

Technical Bulletin

TB 0294 – 22kV Distribution Supply Strategy for the Western Sydney Aerotropolis Area

Purpose

This bulletin is to inform Accredited Service Providers (ASP's) of the strategy to establish a 22kV distribution network in the Western Sydney Aerotropolis Area.

Background

Endeavour Energy has made a strategic decision to adopt 22kV as the supply voltage for the distribution network in the Western Sydney Aerotropolis Growth Area. This area is shown in Diagram 1 below (pale blue area) and adjoins the previously announced 22kV area of the Oakdale West Industrial precinct (pink area).

As the network develops in the Aerotropolis Endeavour Energy will acquire the necessary zone substations to supply the future anticipated customer loads.

Initial 22kV supply area

From information received, it is anticipated development will occur in several areas simultaneously within the Aerotropolis to coincide with the opening of the airport in 2026. These being the Aerotropolis core, the Badgerys Creek and Kemps Creek precincts, north of Elizabeth Drive (Elizabeth Drive Industrial), the Northern Gateway precinct (Science Park) and the southern portion of the agribusiness precinct. These areas are shown in figure two.

Where the new 22kV network interfaces with the surrounding 11kV network it will be necessary to install permanent 11kV/22kV auto transformers to maintain supply security standards. Additional land tenure, in the form of padmount easements will be required for these auto transformers.

Network Operation

All new assets installed within the areas are to be rated at 22kV. In some instances, the transformers

may need to be 11kV rated until the 22kV network is established.

As the proposed 22kV zone substations are commissioned the supply voltage in the local area will become 22kV and with minimal conversion work previously established network will be retrofitted and energised at 22kV.

Actions

Where it is reasonable to do so, applications in progress may be rescoped for 22kV cable and switchgear via an alteration in the Method of Supply provided by Network Connections and forwarded to the relevant ASP/designer.

All new applications within the boundaries indicated below will be answered based on the ultimate supply voltage being 22kV. Therefore, all proposed underground HV cable and substation switchgear will be scoped as 22kV and where necessary transformers scoped as 11kV. As required these transformers will be replaced with 22kV transformers as part of an Endeavour Energy conversion project.

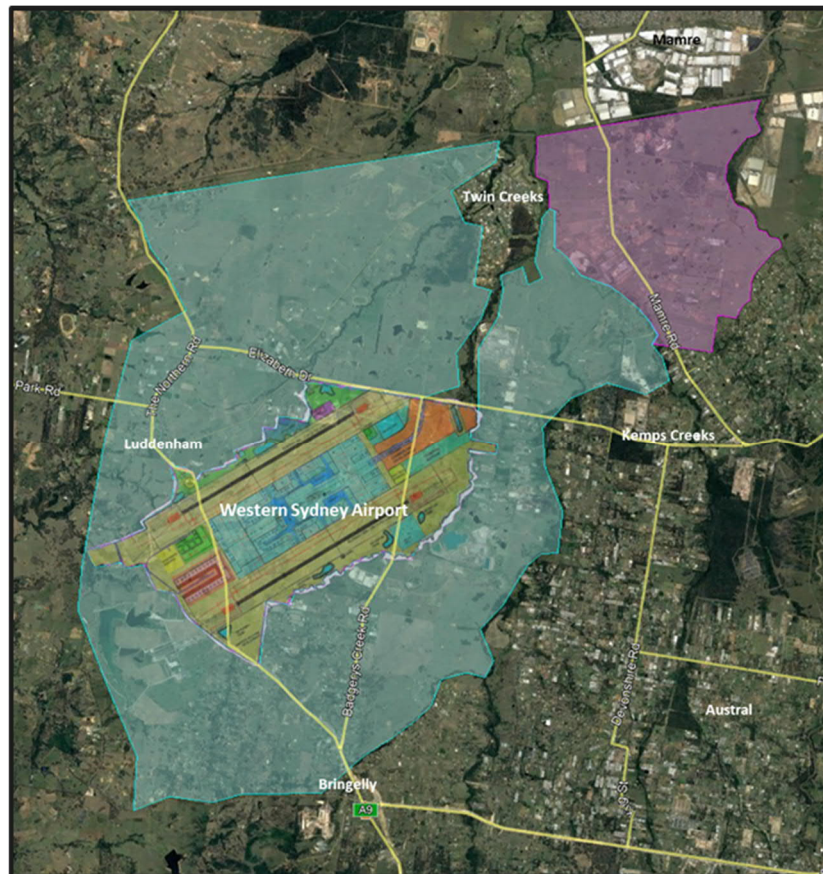


Figure 1 – Western Sydney Aerotropolis Growth Area 22kV supply area

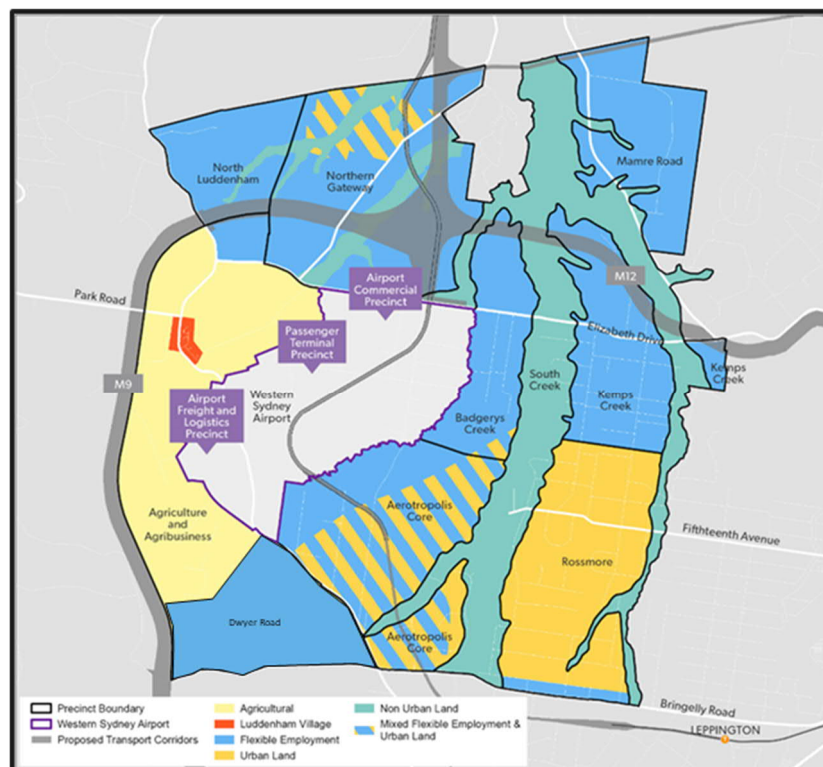


Figure 2 – Western Sydney Aerotropolis Growth area Precinct map