

**NATIONAL GRID VIKING LINK COMPULSORY PURCHASE ORDER 2019**

**PROOF SUMMARY**

**IMPACT ON SOILS AND LAND DRAINAGE  
DAVID ROYLE  
LAND DRAINAGE CONSULTANCY LTD**

## **1. QUALIFICATIONS AND EXPERIENCE**

- 1.1 My name is David George Royle and I have been employed for 12 years as an Associate Director of Land Drainage Consultancy Ltd. (LDC), Cowslip Offices, Fimber, Driffield, East Yorkshire, YO25 9LY. I currently work as a soil scientist and land drainage consultant. My qualifications and experience are set out at Section 1 of my proof.

## **2. INTRODUCTION AND SCOPE OF EVIDENCE**

- 2.1 On 22<sup>nd</sup> January 2019 I was instructed by Eversheds-Sutherland to provide a proof of evidence in connection with the NGVL (Viking Link Interconnector) Compulsory Purchase Order 2019 ("the Order") (CD Ref: C.1) which was made on 15<sup>th</sup> of January 2019. I was asked to provide information on the land drainage and soils impacted by the UK Onshore Scheme; how potential impacts are being considered; the mitigation of impacts and to review any objections from those affected by the Order.
- 2.2 My proof of evidence explains how, in my expertise as a soils and land drainage practitioner, soils and land drainage have been considered by NGVL in developing the rights packages sought for the Order Land. To this end, my proof of evidence is summarised below:

## **3. LDC INVOLVEMENT IN THE UK ONSHORE SCHEME**

- 3.1 I have been responsible for the management of LDC drainage and soil surveys together with technical inputs on the UK Onshore Scheme. This has included detailed field surveys of soils and drainage features; the collection of information on land drainage systems; the design of mitigation for land drainage and meetings with landowners to discuss NGVL's proposals.

## **4. IMPACTS OF THE UK ONSHORE SCHEME ON SOILS AND AGRICULTURAL LAND DRAINAGE**

### **The importance of soils and land drainage**

- 4.1 Soils are a fundamental component of the agricultural land affected by the UK Onshore Scheme. The maintenance of soil physical, chemical and biological condition is essential to allow productive crop growth and to sustain agricultural businesses in the medium and longer term.
- 4.2 Soils will need to be handled and re-instated during the construction phase, and managed for a period thereafter, to ensure that impacted agricultural land can be returned to its pre-entry condition and to a similar quality.

- 4.3 Agricultural drainage is needed to improve the movement of water by gravity from the surface of the soil to natural drainage points known as outfalls, which might include pipes, ditches, ponds, streams and ultimately rivers and the sea. An understanding of the agricultural land drainage systems in place is very important in order to provide appropriate mitigation and design during all phases of construction.

#### **Land drainage and soil surveys on the UK Onshore Scheme**

- 4.4 It has been necessary to collect information on soils and agricultural land drainage to inform the CPO process and detailed construction design. The current methodology adopted by NGVL is explained in detail in my proof.
- 4.5 LDC has completed soil and drainage surveys on 64.49km (or 93%) of the 69.52 km of land affected by HVDC and HVAC cable installation.
- 4.6 LDC has attended meetings with landowners, occupiers, their land agents and NGVL staff between March and August 2018 to discuss the construction of the UK Onshore Scheme. This information has been used to inform the CDD and to formulate the rights packages being sought by NGVL for the Order Land.
- 4.7 Landowners who have signed up to HoTs have the ability to review, discuss and/or challenge the current Conceptual Land Drainage Design ("CDD") plans provided to them. It is expected that, as the construction detail for the project evolves, a necessary part of the cable installation will be further design, review and agreement of CDD changes with them.
- 4.8 NGVL will continue to seek voluntary access agreement for soil and land drainage surveys on areas not yet surveyed as this information is acknowledged to be very important in developing a detailed construction design.
- 4.9 The information presented in my proof shows that NGVL has taken reasonable care to ensure that it has a good level of knowledge about the soil types and land drainage affected by cable installation and this has been considered in the rights packages sought within the Order.

#### **Impact on soils and agricultural land drainage**

- 4.10 The movement, storage and reinstatement of soils will inevitably result in changes to soil physical characteristics.
- 4.11 Cable installation will impact agricultural land drainage systems on the route. These drains will need to be properly intercepted and provided with new adequate outfalls

- 4.12 Soils affected by cable installation will take time to recover and the design and installation of new land drainage systems will be required in order to facilitate a return to agricultural productivity in the short to medium term.

## **5. MITIGATION OF THE IMPACTS OF THE UK ONSHORE SCHEME**

### **Mitigation of the impacts on soils**

- 5.1 NGVL recognise that land drainage and soils are important considerations. Further development of a Soil Handling and Storage Protocol and Construction and Environmental Management Plan will form an integral phase of the planning of construction work.
- 5.2 The techniques used in soil management are described in my proof and are well understood. They have been employed by National Grid and its contractors on similar projects for many years.
- 5.3 NGVL has developed a 'Code of Practice' to explain the agricultural impacts of cable installation to landowners and occupiers with their Heads of Terms of agreement.
- 5.4 Consultation with affected landowners and occupiers will continue to ensure the best practicable restoration is achieved.

### **Mitigation of the Impacts on Land Drainage**

- 5.5 CDD plans have been completed for 94% of the Order Land (the same proportion as the land in respect of which baseline data has been collected) and these have been issued to landowners and occupiers for consultation.
- 5.6 Follow up meetings have been completed with around 60 (or 75%) of the landowners and occupiers within the Order Land to discuss their CDD.
- 5.7 It is important to recognise at this stage that CDD plans are likely to change as construction detail evolves. This is normal on a project of this type and the drainage design process will be reviewed as detailed cable construction design progresses and as further investigations are undertaken.
- 5.8 Final drainage design will be subject to an agreement between NGVL and the individual landowner(s) affected by the scheme.
- 5.9 It is important that mitigation of the impacts of cable installation on soils and agricultural land drainage is secured, implemented and monitored, from pre-entry and through into the construction phase and beyond. This will be achieved through a combination of planning conditions, necessary consents and oversight by NGVL personnel.
- 5.10 Whilst NGVL will seek to mitigate its impacts as far as reasonably practicable it recognises that there may be circumstances that give rise to financial loss and a reasonable negotiated settlement may need to be made.

## **6. DRAINAGE RIGHTS NEEDED BY NGVL**

- 6.1 The Order Land comprises all of the land required for the construction, operation, repair maintenance and decommissioning of the UK Onshore Scheme.
- 6.2 NGVL has undertaken adequate planning, survey, design and consultation in its consideration of the impacts and mitigation of cable installation on soils and agricultural land drainage. The rights packages sought under the Order have been carefully considered and land drainage mitigation has been embedded in each of the rights packages sought.

## **7. SUMMARY AND CONCLUSIONS**

- 7.1 Construction of the UK Onshore Scheme will inevitably impact on agricultural soils and land drainage.
- 7.2 Agricultural soils and land drainage affected by the UK Onshore Scheme have been assessed through desk and field survey and impacts identified. This understanding has informed the design of mitigation proposed by NGVL and its contractors and the development of the rights packages being sought within the Order Land.
- 7.3 Current designs will develop further and the rights packages have been tailored to accommodate anticipated changes.
- 7.4 Continuing dialogue with affected landowners and occupiers will be necessary and is essential to ensure the best possible construction designs are implemented within the framework of the farming systems in place.
- 7.5 I understand that NGVL is continuing to negotiate with landowners affected by the Order to secure voluntary rights to carry out drainage and soil re-instatement works on their land. In the event that voluntary agreement cannot be reached, NGVL will rely on the rights packages it has included in the Order to carry out necessary drainage work.
- 7.6 I am satisfied that, in developing the rights packages for the Order, the land take proposed is reasonable and proportionate. I am confident that the rights secured will be sufficiently flexible to facilitate construction and remediation of the impacts of the UK Onshore Scheme on soils and agricultural land drainage.
- 7.7 For the reasons set out above and in the evidence of the other witnesses, I believe that there is a compelling case in the public interest to justify confirmation of the Order.

**8. EXPERTS DECLARATION & STATEMENT OF TRUTH**

I, David George Royle, declare that:

- 8.1 I have made clear which facts and matters referred to in this Proof are within my own knowledge and expertise and those which are not. Those that are within my knowledge and expertise I confirm to be true.
- 8.2 I have indicated the sources of all information I have used.
- 8.3 I have complied with my duty to the Compulsory Order Inquiry as an expert witness which overrides any duty to those instructing or paying me.
- 8.4 I am not instructed under any conditional or other success related fee arrangement.
- 8.5 I have no conflicts of interest.
- 8.6 I will notify those instructing me immediately and confirm in writing if for any reason my proof requires any correction or qualification.
- 8.7 I am aware of and have complied with the requirements of the rules, protocols and directions of the Inquiry in connection with the Order which was made on 15<sup>th</sup> of January 2019.

Signed:



**Dated: 4 June 2019**