

National Grid UK Electricity Transmission plc

NATIONAL SAFETY INSTRUCTION 2 and Guidance

EARTHING HIGH VOLTAGE EQUIPMENT

NSI 2 – Appendix A10 – Number of Portable Primary Earths Per Phase

DOCUMENT HISTORY

| Issue | Date | Summary of Changes / Reason | Author(s) | Approved By (Title) |
|-------|------------|---|-------------------|---|
| 12 | Jan 2023 | Ninfield & Richborough updates | Safety Rules Team | Director of Asset Operations Matt Staley |
| 13 | Feb 2023 | Coventry & Market Harborough updates | Safety Rules Team | Director of Asset Operations Matt Staley |
| 14 | May 2023 | Burwell, Oldbury & Bridgwater Updates | Safety Rules Team | Director of Asset Operations Andy Richardson |
| 15 | March 2024 | Warley, Sundon S/S & Puriton East & West CSE Compounds update | Safety Rules Team | Director of Asset Operations Ro Quinn |
| 16 | May 2024 | Addition of Earthing requirements for 7.9kV nodes | Safety Rules Team | Director of Asset Operations Ro Quinn |
| 17 | Oct 2024 | Bramford 33kV nodes & 13kV, East Claydon 15kV | Safety Rules Team | Director of Asset Operations Kate Grant |
| 18 | Nov 2024 | Monk Fryston 33kV nodes & 13kV | Safety Rules Team | Director of Asset Operations Kate Grant |

KEY CHANGES

To Issue 17

| Site | Amendments (In red font in tables below) |
|--------------|---|
| Bramford | Bramford 33kV nodes require 1 earth per phase and Bramford 13kV Substation Equipment requires 2 earths per phase. |
| East Claydon | East Claydon 15kV Substation Equipment requires 4 earths per phase |

To Issue 18

| Site | Amendments (In red font in tables below) |
|--------------|---|
| Monk Fryston | Monk Fryston 33kV nodes require 1 earth per phase and Monk Fryston 13kV Substation Equipment requires 3 earths per phase. |
| Walpole | Walpole 33kV nodes require 1 earth per phase and Walpole 13kV Substation Equipment requires 2 earths per phase. |

NSI 2 Appendix A.10 – Number of Portable Primary Earths Per Phase

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|------------------------|--------------------------|----------------|--------------------------|----------------|-------|------|------|---------|------|--------|------|--------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Aberthaw | | | 1 | 2 | 1 | | | | | | | | |
| Abham | 1 | 2 | | | 1 | | | | | | | | |
| Acton Lane | | | | | | 1 | | | 2 | | | | |
| Aldwarke | | | 2 | 2 | | | | 2 | | | | | |
| Alverdiscott | 1 | 2 | | | 1 | | | | | | | | |
| Amersham | 1 | 2 | | | 1 | | | | | | | | |
| Aust CSE | 2 | 2 | | | | | | | | | | | |
| Axminster | 1 | 2 | | | 1 | | | | | | | | |
| Baglan Bay | | | 1 | 2 | | | | | | | | | |
| Barking | 3 | 3 | 1 | 2 | 1 | | | 2 | | | | | |
| Beddington | 1 | 2 | 2 | 2 | 1 | | | | | | | | |
| Berkswell | | | 1 | 2 | 1 | | | | | | | | |
| Bicker Fen | 2 | 2 | | | 1 | | | | | | | | |
| Birkenhead | | | 1 | 2 | 1 | | | | | | | | |
| Bishops Wood | | | 1 | 2 | 2 | | | | | | | | |
| Blyth | 1 | 2 | 2 | 2 | 2 | 1 | | | | | | | |
| Bodelwyddan | 2 | 2 | | | 1 | | | | | | | | |
| Bolney | 2 | 2 | | | 2 | | | (32): 2 | | | | | |
| Botley Wood | 2 | 2 | | | 1 | | | | | | | | |
| Bradford West | 1 | 2 | 2 | 2 | 1 | | | | | | | | |
| Braintree | 1 | 2 | | | 2 | | | | | | | | |
| Bramford | 2 | 2 | | | 2 | | | 1 | | | | (13):2 | |
| Bramley | 2 | 2 | | | 1 | | | | | | | | |
| Bredbury | | | 2 | 2 | 1 | | | | | | | | |
| Brelston Green CSE | 1 | 2 | | | | | | | | | | | |
| Bridgwater | 1 | 2 | 1 | 2 | 2 | | | | | | | | |
| Brimsgate | | | 2 | 2 | 2 | | | | | | | | |
| Brinsworth | 2 | 2 | 2 | 2 | | | | | | | | | |
| Briton Ferry North CSE | | | 1 | 2 | | | | | | | | | |
| Briton Ferry South CSE | | | 1 | 2 | | | | | | | | | |
| Bulls Lodge | 1 | 2 | | | | | | | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|---------------------------|--------------------------|----------------|--------------------------|----------------|-------|------|------|------|------|--------|------|------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Burwell | 2 | 2 | | | 2 | | | 1 | | | | | |
| Bushbury | | | 1 | 2 | 1 | | | | | | | | |
| Bustleholm | 1 | 2 | 2 | 2 | 1 | | | | | | | | |
| Camblesforth | | | | | | 1 | | | | | | | |
| Canterbury North | 2 | 2 | | | 1 | | | | | | | | |
| Capenhurst | 2 | 2 | 2 | 2 | 2 | | | 2 | | | | | |
| Capenhurst D | | | | | 1 | | | | | | | | 2 |
| Cardiff East | | | 1 | 2 | 2 | | | | | | | | |
| Carrington | 3 | 3 | 2 | 2 | 2 | | | | | | | | |
| Cellarhead | 2 | 2 | | | 2 | | | | | | | | |
| Chafford Hundred East CSE | 3 | 3 | | | | | | | | | | | |
| Chafford Hundred West CSE | 3 | 3 | | | | | | | | | | | |
| Chessington | | | 2 | 2 | 1 | | | | | | | | |
| Chesterfield | | | 2 | 2 | 1 | | | | | | | | |
| Chetney Marsh CSE | 3 | 3 | | | | | | | | | | | 1 |
| Chickerell | 1 | 2 | | | 1 | | | | | | | | |
| Chilling CSE | 2 | 2 | | | | | | | | | | | |
| Cilfynydd | 2 | 2 | 1 | 2 | | | | | | | | | |
| City Road | 3 | 3 | | | 2 | | | | | | | | |
| Cleve Hill | 2 | 2 | | | | | | | | | | | |
| Connahs Quay | 3 | 3 | | | 2 | | | | | | | | |
| Coryton South | 2 | 2 | | | | | | | | | | | |
| Cottam | 2 | 2 | | | | | | | | | | | |
| Coventry | | | 1 | 2 | 1 | | | 1 | | | | | |
| Cowbridge | | | 1 | 2 | | | | | | | | | |
| Cowley | 2 | 2 | | | 2 | | | 1 | | | | | |
| Creyke Beck | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| Culham Jet | 2 | 2 | | | | | | | | | | | |
| Daines | 3 | 3 | | | | | | | | | | | |
| Damhead Creek | 3 | 3 | | | | | | | | | | | |
| Deeside | 3 | 3 | | | | | | | | | | | |
| Deeside Power CSE | 3 | 3 | | | | | | | | | | | |
| Didcot | 2 | 2 | | | | | | | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|----------------------|--------------------------|----------------|--------------------------|----------------|-------|------|------|------|------|--------|--------|------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Dinorwig | 2 | 2 | | | | | | | | | | | |
| Drakelow | 2 | 2 | 2 | 2 | 1 | | | | | | | | |
| Drax | 3 | 3 | | | 1 | 2 | | | | | | | |
| Dunford Bridge CSE | 2 | 2 | | | | | | | | | | | |
| Dungeness | 2 | 2 | 1 | 2 | | | | | | | | | |
| Ealing | | | 2 | 2 | | 2 | | | | | | | |
| East Claydon | 2 | 2 | | | 2 | | | | | | (15).4 | | |
| Eaton Socon | 2 | 2 | | | 2 | | | | | | | | |
| Eggborough | 2 | 2 | | | | | | | | | | | |
| Elland | | | 2 | 2 | 1 | | | | | | | | |
| Elstree | 3 | 3 | 2 | 2 | 2 | | | | | | | | |
| Eltham | | | | | 1 | | | | | | | | |
| Enderby | 2 | 2 | | | 2 | | | | | | | | |
| Exeter | 1 | 2 | | | 2 | | | | | | | | |
| Fawley | 2 | 2 | | | 2 | | | | | | | | |
| Feckenham | 2 | 2 | 1 | 2 | | 2 | | | | | | | |
| Ferrybridge A | | | 1 | 2 | | 1 | | | | | | | |
| Ferrybridge B | | | 1 | 2 | 2 | | | | | | | | |
| Ferrybridge c | 2 | 2 | 1 | 2 | | | | | | | | | |
| Ferrybridge EAST CSE | 2 | 2 | | | | | | | | | | | |
| Ferrybridge WEST CSE | 2 | 2 | | | | | | | | | | | |
| Ffestiniog | | | 1 | 2 | | | | | | | | | |
| Fiddlers Ferry | | | 1 | 2 | 1 | | | | | | | | |
| Fleet | 2 | 2 | | | 2 | | | | | | | | |
| Flintshire Bridge | 2 | 2 | (251) 1 | | | | | | | | | | |
| Fourstones | | | 1 | 2 | | | | 1 | | 2 | | | |
| Frodsham | 2 | 2 | 1 | 2 | 1 | | | | | | | | |
| Garth CSE | 2 | 2 | | | | | | | | | | | |
| Grain | 3 | 3 | | | 1 | | | | | | | | 1 |
| Grange | | | | | | 2 | | | | | | | |
| Grangetown | | | 1 | 2 | | 1 | | | | | | | |
| Gravesend CSE | 3 | 3 | | | | | | | | | | | |
| Grendon | 2 | 2 | | | 2 | | | | | | | | |
| Greystones A & B | | | 1 | 2 | | 2 | | | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|---------------------|--------------------------|----------------|--------------------------|----------------|-------|------|------|------|------|--------|------|------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Grimsby West | 1 | 2 | | | 1 | | | | | | | | |
| Gwent Y Mor | | | | | 2 | | | | | | | | |
| Hackney | 3 | 3 | 2 | 2 | 2 | 1 | | | | | | | |
| Hams Hall | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| Harker | 2 | 2 | 1 | 2 | 1 | | | | | | | 3 | |
| Hartmoor | | | 1 | 2 | | 1 | | | | | | | |
| Hartlepool | | | 2 | 2 | | | | | | | | | |
| Hawthorn Pit | 2 | 2 | 2 | 2 | | 1 | | | | | | | |
| Hedon | | | 2 | 2 | | | | | | | | | |
| Hemsworth CSE | | | 2 | 2 | | | | | | | | | |
| Hendon | | | | | 2 | | | | | | | | |
| Heysham | 2 | 2 | | | 1 | | | | | | | | |
| High Marnham | 2 | 2 | 1 | 2 | | | | 1 | | | | | |
| Highbury | 3 | 3 | | | | | | | | | | | |
| Hinkley Point | 2 | 2 | 1 | 2 | | | | | | | | | |
| Horseshoe Point CSE | 3 | 3 | | | | | | | | | | | 1 |
| Humber Refinery | 2 | 2 | | | | | | | | | | | |
| Hurst | | | 2 | 2 | 1 | | | | | | | | |
| Hutton | 2 | 2 | | | 1 | | | | | | | | |
| Imperial Park | 1 | 2 | | | | | | 2 | | | | | |
| Ince | | | | | 1 | | | | | | | | |
| Indian Queens | 1 | 2 | | | 2 | | | | | | | | |
| Iron Acton | | | 1 | 2 | 2 | | | | | | | | |
| Ironbridge | 2 | 2 | | | 1 | | | | | | | | |
| Iver | 1 | 2 | 2 | 2 | 2 | 1 | | | | | | | |
| Jordanthorpe | | | 1 | 2 | | | | 1 | | | | | |
| Keadby | 2 | 2 | | | 2 | | | | | | | | |
| Kearsley | 2 | 2 | 2 | 2 | 2 | | | 2 | | | | | |
| Kemsley | 3 | 3 | | | 1 | | | | | | | | |
| Kensall Green | 3 | 3 | | | | | | | | | | | |
| Killingholme | 2 | 2 | | | | | | | | | | | |
| Kingsnorth | 3 | 3 | | | 1 | | | | | | | | |
| Kirkby | | | 2 | 2 | 1 | | | | | | | | |
| Kirkstall | | | 1 | 2 | 1 | | | | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|---|--------------------------|----------------|--------------------------|----------------|-------|------|------|------|---------|--------|------|--------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Kitwell | | | 1 | 2 | 1 | | | | | | | | |
| Knaresborough | | | 1 | 2 | 1 | | | | | | | | |
| Lackenby | 2 | 2 | 1 | 2 | | 1 | | | | | | | |
| Lady Lane CSE | 2 | 2 | | | | | | | | | | | |
| Laleham | | | 2 | 2 | 2 | | | | | | | | |
| Landulph | 1 | 2 | | | 2 | | | | | | | | |
| Langage | 1 | 2 | | | | | | | | | | | |
| Lea Marston | | | | | 2 | | | | | | | | |
| Legacy | 2 | 2 | | | 1 | | | | | | | | |
| Leighton Buzzard | 3 | 3 | | | | | | | | | | | |
| Leiston | 2 | 2 | | | 2 | | | | | | | | |
| Lewingdon Wood CSE | 3 | 3 | | | | | | | | | | | |
| Lister Drive | | | 2 | 2 | 1 | | | | | | | | |
| Little Barford | 2 | 2 | | | | | | | | | | | |
| Littlebrook | 3 | 3 | 2 | 2 | 2 | | | | | | | | |
| Littlebrook/West Thurrock CSE Compounds | 3 | 3 | | | | | | | | | | | |
| Llanwern | | | | | | | | 1 | | | | | |
| Lodge Road B | | | | | | 2 | | | | | | | |
| Lovedean | 2 | 2 | | | 1 | | | | | | | | |
| Loxton CSE | 2 | 2 | | | | | | | | | | | |
| Macclesfield | 2 | 2 | 1 | 2 | | | | 1 | | | | | |
| Mannington | 1 | 2 | | | 2 | | | | | | | | |
| Marchwood | 2 | 2 | | | | | | | | | | | |
| Margam | | | 1 | 2 | | 2 | | | | | | | |
| Market Harborough | 1 | 2 | | | | | | | (25): 1 | | | | |
| Medway | 3 | 3 | | | 1 | | | 1 | | | | | |
| Melksham | 2 | 2 | 1 | 2 | 2 | | | | | | | | |
| Middleton | 2 | 2 | | | | | | | | | | | |
| Mill Hill | | | 2 | 2 | 2 | | | | | | | | |
| Minety | 2 | 2 | | | 1 | | | | | | | | |
| Monk Fryston | 2 | 2 | 2 | 2 | | | | 1 | | | | (13):3 | |
| Moulsford Down CSE | 3 | 3 | | | | | | | | | | | |
| Nechells | | | 2 | 2 | 1 | | | | | | | | |
| Nechells East | | | | | 1 | | | | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|-------------------|--------------------------|----------------|--------------------------|----------------|-------|------|------|---------|------|--------|------|---------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Necton | 2 | 2 | | | | | | | | | | | |
| Neepsend | 1 | 2 | 2 | 2 | | | | 1 | | | | | |
| New Cross A & B | | | 2 | 2 | 2 | 2 | | 1 | | | | 3 | |
| Newby CSE | 2 | 2 | | | | | | | | | | | |
| Newhouse CSE | 2 | 2 | | | | | | | | | | | |
| Ninfield | 2 | 2 | | | 1 | | 2 | (32): 2 | | | | | |
| North Hinksey CSE | 3 | 3 | | | | | | | | | | | |
| North Hyde | | | 1 | 2 | | 2 | | | | | | | |
| Northfleet East | 2 | 2 | | | 1 | | | | | | | | |
| Norton | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| Norton Lees | | | 1 | 2 | | | | 1 | | | | | |
| Norwich Main | 2 | 2 | | | 2 | | | | | | | | |
| Norwich | | | | | 2 | | | | | | | | |
| Norwich Trowse | | | | | 2 | | | | | | | | |
| Nunthorpe CSE | 3 | 3 | | | | | | | | | | | |
| Nursling | 1 | 2 | | | 2 | | | 1 | | | | 2 | |
| Ocker Hill | | | 1 | 2 | 1 | | | | | | | | |
| Offerton | | | 2 | 2 | | | | 1 | | | | | |
| Oldbury | 1 | 2 | 1 | 2 | 1 | | | | | | | (13): 3 | |
| Oldbury-on-Seven | | | | | 1 | | | | | | | | |
| Osbaldwick | 1 | 2 | | | 1 | | | | | | | | |
| Padiham | 2 | 2 | | | 1 | | | | | | | | |
| Patford Bridge | 2 | 2 | | | | | | | | | | | |
| Pelham | 3 | 3 | | | 1 | | | | | | | 3 | |
| Pembroke | 2 | 2 | | | 1 | | | | | | | | |
| Penisarwaun CSE | 2 | 2 | | | | | | | | | | | |
| Penn | 1 | 2 | 2 | 2 | 2 | | | | | | | | |
| Penrhos | | | | | 1 | | | | | | | | |
| Pentir | 2 | 2 | | | 1 | | | | | | | | |
| Pentre Mawr CSE | 2 | 2 | | | | | | | | | | | |
| Penwortham | 2 | 2 | 2 | 2 | | | | | | | | | |
| Penwortham East | | | | | 2 | | | | | | | | |
| Penwortham West | | | | | 2 | | | | | | | | |
| Perry Bar CSE | | | 2 | 2 | | | | | | | | | |
| Pitsmoor | | | 2 | 2 | | | | 1 | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|--------------------|--------------------------|----------------|--------------------------|----------------|-------|------|------|---------|------|--------|------|------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Poppleton | | | 1 | 2 | | | | 1 | | | | | |
| Port Ham | | | | | 2 | | | 3 | | | | | |
| Pudding Mill Lane | 3 | 3 | | | | | | | | | | | |
| Puriton East CSE | | 2 | | | | | | | | | | | |
| Puriton West CSE | | 2 | | | | | | | | | | | |
| Pyle | | | 1 | 2 | 1 | | | | | | | | |
| Rainhill | | | 2 | 2 | 1 | | | | | | | | |
| Rassau | 1 | 2 | | | 1 | | | | | | | | |
| Ratcliffe-on- Soar | 2 | 2 | 1 | 2 | 2 | | | | | | | | |
| Rayleigh Main | 2 | 2 | | | 2 | | | | | | | | |
| Rayleigh Local | | | | | 2 | | | | | | | | |
| Redbridge | | | 2 | 2 | | | | 1 | | | | | |
| Rhigos | 1 | 2 | | | | | | | | | | | |
| Richborough | 1 | 2 | | | 1 | | | (32): 2 | | | | | |
| Rochdale | 1 | 2 | 2 | 2 | 2 | | | | | | | | |
| Rocksavage | 2 | 2 | | | 1 | | | | | | | | |
| Rowdown | 1 | 2 | 2 | 2 | | | | | | | | | |
| Rugeley | 1 | 2 | | | 1 | | | | | | | | |
| Rye House | 2 | 2 | | | 1 | | | | | | | | |
| Ryhall | 1 | 2 | | | | | | | | | | | |
| Salt End North | | | 2 | 2 | 1 | | | | | | | | |
| Salt End South | | | 2 | 2 | | | | | | | | | |
| Saltholme | | | 2 | 2 | 1 | | | | | | | | |
| Sandford | 2 | 2 | | | 1 | | | | | | | | |
| Seabank | 2 | 2 | | | 2 | | | | | | | | |
| Sellindge | 2 | 2 | (270): 1 | (270): 1 | 1 | | | | | | | | |
| Sheffield City | | | 2 | 2 | | | | 1 | | | | | |
| Shrewsbury | 1 | 2 | | | 1 | | | | | | | | |
| Shurton | 2 | 2 | | | | | | | | | | | |
| Singlewell | 2 | 2 | | | | | | | | | | | |
| Sizewell | 2 | 2 | | | 2 | | | | | | | | |
| Skelton Grange | | | 1 | 2 | 2 | | | | | | | | |
| South Hinksey CSE | 2 | 2 | | | | | | | | | | | |
| South Humber Bank | 2 | 2 | | | | | | | | | | | |
| South Manchester | | | 2 | 2 | 1 | | | | | | | | |
| South Shields | | | 2 | 2 | | | | 1 | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|--------------------|--------------------------|----------------|--------------------------|----------------|-------|------|------|------|------|--------|------|------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Spalding North | 2 | 2 | | | | | | | | | | | |
| Spennymoor | 1 | 2 | 2 | 2 | 1 | | | | | | | | |
| St Asaph | | | | | 2 | | | | | | | | |
| St Marylebone | | | | | 1 | | | | | | | | |
| St Johns Wood | 3 | 3 | 2 | 2 | 1 | | | | | | 2 | | |
| Stalybridge | 1 | 2 | 2 | 2 | 2 | | | | | | | | |
| Stannah | 2 | 2 | | | 2 | | | | | | | | |
| Staythorpe | 2 | 2 | | | 1 | | | | | | | | |
| Stella North | | | | | 2 | | | | | | | | |
| Stella South | | | | | 2 | | | | | | | | |
| Stella West | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| Stocksbridge | 1 | 2 | | | | 2 | | | | | | | |
| Stoke Bardolph | 2 | 2 | | | 1 | | | | | | | | |
| Sundon | 2 | 2 | | | 2 | | | 1 | | | | | |
| Sutton Bridge | 2 | 2 | | | | | | | | | | | |
| Swansea North | 1 | 2 | 1 | 2 | 2 | | | | | | | | |
| Taunton | 1 | 2 | | | 1 | | | | | | | | |
| Templeborough | | | 2 | 2 | | | | 1 | | | | | |
| Thornton | 2 | 2 | | | | | | | | | | | |
| Thorpe Marsh | 2 | 2 | 2 | 2 | | 2 | | | | | | | |
| Thurrock Cable CSE | 3 | 3 | | | | | | | | | | | |
| Thurcroft | | | 2 | 2 | | 1 | | | | | | | |
| Tilbury | 3 | 3 | 2 | 2 | 1 | | | | | | | | |
| Tilbury CSE | 3 | 3 | | | | | | | | | | | |
| Tinsley Park | | | 1 | 2 | | | | 1 | | | | | |
| Tod Point | | | 1 | 2 | | 1 | | | | | | | |
| Tottenham | | | 2 | 2 | 1 | | | | | | | | |
| Trawsfynydd | 1 | 2 | 1 | 2 | 2 | | | | | | | | |
| Tremorfa | | | 1 | 2 | | | | 2 | | | | | |
| Tynemouth | | | 1 | 2 | 1 | | | | | | | | 2 |
| Upper Boat | | | 1 | 2 | 1 | | | 2 | | | | | |
| Urenco | | | | | | | | | | | | | 2 |
| Uskmouth | | | 2 | 2 | 1 | | | 1 | | | | | |
| Walford CSE | 1 | 2 | | | | | | | | | | | |
| Walham | 1 | 2 | | | 2 | | | | | | | | |

| Substation | 400kV | | 275kV | | 132kV | 66kV | 56kV | 33kV | 22kV | 20.5kV | 16kV | 14kV | 11kV |
|------------------------------|--------------------------|----------------|--------------------------|----------------|-------|-----------------|------|------|------|--------|------|--------|------|
| | Excluding Line end Equip | Line end Equip | Excluding Line end Equip | Line end Equip | | | | | | | | | |
| Walpole | 2 | 2 | | | 2 | | | 1 | | | | (13):2 | |
| Waltham Cross | 2 | 2 | 2 | 2 | | | | | | | | | |
| Warley | | | 2 | 2 | 1 | | | 1 | | | | (13):2 | |
| Washway Farm | | | 1 | 2 | 1 | | | | | | | | |
| Watford South | | | 2 | 2 | 1 | | | | | | | | |
| Wern CSE | 2 | 2 | | | | | | | | | | | |
| West Boldon | | | 2 | 2 | | 1 | | | | | | | |
| West Burton | 2 | 2 | | | 1 | | | | | | | | |
| West Ham | 3 | 3 | | | 1 | | | | | | | | |
| West Melton | | | 2 | 2 | 2 | | | | | | | | |
| West Thurrock | 3 | 3 | 2 | 2 | | | | 1 | | | | | |
| West Weybridge | 1 | 2 | 2 | 2 | 1 | | | | | | | | |
| Whitegate | | | 2 | 2 | 1 | | | | | | | | |
| Whitson | 2 | 2 | 2 | 2 | | | | 1 | | | | | |
| Willenhall | | | 1 | 2 | 1 | | | | | | | | |
| Willesden | | | 2 | 2 | 1 | 1 | | | | | | | |
| Willington | | | 1 | 2 | 2 | | | | | | | | |
| Willington East | 2 | 2 | | | 2 | | | | | | | | |
| Wilton | | | 2 | 2 | | | | | | | | | |
| Wimbledon | 3 | 3 | 2 | 2 | 2 | | | 2 | | | | | |
| Wincobank | | | 2 | 2 | | | | 2 | | | | | |
| Winterbourne Abbas North CSE | 2 | 2 | | | | | | | | | | | |
| Winterbourne Abbas South CSE | 2 | 2 | | | | | | | | | | | |
| Witton CSE | | | 2 | 2 | | | | | | | | | |
| Woodhead CSE | 2 | 2 | | | | | | | | | | | |
| Wood Lane CSE | 2 | 2 | | | | | | | | | | | |
| Wylfa | 1 | 2 | | | 1 | | | | | | | | |
| Wymondley | 2 | 2 | | | 2 | | | | | | | | |
| Additional Notes | | | | | | | | | | | | | |
| All 25kV Trackside s/s | | | | | | 1 PPE Per Phase | | | | | | | |
| All 25kV Primary s/s | | | | | | 1 PPE Per Phase | | | | | | | |
| All 13kV tertiary fed B/B | | | | | | 3 PPE Per Phase | | | | | | | |
| All HVDC | | | | | | 1 PPE Per Phase | | | | | | | |
| All 7.9kV nodes | | | | | | 5 PPE Per Phase | | | | | | | |
| Version 18 - Nov 2024 | | | | | | | | | | | | | |