

Pillar installations

Fact Sheet



Overview to pillar installations

Ausgrid's decision making on pillar locations conform to a series of standards and design guidelines that apply to the planning, and operational management of the network.

Ausgrid, like all other utility providers – (water, gas telecommunications) has an 'allocation' of space within the footpath (road reserve) where its assets can be located. The technical considerations associated with the connection of low voltage (LV) underground services to the network means that property boundaries represent the most practical and efficient location for a pillar.

As well as ensuring the best possible performance of the customer's supply, the proximity to the boundary also affords a degree of protection against the asset being damaged by third parties. Unlike a power pole, which is usually on the outer kerb edge, a pillar is a more fragile installation and highly likely to be rendered inoperable after being damaged, with a common example being a minor impact from a vehicle.

Ausgrid appreciates that from time to time the pillar location may not be optimal from another perspective, and where there are legitimate mitigating circumstances, we will work with the customer to arrive at a mutually acceptable location, provided this does not compromise the performance of the asset and the safety of the general public.

Pillar Installations

What is a network 'pillar'

A: A LV network pillar is a network connection point used in areas where the low voltage supply to residences and businesses is underground. The pillar marks the interface between the Ausgrid network and the private service connection to a customer. Individual properties are connected to the Ausgrid network at pillars (above-ground junction points) as shown below.



Q: Why are they required? What do they do?

A: Pillars are enclosures consisting of a base and a cover which house cable terminations, which form part of our low voltage distribution network. They are required to enable the connection of customer service cables onto our low voltage network distributor cables. The low voltage cables are normally direct-buried and looped into pillars. The pillar allows ready access by Ausgrid for low voltage connections such as street lighting, or for switching at times of faults on the network

Q: Who owns the pillars?

A: Pillars located on public land are generally owned by Ausgrid and referred to as Distribution or Network Pillars. Service Pillars are located on private property and are owned by the customer.

Q: Why do some areas have pillars and others don't?

A: Areas which do not have LV pillars are generally older areas, where the service cables to homes are 'tee connected' to the main trunk of the distributor cable. Or their electricity supply is overhead.

Q: Why is Ausgrid installing pillars?

A: Ausgrid's current practice is to install LV pillars for new connections and in areas where we are replacing LV cable which has previously been tee connected. E.g. we are installing more pillars as we replace aging LV cables. A pillar provides the following advantages for the network:

- Instead of having a tee joint in the ground, it is more easily connected to the LV pillar.
- Quicker to identify the faulted location of failed cables.
- Quicker to return supply to all but the failed section of cable. Some customers are able to have supplied restored quickly by operating "links" (switches) at LV pillars.
- Reducing the need to excavate the footpath to make repairs.
- Cables can be easily isolated and accessed at the LV pillars.

Q: What are the advantages of installing pillars as opposed to continuing with replacing service cables to homes that are tee connected to the main trunk of the distributor cable underground?

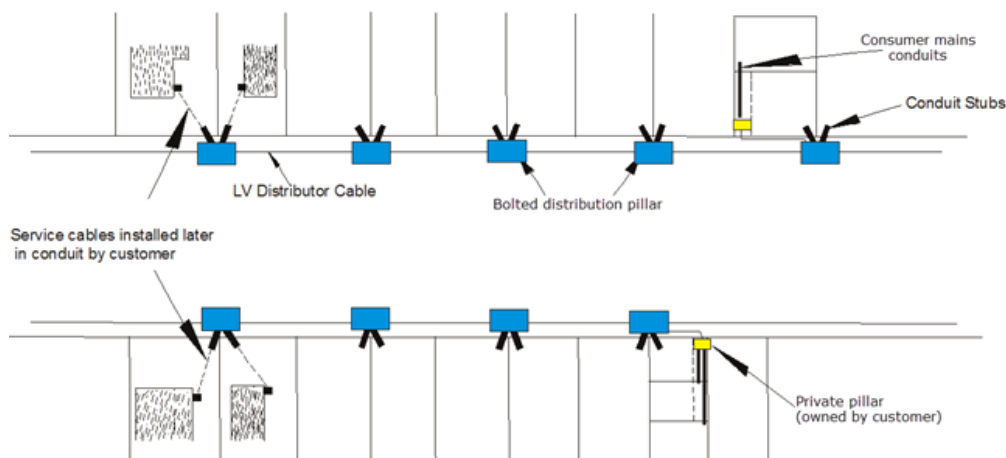
A: Unfortunately, if this underground cable fails, the exact location of the faulty section can be difficult to find and can mean extended delays to repair cables:

- When you do find the faulty section you need to excavate the footpath, cut the cable and undertake repairs.
- Repair crews need to break connections at all the other teed off services in the street. This requires access to each of the affected customer switchboards or worst case, excavating the footpath and breaking the service connection. E.g. say 20 homes are tee connected to the main trunk.
- The old "hard wired" configuration leads to extended delays to return supply to customers.

Pillars also allow Ausgrid to reduce the impact of planned interruptions on customers by enabling us to reduce the outage area affected by the planned interruption. This is achieved by carrying out switching at the pillars to isolate the section of low voltage distributor cable that is to be worked on during the planned outage.

Q: How are locations for pillars to be installed determined?

A: Pillars are usually installed adjacent to lot boundaries and centred 400 mm from the street alignment. The location of pillars may vary due to the presence of other utility underground services such as gas, water and telecommunication assets.



Q: Do pillar installations consider requirements under the DDA (Disability Discrimination Act)?

Visually impaired persons are considered when determining the location of pillars. Clause 6.12 of [NS127](#) and Clause 8.0 of [NS224](#) sets out the requirements. For example, the pillar must provide a strong luminance contrast against surrounding surfaces.

Q: Can pillars be moved?

A: A customer may request the relocation of an Ausgrid asset and this can be done online via the Ausgrid website by completing a Network Asset Relocation Form. More information can be found at:

<https://www.ausgrid.com.au/Connections/special-connections/moving-poles-and-assets>

Note: Network asset relocations will need to be funded by the customer requesting the relocation of the asset.

Q: What standards are applied when installing pillars?

A: Installation details are described in Clause 14.1 of [NS130 Specification for Laying Underground Cables Up to and Including 11kV](#) and Clause 8.0 of [NS224 Low Voltage Suburban Commercial and Industrial Underground Distribution Utilising Pillars](#).

The requirements for installing underground electricity assets (e.g. cables, conduits, pillars) have been established over a number of years to meet the particular needs of Ausgrid, developers, customers, Roads & Maritime Services (RMS), local councils and other service utilities. These requirements are specified in [NS130](#).

Work on Ausgrid's supply system can only be performed by an authorised person as detailed in Ausgrid's publication [ES4](#), Service Provider Authorisation.

Q: How are the widths of existing footpaths and subsequent pillar installations considered?

A: This is contained in the NSW Streets Opening Coordination Council (SOCC) Guide to Codes and Practices for Streets Opening. The [2009 edition](#) details the footway allocations prior to 1 January 1991. Clause 6.1 Note 3 states "The first 300mm allocation from the property alignment may be used for the erection of pillars/pedestals Service pits etc."

For narrow footways, refer to Clause 6.3 Note 6 states "The preferred position for poles, pillars, cabinets and streetlight columns is adjacent to the property alignment." which is the first 500mm from the property alignment.

Q: Why can connections in some areas be completely undergrounded without the need for pillars?

A: The older areas of Sydney utilise underground tee joints as the means for connecting customers to the Ausgrid network instead of pillars. The disadvantage of tee joints are:

- Longer restoration/interruption times to the customer due to increase in fault location times (accessing the main switchboard to provide customer isolation or when access is restricted excavate and cut away customer service),
- Decrease in flexibility and isolation capability of the underground network,
- Increase in civil works in the event of a fault.

Q: Is undergrounding an alternative to pillar installation? Why don't you underground power instead of installing more pillars?

A: Pillars form part of Ausgrid's underground low voltage distribution network. Refer to questions above relating to why we install pillars. The presence of pillars means the network in that area is already underground.

Q: Who do I contact at Ausgrid if I have a concern about a pillar?

A: You can lodge your enquiry online via the Ausgrid website <https://www.ausgrid.com.au/Contact-Us> or contact our General Enquiries number on 13 13 65.

For reporting any dangerous situations please contact 13 13 88.