

Officer responsible City Streets Manager	Author Geoff English, Lighting Asset Engineer
Corporate Plan Output: Underground Wiring 9.5 text 59	

This report has been prepared in response to a petition from some of the residents in Pannell Avenue.

The purpose of this report is to provide information about underground conversion of Orion (formerly Southpower), Telecom and street lighting overhead reticulation.

BACKGROUND

In 1996/97 the Christchurch City Council increased the dividend from Orion (previously Southpower) to take control of underground conversion. Before this change Orion funded an annual underground conversion programme of \$3 - \$3.3m per year.

Orion currently contributes 18% towards the Council funded conversion projects to reflect the betterment it receives. Council pays the remaining 82% of Orion's conversion costs and the full cost of converting the street lighting and Telecom overhead (unless Telecom see a major benefit in having their services underground in which case they will contribute to or fund the cost of conversion of their services).

Orion also funds some underground conversion projects for network reinforcement reasons. In the past Orion has funded the full cost of undergrounding of their reticulation for these projects with the Council funding the undergrounding of street lighting and Telecom's reticulation at the same time.

UNDERGROUND CONVERSION OF OVERHEAD SERVICES

Council funding for underground reticulation of overhead services is allocated on the following basis.

- In conjunction with major road works where road widening requires the existing poles to be relocated.
- Major arterial routes, particularly entrances/exits to the City.
- Major tourist routes.

The City Streets Unit selects from the capital works programme, projects along designated traffic routes as possible candidates for undergrounding. In the past the budget allocation has not allowed all main roads in the capital works programme to be undergrounded so candidates are then prioritised based on road hierarchy and location of poles. Orion's underground conversion projects have also been a priority because, with these projects, the Council only pays for street lighting and Telecom undergrounding which is considerably less than the total cost of conversion. Because Pannell Avenue is a local road it is not a priority for the City Streets' undergrounding programme.

The undergrounding of overhead reticulation along main roads provides the benefit of an aesthetically improved streetscape with safety benefits from the poles being moved away from the edge of the roadway.

The Environmental Policy and Planning Unit has limited urban renewal funding available for undergrounding local roads in conjunction with kerb and channel replacements. The choice of streets to be undergrounded using urban renewal funding is normally limited to streets located in Neighbourhood Improvement Areas or residential streets which are located in close proximity to the Central City. Pannell Avenue does not qualify for undergrounding under either of these criteria.

The funding levels proposed in the City Streets preliminary (draft) 1999 budget for underground conversion over the next five years follows. This budget proposal has yet to be considered by the Council.

Year	Total
1999/00	\$1,950,000
2000/01	\$1,950,000
2001/02	\$1,950,000
2002/03	\$1,950,000
2003/04	\$1,950,000

Note: The amounts shown include capital and operational expenditure.

There are approximately 900km of overhead reticulated services along urban roads to be converted assuming that it would not be considered necessary to underground rural services on the city fringe. The cost to the Council to convert Orion's and Telecom's overhead wires and street lighting is currently around \$350,000 to \$400,000 per kilometre of road length. Where Orion have high voltage overhead lines or the conversion is on the hills the cost may be higher.

Based on the assumptions above, the total cost to convert the remaining roads is approximately \$350 million which equates to approximately 170 years using the proposed annual expenditure in the preliminary (draft) Annual Plan.

CONCLUSION

Due to the high cost of converting overhead reticulation on roads in the city, priorities need to be set. Unfortunately, unless urban renewal funding can be allocated to a particular project it is unlikely that many of the overhead services along local roads will be undergrounded.

Unfortunately, on the basis of this report, no provision can be made to underground the overhead power telephone services in Pannell Avenue.

- Recommendations:**
1. That the information be received.
 2. That the organisers of the petition be informed.

Chairperson's

Recommendation: That the aforementioned recommendations be adopted.