

# Residential Street Powerline Undergrounding Pilot Project

**Tuesday, 2 August 2022**  
**The Committee - Pre-Council  
Discussion Forum**

Strategic Alignment - Thriving Communities

**Program Contact:**  
Geoff Regester, Acting Associate  
Director Infrastructure

Public

**Approving Officer:**  
Tom McCready, Director City  
Services

---

## EXECUTIVE SUMMARY

A significant number of our City Streets and Park Lands have above ground SA Power Networks (SAPN) infrastructure installed within the public realm, that generally consists of stobie poles and overhead electrical wiring.

Council's 2022/23 Business Plan and Budget was endorsed on Tuesday 28 June 2022, and included \$300,000 to investigate and pilot a scheme for the undergrounding of powerlines in small residential streets.

At its meeting on 10 May 2022, Council requested that this investigation and pilot proposal be brought back to Council in August for consideration.

West Pallant Street, North Adelaide is considered to be a suitable residential street and recommended to be the location to pilot an undergrounding project. This location aligns with planned road and footpath renewal works in 2022/23 and the existing footpaths have adequate width to maintain accessibility after the removal of stobie poles and the installation of new public lighting.

Administration is developing an Undergrounding Strategy which will provide guidance and transparency on the prioritisation and planning of all future undergrounding in City Streets, Residential Streets and the Park Lands. The Undergrounding Strategy will align and integrate with other City of Adelaide corporate strategies to ensure project initiatives are delivered to maximise value to the community.

---

The following recommendation will be presented to Council on 9 August 2022 for consideration

### That Council

1. Notes 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. Approves West Pallant Street in North Adelaide as the location to pilot an undergrounding project with the 2022/23 budget allocation.
-

## IMPLICATIONS AND FINANCIALS

City of Adelaide 2020-2024 Strategic Plan	<b>Strategic Alignment – Thriving Communities</b> The undergrounding of SA Power Networks infrastructure presented within this report contribute to achieve a healthy and resilient community. These works also align to creating safe and welcoming community spaces. Ensuring that we continue to create a beautiful, diverse city that celebrates its natural, cultural, and built heritage.
Policy	The Undergrounding (Overhead Electricity and Telecommunication Cables) Policy was approved by Council on 24 September 2007.
Consultation	Routine project management consultation prior to the delivery of pilot project.
Resource	Not as a result of this report
Risk / Legal / Legislative	Not as a result of this report
Opportunities	The review of locations where undergrounding of SA Power Networks infrastructure to improve access and inclusion to all users of our City.
22/23 Budget Allocation	\$300,000
Proposed 23/24 Budget Allocation	To be confirmed in consultation with Council through service delivery plan and business plan and budget.
Life of Project, Service, Initiative or (Expectancy of) Asset	The resultant City of Adelaide Public Lighting assets will have an expected life of 30 years.
22/23 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (eg maintenance cost)	There are implications for the future lifecycle management of our Public Lighting and Electrical Network, including operation, maintenance, renewal and disposal of assets.
Other Funding Sources	The Power Line Environment Committee (PLEC) is not applicable for residential streets.

# DISCUSSION

## Background

1. Council's 2022/23 Business Plan and Budget was endorsed on Tuesday 28 June 2022, and included \$300,000 to investigate and pilot a scheme for the undergrounding of powerlines in small residential streets.
2. A budget of \$300,000 was allocated for the 2022/23 Business Plan and Budget to enable a pilot project to be delivered in the next 12 months.
3. It was requested that this investigation and pilot proposal be brought back to Council in August for consideration.
4. It is acknowledged that discussions about powerline undergrounding in residential streets have recently occurred at Council for Stephens Street, Ada Street and Royal Avenue.
5. A significant number of our City Streets and Park Lands have above ground SA Power Networks (SAPN) infrastructure installed within the public realm, that generally consists of stobie poles and overhead electrical wiring.
6. Our Public Lighting Network is serviced by approximately 10,000 Council owned lights and approximately 3000 luminaires owned and maintain by SAPN (typically mounted to a stobie pole).
7. SAPN invoice CoA quarterly for the provision of public lighting services through SAPN infrastructure.
8. When powerlines are undergrounded, there is a requirement to install new CoA public lighting infrastructure to ensure safe levels of lighting are provided to the community.

## Powerline Undergrounding Considerations

9. One of the key considerations during the investigation of the feasibility of undergrounding is evaluating and understanding the holistic performance and conditions of a street. Such considerations include:
  - 9.1. Public lighting level deficiencies that cannot be improved with existing infrastructure constraints (eg spacing of SAPN infrastructure).
  - 9.2. Existing road geometry and footpaths widths (undergrounding powerlines and installing new public lighting in place will not address core issues relating to accessibility).
  - 9.3. Integrated planning outcomes, which is considerate of other corporate strategies (eg walking, greening, heritage) to ensure capital expenditure is aligned with strategic objectives.
  - 9.4. Timing of planned asset renewal works or streetscape upgrade works, to ensure we optimise project delivery value for money and community benefits.

## Current Practice

10. CoA currently have in place an Undergrounding (Overhead Electricity and Telecommunications Cables) Policy (the policy) that has been in place for a number of years. The policy includes consideration of applications for funding for works from developers, businesses or residents under the Underground Funding Scheme (the Scheme) where there are community benefits. This document is planned to be updated this financial year.
11. The Scheme has three customer focused funding options: Developer Scheme, Residential/Business Scheme and the Hot Spot Scheme. For each of these schemes the applicant formally submits an application, which enables a report to be prepared for Council for funding approval:
  - 11.1. The Developer Scheme is for developments that have been granted Development Assessment approval and have not yet commenced on site. This Scheme requires the Developer to undertake, manage and pay for all works, and Council contributes up to 50% of the undergrounding costs to the Developer upon the satisfactory completion and inspection of the works by Council.
  - 11.2. The Residential/Business Scheme provides an opportunity for resident(s), private owner(s) or business owner(s) to contribute to the costs for undergrounding of whole or parts of a public street and bring it forward on the Council works program. This may attract up to 50% Council funding contribution. Funding applications must be lodged by one ratepayer representative of the street.

- 11.3. The Hot Spot Scheme aims to provide opportunities for relatively small scale works that have relatively large benefits for property owners. Projects under this Scheme may be identified by Council staff and/or by an application from an external party. The works usually involve the relocation of stobie poles and overhead cables in close proximity to dwellings, balconies, significant trees or driveways.
- 11.4. Majority of scheme applications are not progressed by customers due the significant costs and financial contributions associated with the works.
- 12. We also receive a large number of community requests to underground SA Power Networks infrastructure on small residential streets to improve access and overall street amenity. Such requests can range from a single pole removal to the removal and undergrounding of all SAPN infrastructure on the street:
  - 12.1. These requests are documented and are considered within our integrated asset planning.
  - 12.2. Where opportunities are identified, the undergrounding initiative is presented to Council through the Business Plan and Budget process for consideration
  - 12.3. Undergrounding initiatives are typically delivered in conjunction with planned asset renewal or streetscape upgrade works.
  - 12.4. Recent examples of such projects in residential streets include Boulton Street in 2018 and St Helena's Place in 2019.
  - 12.5. Following the COVID-19 pandemic and the initiation of our Covid Recovery Principles, upgrade/new funding has been constrained and infrastructure investment has primarily focused on asset renewal projects, resulting in no new undergrounding initiatives for residential streets.
- 13. Power Line Environment Committee (PLEC) is a partnership program which enables co-funding opportunities for Council's to underground overhead powerlines:
  - 13.1. Project submissions are evaluated annually by the PLEC Committee to prioritise how available funding is allocated to priority projects.
  - 13.2. There is specific criteria that must be met to enable a project to be eligible for PLEC funding, which generally include: being located in a strategic road corridors and the incorporation of greening and improved streetscape outcomes.
  - 13.3. Typically CoA looks to align PLEC undergrounding projects with major asset renewal and streetscape upgrade projects.
  - 13.4. Where opportunities are identified, the undergrounding initiative is presented to Council through the Business Plan and Budget for consideration.
  - 13.5. In 2020 significant undergrounding works were successfully delivered through the PLEC program on Jeffcott Street, between Barton Terrace West and Wellington Square. This project undertook full undergrounding works with installation of new City of Adelaide public lighting in conjunction with kerbing and drainage works.
  - 13.6. We are currently in discussion with PLEC to assess the feasibility of undergrounding powerlines through the program on Wakefield Street, between Victoria Square and Pulteney Street. Concept design will be progressed in 2022-2023, detailed design in 2023-2024 with construction planned for 2024-2025. This project will also incorporate greening, road renewal and streetscape outcomes to improve amenity and character of the street.

### **Proposed Project for 2022/23**

- 14. It is acknowledged that discussions about powerline undergrounding in residential streets have recently occurred at Council for Stephens Street, Ada Street and Royal Avenue, however there are some key delivery constraints that need to be considered in the planning and prioritisation of these potential undergrounding locations:
  - 14.1. Stephens Street has very narrow footpaths and undergrounding powerlines at this location would result in installing new public lighting in place of stobie poles and not improve the functionality of the street. The 2022/23 Business Plan and Budget has approved the investigation and concept design of streetscape improvements to improve pedestrian access, street amenity and traffic calming. Powerline undergrounding scope and costs can be considered through the concept phase of this project and brought back to Council.

- 14.2. Royal Avenue has road, kerb and footpath asset renewals scheduled in 2023/24. We have received complaints from customers about the road geometry prohibiting safe traffic movements. Any required road improvements such as changing kerb alignments will be considered in the design phase (2022/23). The aligned undergrounding opportunity would be considered an upgrade/new component to the project that will be presented to Council for consideration through the Service Delivery Plan and Business Plan and Budget.
- 14.3. Ada Street is a good residential street undergrounding candidate; however it is recommended that the initiative be considered in conjunction with broader asset renewal and/or streetscape upgrade works such as footpath widening in the future to improve pedestrian accessibility. Currently all of the streets assets are rated in a good-fair condition and are not planned for renewal in the 4 year planning period.
15. West Pallant Street, North Adelaide, is considered to be a suitable residential street and recommended to be the location to pilot an undergrounding project in the first instance. The proposed works align with the critical powerline underground considerations discussed above, which include:
  - 15.1. Works would be delivered in conjunction with planned road, footpath and kerb ramp renewals, which will optimise value for money and community outcomes.
  - 15.2. Works will reinforce value of a number of significant residences with heritage value.
  - 15.3. Works will complete full street undergrounding (northern end already complete).
  - 15.4. Existing footpath widths are satisfactory to enable the removal of existing SAPN infrastructure and replace with CoA public lighting, whilst maintaining accessible footpath widths.
  - 15.5. There will be an opportunity through the concept design phase to review the feasibility of additional streetscape greening.
  - 15.6. The value for the undergrounding component of works, including the reinstatement of new public lighting, is estimated to be \$160,000.

### **Undergrounding Strategy**

16. The development of an Undergrounding Strategy will provide guidance and transparency around the prioritisation and planning of all future undergrounding in City Streets, Residential Streets and the Park Lands, which will return to Council for endorsement.
17. The Undergrounding Strategy will align and integrate with other City of Adelaide corporate strategies to ensure project initiatives are delivered to maximise value to the community.
18. The objective of the Undergrounding Strategy is to develop a framework to identify a list of prioritised undergrounding locations, external funding opportunities, as well as an implementation framework to inform a rolling works program that aligns with planned asset renewals and streetscape upgrades.
19. The strategy's prioritisation will consider street character, heritage value, greening opportunity and community benefit (improved street amenity and functionality).
20. The strategy's implementation framework will consider external funding opportunities, alignment to asset renewal programs.

---

## **ATTACHMENTS**

Nil

---

- END OF REPORT -