

Clearances advice

Disclaimer

Below you will find guidance for clearance requirements around Western Power assets. You are responsible for determining the relevance and applicability of that material based on your individual circumstances.

Standards and electricity supply publications are revised periodically. This information may not be up to date and users should make their own inquiries.

Asset	Issue	Clearance Requirements	References
Overhead Assets (Poles and Power Lines)	Overhead powerlines - Danger Zones	<p>Within the Occupational Safety and Health Regulations 1996 reg. 3.64, a danger zone means anywhere that is within:</p> <ul style="list-style-type: none"> • 0.5 metres of a live insulated overhead powerline or aerial bundled conductor line of a voltage of not more than 1,000 volts • 1.0 metre of a live uninsulated overhead powerline of a voltage of not more than 1,000 volts • 3.0 metres of a live overhead powerline whether insulated or not, of a voltage exceeding 1,000 volts but not more than 33,000 volts, or • 6.0 metres of a live overhead powerline whether insulated or not, of a voltage exceeding 33,000 volts 	http://www.westernpower.com.au/documents/LR_working_near_electricity_information_sheet_27072012.pdf
	Clearances for overhead powerlines and structures	<p>Clearance requirements will vary depending on:</p> <ul style="list-style-type: none"> • Whether parts of the structure are accessible to persons or not • Direction of the clearance requirement from the structure 	Western Australian Distribution Connections Manual 2015, Section 12.4.6.

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	New overhead lines near vegetation	<p>EnergySafety has published a document entitled, "Guidelines for the Management of Vegetation near Powerlines". This document provides the minimum clearance requirements between conductors and vegetation (Table 1).</p> <p>While these clearances are the minimum requirement, further clearances of up to ten (10) metres (the Management Zone) either side of the proposed pole location/line route should be assessed and all trees and saplings with the potential to grow to become large trees within the Management Zone should be removed prior to construction.</p>	Vegetation Clearances for the Construction of Overhead Powerlines (Western Power Standard - Internal Document - DM#9288088)
	Customer's Overhead Service Cables	<p>The service cable must not cross over or enter a hazardous zone(s) of swimming pool, spas or water feature as defined by AS/NZS 3000.</p> <p>Maintain prescribed clearances from and over:</p> <ul style="list-style-type: none"> • Trafficable areas (refer to table 3.7 AS/NZS 7000) • Structures, roofs, verandas, sheds or garden/household equipment • Vegetation • Other utility services including telecommunication conductors and equipment 	Western Australian Distribution Connections Manual 2015, Section 12.4.6
	Service cables crossing an adjoining property	An overhead service cable shall not cross over or into an adjoining property unless a suitable easement is obtained by the customer over such property or it is for the purposes of attachment to a common use consumer pole located on a common boundary	Guidelines for placement of power poles within road reserves in built up areas

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	Roadside power poles and stays	Poles and stays should not be located within 1m of an existing or planned driveway crossover.	Guidelines for placement of power poles within road reserves in built up areas
Underground Cables	Approach distances	<p>Recommended minimum approach distance near underground cables:</p> <ul style="list-style-type: none"> • Up to and including 1,000V – 30cm for power tool or plant • 1,000V up to and including 33kV – 50cm for power tool or plant • Greater than 33kV up to and including 132kV – 3m for power tool or plant <p>In all instances described above, all persons are to avoid contact, including when using non-powered hand tools.</p>	http://www.westernpower.com.au/documents/LR_working_near_electricity_information_sheet_27072012.pdf
Pillars	Pillar exclusion zones	<ul style="list-style-type: none"> • Location shall be on the street boundary of the front lot with the principal street frontage adjacent to, but not within the access leg if it is 1.5 metres or less • A radial area extending 500 mm in the horizontal plain from the centre of the pillar or pit and uninhibited in the vertical plain. • Other utility service shall not pass through or be located within the exclusion zone • A 500 mm separation and service exclusion zone shall be created and maintained around low voltage earthing electrodes from other services including water services, sanitary drainage and gas. This zone shall be extended to 600 mm for stormwater drainage services 	<p>Western Australian Distribution Connections Manual 2015, Section 12.5.5</p> <p>Underground Distribution Schemes, Section 5.3.5.1</p>

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District Substations (Transformers and HV Switchgear)	Excavation near transformers	No excavation work greater than 300 mm in depth within three metres of the substation or transformer enclosure	Western Australian Distribution Connections Manual 2015, Section 12.5.5.2
	Fire clearances requirements	Commercial areas: 6 metres in all directions Residential areas: 2 metres in all directions If the fire risk zone encroaches into an adjoining property, then a two hour fire rated wall must be constructed	Western Australian Distribution Connections Manual 2015, Section 14.4.3 Section 5 – Substation Fire Protection Requirements
	Fire hydrant installations	Australian Standard 2419.1-2005 – “Fire Hydrant Installations”, requires that fire hydrants and brigade booster assemblies be located in a position at least 10 metres from any high voltage main electrical distribution equipment including transformers and switchboards.	Western Australian Distribution Connections Manual 2015, Section 14.4.4.2
	Separation from petroleum and gas installations	As a guide, based on conservative worse case scenarios, a minimum clearance of 8m shall be provided from any Network Operator electrical distribution equipment to a customer’s commercial installation containing petroleum/gas storage or dispensing facilities	Western Australian Distribution Connections Manual 2015, Section 14.4.4.3
	Substation Screening	The outward opening of the doors shall be unobstructed with no physical barriers within a two metre radius of an opened door.	Western Australian Distribution Connections Manual 2015, Section 14.5.4