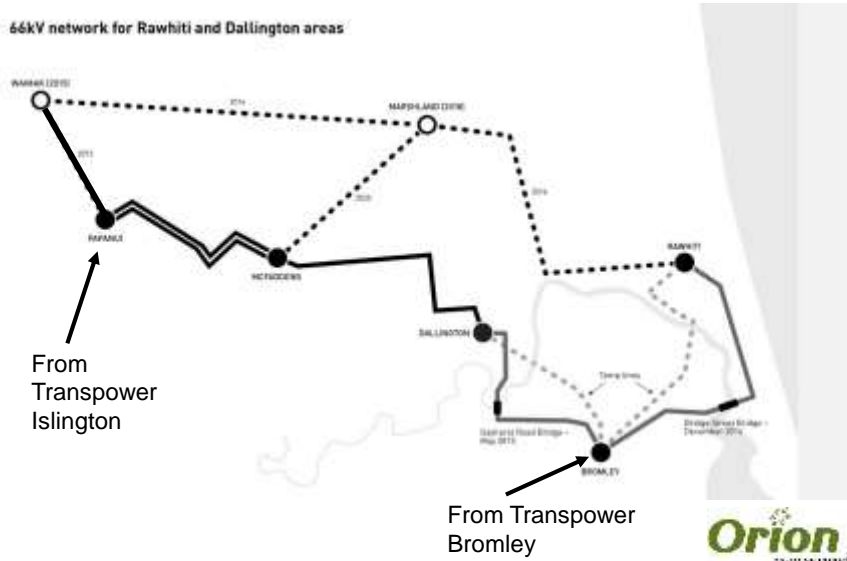
Note!



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Eastern city resilience

66kV network for Rawhiti and Dallington areas



Cable configuration subtransmission

- Parallel radial installation
 - (2 separate cables x 3 phase)
- Ring installation
 - (6 separate cables x 1 phase)



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