

Overhead Line Profile Drawing Help

Vertical Axis indicates meters above OS GB Datum 2m distance between minor marks

Height of Conductor Attachment Point Above OS GB Datum

Lidar Data showing Buildings Roads Vegetation etc

X and Y point of tower base Route and Tower Number Tower Type

Span Length

North Arrow

OHL Plan View and Downward Looking Imagery

Horizontal Axis 10m between minor marks

Span Operating Voltage Conductor Type Conductor Name Bundle Configuration and Sagging Condition

Do Not Use. This is not the drawing scale. This is the scale we use to get 1 span of OHL onto a A0 sheet of paper

Generic Data Origin of drawing

Key for LIDAR Data

Example Clearances to Objects from ENA TS 43-8 at 400kV

Swing and Sag Diagram

NG Drawing Specific Data

National Grid Overhead Line Profiles

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 increase.

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:

Feature Description	Clearance at 400kV
Tower Base	7.5
Ground (2m x 2m Key Points)	1.1
OS GB Datum	1.1
River Navigable	5.1
Other Non-Navigable	3.8
Delimitable Paved	3.8
Roads	3.8
Other Non-Navigable	3.8
Buildings	3.8
Proposed/Existing Tracks	3.8
Highway	3.8
Other	3.8
Vegetation	3.8
Other Low Clearance Works	3.8
Other Low Clearance Works	3.8
Proposed/Existing Structures	3.8
Processing Plant: Industrial	3.8
Other Industrial	3.8
Other Industrial	3.8
Other Industrial	3.8
Other Industrial	3.8
Other Industrial	3.8

No.	Description of Clearance	Minimum Clearance at 400kV
1	Overhead Lines	6.1
2	Overhead Lines	6.1
3	Overhead Lines	6.1
4	Overhead Lines	6.1
5	Overhead Lines	6.1
6	Overhead Lines	6.1
7	Overhead Lines	6.1
8	Overhead Lines	6.1
9	Overhead Lines	6.1
10	Overhead Lines	6.1
11	Overhead Lines	6.1
12	Overhead Lines	6.1
13	Overhead Lines	6.1
14	Overhead Lines	6.1
15	Overhead Lines	6.1
16	Overhead Lines	6.1
17	Overhead Lines	6.1
18	Overhead Lines	6.1
19	Overhead Lines	6.1
20	Overhead Lines	6.1
21	Overhead Lines	6.1
22	Overhead Lines	6.1
23	Overhead Lines	6.1
24	Overhead Lines	6.1
25	Overhead Lines	6.1

Swing Clearances:
The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.

National Grid pic UK Transmission
 Towers ZL384 to ZL385
 Left - A40A.A40D.A696.A609 Right - A41B.A41C.A697.A610
 Change 95262 to 95608
 Survey Date: 30/09/15

2L Profiles Information - Inter
 ZL 1108-505-27316-51016_A
 2L_No_0365_1 42 55 A

PlotId: 31/07/2017 16:43:22