

Reading Ausgrid Plans

COMN0119

1 Property Lines

“property line” (PL), sometimes referred to as “building line” (BL), is the standard dimensioning reference point on all Ausgrid plans and represents property boundaries.

Typically the PL is the boundary between private property and local council’s footpath area or nature reserve. Most residential fences and office blocks are erected along the PL.

“kerb line” (KL) is less frequently referred to on Ausgrid plans, and where used will be identified clearly as KL.

Numbers listed within property boundaries should correspond to recognised “street numbers” (refer to figure 1).



Figure 1

2 Datum References

“datum references” identify distances (in metres) from significant features (such as corners of property boundaries) to reference points such as Ausgrid assets (eg: “conduits”, “cables”, “joints”) (refer to figure 2).

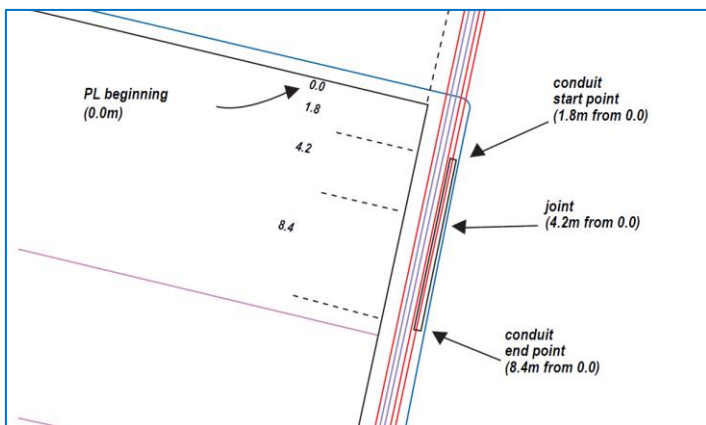


Figure 2

3 Cross Sections

A “cross sections” displayed on Ausgrid plans detail information relating to the relative position (ie: distance from the “property line”, and the depth of “cover”) of Ausgrid assets.

“Cover” is a term used to refer to the depth of cables underground.

A “cross section” leader line will be drawn indicating the location of the displayed “cable” or “conduit” information on Ausgrid plans.

The distance from “property line” (in metres) and depth of “cover” (in metres) references are displayed as; ie: 0.6 metres from PL and 0.5 metres underground.

Where distance and cover are not recorded, they will be clearly marked as “NR”.

NOTE: Distance and cover where indicated may be different to the actual position of the cables (eg: fill may have been placed at site that has changed the ground level).

“PL” distance shown in cross sections is an indicative measure to the centre of the trench allocation from the adjacent property line.

On some plans the “cross sections” may also be shown with a specific number (eg: HR1). This number will match with a cross section detail found in the border of the plot or on a separate plot page (refer to figures 3 and 4).

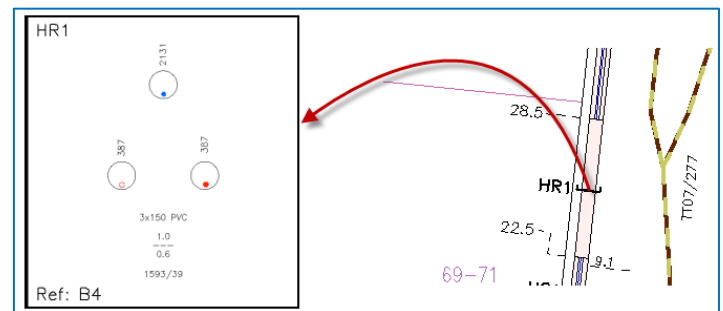


Figure 3

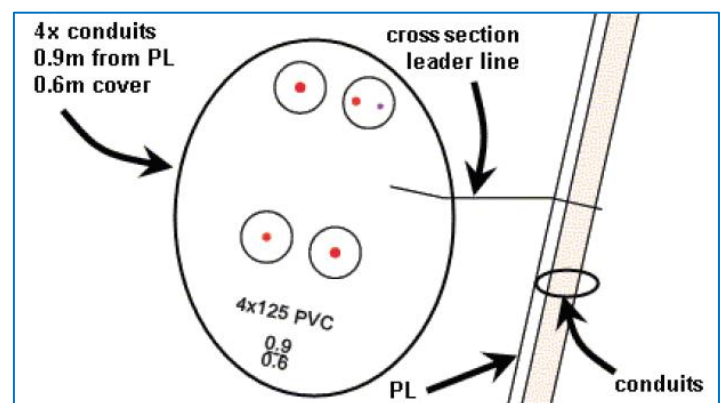


Figure 4

4 Cable Joints and Joint Reports

“cable joints” (numbered individually) and “joint reports” (attached to Ausgrid plans) can provide information relating to the relative position of Ausgrid assets, distance from the “property line” (in metres), and the depth of “cover” (in metres) (refer to figures 5 and 6).

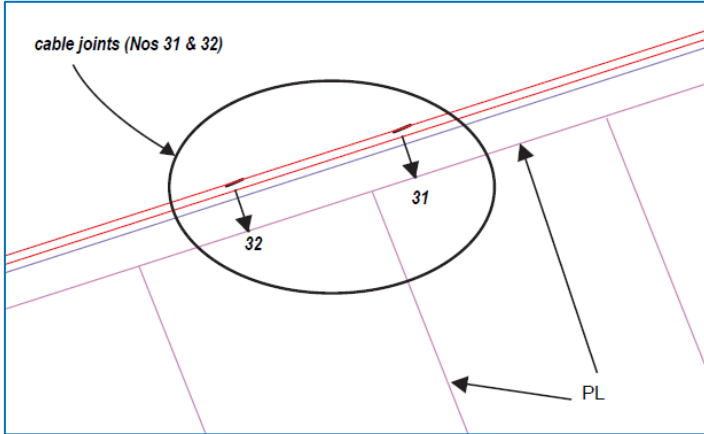


Figure 5

JOINT DETAIL REPORT			
No.	Bk-Pg	PI/Cvt	Joint Location
Map: 31	LE912 524-24	1.14/0.69	61.7 E of Pearl Lane EPL
32	524-24	1.14/0.69	57.6 E of Pearl Lane EPL

joint location
(61.7m east of Pearl Lane East PL)

joint position
(1.14m from PL, 0.69 cover)

Figure 6

5 Cross Section Detail Boxes

“cross section” detail boxes on the sides of an Ausgrid plan are used when there is insufficient room to display “cable” and/or “conduit” information on the Ausgrid plan.

Ausgrid plans (refer to figure 7) are bordered by numeric identifiers along the top and bottom borders and alpha identifiers along the side borders.

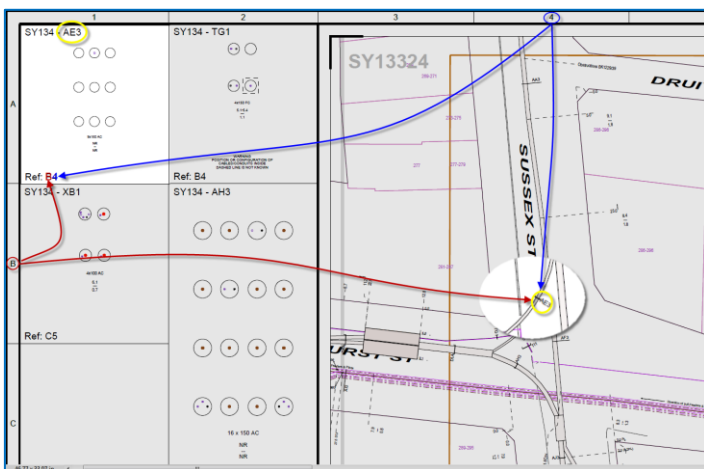


Figure 7

“Cross section” leader line and annotation is drawn on the Ausgrid plan for a reference to “cable” and/or “conduit” information in the “cross section” detail boxes.

6 Pits

Underground “pits” are numbered on Ausgrid plans, positioned relative to the “property line” (PL), and can be found on either the footpath (nature strip) or the road (refer figure 8).

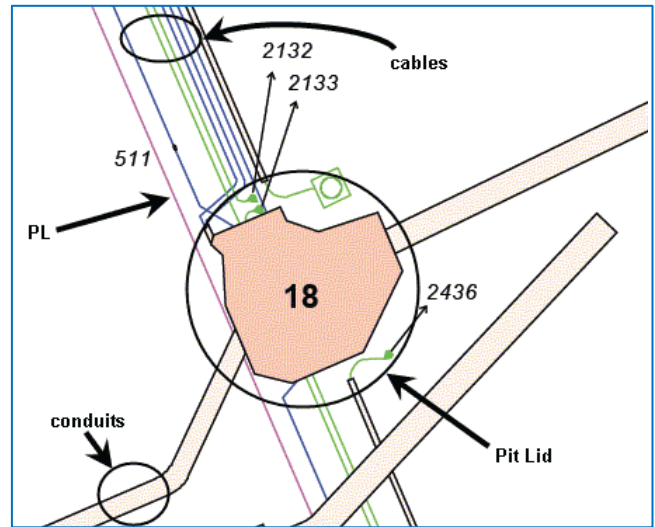


Figure 8

7 Proposal Areas

There are areas where underground work may have been issued for construction by Ausgrid, but details are not yet completely displayed on Ausgrid plans. In such cases a shaded “proposal area” is displayed on the Ausgrid plan, indicating underground work may have commenced in the vicinity but is not yet complete.

In some instances cables and other assets within the shaded “proposal area” will be shown in a bright magenta colour, indicating that the proposed new work displayed within the shaded area is based on initial planning documentation (refer to figure 9).

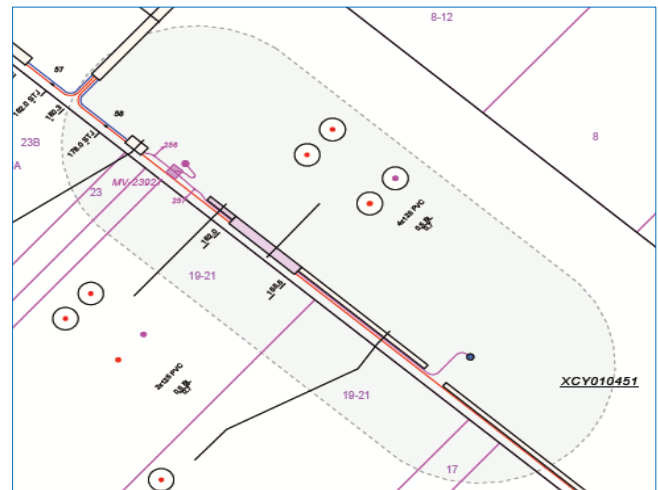


Figure 9

10 “Shifting Land Base” on Ausgrid Distribution and Transmission Plans

In some instances, the plans supplied may indicate road or property outlines that appear to have shifted in relation to the Ausgrid assets displayed (refer to figure 12).

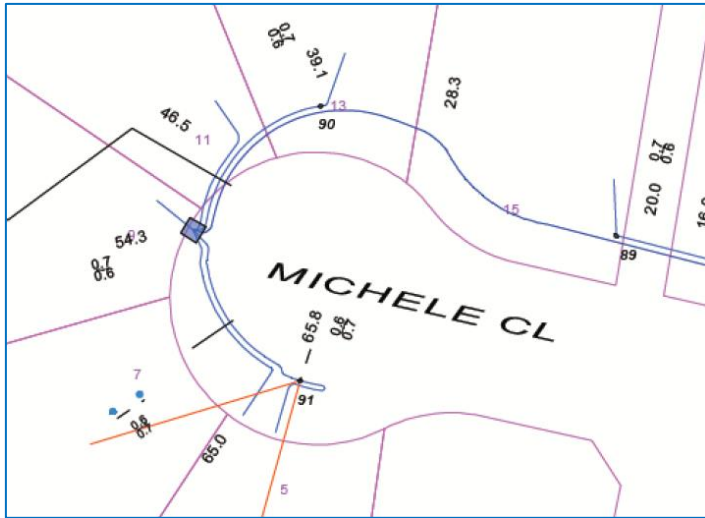


Figure 12

In such instances, always refer to the “property line” (in metres) and depth of “cover” (in metres) references displayed on the nearest relevant “cross sections” to obtain Ausgrid asset location information (see Reading Ausgrid Plans, clause 3, Cross Sections for more detail).

11 “Underground Earthing Infrastructure”

In some instances, the plans supplied may also indicate the presence of underground earthing infrastructure associated with underground and/or overhead Ausgrid assets.

The “Earth Point” symbol (refer to figure 13) will be shown on plans to minimize risk of disturbance or damage to any Ausgrid underground earthing infrastructure in the vicinity.



Figure 13

12 Aluminium Single Core Cables – Specific Excavation Hazard

Certain cables specifically illustrated in figures 14 and 15 below are susceptible to deterioration that may pose a risk of electric shock when working near them, particularly in damp ground.

For all work on or near Ausgrid’s network (where workers have been trained in Ausgrid’s “Work Near Underground Power Lines” course) the work practices outlined in NS199 “Safe Electrical Work on Low Voltage Underground Assets” Section 7 for work near low voltage aluminium single core cable must be adhered to.

All other persons must contact Ausgrid before excavating near these cables to arrange for appropriate precautions to be applied.

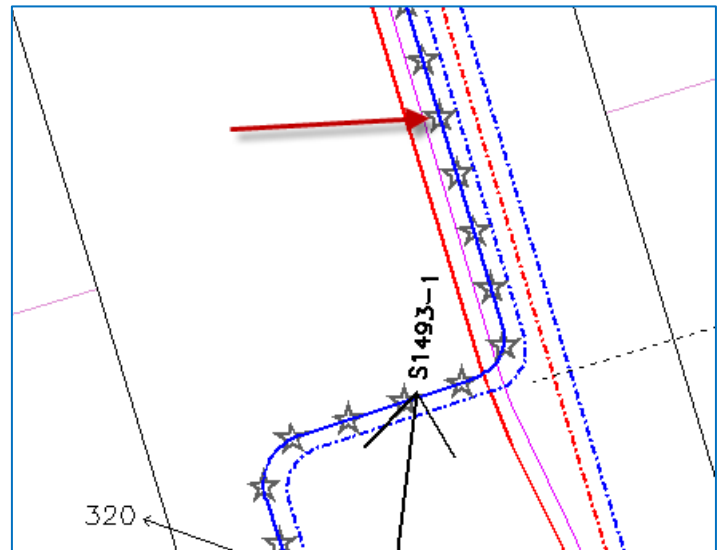


Figure 14

The “star” symbols over the cable indicate that it is susceptible to this deterioration.

Cables that are in duct lines have this symbology covered so an at-risk cable is indicated only within a cross section by a “#” appended to its cable code as illustrated below.

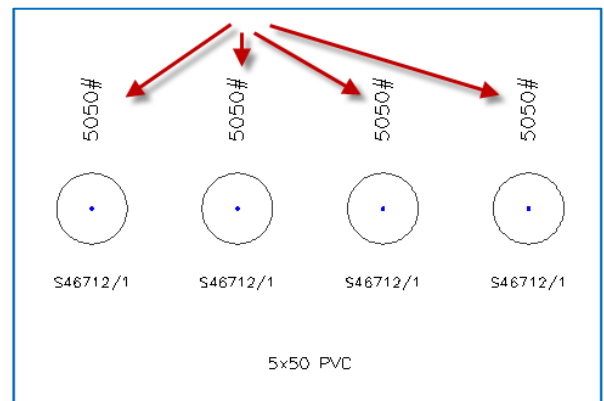


Figure 15

Ausgrid Underground Map Symbology

NOTE: Please note symbology is subject to change. This document provides underground (UG) related objects only. In cases where you are unsure of the data presented, please contact Ausgrid's DBYD for clarification *prior* to any planning/excavation works.

Object		Symbol
HV Cable	HV (High Voltage) 5kV-22kV	In Service
		Out of Service
	TR (Transmission) 33kV – 330kV	In Service
		Out of Service
LV Cable (Low Voltage)	Mains (Dark blue)	In Service
		Out of Service
		In Service Risk
	Street Lighting (Green) Note: Mains Connector also used as Street Lighting (dark blue)	In Service
	Out of Service 	
	Service (Light blue)	In Service
		Out of Service
		In Service Risk
	Unknown	
Auxiliary Cable	Data	
	Comms	In Service
	Telco	
	Protection	Out of Service
	Fibre Optic	
	Pilot	

Object	Symbol
HV UG Joint	Straight Through, Parallel Branch or Tee
	Switchgear, End Box or Transition
HV UG Termination	Sealed end
	Pot End
	UGOH
HV Cable Repair	5kV-330kV (HV & TR)
LV UG Joint	Straight Through, Parallel Branch, Tee or Service
	Network Box
LV UG Termination	Switchgear, End Box or Transition
	Sealed end
	Pot End
	UGOH

Object	Symbol
Auxiliary Fix	Pilot Window
Auxiliary Joint	Straight Through, Parallel Branch or Tee
Auxiliary Termination	UGOH or Pole Termination
	Pilot
	UGOP-ADSS Termination
Cable Pit (Can be various shapes)	Auxiliary
	Distribution
	Transmission
LV Pillar	Distribution
	Switch
	SL Pillar
	SL Cubicle
	Fargo
	Private
LV Auxiliary Pillar	All Types
LV Link Box	2 Way & 4 Way

Ausgrid Underground Map Symboly

Object	Symbol	
Substation	Cottage & Chamber	
	Ground & Subtransmission Ground	
	Kiosk & Subtransmission Kiosk	
	Zone	
	Transmission	
	Bulk Supply Point	
	Metering Station & Subtransmission Metering	
	Switching Station	Isolating & Earth
Other – OH & UG		
Ring Main Unit		
Earthing	UG Earth Cable	
	Earth Point	
Frequency Marker	Distribution and Transmission Power Ball or Disc Type Marker	
	Auxiliary Communications Ball or Disc Type Marker	
	Distribution and Transmission Power Tape Marker	
	Auxiliary Communications Tape Marker	

Object	Symbol	
Trench	Centreline	
Conduit (Can be various shapes)	Coverage (Distribution)	
	Coverage (Transmission)	
	Coverage (Underbore – cross hatched)	
Cross Section	Marker (Staple)	
	User Line	
Measurement Point		
Miscellaneous Point Feature	Cable Clamp	
	Cable Core split (Trifurcation)	
	Cable Marker	
	Electrolysis Point	
	End Of Pipe	
	Frequency Injection Unit	
	Gas Charger	
	Gas Control Cabinet	
	Gas Control Kiosk	
	Gas Control Point	
Gas Control Valve		
Gatic Pit lid		

Object	Symbol	
Miscellaneous Point Feature	Inspection Box	
	Link point	
	Oil Control Valve	
	Oil Gauge	
	Oil Tank	
	Sniffer Box	
	Thermocouple Box	
	Transmission Cable Marker	
	Transmission Link Point	
Miscellaneous Linear Feature	All Geometries	
Map Note	Location & Text	Text about note
Dimension Feature	Placement Change	