Guideline: Distribution Pole to Pillar

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** This person will have the power to grant the process owner the authority and responsibility to manage the process from end to end.*

*** Frequency period is dependent upon circumstances– maximum is 5 years from last issue, review, or revision whichever is the latest. If left blank, the default shall be 1 year unless otherwise specified.*

Revision Control		
Revision	**Date**	**Description**
6	25/05/2023	Reformate normative references and definitions, update to latest standards, remove impact statement
5	17/10/2017	Specific charges Removed and replaced by reference to Horizon Power Charges. Additional charges for lot sizes larger than 2,500 square metres removed. Connection charges included

STAKEHOLDERS *The following positions shall be consulted if an update or review is required:*	
Manager Capacity Management Services	Regional Managers
Manager Finance	Asset Managers
Manager Customer Services	

TABLE OF CONTENTS

Table of Contents

1 OVERVIEW

1.1 Introduction

The Pole to Pillar connection is available to all residential dwellings subject to the conditions detailed in this document. This document is to be read in conjunction with Horizon Power's Underground Distribution Schemes Manual (UDS) [5] and the Western Australia Service and Installation Requirements (WASIR) [10].

The purpose of this guideline is to improve the safety and reliability of the electricity infrastructure currently supplied by Horizon Power in regional WA by connecting all new consumers with underground power at subsidised charge.

1.2 Scope

These guidelines apply to the existing overhead electrical distribution network in the Pilbara Grid (Pilbara region) and the Non-interconnected system (NIS) within Horizon Power's Electricity Licensing Area Boundary.

2 NORMATIVE REFERENCES

2.1 Standards

2.1.1 Horizon Power Standards

[1]. *Horizon Power Pricing Policy*, DM# 1889349, available from Horizon Power

[2]. *Horizon Power Pricing Rules*, DM# 1811759, available from Horizon Power

[3]. *Horizon Power Subdivision Policy,* DM# 780420, *standard number HPC-11AH-07-0002-2015,* available Horizon Power

[4]. *Horizon Power Technical Rules, standard number HPC-9DJ-01-0001-2012, available at Manuals, standards & metering (horizonpower.com.au) under the 'Technical rules' heading*

[5]. *Underground Distribution Schemes Manual*, DM# 1586848, available at https://www.horizonpower.com.au/contractors-installers/manuals-standards/ under the ***Standards*** and then ***Manuals*** tabs

2.1.2 Other References

[6]. *AS/NZS 3000, Electrical Installations (known as Australian/New Zealand Wiring Rules),* Standards Australia, 2008 (Amdt 2:2021) available at http://www.saiglobal.com

[7]. *AS 61386.1, Conduits systems for cable management – Part 1-General requirements,* Standards Australia, 2015 (Amdt 1:2019) available at http://www.saiglobal.com

[8]. *Utility Providers Code of Practice (UPCoP)* available at https://www.horizonpower.com.au/contractors-installers/manuals-standards/ under the ***Industry resources*** tab

[9]. *WA Electrical Requirements (WAER)*, WA Government-DMIRS re-issued 2019 waer_2019.pdf (commerce.wa.gov.au)

[10]. *Western Australian Service and Installation Requirements (WASIR)*, available at https://www.horizonpower.com.au/contractors-installers/manuals-standards/ under the ***Manuals*** and then ***Distribution Design*** tab

2.2 Definitions and Abbreviations

For the purposes of this specification the following definitions apply:

AS: Australian Standard

Consumer Mains: Those conductors between the Point of Supply and the main switchboard (MSB). Refer to Clause 1.4.37 of AS/NZS 3000 [6].

Consumer Pole: A pole supplied, installed, and maintained by the property owner, on the property, to provide ground clearance for overhead service mains.

Extensively Renovated sites: Demolished site with the meter and overhead Service Mains being removed.

LV: Low Voltage <1000 Vac

MSB: Main Switchboard

Overhead Area: A location where low voltage (415 V three-phase or 240 V single-phase) overhead mains exist.

Overhead Mains: Horizon Power's main conductors strung overhead between Horizon Power's poles to distribute electricity to consumers but excluding overhead Service Mains.

Overhead Service Mains: Horizon Power's service cable strung overhead between its power pole or consumer's pole and the consumer's point of attachments.

Point of Supply: The junction of the consumer mains with:

- Conductors of an electrical distribution system; or
- Output terminals of an electricity generating system within the premises.

PPR: Pole to Pillar Rates

Strata Title: Lots and common property forming part of a strata plan or survey strata plan under the Strata Titles Act.

Strata Plan and Survey Strata Plan: Subdivision of land into lots and common property in accordance with the Strata Titles Act.

Underground connection: A ground mounted pillar or similar apparatus forming part of Horizon Power's electrical distribution system, located on a property boundary and to which the consumer mains of a dwelling are connected, to obtain electricity.

136C Service Easement: An easement created under the Strata Titles Act.

The definitions contained in the Western Australia Service and Installation Requirements (WASIR) [10] will also apply. However, where there is a conflict between this Guideline and WASIR this Guideline shall take precedence.

3 OBJECTIVES

1. In keeping with the State Government and the general community's preference for underground power, Horizon Power offers, subject to conditions, a special Pole to Pillar rate for the underground connection of domestic dwellings in overhead areas.

   Therefore, underground power is mandatory for all new and extensively renovated sites supplied by the Pilbara Grid (Pilbara region) and Non-Interconnected System (NIS).

2. Consumers requesting an underground service in an overhead area will be required to complete the standard application form, which can be accessed from Horizon Power's website: New power supply (horizonpower.com.au). The builder or electrician can submit the form on the consumer's behalf.

   Note: No Acknowledgement letter is sent to consumers for pole-to-pillar connections as they are a recoverable works job.

3. The Pole to Pillar rate is calculated assuming pillars will supply several domestic dwellings or lots.

4. If a Directional Drill Rig (drilling machine) is not available to complete the boring for a road crossing of the underground service within the required timeframe, Horizon Power may install a temporary pole with an aerial connection and cable to the pillar until the road crossing can be installed. Consumers are to be informed when this situation may apply. This temporary solution will remain in place until such time it's practicable to dispatch a boring contractor or machinery to complete the work.

5. Horizon Power reserves the right to withhold application of the Pole to Pillar rate and charge full cost at any time at its discretion. Generally, this may occur in (but is not limited to) instances where a suitable supply arrangement exists or can be upgraded, but the consumer requests an arrangement that requires additional network assets be installed.

6. In extenuating circumstances, only when it is technically impractical or cost prohibitive to install underground cable, then at the discretion of Horizon Power, the connection may be a standard aerial connection from the nearest pole, at the standard aerial connection charge.

7. Connections must be made in accordance with the WAER [9] and WASIR [10]. Examples of acceptable and unacceptable supply arrangements are given in Appendix B.

4 CONDITIONS

The following conditions must be met to qualify for the Pole to Pillar rate:

1. New lots and/or dwellings must be located within the Electricity Licensing Area Boundary.
2. No more than three dwellings require connection as a result of the subdivision. This includes any existing connections (a consumer main switchboard is required for three dwellings as a result of a subdivision).
3. No more than three lots are being created as a result of the subdivision.
4. The dwelling(s) supply is standard.
5. The lot is in an overhead area.
6. The proposed pillar must be placed in Horizon Power's preferred or acceptable location. (Horizon Power selects locations that maximise the existing and future use of the pillar). The pillar location must be on a front property boundary. The pillar location must be on a boundary between adjacent lots. The pillar must be located on the requestor's property unless one already exists on the adjacent property. If consumer requires a different location, full cost will apply.
7. There must be no requirement to remove or relocate an existing overhead line because of the subdivision.
8. Low voltage overhead mains must exist within 60 m of the lot boundary where the pillar is to be installed.
9. The route from the existing low voltage overhead mains to the proposed pillar location must be suitable for the installation of low voltage underground cable.
10. The lots must be residential.
11. The same developer/owner must not have submitted an application for Pole to Pillar for an adjacent or the same lot within the previous three years.
12. A company, organisation, person, or group of persons must not be progressively seeking Pole to Pillar connections for an area that, in Horizon Power's opinion, should be developed as a standard underground residential subdivision.
13. Where applicable, common property is created to allow consumer mains to be connected to the pillar and or sub-mains to be connected to the site main switchboard. At Horizon Power's sole discretion, a service easement may be substituted (refer to Section 4.3).
14. The site must be ready and pegged for immediate installation of the pillar, and no obstruction to the pillar access is permitted.

5 CHARGES

5.1 Responsibility for connection from the pillar to and within the consumer's property

All electrical work and associated costs for connection from the pillar to and within the consumer's property/premise is the responsibility of the consumer.

5.2 Pole to Pillar Rates (PPR)

4.2.1 General

Provided the conditions of this guideline are met, the Pole to Pillar rates listed below will apply. Additional charges may apply for the extension or upgrade of Horizon Power's electrical network. Examples of how these charges are applied are given below.

If the conditions are not met, Horizon Power will issue a quote for the full cost of supplying a connection in accordance with the applicable WASIR [10] and UDS manual [5]. This cost may include the extension or upgrade of Horizon Power's electrical network.

(**Note:** where a site is not immediately ready for the pillar to be installed, Horizon Power will charge the Pole to Pillar rate, provided the consumer includes with their application, a written advice as to when the site will be ready. This applies only when the site will be ready a maximum of 90 calendar days from the date of application. If the consumer pays the Pole to Pillar rate but subsequently withdraws access to the site so work is delayed, the full cost may be applied.)

Where a pillar has been installed in an overhead area, new consumers who subsequently have access to the pillar must pay the Pole to Pillar Rate per dwelling or lot.

4.2.2 Fixed Price Charge

The PPR fixed price charge as described in this clause, is based on a single dwelling per lot unless otherwise stated. Four lot strata schemes are not eligible for the PPR fixed charge.

All charges are available at Electricity fees & charges - Horizon Power

4.2.3 Connection Charges

Where the final connections to the pillar are completed by Horizon Power, additional charges apply.

PPR Charges		
Lot Description	**Pillar at HP Preferred Position**	
	YES	NO
Existing Dwelling Converted from Overhead to Underground	Fixed Cost	Full Cost
2 Lot Strata Scheme	Fixed Cost	Full Cost
3 Lot Strata Scheme	Fixed Cost	Full Cost
4 Lot Strata Scheme	Full Cost	
A single freehold lot	Fixed Cost	Full Cost
2 freehold title lots	Fixed Cost	Full Cost
3 freehold title lots	Fixed Cost	Full Cost
4 freehold title lot development	Full Cost	

4.2.4 **Pole to Pillar Options**

a) An existing dwelling is to be converted from overhead service to underground connection and no subdivision is occurring:

- The pillar is to be placed at Horizon Power's preferred front boundary location – Fixed Cost
- The pillar will not be in Horizon Power's preferred front boundary location - Full cost.

b) Two survey strata lots are being created:

- The pillar is to be placed at Horizon Power's preferred front boundary location, the cost will be - Fixed Cost.
- The pillar will not be placed in Horizon Power's preferred/acceptable front boundary location - Full cost.

c) Three survey strata lots being created:

- The pillar is to be placed at any Horizon Power's preferred/acceptable front boundary location - Fixed Cost.
- The pillar will not be in Horizon Power's preferred/ front boundary location - Full cost.

d) Two freehold title lots being created:

- The pillar is to be placed at Horizon Power's preferred front boundary location - Fixed Cost.
- The pillar will not be in Horizon Power's preferred front boundary location - Full cost.

e) Three freehold title lots are being created:

The charge will be a combination of the following costs as applicable and as determined by Horizon Power:

- For a pillar at Horizon Power's preferred front boundary location servicing two of the new lots - Fixed Cost.
- For a pillar at Horizon Power's preferred front boundary location servicing one of the new lots - Fixed Cost.
- For a pillar not in Horizon Power's preferred front boundary location - Full cost.

The application of these charges is illustrated by the examples below.

Example 1: An existing dwelling is to be converted from overhead service to underground connection and no subdivision is occurring

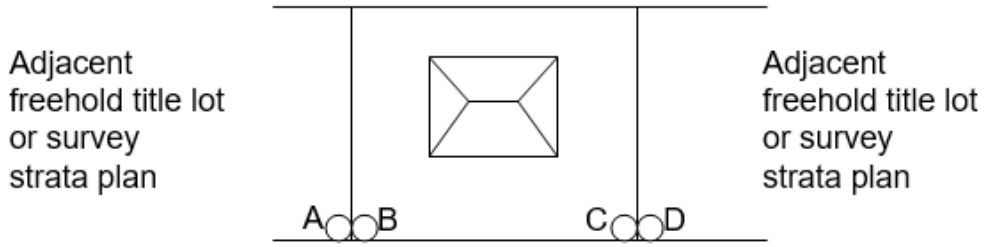


Figure 1

Case 1 - there is an existing pillar at A or D

- Charge – Fixed Cost
- Connections – one* (Connection Charges apply)
- Common property or service easement – not applicable

Case 2 - there is no pillar at A or D, and a new pillar is required at B or C

- Charge - Fixed Cost
- Connections – one* (Connection Charges apply)
- Common property or service easement - not applicable

Case 3 - a new pillar is requested at B or C and a suitable pillar exists at A or D

- Charge - Full Cost.
- Connections – one* (Connection Charges apply)
- Common property or service easement - not applicable

(*Note: 'Connections - one' means only one connection to the existing dwelling. Adjacent properties can connect to the pillar but only upon payment of the additional applicable fee to Horizon Power, except in case when Full Cost has been paid).

Example 2 - Two survey strata lots created in a survey strata plan

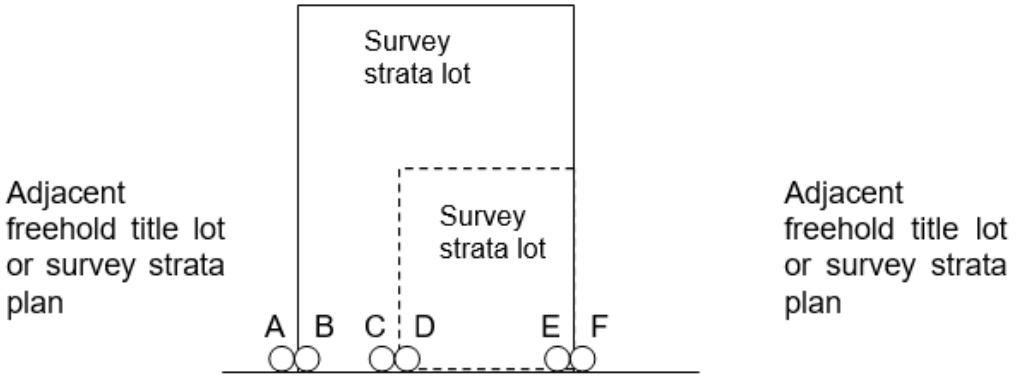


Figure 2

Case 1 - there is an existing pillar at A or F

- Charge – Fixed Cost
- Connections – two, one for each survey strata lot (Connection Charges apply)
- Common property or service easement – required

Case 2 - a new pillar is required at A, B, C, D, E or F (no existing pillar)

- Charge - Fixed Cost
- Connections – two, one for each survey strata lot (Connection Charges apply)
- Common property or service easement – required (except for C or D)

Case 3 – a new pillar is requested at C or D and suitable pillar exists at A or F

- Charge – Full Cost
- Connections – two, one for each survey strata lot (Connection Charges apply)
- Common property or service easement – not required

Case 4 – a new pillar is requested at B or E and suitable pillar exists at A or F respectively

- Charge – Full Cost
- Connections – two, one for each survey strata lot (Connection Charges apply)
- Common property or service easement – required

Example 3 - Three survey strata lots created in a survey strata plan

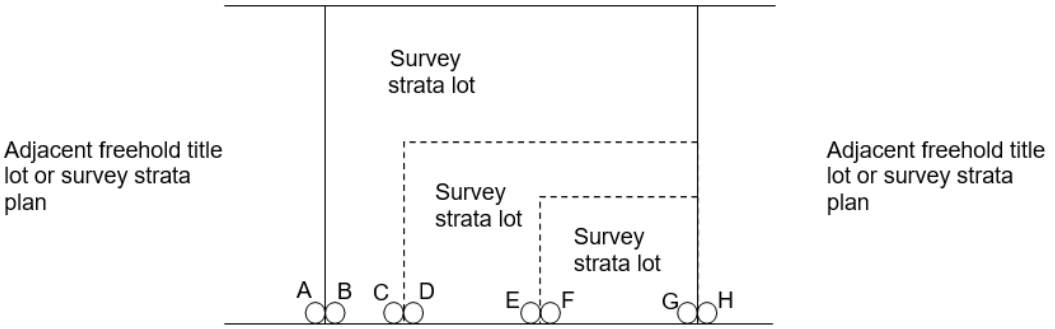


Figure 3

Case 1 - there is an existing pillar at A or H

- Charge - Fixed Cost
- Connections – one, MSB is required with sub-mains to each survey strata lot (Connection Charges apply)
- Common property or service easement – required

Case 2 - a new pillar is required at B, C, D, E, F, or G and no pillar exists at A or H

- Charge - Fixed Cost
- Connections – one, MSB is required with sub-mains to each survey strata lot (Connection Charges apply)
- Common property or service easement – required

Case 3 - a new pillar is requested at B or G and a suitable pillar exists at A or H respectively

- Charge – Full Cost
- Connections – one, MSB required with sub-mains to each survey strata lot (Connection Charges apply)
- Common property or service easement – required

Case 4 - new pillar required at C, D, E or F and pillar exists at A or H which has reached its maximum capacity

- Charge - Fixed Cost

  Connections – one, MSB required with sub-mains to each survey strata lot (Connection Charges apply)

- Common property or service easement – required

Case 5 - new pillar requested at C, D, E or F and pillar exists at B or G

- Not permitted as per WAER.

Example 4 - Two freehold title lots created

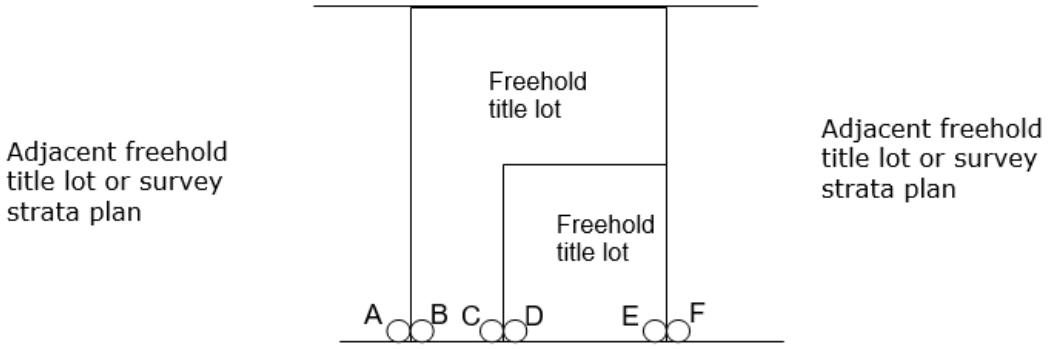


Figure 4

Case 1 - there is an existing pillar at A and F and no new pillar required

- Charge - Fixed Cost
- Connections – two, one for each lot (Connection Charges apply)
- Common property or service easement – not applicable

Case 2 - a new pillar is required at A, B, C, D, E or F and no pillar exists

- Charge - Fixed Cost
- Connections – two, one for each lot (Connection Charges apply)
- Common property or service easement – not applicable

Case 3 - there is an existing pillar at A and F and new pillar is required by the consumer at B or E respectively

- Charge – Full Cost
- Connections – two, one for each lot (Connection Charges apply)
- Common property or service easement – not applicable

Case 4 - there is an existing pillar at A but not at F and new pillar is required by the consumer at C, D, or E respectively

- Charge – Fixed Cost
- Connections – two, one for each lot (Connection Charges apply)
- Common property or service easement – not applicable

5.3 Common property requirements

Where a survey strata lot is created, common property must be established across the front boundary to ensure all lots can access the pillar with their consumer mains. This is because the Strata Titles Act only specifies an implied easement when a service exists.

The common property must be a minimum of one metre in width.

If the establishment of common property will prevent the subdivision from proceeding then, at Horizon Power's sole discretion, an easement may be created in lieu. The consumer is responsible for all costs associated with the creation of the easement.

The easement shall be a 136C service easement with the following notation:

"This easement is to allow connection of power to adjoining survey strata lots on this survey strata plan. Other services are permitted in this easement provided they do not interfere with the provision of power."

If consumer mains exist at the time of subdivision, then there will be an implied easement over them. In infrequent cases, the location of the existing pillar and the existence of consumer mains may mean that access is not required and hence no common property need be established. Appendix D gives examples of this. Note that Horizon Power recommends common property, or an easement is still created in these situations to minimise the risk of future consumer access disputes.

APPENDIX A - REVISION INFORMATION

Informative - for Horizon Power use only.

Horizon Power has endeavoured to provide standards of the highest quality and would appreciate notification if any errors are found or even queries raised.

Each Standard makes use of its own comment sheet that is maintained throughout the life of the standard, which lists all comments made by stakeholders regarding the standard.

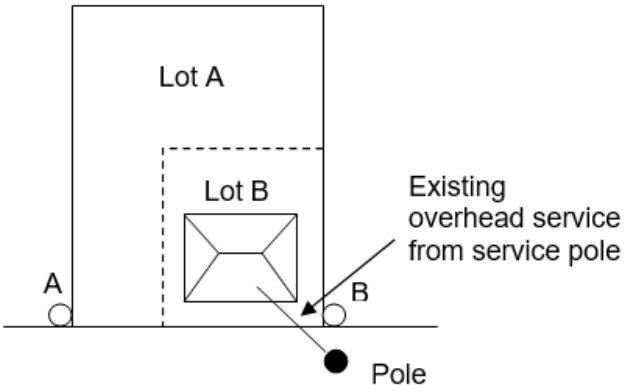
A comment sheet found in **DM#: 2766765** can be used to record any errors or queries found in or pertaining to this standard, which can then be addressed whenever the standard is reviewed.

Date	Rev No.	Notes
July 2009	1	First Issue
July 2009	1A	Reformat and minor changes to Section 2, 3.2, 5 – point 9, 6 – paragraph 3 & 4, and Appendix 1
January 2012	2	Reviewed and updated to align with WADCM and reformatted to incorporate HP's Corporate format
August 2012	3	Updated to clarify the responsibility for connection from pillar to and within the consumer's property
February 2015	4	Charges and timing of charges for lot sizes larger than 2,500 square metres clarified (clause 4.3). Document reformatted.
October 2017	5	Specific charges removed and replaced by reference to Horizon Power Charges. Additional charges for lot sizes larger than 2500 square metres removed. Connection charges included
25/05/2023	6	Reformate normative references and definitions, update to latest standards, remove impact statement

APPENDIX B - ILLUSTRATION OF SOME WA ELECTRICAL REQUIREMENTS

Case 1

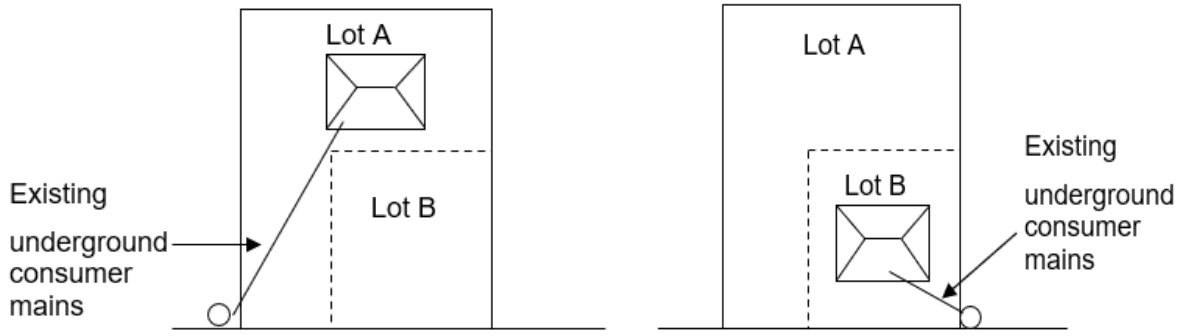
An existing freehold title lot is subdivided into a survey strata plan with two survey strata lots. There is one dwelling with existing overhead supply.



- The installation of pillar on survey strata Lot A or Lot B requires the existing overhead service to Lot B to be removed and the dwelling on Lot B to be connected to same pillar as Lot A.
- The connection of Lot A to pillar A or pillar B requires the existing overhead service to Lot B to be removed and the dwelling on Lot B to be connected to same pillar as Lot A.

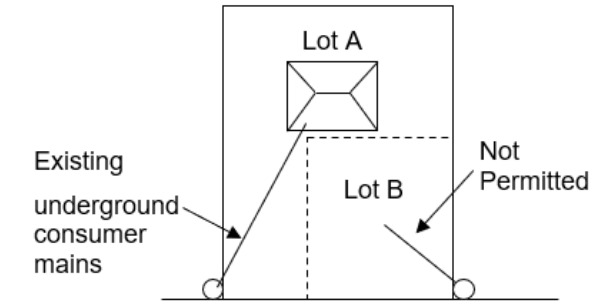
Case 2

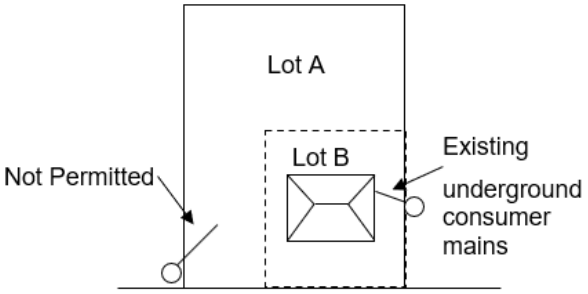
An existing freehold title lot is subdivided into a survey strata plan with two survey strata lots. There is one dwelling with an existing underground supply. These sample cases show situations where an additional pillar cannot be installed on either of the new survey strata lots.

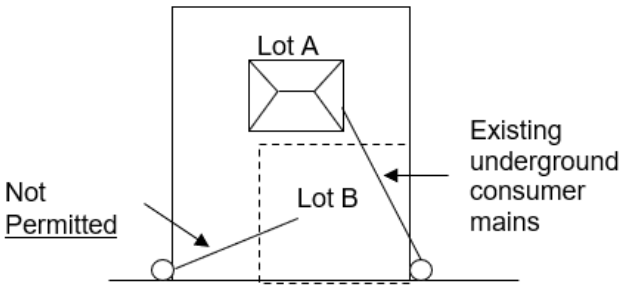


Case 3

An existing freehold title lot is subdivided into a survey strata plan with two survey strata lots. There is one dwelling with an existing underground supply. These sample cases show where new connections cannot be made to an adjacent freehold title lot or adjacent survey strata plan.

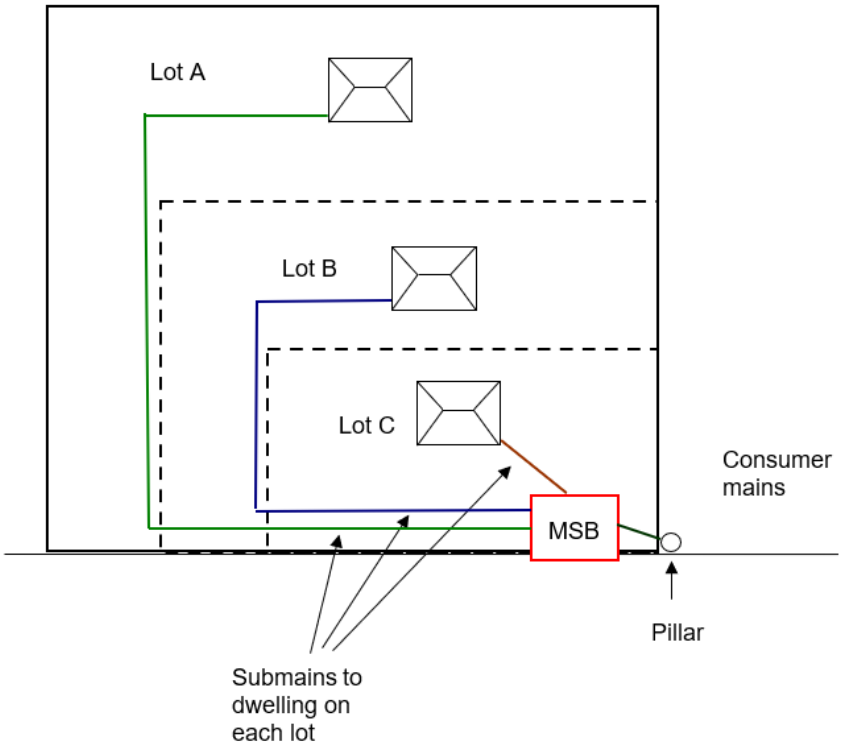






Case 4

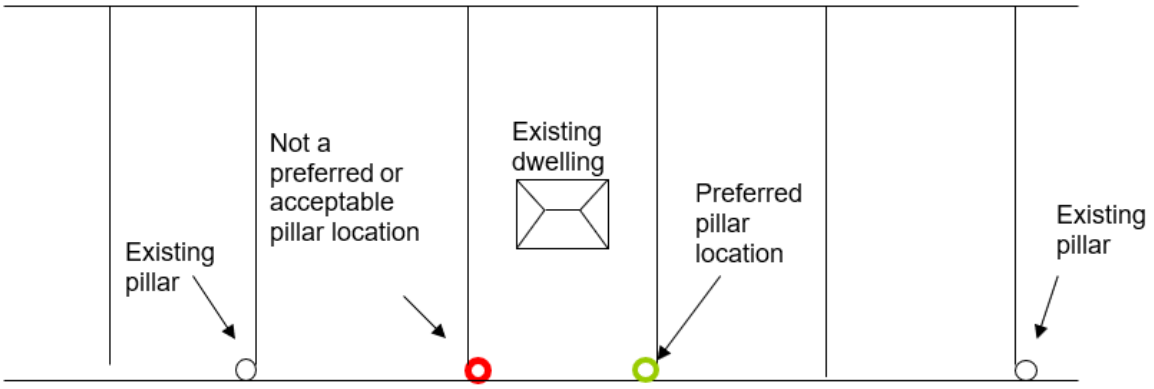
An existing freehold title lot is subdivided into survey strata plan with three or more survey strata lots. A main switchboard (MSB) is required in order to prevent more than two consumer mains being connected to the pillar from any one survey strata plan or any one freehold title lot.



APPENDIX C: - ILLUSTRATION OF PREFERRED LOCATIONS

Case 1

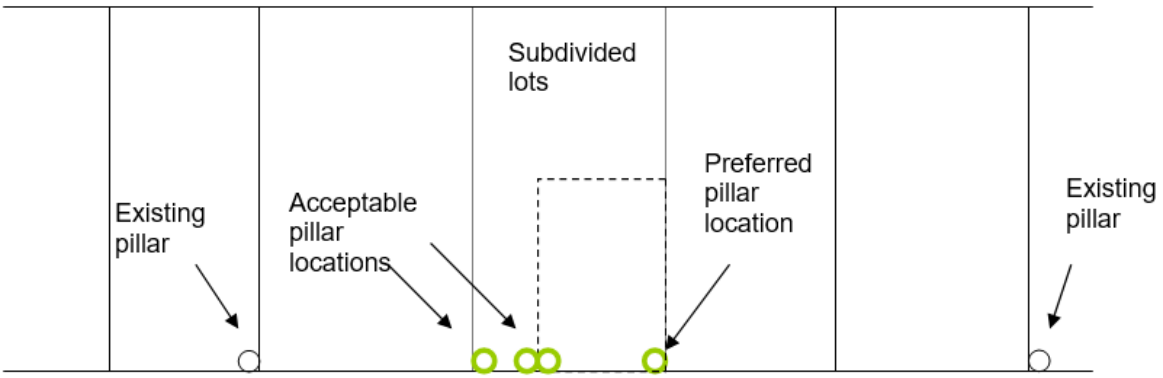
A single existing dwelling is converting to underground.



Pillars are located at every second lot boundary in order to minimise network costs by having at least two connections per pillar.

Case 2

Two survey strata lots are created in existing freehold title lot.



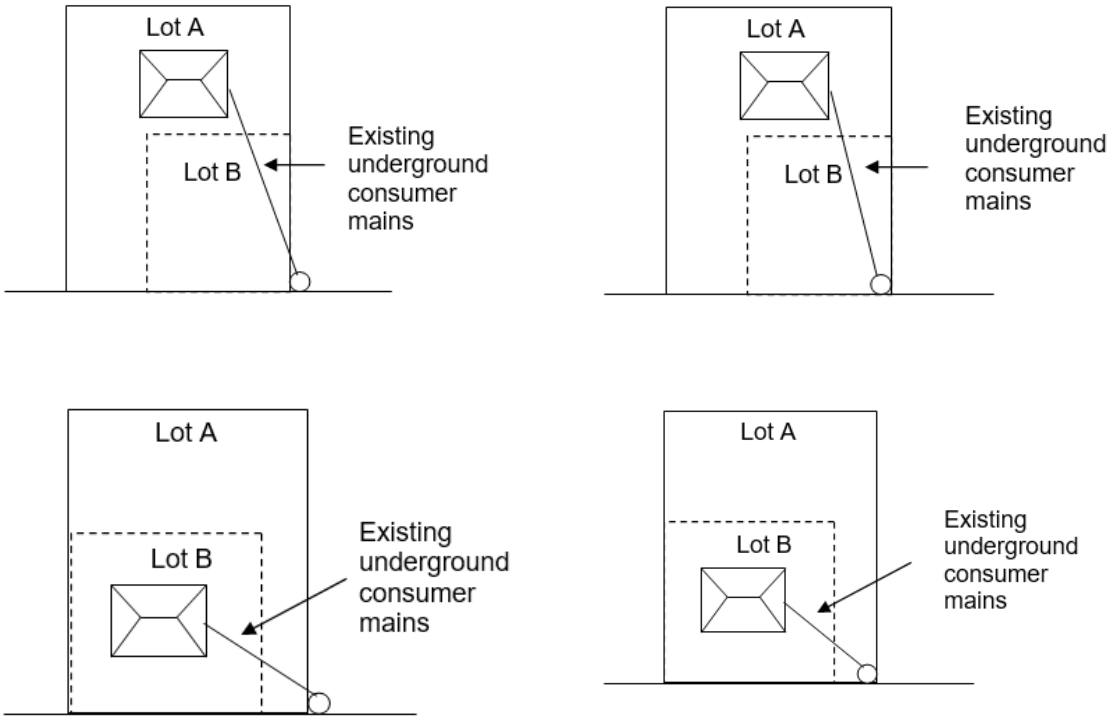
The preferred pillar location maximises the opportunity to minimise costs and maintain the Pole to Pillar rate as low as possible. However, the acceptable locations allow the minimum requirement of two connections per pillar.

APPENDIX D: - ILLUSTRATION WHERE COMMON PROPERTY OR 136C EASEMENT IS NOT REQUIRED

As stated in Section 7 Common Property Requirements, common property or an easement must be established across survey strata lots to ensure all lots can access the pillar with their consumer mains.

In some instances, the location of the existing pillar and the existence of consumer mains may mean that access is not required for the new lot and hence no common property need be established.

The Strata Title Act Provides implied easements for the existing consumer mains in these situations. The following drawings indicate some such instances.



APPENDIX E: - PERMISSIBLE NUMBER OF CONNECTIONS TO A PILLAR

Connection Policy

A maximum of two standard supply connections per single green lot may be made to an individual service pillar where the maximum demand of the pillar permits. Where an existing freehold title lot is subdivided into three or more survey strata lots or survey plan then a main switchboard (MSB) shall be supplied and installed to ensure that the connection capacity of the pillar is not exceeded by the connection of more than two consumer mains from any one strata lot or any one freehold title lot.

Pillar Location

Horizon Power will provide only one point of supply to an individual freehold lot, Crown land title or strata lot unless unusual circumstances justify more than one and safety concerns are satisfied.
A service pillar is a distribution enclosure owned by Horizon Power installed on a consumer's property, providing a point of supply (connection point) to the electricity distribution network for the consumer's electrical installation.
Horizon Power will determine the final location of all pillars. As a general rule the centre of the pillar should be within an area not more than 500 mm from the front boundary and from the common boundary of the adjacent property so as to allow access to the pillar from both properties. The consumer may choose to negotiate the installation of the pillar in an alternative location however in such cases the full cost of the pillar installation shall be borne by the consumer and access, or easements provided for any affected consumers.

Pillar Capacity

For the majority of residential connections a mini pillar will be installed as described above to service two adjacent residential lots. For group housing lots (building strata or survey strata) with more than four dwelling units or where loads exceed standard supply an uni-pillar may be provided.
Pillars are capable of accommodating up to four (standard supply) sets of consumer main terminations via a multi-point terminal block provided within the pillar. For safety reasons and to ensure the continuance of supply to all consumers only one wire of a consumer mains cable shall be terminated in each tunnel of the terminal block. Doubling of active conductors in one tunnel is not permitted except for street light circuits.

Developer's Responsibility

The developer is responsible for:

- Ensuring that the electricity network for the development is designed and constructed to deliver a reliable and quality electricity supply for end users of electricity for the life of the asset. The life expectancy of the asset is 50 years.
- The provision of services including an electricity service to each individual lot within the development;
- Installing a site main switchboard (MSB) with adequate electrical capacity to accommodate and accept all consumer connections for the development where three or more survey strata lots have been created from a single freehold title;

- Creating common property or easements to allow consumer mains to be connected to the pillar and or sub-mains to be connected to the site main switchboard. In doing so it should be noted that cables shall run parallel to or perpendicular to the property boundary and shall be within 1.0 m of those boundaries;
- Converting any portion of the development that has an existing overhead connection to underground;
- Ensuring that the development has a single point of supply unless prior formal approval has been granted by Horizon Power for an alternative arrangement.

Obligations and Clearances

The developer is also responsible for ensuring that all statutory requirements are completed and all relevant clearances are obtaining from the relevant agencies including Western Australian Planning Commission and Horizon Power prior to transferring titles to the purchaser. Additionally, the developer is responsible for formally advising all affected parties where common property or easements have been created and where required to facilitate the notation of such on relevant title deeds. All costs associated with these undertakings shall be borne by the developer.

Policy Examples

The following examples are based on Section 3 of Western Australian Electrical Requirements [9].