

APPENDIX 3

Extracts from the New Zealand Electrical Code of Practice For Electrical Safe Distances (NZECP 34:2001)

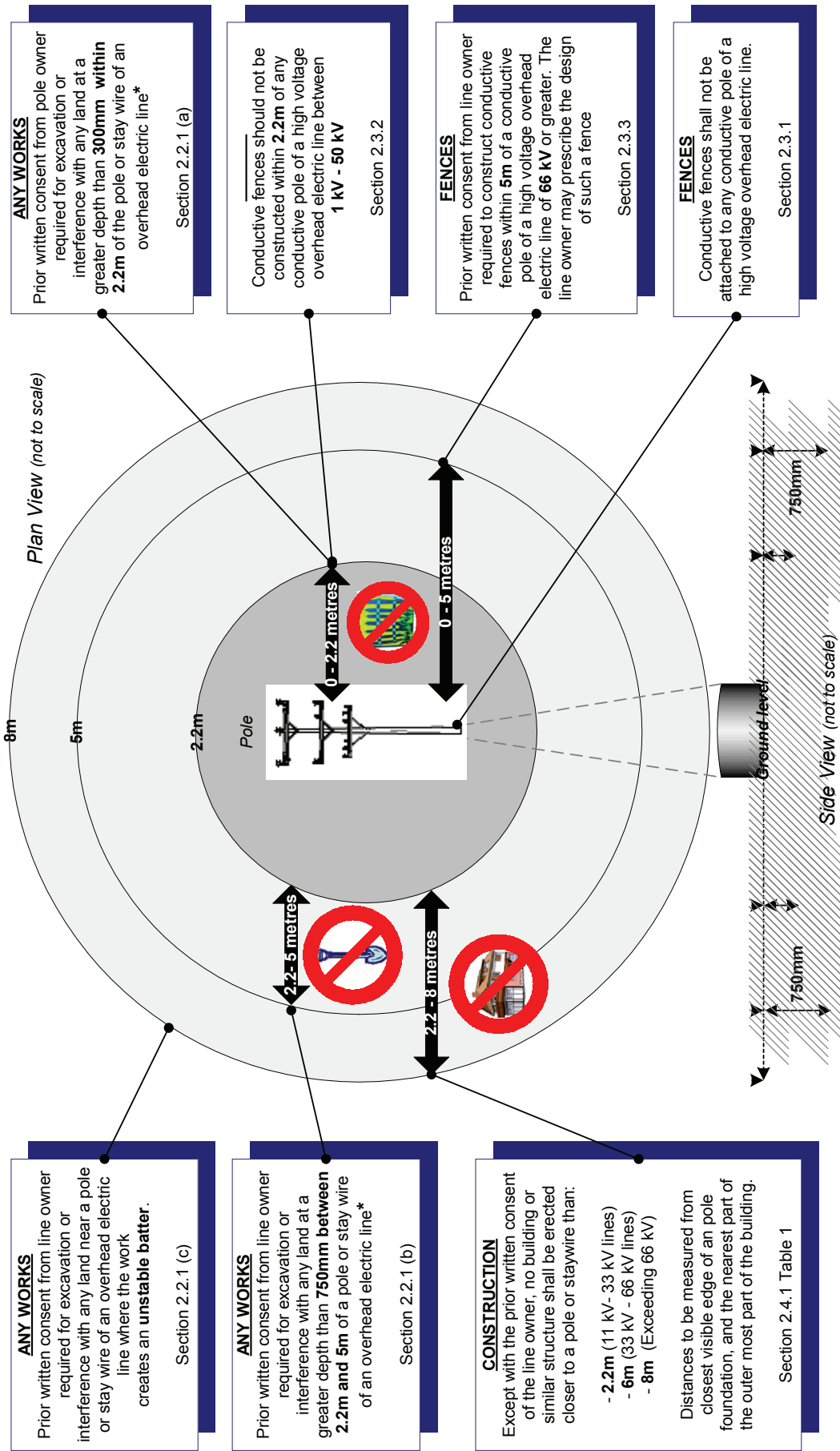
SECTION 2

Minimum safe Distances for Excavation and Construction near overhead Electric Line Supports

Table 1 Minimum safe distances between buildings and overhead electric line support structures.

Circuit Voltage	Pole	Tower (pylon)
11 kV to 33 kV	2m	6m
Exceeding 33 kV to 66 kV	6m	9m
Exceeding 66 kV	8m	12m

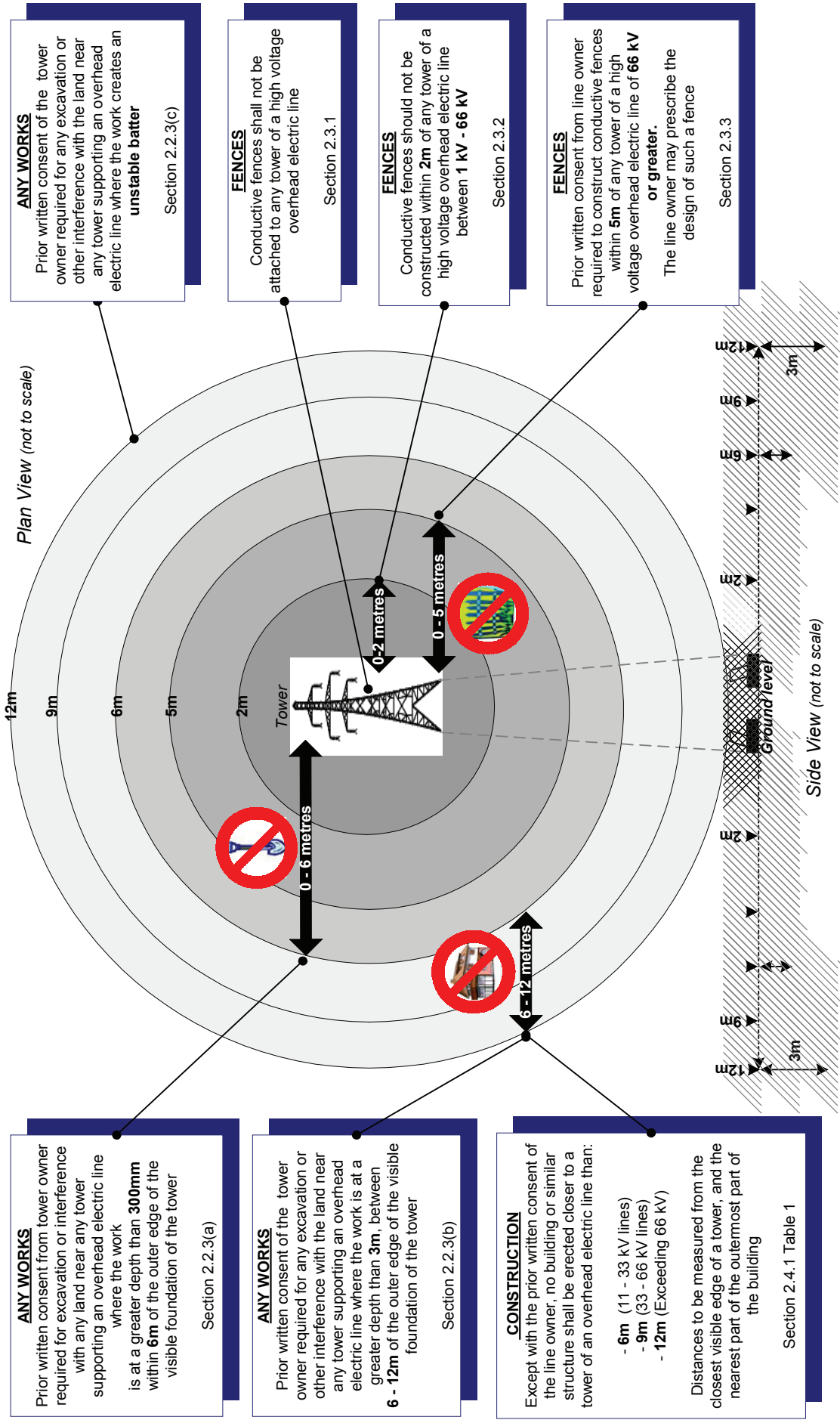
FIGURE 1 MINIMUM SAFE DISTANCES FOR EXCAVATION AND CONSTRUCTION NEAR POLES OR STAY WIRES



Notes

- This diagram is for quick reference only. Please refer to Section 2 for the complete safe distance requirements.
- Nothing in clauses 2.2.1 - 2.2.3 applies in respect of normal agricultural cultivation or the repair, sealing, or resealing of the existing surface of any road, footpath, or driveway (Section 2.2.4).
- * Clause 2.2.1 does not apply to vertical holes, not exceeding 500 mm diameter, beyond 1.5m from the pole or stay wire.

FIGURE 2 MINIMUM SAFE DISTANCES FOR EXCAVATION AND CONSTRUCTION NEAR TOWERS



• This diagram is for quick reference only. Please refer to Section 2 for the complete safe distance requirements.
• Nothing in clauses 2.2.1 - 2.2.3 applies in respect of normal agricultural cultivation or the repair, sealing, or resealing of the existing surface of any road, footpath, or driveway (Section 2.2.4).

SECTION 3

Safe Distance Requirements between Conductors and Buildings (and other Structures)

Table 2 Safe distances from conductors without engineering advice.

Circuit Voltage	Max. Span Length (m)	Minimum Distance beneath conductors under normal conditions (m)	Minimum distance to the side of conductors under normal conditions (m)
Not exceeding 1 kV	50	4	3.5
Exceeding 1 kV but not exceeding 11 kV	80	5.5	5
Exceeding 11 kV but not exceeding 33 kV	125	7	8.5
Exceeding 33 kV but not exceeding 110 kV	125	7.5	9.5
Exceeding 110 kV but not exceeding 220 kV	125	8.5	11
275 kV d.c. & 350 kV d.c.	125	8.5	7.5
Not exceeding 33 kV	250	8	12
Exceeding 33 kV but not exceeding 110 kV	250	8.5	12.5
Exceeding 110 kV but not exceeding 220 kV	250	10	14
275 kV d.c. & 350 kV d.c.	250	10	11
Not exceeding 33 kV	375	9.5	20.5
Exceeding 33 kV but not exceeding 110 kV	375	10	21
Exceeding 110 kV but not exceeding 220 kV	375	11	22.5
275 kV d.c. & 350 kV d.c.	375	10.5	18

For all other spans Engineering advice required

(Voltages are a.c. except where specified as d.c.)

SECTION 4

Safe Distances of Conductors from the Ground and Water

Table 4 Minimum safe distances of Conductors from the ground.

Circuit Voltage	Vertical Distance to Ground (m)			Radial Distance (m)
	Across or along roads or driveways	Any other land traversable by vehicles (including mobile plant) but excluding across or along roads or driveways	Any land not traversable by vehicles (including mobile plant) due to its inaccessibility (e.g. steepness or swampiness)	In any direction other than vertical on all land
Not exceeding 1 kV and insulated	5.5	4.0	2.8	2
Not exceeding 1 kV	5.5	5.0	4.5	2
Exceeding 1 kV but not exceeding 33 kV	6.5	5.5	4.5	2
Exceeding 33 kV but not exceeding 110 kV	6.5	6.5	5.5	3
Exceeding 110 kV but not exceeding 220 kV	7.5	7.5	6.0	4.5
Exceeding 220 kV a.c. or d.c.	8.0	8.0	6.5	5

SECTION 5

Safe Distances for the Operation of Mobile Plant near Conductors

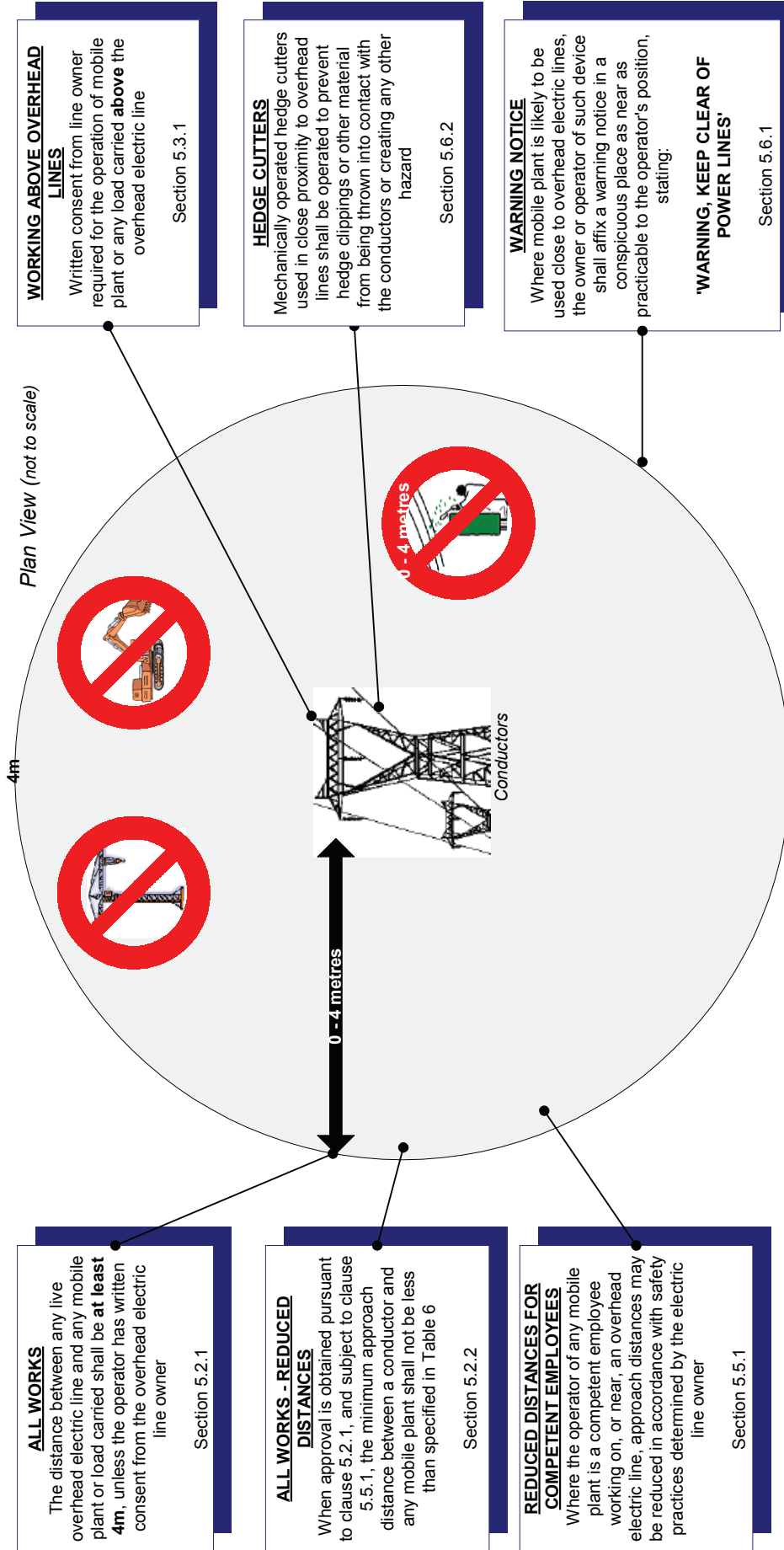
5.2 MINIMUM APPROACH DISTANCE

- 5.2.1** The distance between any live overhead electric line and any part of any mobile plant or load carried shall be "AT LEAST 4.0 METRES" unless the operator has received written consent from the overhead electric line owner allowing a reduced distance.
- 5.2.2** When an approval has been obtained pursuant to clause 5.2.1 and subject to clause 5.5.1, the minimum approach distance between a conductor and any mobile plant shall not be less than specified in Table 6.
- 5.2.3** Figure 5 provides a quick reference guide to the minimum safe distances for use of mobile plant near conductors of overhead electric lines

Table 6 Reduced Minimum Approach Distances (Where written consent has been obtained)

Circuit Voltage	Minimum Approach Distance (m)
Not exceeding 1kV – insulated conductor	0.15
Not exceeding 1 kV – conductor not insulated	1.0
Exceeding 1 kV but not exceeding 66kV	1.0
Exceeding 66kV but not exceeding 110kV a.c. or d.c.	1.5
Exceeding 110kV but not exceeding 220 kV a.c. or d.c.	2.2
Exceeding 220 kV d.c. but not exceeding 270 kV d.c.	2.3
Exceeding 270 kV d.c. but not exceeding 350 kV d.c.	2.8
Exceeding 350 kV d.c. or 220 kV a.c.	4.0

FIGURE 5 MINIMUM SAFE DISTANCES FOR THE OPERATION OF MOBILE PLANT NEAR CONDUCTORS



Notes

- This diagram is for quick reference only. Please refer to Section 5 for the complete minimum safe distance requirements.
- Mobile Plant includes cranes, loaders, excavators, drilling or pile driving equipment or other similar device.
- The provisions of Section 5 do not apply to live line work or to any conductor forming part of the mobile plant or any collector wire, insulated cable, or flexible cord used for the purpose of supplying electricity to the mobile plant (section 5.1.1) or while mobile plant is in transit on a road and the relevant requirements of the Traffic Regulations 1976 are observed (section 5.1.4).

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