

Findings of the Powerline Undergrounding Pilot Project - West Pallant Street

Strategic Alignment - Our Places

Public

Tuesday, 15 October 2024

Infrastructure and Public Works Committee

Program Contact:

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Approving Officer:

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EXECUTIVE SUMMARY

At the meeting of Council on 9 August 2022, Council resolved to undertake a Powerline Undergrounding Project within West Pallant Street. Following Council's endorsement, the Administration proceeded with investigations to capture essential information to inform future undergrounding projects in the city.

Scheduled renewal works in West Pallant Street aligned with the strategically funded powerline undergrounding works and was considered at the time to deliver maximum value for money to the community.

The Administration has undertaken a detailed review of powerline undergrounding and associated scope on this street and has identified that undergrounding of overhead services is not limited to South Australian Power Networks (SAPN) owned power assets, but also involves other third-party services in proximity, including telecommunications such as Telstra and National Broadband Network (NBN). SAPN, Telstra and NBN are collectively referred to as third-party service providers.

Each third-party service provider has separate levels of complexity and variable cost and scope requirements that vary by location and that compound the strategic costs and delivery complexity.

As part of this investigation all third-party service providers were approached by the project team for undergrounding design and forecast cost advice, with varying levels of design scope and pricing provided.

Customers affected by the undergrounding were informed of the project through direct communications by the project team. Impacted properties were subject to heritage and electrical assessments to ensure the building façades were not impacted by the works and existing electrical infrastructure was checked for compliance. Additionally, inspections by contractors to assess the scope and forecast costs for reinstating landscape elements on private property impacted by the undergrounding were also undertaken.

No funding has been allocated in the 2024/25 Business Plan and Budget to progress undergrounding works on the street. After a full scoping of the undergrounding works including the requirements for third party asset relocation, the forecast cost to underground power delivery in West Pallant Street is \$387,000.

The purpose of this report is to update Council on the Project team's progress on the pilot project and to provide a recommendation moving forward.

RECOMMENDATION

The following recommendation will be presented to Council on 22 October 2024 for consideration

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL THAT COUNCIL

1. Notes the findings of the Powerline Undergrounding Pilot Project in West Pallant Street determined to date.
2. Endorses not to proceed further with the third-party asset undergrounding in West Pallant Street.
3. Proceed with the capital renewal portion of the project as included in the 2024/25 Business Plan & Budget.

IMPLICATIONS AND FINANCIALS

City of Adelaide 2024-2028 Strategic Plan	<p>Strategic Alignment – Our Places</p> <p>Strategic Alignment – Our Environment</p>
Policy	Undergrounding (Overhead Electricity and Telecommunication Cables) Policy.
Consultation	Directly affected landowners of undergrounding 14 & 18 West Pallant Street, North Adelaide.
Resource	Not as a result of this report
Risk / Legal / Legislative	Not as a result of this report
Opportunities	<ul style="list-style-type: none"> Improvement to streetscape and amenity of the street compounded by the removal of overhead services and stobie poles Upgrade kerb ramps to meet DDA requirements Upgrade lighting to meet lighting standards
24/25 Budget Allocation	Capital renewal budget allocation \$149,000 for streetscape works only.
Proposed 25/26 Budget Allocation	Not as a result of this report
Life of Project, Service, Initiative or (Expectancy of) Asset	CoA's Capital Asset Life (renewals component) will extend by 25 years. The asset life (maintenance and renewal) of underground utilities will be the concern of third-party providers.
24/25 Budget Reconsideration (if applicable)	Should Council endorse undergrounding of third-party services infrastructure to proceed, a strategic budget allocation of \$387,000 would be required as part of a quarterly budget reconsideration.
Ongoing Costs (eg maintenance cost)	2% per annum for ongoing maintenance costs
Other Funding Sources	Not as a result of this report

DISCUSSION

Background

1. At its meeting on 10 May 2022, Council requested:
 - 1.1. *The CEO investigate a scheme which enables the undergrounding of power lines in small residential streets in the City and North Adelaide and brings back to the August meeting of Council for consideration and that council includes \$300,000 in the 2022/23 budget for consultation to enable the above pilot in the next 12 months.*
2. At the Infrastructure and Public Works Committee meeting held on 2 August 2022 and subsequent Council meeting on 9 August 2022, Council:
 - 2.1. *Noted that an Undergrounding Strategy will be developed to provide strategic guidance and transparency around the prioritisation and planning of all future undergrounding in City Streets, Residential Streets and the Park Lands and will be presented to Council for consideration.*
 - 2.2. *Approved West Pallant Street in North Adelaide as the location to pilot an undergrounding project with the 2022/23 budget allocation.*
3. West Pallant Street, North Adelaide was proposed to Council as the Pilot project for the following reasons:
 - 3.1. Scheduled renewals work on the Street including Road surface and footpath renewal aligned in the same financial year as the proposed undergrounding works and offered maximum value to the community.
 - 3.2. Upon initial review the undergrounding scope appeared minimal, with only two stobie poles and overhead services connecting to two residential properties in the street.
4. Strategic project costs to date of \$66,215 have covered investigational and engineering studies associated with concept development including residential fuse box investigations, landscaping reinstatement cost estimates and 3rd party utility investigations. Third-party service providers South Australian Power Networks (SAPN) and National Broadband Network (NBN) also charged for providing their undergrounding cost estimates.

Findings from Undergrounding Pilot Project

5. West Pallant Street, North Adelaide runs between Melbourne Street and Stanley Street. The street includes two residential properties, two stobie poles and sparse low-level vegetation. The street is intersected by Sussex Street and lies at the eastern end of Melbourne Street.
6. The Infrastructure Delivery Team undertook a feasibility study that examined best value for money outcomes in West Pallant Street, including:
 - 6.1. A New & Upgrade option that addresses *Disability Discrimination Act 1992* (DDA) compliance and increasing the amenity of the street including supporting infrastructure for the undergrounding of power supply.
 - 6.2. A Renewal only option including supporting infrastructure for the undergrounding of power supply.
 - 6.3. A detailed investigation in collaboration with SAPN to develop a scope and forecast cost estimate to underground electrical services and remove redundant infrastructure including two stobie poles in the street.
 - 6.4. A detailed investigation of power consumer mains (block connections) was undertaken to understand:
 - 6.4.1. Where SAPN's responsibility ends, and the residents begin.
 - 6.4.2. Consumer mains connection scope including like for like landscaping reinstatement.
 - 6.4.3. Heritage assessment to understand the impact of proposed works on the two local heritage buildings in the street.
 - 6.5. Consideration of all third-party assets on the street impacted with the undergrounding works including:
 - 6.5.1. A detailed investigation with NBN to ascertain the cost to relocate their asset back to the nearest node and co-locate with SAPN into a common service trench to the dwellings.
 - 6.5.2. Consultation with Telstra to have their redundant assets removed from the stobie poles and dwellings.

7. Initial cost estimates to deliver the undergrounding component on West Pallant Street, categorised 'Strategic Cost', were based on third-party service provider estimates.
8. These examples are outlined below.

Cost Area	Amount
SAPN	\$239,349
*Consumer mains connection <i>(for two properties)</i>	\$43,230
NBN	\$59,732
Telstra	\$10,000
Contingency	\$35,049
Total cost	\$387,000

*** Consumer main connections to private properties (cost to customer)**

9. A lighting assessment was also undertaken to understand the current deficiencies on the Street. Through this assessment the project scope was further increased to deliver appropriate street lighting required following the removal of existing lighting assets affixed to stobie poles.
10. The extra lighting scope on the project reinforced our learnings about associated time and cost needs of related third-party assets in residential streets. Specifically, the added cost and complexity of managing dependent assets needs to be considered in conjunction with undergrounding power supply.
11. While some economies of scale may exist for streets with larger numbers of stobie poles and residences, the incorporation of third-party utilities such as NBN and Telstra, adds a significantly higher burden of complexity, risk and cost to the project.
12. Furthermore, possible complications with heritage buildings were also highlighted throughout the course of the pilot project requiring:
 - 12.1. Council to fully understand the implications on the delicate fabric of heritage buildings likely to be impacted, and not undertake work that is irreversible.
 - 12.2. Council and its contractor to be fully covered against damage to residents' building/property in the during delivery of their works.

West Pallant Pilot Study

13. Based on increased costs associated with third-party asset augmentation and the costs with works to the residential properties, the project team recommend not to proceed with the undergrounding portion of the project.
14. While not progressing with underground power supply, it is, however, recommended to deliver capital renewals in the street, in line with Asset Management Plans simultaneously addressing current DDA and lighting deficiencies.

Updating Policy Position

15. Based on the findings of the Powerline Underground Pilot Project and the workshop and discussions held with Council (to occur at the Infrastructure and Public Works Committee, October 2024) the Administration will look to further develop Council's Policy position for the undergrounding of powerlines.
16. The Policy will provide a framework for the assessment, initiation and funding for undergrounding powerlines within the City of Adelaide, including a position around external funding contributions and leveraging from available grant programs.
17. The Policy will articulate Councils' position on the apportionment of cost for reinstatement works on private properties.

Development of Powerline Undergrounding Strategy

18. Following confirmation of the policy position adopted by Council, further work will be undertaken to develop a powerline undergrounding strategy.
19. The powerline undergrounding strategy will identify locations in the City where above ground powerlines are present and identify priority locations where whole of street benefits can be realised through powerline undergrounding (eg improved accessibility, increased tree canopy, enhanced lighting levels, promotion of built heritage).

20. This strategy will be utilised in conjunction with other key corporate strategies and planning documents, including the Integrated Transport Strategy and the Integrated Climate Strategy, to guide integrated planning and prioritise project initiatives that will be presented to Council through the business plan and budget process to deliver upon Council's Strategic Plan objectives.

Future Powerline Underground Initiatives

21. All powerline undergrounding initiatives that enable significant whole of street benefits or have supporting external funding opportunities (eg grants or developer contributions) will continue to be presented to Council for consideration through the business plan and budget process, where budget submissions will comprise a strategic operating budget for the undergrounding of SAPN's infrastructure as well as an accompanying new/upgrade budget for the provision of new replacement public lighting.

ATTACHMENTS

Nil
