AIR QUALITY STATEMENT

NINFIELD GREENER GRID PARK

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1 INTRODUCTION

1.1 Background

Arcus Consultancy Services (Arcus) has been commissioned by Statkraft UK LTD (the Applicant) to prepare this Air Quality Statement as part of the planning application for a Greener Grid Park, comprising of battery storage and energy management technology ('the Development') on land to the north of Potman's Lane, Ninfield ('the Site'). The Site comprises 2.58 hectares (ha) of agricultural grazing land located approximately 1.5 kilometres (km) to the east of Ninfield, immediately to the southwest of Ninfield 400kV Substation, as shown on the Site Location Plan (Figure 1).

1.2 Overview of the Development

The Development is intended to provide services supporting the flexible operation of the National Grid and decarbonisation of electricity supply e.g. by balancing electricity supply and demand. The Development will import and export electricity but will not generate any additional electricity nor have any on site emissions of carbon dioxide or pollutants. The proposed batteries will store surplus electricity to be fed into the grid when required, while the energy management modules will reduce fluctuations, thus improving stability and reducing the risk of power failures. Other sources of potential air quality emissions arising from traffic movements, both during the short term construction period and when operational, although the site will be unmanned and remotely operated so only visited for maintenance purposes.

1.3 Guidance

In preparing this Air Quality Statement the following guidance has been considered throughout:

- Department for environment Food and rural Affairs (DEFRA, 2018) – Local Air Quality Management Technical Guidance (TG 16); and
- Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK, 2017) – Land Use Planning and Development Control: Planning for Air Quality.

1.4 Consultation

Pre-application consultation was undertaken with Wealdon District Council (the Council) in 2019, with formal written advice provided in November 2019.

In its response the Council noted the need to consider potential impacts on the Ashdown Forest and Lewes Downs Special Areas of Conservation (SAC), sites designated under the Habitats Directive, as a result of increased vehicle emissions, to which the SACs are sensitive.

1.5 Purpose and Scope of this Report

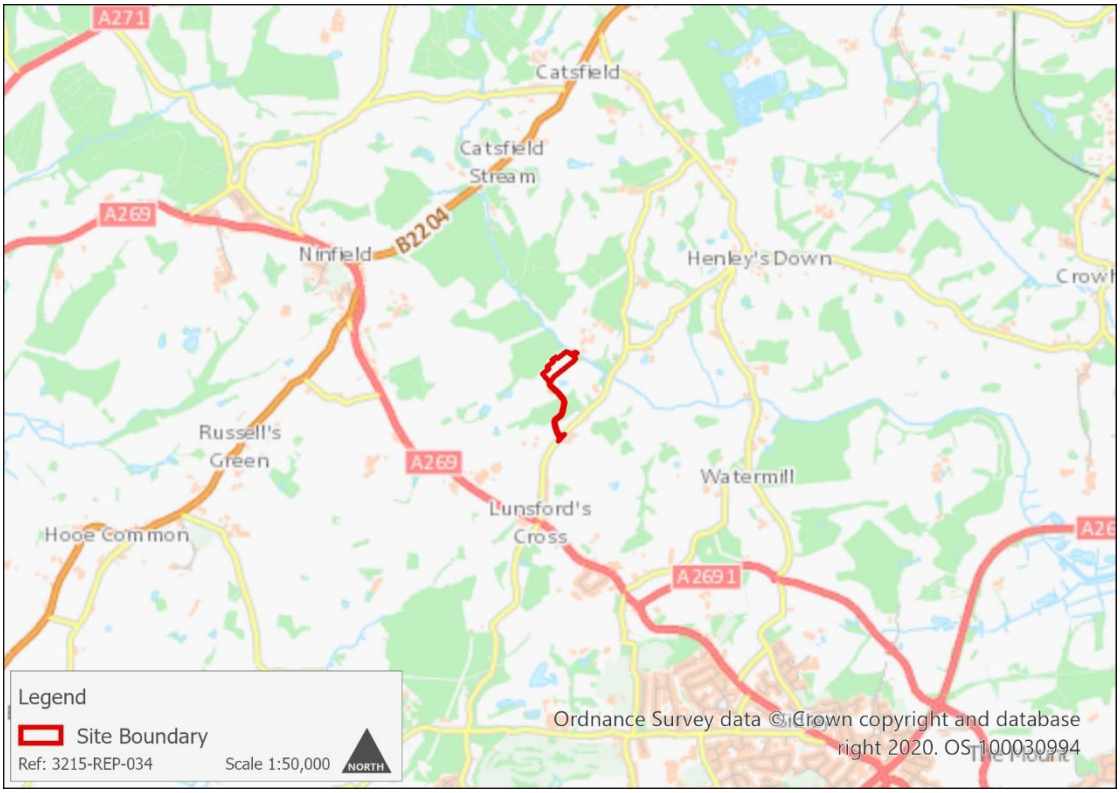
The purpose of this report is to address the comments received from the Council in their pre-application advice set out in section 1.4.

The scope of the report is therefore limited to air quality impacts on the Ashdown Forest and Lewes Downs SACs. All other air quality effects are excluded.

2 DEVELOPMENT PROPOSAL

2.1 Site Location

Figure1 - Site Location Plan



2.2 Development Elements

The Development is anticipated to include the following components, as shown on the Site Layout Plan and detailed in the Planning Design and Access Statement and planning drawings and elevations which form part of the planning application:

- Energy management building containing energy management modules, coolers, and e-houses;
- Battery storage units;
- Electrical infrastructure including inverters, transformers, grid connection, switchgear and underground cabling;
- Site office and welfare area;
- Control room;
- Existing access off the public road;
- On site access track and parking area;
- Security perimeter fencing and CCTV; and
- Landscaping and planting.

The site will be accessed via the existing access track from Potman's Lane.

2.3 Development Traffic

2.3.1 Traffic Routing

As set out in the Transport Statement, it is assumed that all deliveries will approach the Site from the A21 to the east of the Site. From the A21 the route to site will be as follows:

- Leave A21 onto Junction Rd towards A2100;

- Continue along Junction Rd, turning left onto A2100;
- Continue on A2100 for approx. 0.3 miles to roundabout;
- Turn left at roundabout onto A2690;
- Continue on A2690 (Queensway) for approx. 1.8 miles;
- Turn right at Junction to continue on A2690, following signage for A259;
- Continue on A2690 (Combe Valley Way) for approx. 2.3 miles to roundabout;
- Turn right onto A2691;
- Continue along A2691 for approx. 1.6 miles to roundabout junction with A269;
- Turn right onto A269 (Ninfield Rd);
- Continue along A269 (Ninfield Rd) for approx. 0.5 miles;
- Turn right onto Potman's Lane;
- Continue along Potman's Lane for approx. 0.4 miles to Site Access Junction;
- Turn Left into existing Site Access.

2.3.2 Construction Traffic

Given the temporary nature of the construction work, any traffic increase related to the construction phase of the development will only be present for the duration of the 18th month construction programme, namely during peak periods. Further detail on this is provided in the Transport Statement which is submitted with the planning application.

Construction of the Development will generate approximately 5,046 vehicle movements during the 18-month construction period. It is expected that during the peak month of construction (Month 1), 21 two-way vehicle movements per day will occur per day, which would consist of 4 Light Good Vehicles (LGV) movements and 17 HGV movements on average. In other months when traffic levels are lower there could be no HGV movements and as few as 5 two-way vehicle movements.

The lowest threshold of impact for traffic generation at sensitive receptors is typically 10%. As indicated in Section 4.4.2 of the Transport Statement, the temporary increase in Average Daily Traffic Flow ('ADTF') due to total construction traffic is between 0.11 and 0.26% and HGV is between 5 and 7%, in both instances less than the 10% threshold so any short-term traffic impacts are negligible and not significant.

2.3.3 Operational Traffic

When operational, the Development will be operated remotely. As such Development traffic will be minimal and can be expected to be limited to approximately 1 car or van visit per week as an estimate of average frequency.

3 ASHDOWN FOREST AND LEWES DOWNS SAC

3.1 The Ashdown Forest SAC

Large parts of Ashdown Forest (2,729 hectares) are designated as an SAC, awarded because Ashdown Forest contains one of the largest single continuous blocks of lowland heath in south-east England. The SAC designation recognises the special nature of the vegetation found within Ashdown Forest, namely European dry heaths and North Atlantic wet heath and affords it legal protection by the Conservation of Habitats and Species Regulations 2017 (as amended) which transposes the requirements of the European Habitats Directive (92/43/EEC).

The main threat to the SAC relates to air quality associated with an increase in additional traffic movements resulting from development across the forest.

The closest part of the delivery route to the Site is located 28.8 km from the SAC.

3.2 The Lewes Downs SAC

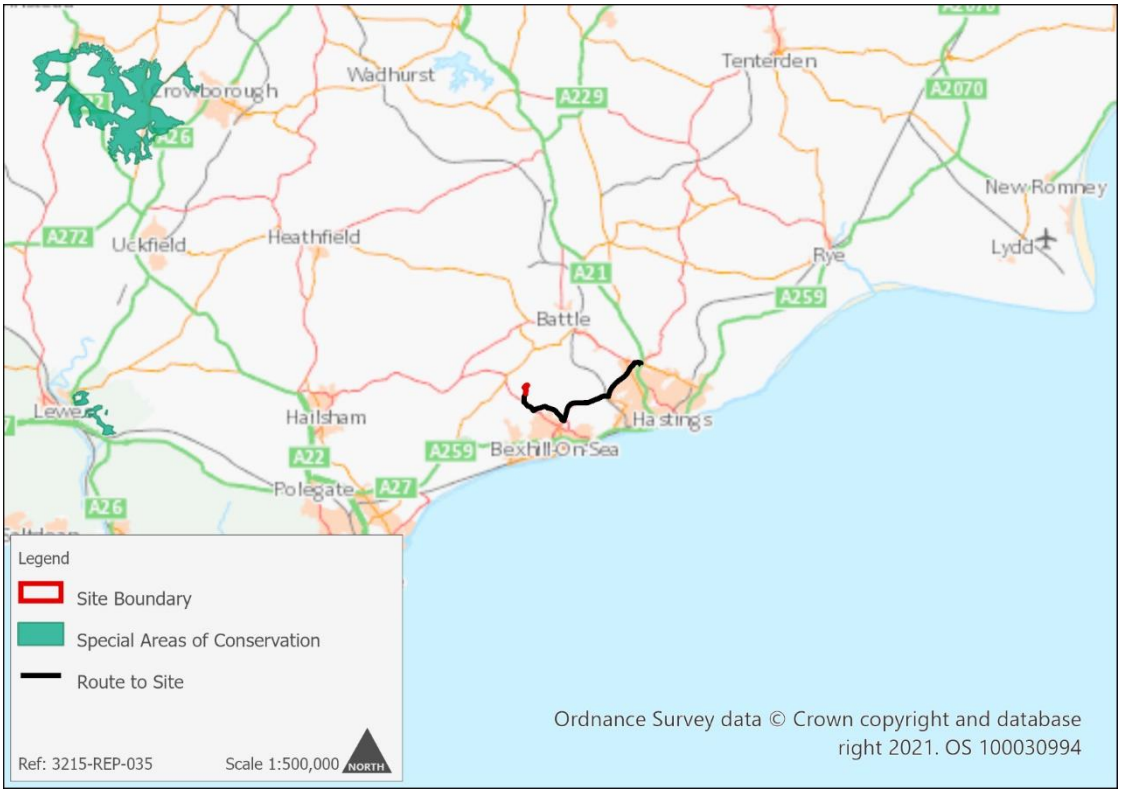
The Lewes Downs has been designated as an SAC, Site of Special Scientific Interest (SSSI) and a National Nature Reserve (NNR), due to its orchid-rich chalk grassland and scrub vegetation, which contains numerous southern and oceanic-southern species. It also supports a rich invertebrate fauna, including moths and a breeding community of downland birds. It is sensitive to air quality impacts associated with increased traffic in the vicinity of the designation.

The closest part of the delivery route to the Site is located 27 km from the SAC.

3.3 Delivery Route

The location of the two SACs relative to the Site and the vehicle route to Site are shown on Figure 2, with the Ashdown Forest SAC the larger designation in the northwest of the map and the Lewes Downs SAC in the west of the map. The delivery route utilising the A21 has specifically been designed to approach from the east, on the opposite side of the site to the SACs.

Figure 2 – SAC locations and Route to Site



4 AIR QUALITY EFFECTS

The principal air quality pollutants associated with vehicle traffic are Nitrogen Dioxide and Particulate Matter (PM_{10}). Such pollutants disperse with distance from the source such that impacts are typically not modelled when receptors are more than 200 m from the road sources.

4.1 Construction

Given the short-term construction traffic impact, which in absolute terms results in a less than 0.26% increase in traffic on the local road network, and the distance between the vehicle route and SACs (at least 27 km), the increase in traffic associated with the Development will not provide any increase in air quality effects at the SACs.

As a result of the temporary nature and short-term duration of the construction work and the distance between the route and the SACs, there are no potential air quality effects as a result of construction traffic on the SACs.

4.2 Operation

Given the very minor increase in operational traffic flow, and the distance between the route and the SACs, there are no potential air quality effects as a result of operational traffic on the SACs.

5 CONCLUSION

This Air Quality Statement has considered the likely air quality impacts as a result of traffic generated by the Development on the Ashdown Forest and Lewes Downs SACs. A review of the type and quantity of vehicles associated with the construction and operational phases of the project has been considered along with the route to site which has been specifically designed to approach the Site from the A21 to the east, as far as possible from the Ashdown Forest and Lewes Downs SACs as possible.

Given the vehicle numbers, duration and distances to the SACs there will be no air quality impact on the SACs as a result of the Development.