

nationalgrid - Overhead Line Profile Drawing Help

X & Y Co-ordinate of tower base.
Route & Tower Number
Tower Type

(2) Vertical Axis
indicates meters
above OS GB
Datum 2m distance
between minor
marks/box

Span Length (m)

Generic Data
Origin of
Drawing

Height of
Conductor
Attachment
Point Above OS
GB Datum

Bottom
Conductor
Displayed at
Max Sag

National Grid Overhead Line Profile
Profile Description:
This profile is derived from the use of LIDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.
As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.
The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances.
It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.
Drawing Key:
The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

Key for LIDAR
Data

5.3m Clearance line at Max
Orange dashed line

7.3m Clearance line at Max Sag
Blue dashed line

Lidar Data showing
Buildings, Roads,
Vegetation etc.

Horizontal Axis –
10m between
minor marks/ box.

North Arrow

ENA43-8
Clearance to
Objects at
400kV

5.3m Clearance line at Max Swing
Orange dashed line

OHL Plan View & Downward Looking
Imagery

Swing & Sag
Diagram

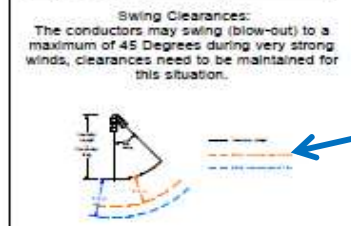
Section Operating Voltage, Conductor
Type, Conductor Name, Bundle
Configuration & Sagging Condition

(1) Vertical & Horizontal
Scale – can be used in
conjunction with a ruler

IMPORTANT: NOTE HORIZONTAL & VERTICAL
SCALES DISTANCE (1) MAY DIFFER FROM
HORIZONTAL & VERTICAL GRID MARKS
SCALE/BOX DISTANCE (2).

Drawing Key:
The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

Clearance to	Minimum clearance
To ground	13.0
To fixed structures	8.0
To trees	8.0
To other overhead lines	10.0
To buildings	10.0
To roads	10.0
To water	10.0
To vegetation	10.0
To power lines	10.0
To other structures	10.0
To ground	13.0
To fixed structures	8.0
To trees	8.0
To other overhead lines	10.0
To buildings	10.0
To roads	10.0
To water	10.0
To vegetation	10.0
To power lines	10.0
To other structures	10.0



National Grid plc
UK Transmission
Towers ZJ054 to ZJ055
Left - P055.A758.A653 Right - P055.A757.A658.A654
Chainage 17301 to 17322
Survey Date: 03/11/18
ZJ Tilbury - Rayleigh Main
ZJ054-A-070_30718_A
28_NG_0362

NG Drawing
Specific
Data