



## Network Standard Advice

**No. 1620** 11/07/2011

Doc. Ref. Network Standard NS 135

**TO: Customers, Service Providers and Ausgrid Staff.**

### **Amendments to Ausgrid's Network Standard NS 135, *Specification for Construction of Sub- Transmission Lines***

#### **Introduction**

This Network Standard Advice (NSA) amends Network Standard (NS) 135, Specification for Construction of Sub-Transmission Lines, which will be updated.

This amendment includes re-branding of the document to Ausgrid and in addition clarifies

- Crossings of Navigable Waterways, Sect. 11.1.2
- Clearances, Sect. 11.3.
- Foundation Design,, Sect. 11.14.
- Poles, Sect 13.5.
- Design Documentation, Sect 14.

Throughout the standard references to ENA C(B)1 / AS 7000 have been replaced with AS/NZS 7000.

Note: Current network standards, with NSAs on Ausgrid's internet site at [www.ausgrid.com.au](http://www.ausgrid.com.au).

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#### **Section 11.1.2 Crossings of Navigable Waterways**

Added the following after the first paragraph,

The assessment of waterway crossing risks as required by the Code shall be undertaken in accordance with NEG OH14.

Also refer to NS 220 Section 10.6

#### **Section 11.3 Clearances**

The first four paragraphs deleted and replaced with:

Clearances from ground, structures and vegetation shall be in accordance with NS 220 Section 10.

It should be noted that whilst clearances specified in NS 220 are based on AS/NZS 7000 the ground clearance values specified in NS 220 Section 10 are more stringent.

### Section 11.14 Foundation Design

Paragraphs 2 and 3 replaced with:

Pole embedment depths shall be as indicated in NS 220 Sections 6.2 & 6.3.

See AS/NZS 7000 for details of the Brinch-Hansen foundation design method and descriptions of soil type properties referred to in NS 220 Sections 6.2 & 6.3..

### Section 13.5 Poles

The first paragraph replaced with the following:

Pole types should be chosen to suit the situation as outlined in the following table:

Type of Pole	Situation
“Regal” species (non CCA) timber	Normally most appropriate for developed urban areas where spans are shorter to accommodate lower voltage underbuild, narrow footpaths, lower tensions and step and touch potential hazards
CCA timber	Has larger butt sizes and is more conductive than non CCA Regal species – more suited to locations where footpath space is not as critical and where step and touch potential hazards do not exist
Steel or spun-reinforced, pre-stressed concrete	These poles are generally higher strength and length than timber and are generally preferred in non-urban or non-street locations where longer spans and higher tensions are more appropriate
Underground to overhead (UGOH)	Shall be either concrete or steel

In all cases special circumstances may mitigate against the preferred option indicated above therefore details shall be determined on a project by project basis and specified in the Design Brief/Information.

### Section 14 Design Documentation

After the 5<sup>th</sup> bullet point the following added:

- ◆ Overhead Design Electronic Files – To assist with assessing designs, the relevant overhead design files (from the overhead line design software package used), and digital terrain survey file should be submitted along with the drawings etc discussed above.