

AINSTY (2008) INTERNAL DRAINAGE BOARD

(A Member of the York Consortium of Drainage Boards)

=====

22nd August 2023

Our Ref:

Planning Inspectorate

Dear Sir,

Yorkshire GREEN – DC1

Q4.03 Ainsty Internal Drainage Board Response

The Board remains in dispute with National Grid regarding the heights of the proposed electricity cables. In relation to the Boards working in the vicinity of these cables we believed it would be useful to highlight why the Board seeks 10.5m cable heights as a minimum:

The Board is aware that “Issue 4” of the Energy Network Association’s Technical Specification 43-8 - Issue 4 – when updated to issue 4 now includes reference to HSE Guidance Note GS6.

“Clause 11: Major changes to content of entire clause to reflect and align with the latest revision of HSE Guidance Note GS6. This includes incorporating the 10 m clearance from overhead lines stipulated in HSE Guidance Note GS6 and the exclusion zones identified by HSE Guidance Note GS6 when third parties are working underneath an overhead line. Terminology amended to align with HSE Guidance Note GS6. Table column headings have been updated to align with other tables in the document.”

This suggests that the requirements of HSE Guidance Note GS6 are recognised.

Health and Safety Executive Guide Note GS6 is here: <https://www.hse.gov.uk/pubns/gs6.pdf>



William Symons Clerk to the Board

Derwent House, Crockey Hill, York, YO19 4SR ☎ Tel 01904 720785 🌐 www.yorkconsort.gov.uk

An extract from that guidance “**Avoiding danger from overhead power lines - Guidance Note GS6 (Fourth edition)**” is below:

25 If you cannot avoid transitory or short-duration, ground-level work where there is a risk of contact from, for example, the upward movement of cranes or tipper trailers or people carrying tools and equipment, you should carefully assess the risks and precautionary measures. Find out if the overhead line can be switched off for the duration of the work. If this cannot be done:

- refer to the Energy Networks Association (ENA) publication *Look Out Look Up! A Guide to the Safe Use of Mechanical Plant in the Vicinity of Electricity Overhead Lines.*² This advises establishing exclusion zones around the line and any other equipment that may be fitted to the pole or pylon. The minimum extent of these zones varies according to the voltage of the line, as follows:
 - low-voltage line – 1 m;
 - 11 kV and 33 kV lines – 3 m;
 - 132 kV line – 6 m;
 - 275 kV and 400 kV lines – 7 m;
- under no circumstances must any part of plant or equipment such as ladders, poles and hand tools be able to encroach within these zones. Allow for uncertainty in measuring the distances and for the possibility of unexpected movement of the equipment due, for example, to wind conditions;

The guidance as the first port of call is noted as having the overhead line switched off.

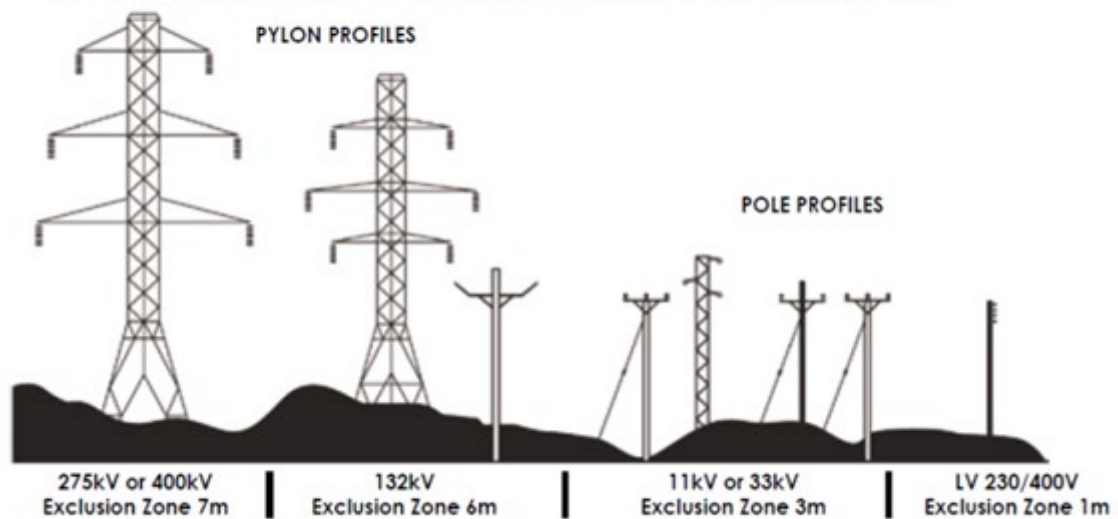
Assuming the overhead line cannot be switched off, the Health and Safety Executive guidance refers to the Energy Network Association’s “**Look Out Look Up! A guide to the safe use of mechanical plant in the vicinity of electricity overhead lines.**”

This document is here: <https://www.energynetworks.org/industry-hub/resource-library/mechanical-plant-safety-advice.pdf>



An extract from that guidance is below:

- You must not allow any part of your plant to enter the **EXCLUSION ZONE**.
- The diagram below shows typical types of overhead lines and provides a guide to help assess the line voltage of lines on wooden poles or steel pylons. The minimum **EXCLUSION ZONE DISTANCE** is shown for each example.



- Please note that these are absolute minimum distances that should under no circumstances be infringed. ***If you do - it could prove fatal.***

This clearly states that we should not be letting any part of our equipment in the “Exclusion Zone” and the “Exclusion Zone” for 275kV and 400kV is 7 metres.

The Boards equipment height is 3.5 metres.

This takes us to needing the overhead lines to be 10.5 metres above ground level.

The advice from National Grid being unable to send ENA 43-8 is to confirm that the figures in the table below (row 7: 3.1m and 2.4m) remain in the latest version of ENA 43-8. These figures, when combined with the 3.5m equipment ensure that statutory clearances, and safe working clearances are achieved.

In terms of the 7m referenced by National Grid, this is intended for those working under overhead lines with no procedures in place/ knowledge of working under overhead lines. The guidance attached seeks to ensure working under overhead lines can take place safely, while complying with the necessary legislation.



Table below:

Table 1: Overhead line conductor clearances

Description of Clearance	Minimum clearance (metres) at 400kV	Minimum clearance (metres) at 275kV
To ground	7.6	7.0
To normal road surface	8.1	7.4
To road surface of designated '6.1 metres high load' routes	9.2	8.5
To motorway or other road surface where Skycradle can be used	10.5	9.8
To motorway road surface where scaffolding is to be used on:		
(i) Normal 3 lane motorways	16.3	15.6
(ii) Elevated 2 lane motorways	13.3	12.6
To any object on which a person may stand including ladders, access platforms etc.	5.3	4.6
To any object to which access is not required AND on which a person cannot stand or lean a ladder	3.1	2.4
To trees under or adjacent to line and:		
(i) Unable to support ladder/climber	3.1	2.4
(ii) Capable of supporting ladder/climber	5.3	4.6
(iii) Trees falling towards line with line conductors hanging vertically only	3.1	2.4
To trees in orchards and hop gardens	5.3	4.6
To irrigators, slurry guns and high pressure hoses	30.0	30.0
To street lighting standards with:		
(i) Standard in normal upright position	4.0	3.3
(ii) Standard falling towards line with line conductors hanging vertically only	4.0	3.3
(iii) Standard falling towards line	1.9	1.4

The Board does not agree with this statement and believes it relates to National Grids experienced contractors working daily in this environment. It is more likely to refer to an apex of a roof or hoarding rather than moving machinery. We further note GS6 is seeking risk assessments and cable height measurements to be carried out to establish and identifying the required clearances. The response from National Grid also included an attached document referencing TGN 287 Third-party guidance for working near National Grid Electricity Transmission equipment.

This document is here: www.nationalgrid.com/electricity-transmission/document/149291/download



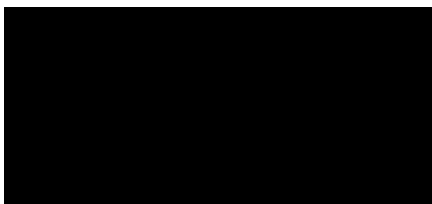
Page 6 of which recommends that HSE Guidance Note GS6 is also followed.

The Board further notes waterway crossings have much higher cable heights than 10.5m agreed. Northern Power Grid document as an example link below have agreed over-sail heights for cables over waterways (section 3.9) but none are provided for IDB maintained watercourses.

www.northernpowergrid.com/sites/default/files/assets/2012.pdf

We trust the above explains the Boards approach with its safety procedures for working in the vicinity of overhead power cables. This is our requirement for National Grid to seek the Boards consent for any cables to be installed below 10.5 m so we can see if it is practical to match our operations. We are sending this letter as we do not believe the information supplied by National Grid comprehensively explains the Boards position and highlight the reasons why we are unable to agree the arrangements.

Yours sincerely,



W Symons
Clerk and Engineer to the Board

