



# Network Records NetMAP Symbols Booklet - East of England

This symbol booklet is intended as a general guide only - some local variations of these symbols may be found.

**Version 1.2**

Released October 2010

Always check with your local Network Records office or the UK Power Networks server to ensure that you are using the most up to date copy of this booklet - Tel: 08000 565866.

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## Guidance notes.

### **Important notice:**

If you do not understand the NetMAP record that you are using, please contact the UK Power Networks Network Records team for guidance  
**Tel: 08000 565866.**

- The position of apparatus shown on NetMAP is believed to be correct, but the original landmarks may have altered since the apparatus was installed.
- It must be assumed that there is at least one service to each property, lamp column, street sign etc.
- All cables must be treated as live, unless proven otherwise by an authorised UK Power Networks representative.
- Third party cables are not usually shown. In cases of doubt, please telephone 08000 565866.
- When two or more maps are supplied for the same area, the maps must be read in conjunction with each other and with this symbol document.
- All LV cables are assumed to be 4 core, and all HV cables assumed to be 3 core unless otherwise stated.

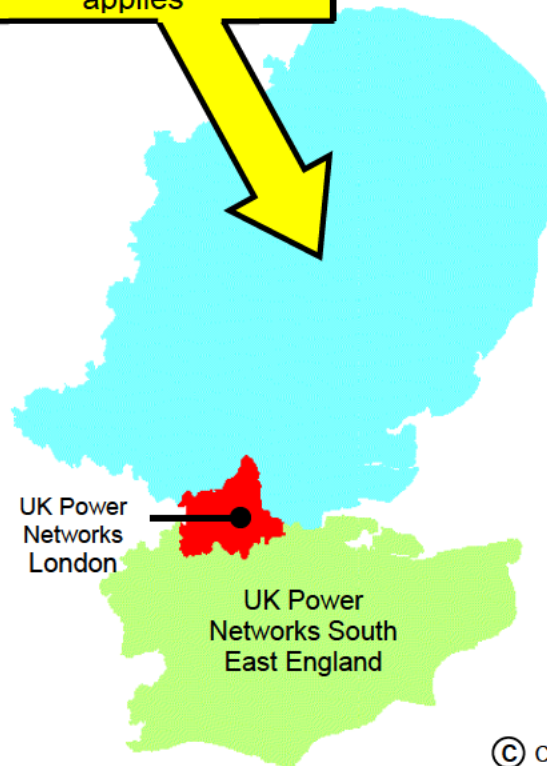


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## **The area covered by this guide:**

### **UK Power Networks East of England.**

This is the only area  
where this document  
applies



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## 1:500 view - underground network

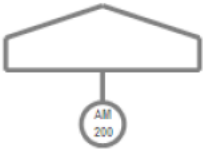
### Scenery

| NetMAP system                                                                     | Scanned image                                                                     | Description                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|
|  |  | 100 metre Ordnance Survey grid line (on O/S based maps only.) |
|  |  | Property fence line                                           |
|  |  | Building line                                                 |
|  |  | Kerb line                                                     |
|  |  | Electrical Boundary                                           |

## Scenery - for UK Power Networks use only - boxed in red

| NetMAP system                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Scanned image  | Description                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <br>Inset Network – Contact xxxx IDNO for further information                                                                                                                                                                                                                                                                                                                                      | Not applicable | Area of inset network - not the asset of UK Power Networks<br>(only visible to UK Power Networks and their immediate contractors) |
|                                                                                                                                                                                                                                                                                                                                                                                                    | Not applicable | Proposed Cross Rail route<br>(only visible to UK Power Networks and their immediate contractors)                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                    | Not applicable | High pressure pipelines in the general vicinity<br>(only visible to UK Power Networks and their immediate contractors)            |
| Note: Pipelines are only viewable on NetMAP by UK Power Networks staff and their immediate contractors. Do not carry out any excavation without consent from the relevant agency - legally protected high pressure petroleum products pipeline route in the general vicinity - consult <a href="http://www.linewatch.co.uk">www.linewatch.co.uk</a> for contacts and guidance. Pipeline contact numbers can also be found on the intranet – out of hours, contact our Control Centre. |                |                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                    | Not applicable | Water - surface water<br>(only visible to UK Power Networks and their immediate contractors)                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                   | Not applicable | Water - Source Protection Zone 1<br>(only visible to UK Power Networks and their immediate contractors)                           |
|                                                                                                                                                                                                                                                                                                                                                                                                  | Not applicable | Water - Source Protection Zone 2<br>(only visible to UK Power Networks and their immediate contractors)                           |
|                                                                                                                                                                                                                                                                                                                                                                                                  | Not applicable | Water - Source Protection Zone 3<br>(only visible to UK Power Networks and their immediate contractors)                           |

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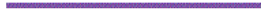
| Scenery for UK Power Networks use only - boxed in red                               |                                                                                     |                                                                                                                                |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| NetMAP system                                                                       | Scanned image                                                                       | Description                                                                                                                    |
|    | Not applicable                                                                      | Historical - Scheduled Monuments<br>(only visible to UK Power Networks and their immediate contractors)                        |
|    | Not applicable                                                                      | Historical - Parks and Gardens<br>(only visible to UK Power Networks and their immediate contractors)                          |
|    | Not applicable                                                                      | Historical - Areas of Archaeological Potential (AAP)<br>(only visible to E UK Power Networks and their Immediate contractors)  |
|    | Not applicable                                                                      | Nature - Ramsar Wetlands of International Importance<br>(only visible to UK Power Networks and their immediate contractors)    |
|   | Not applicable                                                                      | Nature - Special Area of Conservation (SAC)<br>(only visible to UK Power Networks and their immediate contractors)             |
|  | Not applicable                                                                      | Nature - Special Protected Area (SPA)<br>(only visible to UK Power Networks and their immediate contractors)                   |
|  |  | Nature - Site of Special and Scientific Interest (SSSI)<br>(only visible to UK Power Networks and their immediate contractors) |
| section continued on next page                                                      |                                                                                     |                                                                                                                                |

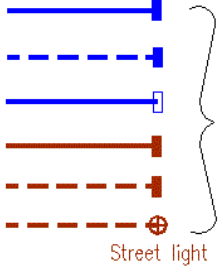
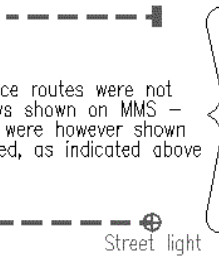
| Scenery for UK Power Networks use only - boxed in red                                 |                |                                                                                                                           |
|---------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------|
| NetMAP system                                                                         | Scanned image  | Description                                                                                                               |
|    | Not applicable | Nature - Local Nature Reserve<br>(only visible to UK Power Networks and their immediate contractors)                      |
|    | Not applicable | Nature - National Nature Reserve<br>(only visible to UK Power Networks and their immediate contractors)                   |
|    | Not applicable | Nature - Area of Outstanding Natural Beauty (AONB)<br>(only visible to UK Power Networks and their immediate contractors) |
|    | Not applicable | Nature - National Park<br>(only visible to UK Power Networks and their immediate contractors)                             |
|  | Not applicable | Fluid filled cables - very high sensitivity<br>(only visible to UK Power Networks and their immediate contractors)        |
|  | Not applicable | Fluid filled cables - high sensitivity<br>(only visible to UK Power Networks and their immediate contractors)             |
|  | Not applicable | Fluid filled cables - medium sensitivity<br>(only visible to UK Power Networks and their immediate contractors)           |
|  | Not applicable | Fluid filled cables - low sensitivity<br>(only visible to UK Power Networks and their immediate contractors)              |

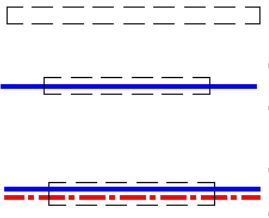
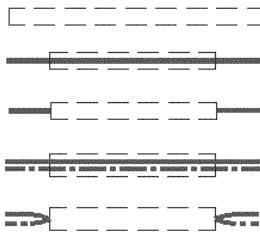
### Primary distribution cables (1:500 view)

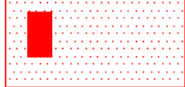
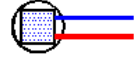
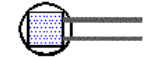
| NetMAP system                                                                     | Scanned image                                                                     | Description               |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------|
|  |  | Over 33kV and up to 132kV |
|  |  | Over 11kV and up to 33kV  |

### Secondary distribution cables (1:500 view)

| NetMAP system                                                                       | Scanned image                                                                       | Description                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|
|  |  | Over 230/400V and up to 11kV (HV) cable route |
|  |  | 230/400V (LV) cable route                     |
|  |  | Pilot cable route                             |
| (Only shown this way if independent from HV cable route)                            |                                                                                     |                                               |
| Abandoned cables are shown and labelled as such when applicable                     |                                                                                     |                                               |

| Service cables and terminations (1:500 view)                                      |                                                                                   |                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NetMAP system                                                                     | Scanned image                                                                     | Description                                                                                                                                                                                                                                                                                               |
|  |  | <p>3 phase service with termination</p> <p>3 phase service with termination (unknown route)</p> <p>3 phase service with multi-head termination</p> <p>Single phase service with termination</p> <p>Single phase service with termination (route unknown)</p> <p>Street lighting cable and termination</p> |

| Cable ducts (1:500 view)                                                            |                                                                                     |                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NetMAP system                                                                       | Scanned image                                                                       | Description                                                                                                                                                                         |
|  |  | <p>Empty duct</p> <p>Cable(s) in duct(s)</p> <p>Cable(s) in duct(s) (on some raster maps)</p> <p>Multiple cables in ducts</p> <p>Multiple cables in ducts (on some raster maps)</p> |

| EHV, HV and LV sites (1:500 view)                                                                    |                                                                                                                                                                                                |                                                      |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| NetMAP system                                                                                        | Scanned image                                                                                                                                                                                  | Description                                          |
| COLCHESTER GRID<br> | COLCHESTER GRID<br>                                                                                           | Primary substation                                   |
| HIGH STREET<br>     |  HIGH STREET<br> HIGH STREET | Secondary substation                                 |
|                     |                                                                                                               | Pad mounted substation                               |
|                     |                                                                                                               | Link box – 2 way                                     |
|                     |                                                                                                               | Link box – 4 way<br>(6 way etc shown similarly)      |
|                     |                                                                                                               | Feeder pillar – 4 way<br>(6 way etc shown similarly) |
| CHURCH RD<br>       | CHURCH RD<br>                                                                                                 | Pole transformer                                     |
|  <sup>3</sup>     |  <sup>3</sup>                                                                                               | Poles on underground records                         |
|                   |                                                                                                             |                                                      |
|                   |                                                                                                             | H pole, any voltage                                  |
|                   |                                                                                                             | Service turret (solid type)                          |
| section continued on next page                                                                       |                                                                                                                                                                                                |                                                      |

| EHV, HV and LV sites continued (1:500 view)                                                                                                   |                                                                                                          |                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| NetMAP system                                                                                                                                 | Scanned image                                                                                            | Description                                                                                 |
| No NetMAP equivalent<br><br>CAUTION<br>Missing Information | <br><br>No equivalent | Service turret (with link facility on LV main)<br><br>Missing data in or near this location |
| <br>Contaminated Land<br>refer to SHE 01 016               | Not applicable                                                                                           | Contaminated land reference                                                                 |
|                                                                                                                                               |                                                                                                          |                                                                                             |

| Mains joints (1:500 view)                |                    |                                                                                               |
|------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------|
| NetMAP system                            | Scanned image      | Description                                                                                   |
| (voltage indicated by colour/line-style) |                    |                                                                                               |
|                                          |                    | Straight joint                                                                                |
|                                          |                    | Crutch joint                                                                                  |
|                                          |                    | Straight crutch joint                                                                         |
|                                          |                    | Pot end                                                                                       |
|                                          |                    | Pot end – on one of several cables – single line representation                               |
|                                          |                    | Branch joint/pot end – (humpty back joint, back to back joint, bull nose joint or stub joint) |
|                                          |                    | Sleeve repair or repair joint                                                                 |
|                                          |                    | Cut end                                                                                       |
|                                          |                    | Capped end                                                                                    |
|                                          |                    | Tee joint                                                                                     |
|                                          | NetMAP/vector only | Sicame joint box                                                                              |

| Service joints (1:500 view)                                                                 |               |                       |
|---------------------------------------------------------------------------------------------|---------------|-----------------------|
| NetMAP system                                                                               | Scanned image | Description           |
| Please note that 3 phase services are shown blue, and single phase services are shown brown |               |                       |
|                                                                                             |               | Straight joint        |
|                                                                                             |               | Service joint to main |
|                                                                                             |               | Pot end               |



| Cross sections (1:500 view)                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NetMAP system                                                                                                                                                                                                                                                                                                      | Scanned image                                                                                                                                                                                                                                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>PLAN VIEW</p> <p>MARSH LANE</p> <p>2563525</p> <p>CROSS SECTIONAL VIEW</p> <p>1.60</p> <p>0.80</p> <p>0.50</p> <p>300Ew</p> <p>HV3005</p> <p>150 XLPE</p> <p>150 XLPE</p> <p>HV6022</p> <p>(found within NetMAP section world or supplementary sheet)</p> <p>2563525</p> <p>185Ew</p> <p>35Ec</p> <p>HV3005</p> | <p>PLAN VIEW</p> <p>MARSH LANE</p> <p>5</p> <p>CROSS SECTIONAL VIEW</p> <p>1100</p> <p>800</p> <p>900</p> <p>500</p> <p>5c.25</p> <p>H.V.1</p> <p>H.V.2</p> <p>5</p> <p>(always found on a supplementary sheet)</p> <p>5</p> <p>185Ew</p> <p>35Ec</p> <p>HV3005</p> | <p>Single line representational plan view with NetMAP equivalent (please note the use of separate line for each voltage on the raster/MMS data)</p> <p>Cross sectional view of above</p> <p>Section arrow with old/new numbering system – points in direction section is viewed</p> <p>LV/3 phase service cable</p> <p>Single phase service cable with size annotation</p> <p>HV cable – 3 core with route number annotation</p> |

section continued on next page

| Cross sections continued (1:500 view)                                                       |                                                                                            |                                                                                            |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| NetMAP system                                                                               | Scanned image                                                                              | Description                                                                                |
|  HV3005  |  HV3005 | HV cable – modern EPR, Plam and Triplex with route number annotation                       |
|          |         | Pilot cable                                                                                |
|  HV1023  |  HV3005 | 33kV cable                                                                                 |
|  HV3005  |  HV3005 | 132kV cable                                                                                |
|          |         | Single duct                                                                                |
|          |         | 6 way duct formation – irrespective of duct type and material, all are displayed similarly |
|          |         | Protective slab                                                                            |
|          |         | Tiles                                                                                      |
|          |         | Concrete slabs                                                                             |
|          |         | 33kV fibre warning board                                                                   |
|          |         | Steel plate                                                                                |
|         |        | Plastic tile tape                                                                          |
| Timber  |        | Timber                                                                                     |

## Common abbreviations and terminology (all views)

| Abbrev.      | Description                                                                                  | Abbrev.        | Description                                                                                              |
|--------------|----------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------|
| 1c           | Single core                                                                                  | Cut out or C/O | Meter/main fuse position                                                                                 |
| 1ph          | Single phase                                                                                 | cx             | Triplex (copper)                                                                                         |
| 2c           | Two core                                                                                     | DE             | Direct earth                                                                                             |
| 3c           | Three core                                                                                   | DSTA           | Double steel tape armoured                                                                               |
| 3ph          | Three phase                                                                                  | Ea             | Alpex cable                                                                                              |
| ABC          | Aerial bunched (bundled) conductor (modern LV overhead line)                                 | EFI            | Earth fault passage indicator                                                                            |
| ABI          | Air break isolator (no fuses)                                                                | EHV            | Extra high voltage (11,001 Volts and over)                                                               |
| ABSD         | Air break switch disconnecter                                                                | ELCB           | Earth leakage circuit breaker                                                                            |
| ACCS         | Aluminium concentric copper sheathed                                                         | ELT            | Earth leakage trip                                                                                       |
| Al           | Aluminium                                                                                    | EPR            | Ethylene propylene rubber                                                                                |
| AR           | Auto recloser                                                                                | Ew             | Waveform cable                                                                                           |
| ASL          | Automatic sectionalising links                                                               | E/W            | Earthenware duct or earth wire                                                                           |
| ax           | Triplex (aluminium)<br>2 x 22mm AL PVC (example) Duplex<br>3 x 22mm AL PVC (example) Triplex | Fdr or Feeder  | LV or HV cable fed by or feeding a substation                                                            |
| CB           | Circuit breaker                                                                              | F/G            | Fuse gear                                                                                                |
| c/c          | Concentric cores                                                                             | F/P            | Feeder pillar                                                                                            |
| ccc          | Compact covered conductor                                                                    | GRP            | Fibreglass substation                                                                                    |
| CCT          | Circuit                                                                                      | GVR            | Gas vacuum recloser or pole mounted circuit breaker                                                      |
| CNE          | Combined neutral and earth                                                                   | HV             | High voltage (1,001 – 11,000 Volts incl)                                                                 |
| Cross phased | The core colour may be different to originating transformer phasing                          | HYBRID         | Modern plastic cable with mixed conductor material (Al/Cu)                                               |
| CS           | Consac                                                                                       | Insulation     | Electrically protective material surrounding a conductor                                                 |
| CSE          | Cable sheath earth                                                                           | Insulator      | Porcelain or glass overhead line support (on poles)                                                      |
| Cu           | Copper                                                                                       | ITC            | Instrument traced cable or ITC - cable traced electronically using Cable Avoidance Tool (CAT) or similar |

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## Common abbreviations and terminology continued (all views)

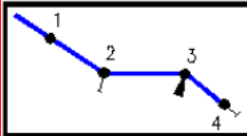
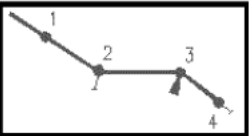
| Abbrev.        | Description                                                                                                                                    | Abbrev.      | Description                                            |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------|
| Jumper         | Connecting lead between open points, section points and overhead plant                                                                         | PICAS        | Paper insulated corrugated aluminium sheath armoured   |
| kV             | Kilovolt (or 1,000 Volts) – unit of electrical pressure                                                                                        | PILC         | Paper insulated lead covered                           |
| kW             | Kilowatt (1,000 Watts) – unit of electrical power                                                                                              | PILSTA       | Paper insulated lead covered steel tape armoured cable |
| kVA            | Kilovolt Amps or power                                                                                                                         | PL           | Plain lead or public lighting                          |
| Link box or LB | Means of connecting LV feeders together using links or fuses                                                                                   | PME          | Protected multiple earth or CNE                        |
| LSF            | Low smoke & fume                                                                                                                               | PMT          | Pole mounted transformer                               |
| LV             | Low voltage (up to 1,000 Volts incl)                                                                                                           | PMR          | Pole mounted recloser (generic term for OYT/GVR)       |
| LV Pillar      | Low voltage fuse distribution board                                                                                                            | PT           | Pole transformer                                       |
| Neutral        | Return path of live cable                                                                                                                      | PVC          | Polyvinyl chloride                                     |
| O/H or OHL     | Overhead line                                                                                                                                  | RMU          | Ring main unit                                         |
| OYS            | Oil filled pole mounted sectionaliser                                                                                                          | RN           | Reduced neutral                                        |
| OYT            | Oil filled pole mounted recloser                                                                                                               | s/c          | Split concentric or single core                        |
| PC400          | Pole mounted LV fuse unit                                                                                                                      | S/L          | Street light                                           |
| PE             | Pot end or potential end – joint on cable end                                                                                                  | S/S          | Substation                                             |
| Phase          | Usually the core colour of a cable (caution – may be cross phased) – Red, Yellow, Blue on old cables, or L1, L2, L3 on new cables, for example | STA          | Steel tape armoured                                    |
|                |                                                                                                                                                | SWA          | Steel wire armoured                                    |
|                |                                                                                                                                                | T1 or T2 etc | Substation TX setup where more than one TX exists      |
|                |                                                                                                                                                | T/F or TX    | Transformer                                            |
|                |                                                                                                                                                | Volts        | Unit of electrical pressure                            |
|                |                                                                                                                                                | Watts        | Unit of electrical power                               |
|                |                                                                                                                                                | XLPE         | Cross linked polyethylene                              |

# 1:2500 & 1:10000 view - overhead networks - for UK Power Networks use only - boxed in red

## General

| NetMAP system                                                                     | Scanned image                                                                     | Description    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|
|  |  | H pole<br>Pole |

## 1:2500 scale LV network

| NetMAP system                                                                         | Scanned image                                                                         | Description                                     |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------|
| No NetMAP equivalent                                                                  |    | 132kV cable route                               |
| No NetMAP equivalent                                                                  |    | 33/22kV cable route                             |
| No NetMAP equivalent                                                                  |    | 11kV underground cable                          |
|    |    | 132kV overhead line                             |
|    |    | 33kV overhead line<br>dots mark pole position   |
|    |    | 11kV overhead line –<br>dots mark pole position |
|    |    | Dual construction – dots<br>mark pole position  |
|    |    | LV overhead line – dots<br>mark pole position   |
| No NetMAP equivalent                                                                  |    | LV underground cable                            |
|    |    | Pole and stay                                   |
|    |    | Pole and strut                                  |
|    |    | Voltage regulator                               |
|   |   | Static balancer                                 |
|   |   | Example of<br>struts and stays                  |
|  |  | Flying stay                                     |
|  |  | Earthed pole in PME system                      |
| 261                                                                                   | 261                                                                                   | Pole number                                     |
|  |  | Ground type substation                          |
| S.P.                                                                                  | S.P.                                                                                  | Section pole                                    |
| S.L.                                                                                  | S.L.                                                                                  | Street light                                    |

section continued on next page

### 1:2500 scale LV network continued

| NetMAP system | Scanned image | Description       |
|---------------|---------------|-------------------|
| O.R. Stay     | O.R. Stay     | Outrigger stay    |
| Ext. Brkt     | Ext. Brkt     | Extension bracket |
| P. Box        | P. Box        | Pole box          |
| N.E.          | N.E.          | Neutral and earth |
| O.R. Brkt     | O.R. Brkt     | Outrigger bracket |

### 1:10000 scale HV network

| NetMAP system | Scanned image | Description                                                       |
|---------------|---------------|-------------------------------------------------------------------|
|               |               | 132kV overhead line                                               |
|               |               | 33kV overhead line<br>dots mark pole position                     |
|               |               | 11kV overhead line –<br>dots mark pole position                   |
|               |               | 11kV overhead line –<br>dual circuit –<br>dots mark pole position |
|               |               | 11kV underground cable<br>and EHV                                 |
|               |               | Pylon HV or EHV                                                   |
|               |               | Grid line tower                                                   |
|               |               | Stay                                                              |
|               |               | Ground type substation                                            |
|               |               | Pole type transformer                                             |
|               |               | Live line taps                                                    |
|               |               | Switchgear – all types                                            |
|               |               | Fuse gear                                                         |
|               |               | Auto recloser –<br>live line connected                            |

The above circular substation/switchgear symbols may be found that contain different combinations of apparatus (see last example)

## LV network diagram view-for UK Power Networks use only-boxed in red

### Overhead lines

| NetMAP system                                                                     | Description |
|-----------------------------------------------------------------------------------|-------------|
|  | Unknown     |
|  | Al          |
|  | Cu          |
|  | ABC         |
|  | Pole link   |

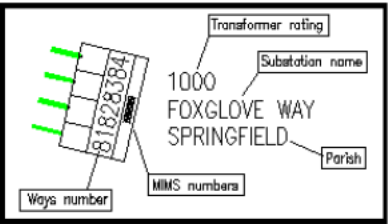
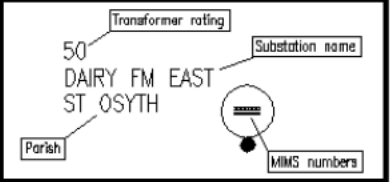
## Underground cables (LV network diagram view)

| NetMAP system                                                                       | Description |
|-------------------------------------------------------------------------------------|-------------|
|  | Unknown     |
|  | Al          |
|  | Cu          |
|  | CC          |
|  | TCC         |
|  | Ea          |
|  | Ec          |
|  | Ecx         |
|  | Ew          |
|  | LSF         |
|  | Other       |

## **Joints (LV network diagram view)**

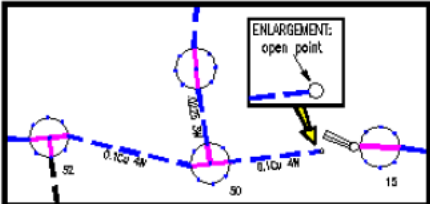
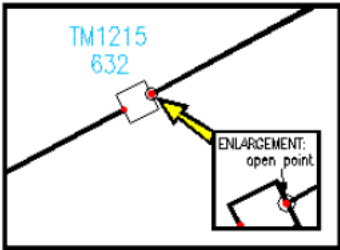
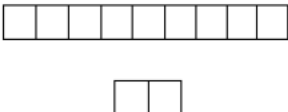
| NetMAP system                                                                     | Description           |
|-----------------------------------------------------------------------------------|-----------------------|
|  | Pot end or Sicame Box |
|  | Straight joint        |
|  | Crutch joint          |
|  | 3 phase termination   |

## **Substations/pole transformers (LV network diagram view)**

| NetMAP system                                                                                                                                                                                      | Description                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <p>There are many substation combinations – these are merely a sample of configurations that can be found.</p>  | 2 way substation                                                       |
|                                                                                                                 | 4 way substation                                                       |
|                                                                                                                 | 4 way twin busbar substation                                           |
|                                                                                                                 | 10 way back to back substation                                         |
|                                                                                                                 | Pole transformer (normal)                                              |
|                                                                                                                 | Pole transformer 2 way                                                 |
|                                                                                                                 | Pole transformer 3 way                                                 |
|                                                                                                                 | Substation with rating, name, Parish and MIMS identifying number       |
|                                                                                                                | Pole transformer with rating, name, Parish and MIMS identifying number |
|                                                                                                               | Intermediate pole                                                      |
|                                                                                                               | Section pole                                                           |
|                                                                                                               | Overhead fuse                                                          |

**section continued on next page**

## Substations/pole transformers cont'd (LV network diagram view)

| NetMAP system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><br><br><br><br><br><br><br><br><br> | <p>Overview – the purple lines through the section poles are pole links – these indicate how the network is linked together</p> <p>2 way link box</p> <p>3 way link box</p> <p>4 way link box</p> <p>4 way double busbar link box</p> <p>4 way BICC link box</p> <p>5 way link box</p> <p>6 way link box</p> <p>6 way double busbar link box</p> <p>A two way link box with identification number, connected to a cable with an open point</p> <p>Feeder pillars – these range from 2 ways through to 9 ways – a 9 way and a 2 way are shown as examples</p> |