



Nisthill Wind Farm

Supplementary Environmental Information (June 2024) – Non-Technical Summary

Client:	Nisthill Wind Farm Limited
Project/Proposal No:	3586
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1. Introduction

1.1 Background

Nisthill Wind Farm Limited (hereafter referred to as “the Applicant”) is proposing a renewable energy development, Nisthill Wind Farm (hereafter referred to as the “Proposed Development”) on a site 5 km east of Birsay immediately west of the Loch of Swannay, Orkney. A planning application was submitted to Orkney Islands Council (OIC) on 26th August 2022 for the Proposed Development, described as:

“Erect four wind turbines (maximum height of 180 metres, maximum generation capacity 26.4 MW total), a substation and maintenance building, create an access, and associated infrastructure including access tracks, underground cabling, crane hardstandings and borrow pit | Hundland Hill (Land Near), Birsay, Orkney”.

The planning application (reference 22/320/TPMAJ) was supported by an Environmental Impact Assessment (EIA) Report prepared in accordance with The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. The planning application was validated by OIC on 21st September 2022.

Supporting Supplementary Environmental Information Reports (SEI Reports) were submitted by the Applicant in April 2023 and December 2023 under Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 Regulation 26 – Supplementary information and evidence relating to EIA reports. These SEI Reports provided additional information on baseline ornithology surveys, as well as clarifications and responses to consultee queries and responses to the planning application.

The site location and site boundary, and the proposed site layout, are shown in **Figure 1.1** and **Figure 1.2**.

1.2 Purpose of the SEI Report (June 2024)

In March 2024, a planning application for the repowering of an operational single wind turbine within the Nisthill Wind Farm site area (referred to as “the Ludenhill turbine”) has been approved by OIC (ref. 23/295/TPP). The application was to replace the existing Ludenhill turbine with a larger model, up to 76m tip height.

As has been stated by the Applicant in previous submissions, and as still maintained by the Applicant, the scenario whereby both the Ludenhill turbine (existing or repowered) operates concurrently with the Proposed Development, is not anticipated in practice. A commercial arrangement between the Applicant and the operator of the Ludenhill turbine is ongoing. However, given that the Ludenhill repowering application has now been granted planning permission, OIC has requested that the Applicant provides an update to cumulative impact assessments as previously presented for the Proposed Development, to take account of the repowered Ludenhill turbine.

The SEI Report (June 2024) therefore provides a review of and, where applicable, update to cumulative assessments for the various technical topics included in the EIA process.

There has been no change to the Proposed Development description, design or layout, and with the exception of the updated cumulative assessment to take account of the consented Ludenhill repowering application, the information reported in the submitted EIA Report and previous SEIs is unchanged. This NTS (June 2024) summarises the updated cumulative assessment, but does not repeat the content of the submitted EIA Report and previous SEISs.

1.3 Availability of the SEI Report (June 2024)

Electronic copies of the SEI Report (June 2024), including all figures, appendices and accompanying documents are available to view on the project website www.nisthillwindfarm.co.uk.

Electronic copies of the SEI Report (June 2024) can also be accessed at <https://www.orkney.gov.uk/>



A physical copy of the SEI Report (June 2024) is available for viewing at Birsay Community Hall.

Hard copies of the NTS (June 2024) are available free of charge from the Applicant (info@nisthillwindfarm.co.uk). The cost of a hard copy of the SEI Report (June 2024) is £250. In addition, for anyone who has difficulty accessing the information online, a USB copy can be made available on request by emailing info@nisthillwindfarm.co.uk. The price of the hard copy reflects the cost of producing all of the graphics and visualisations at the recommended size. As such, a DVD/USB version is recommended.

1.4 Representation to the SEI (June 2024)

Any representation to the application should be made by email, directly to OIC at:

planning@orkney.gov.uk

2. Additional Environmental Information

For each technical topic considered as part of the EIA process, a review and, where applicable, update to the cumulative assessment has been undertaken, to consider the now consented proposal to replace the Ludenhill turbine, within the Proposed Application site, with a larger turbine model.

The following provides a summary of the updated cumulative assessment for each technical topic.

2.1 Landscape and Visual

The revised cumulative assessment considers the effects of adding the Proposed Development to a cumulative context that comprises all other operational, under construction, consented and application wind farms and single turbines above 50m, including the consented 76m high Ludenhill turbine.

Updated wirelines (updated Figures 6.19 to 6.37 attached to the SEI Report (June 2024)) have been prepared to support the revised cumulative assessment, showing the Proposed Development in conjunction with the recently consented 76m Ludenhill turbine.

In respect of the effects on the representative viewpoints, the cumulative effect of the Proposed Development, as assessed in the 2022 EIA, has not changed despite the addition of the consented 76m high Ludenhill turbine to the cumulative context. In respect of landscape character and landscape designations, the assessment of significant cumulative effects would also remain as assessed in the 2022 EIA.

The key reasons for the cumulative assessment remaining unchanged are as follows:

- There is an existing 46.5m to blade tip turbine in the same location which means there is already an influence from wind turbine development in this area;
- The consented 76m to blade tip turbine is still a relatively small-scale turbine compared to the turbines of the Proposed Development which would be up to 180m;
- The small scale and single nature of the 76m to blade tip turbine means that it has a very limited influence on the cumulative context; and
- The 76m to blade tip turbine would typically be seen between the proposed turbines and this would reduce its prominence in views.

While the location of the consented 76m high Ludenhill turbine would accentuate the larger scale of the turbines in the Proposed Development, the factors listed above would ensure that, overall, any change to the cumulative assessment would be negligible. Essentially, the 76m Ludenhill turbine would be seen as a 'domestic' turbine in the context of larger scale commercial wind farms. Domestic turbines are a common feature across the Western Mainland and the cumulative effects of the Proposed Development would relate specifically to the relationship with operational Bugar Hill and consented Costa Head, the effects of which are presented in the 2022 EIA Report.



2.2 Ecology

The Ludenhill repowering proposals include for replacing the existing turbine with a larger turbine model, sited at the same location as the existing turbine, with essentially the same area of hardstanding, and associated access track.

The proposed new hardstanding area would be very slightly larger than the existing hardstanding, to accommodate construction of the larger turbine (estimated 350 m² additional hardstanding area). A short stretch of additional access track, between Dale Farm and Ludenhill Farm, will be temporary during construction, comprising “suitable overlain matting”, to be removed on completion of construction.

The habitat surrounding the existing turbine base and hardstanding at the Ludenhill turbine site is B5 marshy grassland, which was not identified as an Important Ecological Receptor (IEF) in the 2022 EIA Report for the Proposed Development, nor the Ludenhill repowering EIA Report.

The slightly extended Ludenhill hardstanding would result in loss of a very small additional area of this habitat. Given the small scale of additional loss, of a habitat type that has not been identified as an IEF, there is no potential for significant adverse cumulative effects on habitats to arise as a result of the repowered Ludenhill turbine, in combination with the Proposed Development and the other cumulative developments already considered.

Negligible effects on protected or notable species were predicted to arise from the Proposed Development, and no consideration of cumulative effects on species was considered to be warranted, as given in the 2022 EIA Report. The Ludenhill repowering EIA Report identifies no potential effects on protected or notable species, therefore there is no change to the above conclusion.

It is therefore concluded that the inclusion of the Ludenhill repowering project in an updated cumulative impact assessment results in no change to the previous conclusion of no significant adverse cumulative effects on ecological receptors.

2.3 Ornithology

The cumulative assessment presented in the 2022 EIA Report included consideration of potential cumulative effects from the Proposed Development in combination with relevant wind energy developments in the Orkney area of Natural Heritage Zone 2 (NHZ2) as detailed in Table 8.11 in the 2022 EIA Report. The cumulative assessment considered the potential for cumulative collision risk impacts, and the potential for cumulative disturbance and displacement effects.

The EIA Report provided in support of the planning application for the Ludenhill repowering project considers potential cumulative ornithological effects from the repowered Ludenhill turbine together with the Proposed Development. The conclusions drawn were generally that the repowered turbine would have no greater impact on bird species than the existing baseline (operational Ludenhill turbine).

In respect of collision risk, the repowered Ludenhill turbine would not likely result in any discernibly greater impact on bird species than the existing, operational turbine. Considering also that the repowered Ludenhill turbine would be sited within the spatial area of the Proposed Development array, the “at risk” flights relevant to the Proposed Development have already been considered in the calculation of collision risk from the Proposed Development on its own. The impact of replacing the existing, operational Ludenhill turbine with a larger model at the same location, is not expected to have any material effect on the cumulative collision risk. This is the conclusion reached in the Ludenhill repowering EIA Report, which does not appear to have been questioned by any regulatory authorities.

In respect of disturbance and displacement effects, given that the repowered Ludenhill turbine would be sited within the Proposed Development array area, there would be no difference to resultant disturbance and displacement effects on wader species breeding within the Proposed Development site.

Potential indirect effects on hen harrier and short-eared owl from the Orkney Mainland Moors Special Protection Area (SPA) have also been considered in the updated cumulative assessment. Such indirect effects



may result from indirect loss of foraging habitat/ displacement of birds from suitable foraging habitat in the area around the proposed turbines. Because the repowered Ludenhill turbine would be located within the Proposed Development turbine array area, it has no impact on the potential for indirect loss of foraging habitat.

In summary, it is concluded that the inclusion of the Ludenhill repowering project in an updated cumulative impact assessment for ornithology results in no change to the previous assessments and mitigation commitments.

2.4 Cultural Heritage

The existing operational Ludenhill turbine was not considered in the 2022 EIA Report as it falls below the 50m threshold that was used to identify cumulative developments. However, as noted above, its operators have recently obtained planning permission to repower the development with a 76m blade tip successor.

It should also be noted that the Ludenhill applicants' cultural heritage EIA Report chapter included the Proposed Development as part of its cumulative baseline, and concluded that the 76m Ludenhill development 'would represent only a small increase in the number of large-scale turbines within the setting of the heritage assets in this northern part of Orkney Mainland'. Neither Historic Environment Scotland (HES) or the Orkney Islands Archaeologist objected to the Ludenhill repowering application.

An updated assessment of potential cumulative effects has been undertaken, informed by visualisations from the Ludenhill repowering EIA Report, and updated cumulative wirelines presented in Figures 6.19 to 6.37 of the SEI Report (June 2024). Assessment was undertaken of the potential cumulative effect on the settings of all cultural heritage assets considered to have potential to experience significant effects.

The assessment identified no additional cumulative effects resulting from the consented 76m Ludenhill turbine and therefore the conclusions of the cumulative assessment remain unchanged from those that were set out in Chapter 9 of the 2022 EIA Report.

2.5 Noise

The ability of the Proposed Development to meet appropriate operational noise limits, considering existing cumulative turbines, was considered in the 2022 EIA Report. Following the consented application for the repowering of the Ludenhill turbine, the future baseline cumulative scenario has changed, and further assessment was required to determine whether the derived residual noise limits applicable to the Proposed Development require updating.

Updated noise modelling was therefore carried out, to consider the proposed larger Ludenhill turbine model (candidate turbine Vestas V52).

The assessment comprised updating the derived residual noise limits at noise sensitive receptors (residential properties) within the study area, and evaluation of the ability of the Proposed Development to meet the updated limits.

The predicted noise level due to the Proposed Development meets the updated noise limits at all wind speeds, both during the daytime and the night-time period, with marginal exceptions (up to 0.5 dB) at two nearby receptors, at wind speeds of 5 m/s and 6 m/s during the daytime.

Additional mitigation measures have been specified, beyond those proposed in the 2022 EIA Report, requiring that the small turbines at financially involved receptors Hundland, Nisthouse and Newhouse be curtailed (switched off) at 7 m/s and 8 m/s to preserve headroom for the Proposed Development to operate. The actual requirements for curtailment of the small turbines would be determined subject to consent of the Proposed Development and the cumulative situation prevailing at the time of its construction.



2.6 Transport and Access

The cumulative assessment undertaken as part of the 2022 EIA considered potential traffic flows from additional developments in the vicinity. At that time, the repowering of the Ludenhill turbine was not considered because it was not a consented development. Now that planning permission has been granted to repower the Ludenhill turbine, consideration is required as to the potential for cumulative traffic and transport effects to arise, when taking account of the Ludenhill repowering together with the Proposed Development.

As noted above, the scenario whereby both the Ludenhill turbine (existing or repowered) operates concurrently with the Proposed Development, is not anticipated in practice. It is therefore not anticipated that there is any potential for the construction of the Proposed Development to overlap with construction works for the Ludenhill turbine repowering.

However, the theoretical possibility of this occurring has been considered, for this updated cumulative assessment.

Taking account of the very remote possibility of both developments being constructed, and construction periods overlapping, the Ludenhill repowering EIA Report indicates that the total number of expected two-way HGV movements to construct that development would be seven. If those seven predicted HGV movements were all to occur within month seven (the peak construction traffic month) of the Proposed Development construction programme, this would represent a negligible increase (approximately 0.3%) to the predicted Proposed Development construction traffic.

Operational traffic for the Ludenhill repowered turbine is anticipated to be very limited, in the order of four maintenance visits per year based on information from the Ludenhill repowering EIA Report.

There is therefore considered to be no change to the previous assessment, i.e. no potential for significant cumulative traffic and transport effects to arise, for either the construction or operational phases of the Proposed Development together with other relevant developments in the vicinity, including the Ludenhill repowered turbine.

2.7 Geology, Peat, Hydrology & Hydrogeology

The cumulative assessment as reported in the 2022 EIA Report identified no significant cumulative effects on geology, peat, hydrology and hydrogeology receptors. At that time, the only development considered as part of the cumulative assessment was Costa Head Wind Farm, approximately 1.1 km north of the site.

An updated cumulative assessment has been undertaken to take account of the now consented Ludenhill repowering project.

With no or very little new permanent land-take proposed for the Ludenhill repowering project, and no highly sensitive geological, hydrological or hydrogeological receptors (including, for example, deep peat) identified at or in close proximity to the proposed temporary track and hardstanding extension, there is not considered to be any potential for significant cumulative effects to arise as a result of construction or operation of the Proposed Development together with the Ludenhill repowering project. No additional or amended mitigation measures are therefore considered to be warranted.

2.8 Aviation

The recent granting of planning permission to repower the Ludenhill wind turbine, within the Proposed Development site boundary, has no impact on the assessment of aviation and radar effects. With no effects assessed as a result of either the Proposed Development or the repowered Ludenhill turbine, there is no potential for significant cumulative effects to arise.



2.9 Socioeconomics, Recreation and Tourism

The recent granting of planning permission to repower the Ludenhill wind turbine, within the Proposed Development site boundary, has no impact on the cumulative assessment of socioeconomic, recreation and tourism effects. In the unlikely event that the repowered Ludenhill turbine was to be constructed as well as the Proposed Development, there would be some additional construction activity in the site area, and therefore some additional economic activity and generation of employment. However, given the small scale of the Ludenhill repowering proposals and the short duration of construction, this would not change the significance of cumulative socioeconomic effects as previously presented. No change to the significance of cumulative effects on recreation or tourism receptors is anticipated.

2.10 Telecommunications

The recent granting of planning permission to repower the Ludenhill wind turbine, within the Proposed Development site boundary, has no impact on the assessment of effects on telecommunications links. The Ludenhill turbine is not located within an area that could cause infringement on the identified EE link. With no residual effects assessed as a result of either the Proposed Development or the repowered Ludenhill turbine, there is no potential for significant cumulative effects to arise.

2.11 Shadow Flicker

An update to the relevant shadow flicker study area for the Ludenhill turbine has been considered, to determine whether there are any receptors for which there is an overlap in shadow flicker study areas for the Ludenhill turbine and the Proposed Development. There are no such receptors within the overlapping study areas. There is therefore no change to the conclusion from the 2022 EIA Report, that there is no potential for cumulative shadow flicker effects. No additional or amended mitigation measures are considered to be warranted.

2.12 Carbon Savings

The recent granting of planning permission to repower the Ludenhill wind turbine has no impact on the assessment of carbon savings associated with the Proposed Development.

3. Conclusions

Consideration of the recent planning permission granted for repowering the Ludenhill wind turbine located within the boundary of the Proposed Development in updated cumulative impact assessment, confirms no change to the assessed significance of cumulative effects as presented in the 2022 EIA Report. Also as confirmed in both the April 2023 and December 2023 SEI Reports, no change to the assessed residual effects or cumulative effects resulted from the additional information and analysis presented in those reports.

The granting of planning permission to repower the Ludenhill turbine has resulted in no change to the committed mitigation measures for the Proposed Development, with the exception of a slight change to operational noise mitigation to ensure relevant cumulative noise limits can be met at all identified receptors, across the full range of wind speeds.



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KEY
 Site Boundary

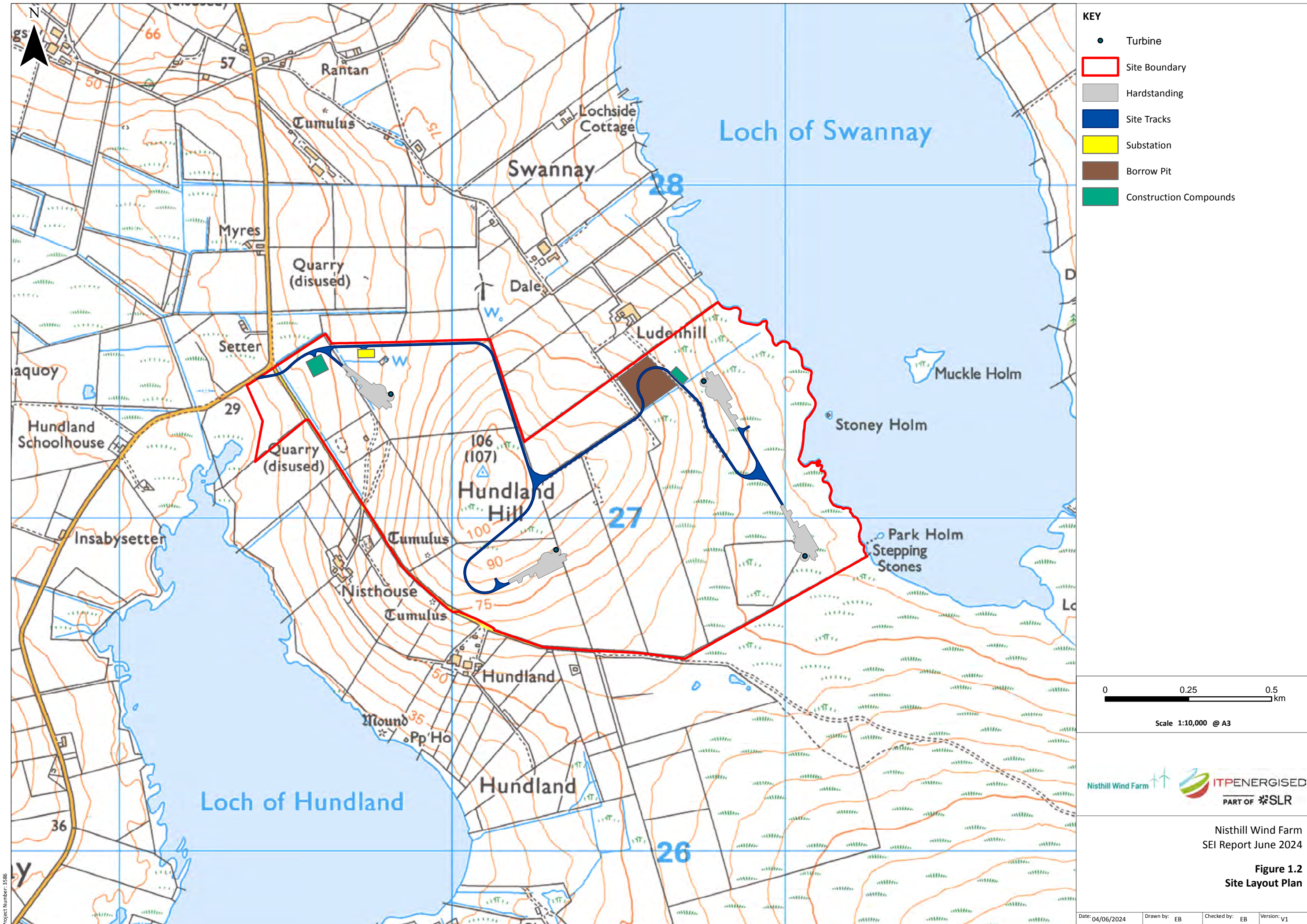

Scale 1:50,000 @ A3


PART OF SLR

Nisthill Wind Farm
SEI Report June 2024

Figure 1.1
Site Location Plan

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- KEY**
- Turbine
 - Site Boundary
 - Hardstanding
 - Site Tracks
 - Substation
 - Borrow Pit
 - Construction Compounds

0 0.25 0.5 km
Scale 1:10,000 @ A3



Nisthill Wind Farm
SEI Report June 2024

Figure 1.2
Site Layout Plan

Date: 04/06/2024	Drawn by: EB	Checked by: EB	Version: v1
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