

# **AINSTY (2008) INTERNAL DRAINAGE BOARD**

(A Member of the York Consortium of Drainage Boards)

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Wednesday 30 August 2023

The Planning Inspectorate  
National Infrastructure Planning  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

Dear Sir/Madam,

**Planning Inspectorate Reference:** EN020024  
**Application Description:** Application by National Grid Electricity Transmission (NGET) for an Order Granting Development Consent for the Yorkshire Green Energy Enablement (GREEN) Project

In response to Question 4.03:

***The ExA notes the submissions of Ainsty IDB [REP6-067] with regard to Article 19(12) and the justification for requiring consent under the relevant IDB byelaw for overhead line works with a clearance of less than 10.5 metres above ground level when crossing IDB maintained watercourses. This figure is calculated using the 7 metres height for overhead lines exceeding 132,000 volts but not exceeding 275,000 volts as stated in Schedule 2 of the Electricity Safety, Quality and Continuity Regulations 2002 plus the maximum 3.5m height of equipment used by Ainsty IDB.***

***a) Can Ainsty IDB respond to the Applicant's latest submissions on this matter, set out at Appendix D and Appendix E, line 7 of [REP6-062] and Table 2.1 of [REP6-058].***

***b) Appendix D of [REP6-062] indicates that all of the overhead line crossings would exceed 10.5 metres, with the exception of that relating to Pylon XC459. The Applicant notes that these figures should be treated as indicative since they are subject to final detailed design. Is there any change to Ainsty IDB's position in response to this analysis?***

***c) Should wording be inserted into Article 19(12) to provide that no consent under the relevant IDB byelaw is required for any overhead lines which are 10.5 metres or more above ground but that consent is required for any overhead lines with a clearance of less than 10.5 metres, would this remove Ainsty IDB's objections to Article 19? If not, explain why and set out drafting that would address your remaining concerns.***

The Board has recently sent the enclosed letter dated 22 August 2023 to the Planning Inspectorate by e-mail but we enclose it again through the formal process. This should answer part (a) of the above question.

The Association of Drainage Authorities ("ADA") has also sent the enclosed letter in support of our request.

With regards to part (b) and (c) of the above question, our comments are:

- The Development Consent Order ("DCO") is drafted to say National Grid do not need the Board's consent if they comply with the Electricity Safety, Quality and Continuity Regulations 2002 – which



William Symons Clerk to the Board

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requires overhead lines to have a clearance of 7 metres for 275 volt overhead lines and 7.3 metres for 400 volt overhead lines from the top of the bank of watercourse maintained by the Board.

- National Grid have provided details of the proposed clearances, stating that current clearances will be improved in all cases and will meet the Board's 10.5 metre clearance request (other than in respect of pylon XC459).
- The Board accepted pylon XC459 being lower.
- However, National Grid will give the Board no guarantee regarding the proposed clearances. They are in fact making the DCO state that they only need to provide 7m / 7.3m clearance for them to not require the Board's consent.
- The Board are happy for the DCO to state that no consent is required from the Board for any overhead lines which are 10.5 metres or more above ground level (specifically the top of the bank of a watercourse) but we would ask that our consent is obtained for any overhead lines with a clearance of less than 10.5 metres.
- Ultimately, National Grid is trying to give the Board reassurance that their proposed clearances will meet our criteria of 10.5 metres or more (other than pylon XC459 – which reiterate we will accept will be lower) but then when it comes to it, National Grid could make the clearances much lower (at say 7.5 metres from ground level) under the current drafting of the DCO and we would have nothing to stop this.

Yours faithfully,



Charlotte Gill  
Planning Officer  
Email: [Planning@yorkconsort.gov.uk](mailto:Planning@yorkconsort.gov.uk)



# **AINSTY (2008) INTERNAL DRAINAGE BOARD**

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22<sup>nd</sup> August 2023

## **Our Ref:**

The Planning Inspectorate  
National Infrastructure Planning  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

Dear Sir/Madam

## **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/g6.pdf>



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.*<sup>2</sup> 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.

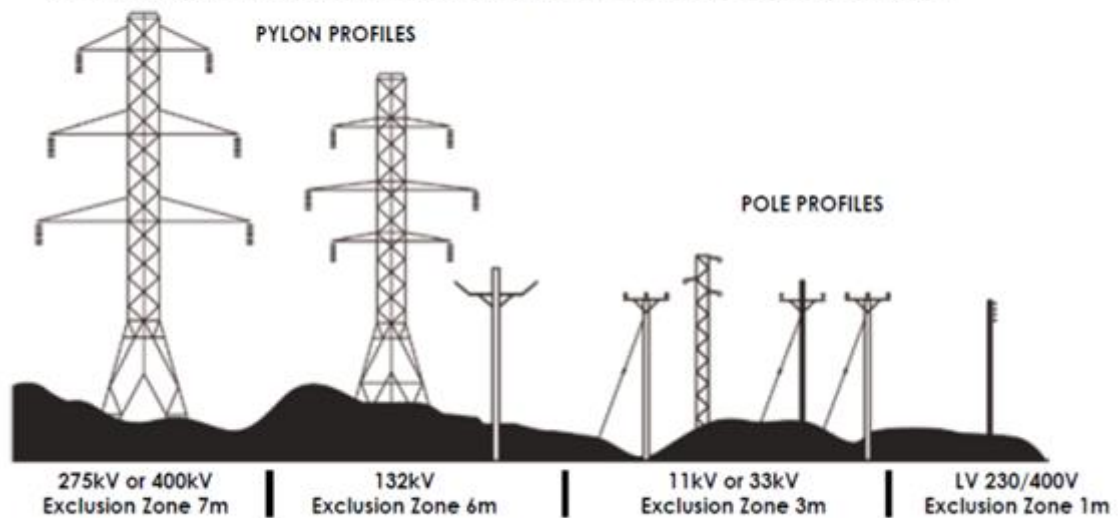
Assuming the overhead line cannot be switched off, the Health and Safety Executive guidance refers to the Energy Network Association’s “**Look Out Look Up! A guide to the safe use of mechanical plant in the vicinity of electricity overhead lines.**”

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](http://www.nationalgrid.com/electricity-transmission/document/149291/download)



William Symons Clerk to the Board

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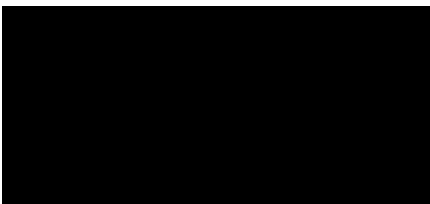
Page 6 of which recommends that HSE Guidance Note GS6 is also followed.

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](http://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





# Representing Drainage Water Level & Flood Risk Management Authorities

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22nd August 2023

## **Safe Working Clearances for essential maintenance works under HV Cables**

**Reference: Yorkshire GREEN – DC1 - Q4.03 Ainsty Internal Drainage Board Response**

Dear Sirs,

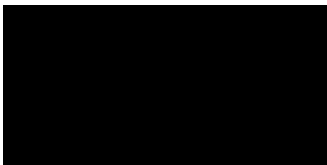
It has come to our attention that one of our members – the Ainsty Internal Drainage Board (IDB) – has highlighted significant safety concerns about the clearance of high voltage electricity cables from the ground as part of National Grid's Yorkshire Green Project.

As part of the project, we understand that National Grid are proposing to use the minimum clearance heights for new cabling of 7m for 250kV and 7.6m for 400kV cables without taking into account the need for certain essential maintenance activities to be undertaken below these cables, such as the routine maintenance of ditches and waterways for flood risk management reasons. The equipment which Ainsty IDB uses has a working height of 3.5m which, when added to the minimum clearance heights, gives a minimum required clearance height between the ground and lowest point in the cabling of 10.5m. ADA understands that this aligns closely with the Health & Safety Executive's Guidance Note GS6 which includes incorporating a minimum 10 m clearance from overhead lines and an exclusion zones identified when third parties are working underneath an overhead line.

Ainsty IDB have indicated that they are prepared to work with National Grid to evaluate the necessary clearances at each of the sites where new cabling is proposed.

The purpose of this letter is therefore to ask the Planning Inspectorate to uphold Ainsty IDB's concerns and request that for each case of cables crossing waterways and ditches where IDB maintenance operations take place, the minimum HV cable height off the ground should be 10.5m, unless otherwise agreed with the IDB.

Yours faithfully,



Innes Thomson  
Chief Executive

Cc: W Symons (Ainsty IDB)

ADA – representing drainage, water level and flood risk management authorities

Member of EUWMA- the European Union of Water Management Associations

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