LAND DRAINAGE AND SOILS

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SCOTLAND TO ENGLAND GREEN LINK 2) COMPULSORY PURCHASE ORDER 2023

SUMMARY STATEMENT
STATEMENT OF EVIDENCE

Miles George Flather
Land Drainage Consultancy Ltd

1. QUALIFICATIONS AND EXPERIENCE

1.1 My name is Miles George Flather and I have been employed for 14 years as a consultant at Land Drainage Consultancy Ltd (LDCL). I currently work as a technical director and land drainage consultant.

1.2 Since 2010 I have been involved in agricultural land drainage surveys, drainage design and remediation of drainage problems on a range of linear developments.

1.3 I set out my qualifications and experience in section 1 of my evidence.

2. INTRODUCTION AND SCOPE OF EVIDENCE

2.1 The purpose of my evidence is to explain the approach to land drainage and soils along the English Onshore Scheme component of the Project (as defined in Dave Ritchie's proof of evidence).

3. LDCL'S ROLE TO DATE

3.1 In August 2022, LDCL provided NGET with a *Desk Study of Soils and Land Drainage* (Please refer to Appendix 1 of my evidence).

3.2 The study allowed LDCL to gauge what sections of the Project are likely to be drained via agricultural land drainage systems.

3.3 The report advised NGET that where land is artificially drained, mitigation drainage systems, also referred to as 'pre' and 'post' construction schemes will be required.

3.4 The desk study also provided an understanding of the varying soil types and geology that will be encountered along the Project. This in turn notified NGET that there will be potential engineering limitations and special soil handling requirements throughout the construction phases of the Project.

3.5 LDCL has attended meetings with landowners, occupiers, and their land agents and NGET staff to discuss the construction of the UK onshore scheme. Meetings are carried out to inform landowners, occupiers and their agents on how land drainage and soils will be managed on the Project. The meetings are also an opportunity for landowners to provide information on their land, soils and land drainage systems, the latter usually provided in the form of paper drainage plans.

3.6 LDCL are undertaking land drainage surveys along the route. Surveys include gathering of information to help inform the drainage design process. GPS equipment is used to record ground levels along the proposed route, water levels in watercourses and mark existing land drainage outfalls, as well as recording several other features of relevance.

3.7 Soil surveys are being conducted by experienced soil scientists. The information on soils is to be used to advise contractors on soils handling, most notably depths of topsoil when soil stripping is being carried out. LDCL's soil survey methodology and soil physical and chemical properties that are being tested are provided under Section 6 of this report.

4. LDCL'S FUTURE ROLE

4.1 LDCL are to continue to provide NGET with ongoing technical support in the lead up to the construction phase of the Project, during the construction phase and throughout the reinstatement and aftercare period. Details of LDCL's future roles are provided below.

4.2 Meetings will be held with landowners and occupiers yet to be consulted on the Project and given the opportunity to provide important information to LDCL on land drainage, soils, farming practices etc.

4.3 LDCL are continuing to carry out their land drainage and soils surveys with the aim of completing surveys by late February 2024 and ideally before the start of the Compulsory Purchase Order (CPO) inquiry on 5th March 2024. The progress of LDCL's surveys is largely dependent on some landowners and occupiers granting access to their land. In addition, some fields along the route have been subject to flooding and access has not been possible.

5. CABLE BURIAL DEPTH

5.1 LDCL is aware that, following the CPO being made, there have been objections from the National Farmers Union (NFU) as well as landowners to the Project with regards to the burial depth of the cable, wanting it increased from 0.90m to 1.20m.

5.2 Before making the CPO and as part of the engagement with landowners, NGET appointed LDCL to advise with regards to cable burial depth, drainage, and soils.

5.3 NGET was aware of specific soil and drainage conditions that warranted early consideration of whether a greater minimum burial depth would be appropriate in some areas. Having received comprehensive feedback from landowners and considering the unique underlying geology and the farming and cultivation practices carried out along sections of the route, NGET engaged LDCL to analyse the cable route.

5.4 The Cable Depth plan appended to this report is indicative only. The plan shows the route split into two categories.

5.5 Category 1 denotes sections of the scheme whereby NGET expects the HVDC cables to be installed with a minimum depth of not less than 1.2 metres from the surface level to the top of the protective tile laid above the cables. Category 2 are sections of the scheme where NGET have confirmed to landowners that cables will be laid to a minimum depth of 0.9 meters.

5.6 As addressed in David Rogerson's evidence 'The current industry wide documentation demonstrates that there is no intention to implement a new minimum installation depth greater than the 0.9 meters, notwithstanding the requirement based on evidence and agreement to increase this on a case-by-case basis.'

5.7 There is clear explanation that land drainage will be treated as a service, requiring cables to cross under land drains or mitigating the impact by diverting the drains.

6. MITIGATION OF THE IMPACTS OF ENGLISH ONSHORE SCHEME

6.1 Section 6 of my evidence sets out how potential impacts of the English Onshore Scheme on land drainage and soil will be mitigated.

6.2 Cable installation will impact agricultural land drainage systems on the route. Existing drainage systems will need to be properly intercepted, diverted away from zones of impact

and be provided with new adequate outfalls. This principle is commonly referred to pre-construction drainage and is described in more detail in my evidence.

6.3 There are several fields along the route that are occupied by land drainage schemes that present technical issues for standard land drainage mitigation, as described in section 6.5 of my evidence. These issues occur in situations where land drains outfall individually or directly into ditches or watercourses. Further detail is given in my evidence.

6.4 Soils affected by cable installation will take time to recover and the design and installation of new land drainage systems will be required to facilitate a return to agricultural productivity in the short to medium term. This type of system is referred to as post-construction drainage and is explained in my evidence.

6.5 The movement, storage and reinstatement of soils will inevitably result in changes to soil physical characteristics. Soil handling recommendations applicable to soil types assessed along the route will be provided by LDCL in the form of a detailed report and accompanying plans. Further details on the management of soils are provided in my evidence.

7. OBJECTIONS MADE TO THE ORDER

7.1 Several objectors have raised concerns about land drainage and soils. Details of each objection and LDCL's responses are provided in section 7 of my evidence.

8. SUMMARY AND CONCLUSION

8.1 In my statement of evidence, I have described the approach to land drainage and soils as part of the Project.

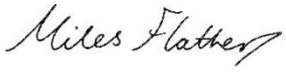
8.2 Land drainage systems and agricultural soils affected by the scheme are currently being assessed by LDCL and potential impacts identified. This understanding will inform the design of mitigation to be implemented by NGET and its contractors and assist in the development of rights being sought within the Order Land.

8.3 Ongoing dialogue with affected landowners and occupiers is required by the Project and is essential to ensure the best possible mitigation is implemented within the framework of the farming systems in place.

8.4 I consider that the approach to land drainage and soils in respect of the Project is appropriate, feasible, and compliant with the relevant standards, codes, and guidance.

9. DECLARATION

9.1 I confirm that the opinions expressed in this proof of evidence are my true and professional opinions.



Miles George Flather

16th February 2024