

# Our Places

## Undergrounding of Powerlines

To provide an update to Council Members on the progress of undergrounding projects and seek feedback noting the findings and challenges associated with undergrounding on residential streets.

Infrastructure

Mark Goudge  
Associate Director Infrastructure

### **Agenda**

- Key Questions
- Typical Underground Configuration
- West Pallant Street and Royal Avenue
  - Background
  - Scope
  - Costing
- Risks / Implications
- Policy

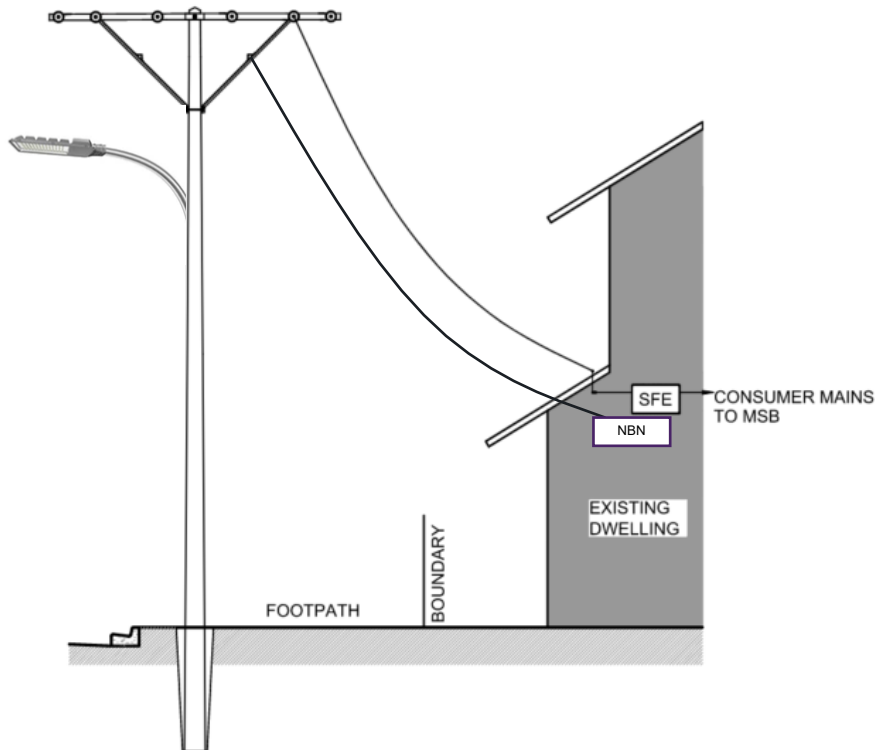
### KEY QUESTION

What are Council Members' views on the undergrounding of powerlines noting the increased costs associated with supporting infrastructure?

### KEY QUESTION

What are Council Members' views on seeking funding contributions from residents to undertake associated works on private properties?

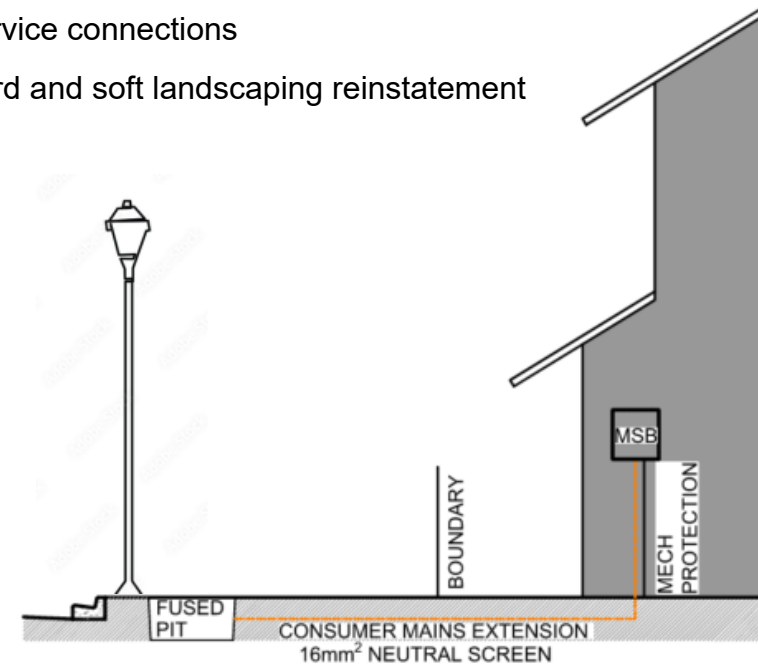
### Current Typical Configuration



### Proposed Typical Configuration

**AVERAGE cost to Landowner \$15,000**

- All trenching and conduit installation
- Service connections
- Hard and soft landscaping reinstatement



# Undergrounding of Powerlines

## West Pallant - Background



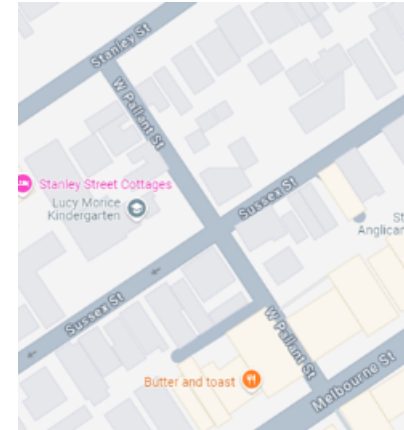
- **On 10 May 2022, Council requested that:**
  - *The CEO investigate a scheme which enables the undergrounding of powerlines in small residential streets in the City and North Adelaide and brings back to the August meeting of Council for consideration and that Council includes \$300,000 in the 2022/23 budget for consultation to enable the above pilot in the next 12 months.*
- Council's 2022/23 Business Plan and Budget included \$300,000 to investigate and pilot a scheme for the undergrounding of powerlines in small residential streets.
- West Pallant Street, North Adelaide was recommended to be the location to pilot an undergrounding project. This aligned with planned road and footpath renewal works in 2022/23.
- **On 9 August 2022, Council 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.*
  - *Approved West Pallant Street in North Adelaide as the location to pilot an undergrounding project with the 2022/23 budget allocation.*
- Council's 2023/24 Business Plan and Budget included \$150,000 for the strategic project (undergrounding) West Pallant Street Improvements (Construction).

# Undergrounding of Powerlines

## West Pallant - Scope

### Strategic project scope necessary to underground power:

- Undergrounding of Third-Party assets.
  - SAPN – Undergrounding of overhead Low Voltage (LV) power supply to the Service Fuse Enclosure (SFE) located in the pit.
  - Consumer Mains Connection – From the pit in the footpath to the Fusebox of the dwelling (x2, including works on private property).
  - NBN – Optic Fibre rewiring to the closest node.
  - Telstra – Removal of redundant service.
- Removal of redundant stobie poles (x2).
- A new kerb protuberance to protect the LV Cabinet.
- Reinstatement of all hard/soft landscaping on private property as required.



### Capital project scope:

- Renewal
  - Renewal of the Footpath and Road Pavements
  - Renewal of kerb ramps
  - Soft landscaping
- New & Upgrade
  - Lighting



### Undergrounding Cost Forecast – Strategic and Capital (New & Upgrade)

Current Strategic Budget 2024/25: there is currently no funding allocated within the 2024/25 Strategic Budget

Budget Category	Item	Forecast
Strategic	SAPN	\$ 239,349
	Consumer main connections*	\$ 43,230
	NBN	\$ 59,372
	Telstra	\$ 10,000
	Contingency	\$ 35,049
	<b>Strategic Total</b>	<b>\$ 387,000</b>
Capital (N&U)	Street lighting	\$ 35,000
	<b>TOTAL</b>	<b>\$ 422,000</b>

**Note:**

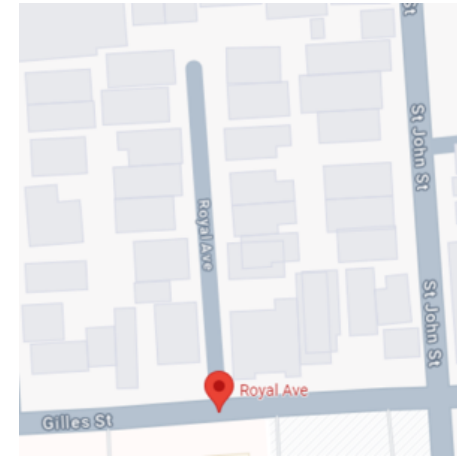
- \*Consumer main connections to private properties (cost to customer).
- Strategic cost delivers undergrounding of 2 properties and removal of 2 poles.
- Costs current as of July 2024.

# Undergrounding of Powerlines

## Royal Avenue - Scope

### Strategic project scope necessary to underground power:

- Undergrounding of Third-Party assets.
  - SAPN – Undergrounding of overhead LV power supply to the Service Fuse Enclosure (SFE) located in the pit.
  - Consumer Mains Connection – From the pit in the footpath to the Fusebox of the dwelling (x13 including works on private property).
  - NBN – Optic Fibre rewiring (x13) to the closest node.
  - Telstra – Removal of redundant service.
- Removal of redundant stobie poles (x7).
- Reinstatement of all hard/soft landscaping on private property as required.



### Capital project scope:

- Renewal
  - Renewal of Pavements
  - Renewal of kerb ramps
  - Soft landscaping
- New & Upgrade
  - Street Lighting
  - Pavement





### Undergrounding Cost Forecast – Strategic and Capital (New & Upgrade)

Current Strategic Budget 2024/25: no allocation within 2024/25

Budget Category	Item	Forecast
Strategic	SAPN	\$ 185,000
	Consumer property connections (estimate)*	\$ 195,000
	NBN (estimate)	\$ 170,000
	Telstra (estimate)	\$ 10,000
	Contingency	\$ 55,000
<b>Strategic Total</b>		<b>\$ 615,000</b>
Capital (N&U)	Street lighting	\$ 80,000
<b>TOTAL</b>		<b>\$ 695,000</b>

**Note:**

- \*Consumer main connections to private properties (cost to customer).
- Utilities costs are estimates and require further investigation and testing by utilities providers.
- Consumer property connection cost based on average ~\$15,000 per property x 13 properties.
- Costs current as of July 2024.

### Risks:

- Expanded SAPN scope – undergrounding to extend to nearest junction point outside area of the works.
- Additional services impacted – NBN, Telstra, runs to nodes/stobies outside area of the works.
- New Street lighting cost and reduced spatial benefit as stobies replaced with light poles.
- Third party connections bring complexity, risk and cost, which is unable to be quantified until detailed investigations are undertaken:
  - Electrical condition assessments.
  - Switch board upgrades.
  - Upgrades to property wiring / potential rewiring of the property.
  - Disturbing / reinstating hard and soft landscaping finishes.

### Implications:

- PLEC funding is not available for powerline undergrounding on residential streets such as West Pallant Street and Royal Avenue. This was tested with PLEC as recently as April 2024.
- The budget required for undergrounding is primarily a Strategic Project cost with associated New & Upgrade costs. Therefore, Council will need to endorse budget for this work through its Business Plan and Budget each year, based on estimate or defined streets.
- Upgrading the powerline connection within the street will trigger cost implications to private property such as trenching for new conduits and private connections to meet the Australian Standards.

## Updating Policy Position

- Pending this Workshop and Council feedback, Administration will develop Council's Policy Position for the undergrounding of powerlines and associated overhead services.
- The Policy will provide governance 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.

# Undergrounding of Powerlines

## Key Questions

### KEY QUESTION

What are Council Members' views on the undergrounding of powerlines noting the increased costs associated with supporting infrastructure?

### KEY QUESTION

What are Council Members' views on seeking funding contributions from residents to undertake associated works on private properties?