



Code: UKCAL-CWF-CON-EIA-RPT-00007-7E45

Volume 7E Proposed Development (Onshore) Appendices

Appendix 8-2 Summary of Noise Consultation

Ocean Winds

5th Floor Atria One, 144 Morrison Street, Edinburgh, EH3 8EX



Appendix 8-2 Summary of Noise Consultation

Code	UKCAL-CWF-CON-EIA-RPT-00007-7E45
Revision	Issued
Date	18 October 2024

1 Email Correspondence with Aberdeenshire Council

1.1 November 2023 Consultation with Environmental Health Officer (EHO) to Agree Noise Methodology

1.1.1.1 The below email correspondence was undertaken with Aberdeenshire Council's EHO to agree the noise methodology for the Environmental Impact Assessment Report (EIAR) and to agree baseline survey monitoring locations.

1.1.1.2 The consultation request note is attached below.

From: [REDACTED]
Sent: Thursday, June 20, 2024 8:30 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Caledonia - onshore substation - noise assessment approach and evaluation criteria.

Morning [REDACTED]
Apologies for the delay in getting back to you. I have spoken with [REDACTED] and [REDACTED], Environmental Health Manager.

I can confirm that we would expect a BS4142 assessment to be completed as part of any NIA. The aspect of external impact of any development is an important one and this would be required before any approval.

This was confirmed by [REDACTED] in his email to you of 20 November 2024.

Regards

[REDACTED]

[REDACTED]

Senior Environmental Health Officer
Aberdeenshire Council
Tel: [REDACTED]
Mob [REDACTED]



REHIS
Chartered Environmental Health Officer
2024

From: [REDACTED]
Sent: Friday, June 7, 2024 10:10 AM
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]
[REDACTED]
Subject: Caledonia - onshore substation - noise assessment approach and evaluation criteria.

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Good morning [REDACTED],

Thank you for your time yesterday. As discussed, we have received the following

requirement from Environmental Health in the pre-application response to the Caledonia onshore substation and transmission infrastructure application (your ref. ENQ/2024/0040):

The assessment should be undertaken in accordance with BS4142:2019 for external noise to achieve a low impact when compared to background LA90 and NR25 and NR20 curve assessment for internal noise during daytime and nighttime respectively. The specific methodology must be agreed with the Environmental Health service prior to the undertaking of the noise impact assessment.

The pre-app advice was issued on 18th April, however, we have been in discussion with Aberdeenshire Council Environmental Health since 16th November 2023 to agree the approach to the assessment, the methods and the evaluation criteria. The approach which has been agreed through that process, is that compliance with the NR criteria should be the primary focus of the assessment and that demonstration of a low impact in accordance with BS4142 should be an aim, rather than a strict requirement.

We would therefore be most grateful if you could confirm by response that you are satisfied that the specific method has been agreed through consultation with Environmental Health, and that determination of significance may be made on the basis of compliance with NR criteria alone.

OceanWinds proposes to undertake further mitigation studies during the detailed design of the substation (which will be the subject of a future planning application) seeking to demonstrate a low impact when evaluated in accordance with BS4142, however, this will be beyond the scope of the current assessment and application.

If you would like to discuss any of the above further, please don't hesitate to call me.

Best regards,

[Redacted]

[Redacted] (he/him) | **Associate** | ITP Energised

Office:

[Redacted]
4th Floor | Centrum House | 108-114 Dundas Street | Edinburgh | EH3 5DQ

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Sent: Monday, November 20, 2023 2:21 PM

To: [REDACTED]

Cc: [REDACTED]

Subject: RE: Caledonia OWF onshore substation - consultation regarding noise impact assessment

Hi [REDACTED]

Thanks for your email. Here are my thoughts:

1. The BS4142 assessment should aim for a 'low impact' depending on the context.
2. The NIA must include an internal receptor NR Curve comparison and assess the cumulative impact with other steady state developments. The live substation application and associated NIA is going through a redraft just now to include this. The NR Curve assessment should not be supplementary but be the focus of the assessment during the night time period. It would be expected that NR20 is achieved internally and cumulatively.
3. If there is an indication that background noise levels may be affected by existing wind turbines, is 24 – 48 hours enough time to capture calm weather conditions when the turbines might not be operational and the background noise level potentially of a lower value?

Thanks

[REDACTED]
Environmental Health Officer
Team 1
Aberdeenshire Council
Buchan House
St Peter Street
Peterhead
AB42 1QF

Tel - [REDACTED]



REHIS
Chartered Environmental Health Officer
2023

From: [REDACTED]

Sent: Thursday, November 16, 2023 11:19 AM

To: [REDACTED]

Cc: [REDACTED]

Subject: Caledonia OWF onshore substation - consultation regarding noise impact assessment

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Good morning [REDACTED],

I provide attached our consultation request seeking to agree our approach to the assessment of noise impacts from the proposed substation for the Caledonia offshore wind farm, including the approach to the baseline noise survey. Please can you review and confirm by response whether you agree with our proposals?

Also attached is a kmz file showing the proposed baseline survey monitoring locations and the noise impact assessment for the adjacent Moray East and New Deer substations, for your reference.

Should you wish to discuss any aspect please let me know and I will set up a call.

We hope to undertake the baseline survey in the coming weeks (subject to appropriate weather window and confirmation of approval for access from residents) therefore your swift response would be greatly appreciated.

With thanks and regards,


[REDACTED]

[REDACTED] [REDACTED]

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www.aberdeenshire.gov.uk

Subject: RE: Caledonia OWF onshore substation - consultation regarding noise impact assessment

Hi [REDACTED]

See comments in blue below.

[REDACTED]

From: [REDACTED]

Sent: Monday, November 20, 2023 2:43 PM

To: [REDACTED]

[REDACTED]

Subject: RE: Caledonia OWF onshore substation - consultation regarding noise impact assessment

You don't often get email from [REDACTED]

Many thanks [REDACTED]

Our comments in response as follows:

1. Noted on aim for low impact; BS4142 suggests that low impacts may occur at up to 'background +5 dB' i.e. where the rating level exceeds background by more than 5 dB is an indication of impacts greater than 'low' – **do you agree?** I don't agree, a low impact would generally be considered when rated = background, however, see my response re being an "aim" depending on the context and not a requirement.
2. Noted on NR curve comparison being the main focus and requirement for cumulative compliance with NR20. The availability of information to confirm cumulative compliance may be a sticking point here – **if the live application is currently being redrafted, do you know when this is likely to be publicly available, such that we can confirm this?** I don't know unfortunately. Hopefully within the next few weeks.
3. We hope to schedule our survey for a weather window when wind speeds will be low. As such, we hope/expect that noise from the wind turbines will be negligible; though this would need to be confirmed during the visit. If audible wind turbine noise is noted at any of the measurement locations, we would look at options to use a proxy location, or placing the monitoring equipment such that existing buildings/structures provide screening of wind turbine noise. The likely influence of wind turbines on measured noise levels would be noted (subjectively) during the survey and reported. On this basis, we expect that the influence of turbine noise could be minimised/excluded from the survey results.

Please could you let me know your responses?

Best regards,

[REDACTED]

[REDACTED]

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From: [REDACTED]

1.2 February 2024 Consultation with EHO to Agree Determination of Significance of Noise Effects

- 1.2.1.1 The below email correspondence with Aberdeenshire Council's EHO was undertaken to agree the approach to determining significance of noise effects. The email correspondence also sought to present the construction scenarios being considered and to outline the worst case scenario for the noise assessment.

From: [REDACTED]

Sent: Friday, February 2, 2024 2:27 PM

To: [REDACTED]

Cc: [REDACTED]

Subject: RE: Caledonia OWF onshore substation - consultation regarding noise impact assessment

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H [REDACTED]

It's likely that an exceedance (cumulatively or individually) of the NR curve noise criteria inside receptors would be viewed as significant leading to an objection from Environmental Health.

In terms of the construction scenarios and proposal outlined, this would be accepted.

Thanks

[REDACTED]
[REDACTED]
Environmental Health Officer
Team 1
Aberdeenshire Council
Buchan House
St Peter Street
Peterhead
AB42 1QF

Tel - [REDACTED]



REHIS
Chartered Environmental Health Officer
2023

From: [REDACTED]

Sent: Thursday, February 1, 2024 4:27 PM

To: [REDACTED]

Subject: RE: Caledonia OWF onshore substation - consultation regarding noise impact assessment

You don't often get email from [REDACTED]

Good afternoon [REDACTED]

Further to the email chain below, we have completed the baseline survey and can confirm that the influence of wind turbine noise was suppressed to a negligible level at our monitoring locations.

With reference to Table 4.2 of the Scoping Report (reproduced below for your ease of reference), regarding the determination of the significance of noise effects in the EIA, we propose the following approach:

- All residential noise sensitive receptors (NSRs) will be considered to be of high sensitivity;
- Where predicted operational noise levels meet the adopted criteria (specifically cumulative NR20) the assessment will consider that noise impacts will have a magnitude of 'low' or lesser;
- The resultant effect significance will be 'minor' and will therefore be 'not significant' in EIA terms;
- Where predicted operational noise levels exceed the adopted criteria the assessment will consider that noise impacts will have a magnitude of 'medium' or greater;
- The resultant effect significance will therefore be 'moderate' or greater and will therefore be 'significant' in EIA terms and

mitigation will be specified.

Table 4.2: Interaction Between Impact Magnitude and Receptor Sensitivity to Assign Significance

Significance of Effect		Sensitivity of Receptor			
		Negligible	Low	Medium	High
Impact Magnitude	Negligible	Negligible	Negligible	Negligible	Negligible
	Low	Negligible	Negligible	Minor	Minor
	Medium	Negligible	Minor	Moderate	Moderate
	High	Negligible	Minor	Moderate	Major

Please can you confirm whether you accept the above outlined approach?

Please note that within the EIA Report we will be presenting three construction scenarios, these construction scenarios are in response to grid availability. The scenarios presented are:

- Concurrent – all cable route, substation and landfall works for 2GW to be developed in a single phase of works post 2030 on confirmation of grid availability;
- Sequential– development of a cable route, landfall works and substation, for up to 1GW with later development of a second cable route, landfall works and substation for a further 1GW on confirmation of grid availability; and
- Enabling – development of a cable route, landfall works and substation, for up to 1GW, plus enabling works for the second cable route, landfall works and substation, with the remainder of works for the further 1GW completed at a later stage on confirmation of grid availability.

In noise terms, the first option would likely result in the most intensive works, with the most items of plant on site and largest increase in traffic flows due to construction works. The sequential and enabling options would result in the longest duration of the construction phase but noise levels may be lower.

While the duration of construction activities will have some bearing on the resultant noise impact, there is no mechanism to capture this in the evaluation. Noise impacts will be determined by the ability of the proposed works to meet the BS5228 thresholds only and therefore the ‘concurrent’ option will represent the ‘worst case’. Our assessment will therefore consider the concurrent option, noting that noise levels for the sequential or enabling works will likely be similar or lower and the resultant impacts will be lesser.

Please can you confirm whether you accept the above outlined approach?

With thanks and regards,

[Redacted]

[Redacted]

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From: [Redacted]

Sent: Monday, November 20, 2023 4:54 PM

To: [Redacted]

[Redacted]

1.3 March 2024 Consultation with EHO to Agree Cumulative Developments

- 1.3.1.1 The below email correspondence with Aberdeenshire Council's EHO was undertaken to agree to scope out the proposed SSEN 'Greens' substation from the Cumulative Impact Assessment.

From: [REDACTED]
To: [REDACTED]
Subject: RE: Caledonia OWF onshore substation - consultation regarding potential vibration impacts
Date: 27 March 2024 17:05:22
Attachments: [image001.png](#)

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Hi [REDACTED],

As per our conversation, I am happy that no cumulative assessment needs to be considered with the proposed SSE substation provided that the Caledonia substation application is submitted prior to the SSE substation. It would then be for the SSE substation to consider any cumulative impact or influence on cumulative noise levels when the application is submitted.

Thanks

[REDACTED]

From: [REDACTED]
Sent: Wednesday, March 27, 2024 4:20 PM
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]
[REDACTED]
Subject: RE: Caledonia OWF onshore substation - consultation regarding potential vibration impacts

Hi [REDACTED],

Apologies for not replying sooner.

You've stated 'Assuming you apply the same NR20 standalone/cumulative criteria to the SSEN development, given Caledonia is >10 dB below the criterion in each octave band, there is no prospect that it could contribute to any cumulative exceedance of the NR20 criterion'. So just to clarify, does the Caledonia or proposed SSE substation influence the cumulative noise levels at any receptors? I appreciate that it may not lead to a cumulative exceedance of NR20 but will the development lead to any cumulative increase in noise levels?

Thanks

[REDACTED]

[REDACTED]
Environmental Health Officer
Team 1
Aberdeenshire Council
Buchan House
St Peter Street

Peterhead
AB42 1QF

[REDACTED]



REHIS
Chartered Environmental Health Officer
2024

From: [REDACTED]
Sent: Wednesday, March 27, 2024 2:46 PM
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]
[REDACTED]
Subject: RE: Caledonia OWF onshore substation - consultation regarding potential vibration impacts

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Hi [REDACTED]

Further to the below, please can you confirm whether you require more information to be able to scope out cumulative effects with the proposed SSEN substation from our assessment?

Best regards,
[REDACTED]

From: [REDACTED]
Sent: Tuesday, March 19, 2024 11:44 AM
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]
[REDACTED]
Subject: RE: Caledonia OWF onshore substation - consultation regarding potential vibration impacts

Hi [REDACTED],

A further point to note, the SSEN substation is not in the planning system yet; they are expecting to submit their EIA to the local authority in October of this year and our understanding is that they are not seeking a scoping opinion and are going directly to EIA.

Best regards,

[REDACTED]

From: [REDACTED]

Sent: Wednesday, March 13, 2024 11:53 AM

To: [REDACTED]

Cc: [REDACTED]

[REDACTED]

[REDACTED]

Subject: RE: Caledonia OWF onshore substation - consultation regarding potential vibration impacts

Hi [REDACTED],

Re the vibration, no concerns re this approach.

Re the SSEN proposed substation, it would depend what the existing cumulative impact of development is on receptors and what the perceived influence of the new substation might be. I think I would be looking for some further justification for scoping it out especially if the internal NR Curve criterion is near or at NR 20 night time. Are they likely to be within 10dB of the existing cumulative noise impact at receptors? I'm assuming that the SSEN substation has submitted an application already and this application is 'behind them in the que'?

Thanks

[REDACTED]
[REDACTED]
Environmental Health Officer
Team 1
Aberdeenshire Council
Buchan House
St Peter Street
Peterhead
AB42 1QF

Tel - [REDACTED]



REHIS
Chartered Environmental Health Officer
2024

From: [REDACTED]

Sent: Tuesday, March 12, 2024 11:44 AM

To: [REDACTED]

Cc: [REDACTED]

[REDACTED]

[REDACTED]
Subject: Caledonia OWF onshore substation - consultation regarding potential vibration impacts

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Good morning [REDACTED]

Further to our earlier correspondence, we wish to agree a minor variation to our previously agreed scope of assessment of the proposed Caledonia substation. Vibration impacts were previously expected to be negligible and evaluation had been scoped out accordingly. We now note that there is a potential for shallow rockhead at the onshore substation site, and that breaking out of rock may therefore be required. The requirement to undertake such works has yet to be determined and therefore the appropriate method will not be known at the time of completion of the assessment. Methods to be considered include use of an excavator mounted hydraulic breaker, an excavator with a toothed bucket, or blasting.

We therefore propose to undertake a qualitative appraisal of potential blast vibration impacts and will specify that appropriate mitigation will be included within the CEMP. Such mitigation will comprise design of charges by the blasting engineer such that the threshold of perception criterion provided in BS5228 – Part 2, will not be exceeded at the closest NSRs. Vibration monitoring during blasting will also be specified. Vibration from use of a hydraulic breaker or toothed bucket is expected to be negligible at the closest NSRs, based on the likely minimum separation distances.

On a separate matter, we note that SSEN proposes to construct a substation approximately 2 km to the north of the proposed Caledonia substation. The SSEN development will be approximately 1,600 m to the north of our northernmost NSR (Burnside) and will therefore be approximately four times the distance from that NSR than the Caledonia substation. We do not expect that significant cumulative effects would arise at such a distance, and we therefore propose to scope out further consideration of potential cumulative effects between these proposed substations.

We trust that the above will prove acceptable, however, please let me know if you have any questions or wish to discuss. If you can confirm by response that you agree with our proposed approach that would be much appreciated.

Best regards,
[REDACTED]

[REDACTED] | **Associate** | ITP Energised

4th Floor | Centrum House | 108-114 Dundas Street | Edinburgh | EH3 5DQ

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Annex 1: Noise Monitoring Pre Application Consultation

Job number 286850-13
Date 15 November 2023

File Note

Project title Caledonia Offshore Wind Farm
Job number 286850-13
File reference Pre-Application Consultation Note
cc
Prepared by [REDACTED]
Date 15 November 2023
Subject Noise Monitoring Pre Application Consultation

4th Floor 10 George Street Edinburgh EH2 2PF United Kingdom

[REDACTED]
arup.com

Introduction

The Onshore EIA Scoping Report for the onshore transmission infrastructure (OnTI) of the Caledonia Offshore Wind Farm (OWF) was submitted to Aberdeenshire Council in December 2022. The Scoping Report presented an overview of the potential impacts and likelihood for significant effects to arise from the construction, operation and decommissioning of the Proposed Development landward of Mean Low Water Spring (MLWS).

A Scoping Opinion was received from Aberdeenshire Council on 1 February 2023 which included a response from the Aberdeenshire Environmental Health Service noting that in the absence of exact site locations, it had no prescriptive comments to make on the proposed documents and therefore once a clearer site location was finalised, any noise and vibration consultant should engage with the Service to agree a detailed methodology.

This technical note has been prepared in response to the pre-application consultation received with the view to clarify the proposed methodology for the noise assessment.

Project Summary

The Caledonia OWF Project OnTI comprises underground cables from a Landfall Site on the Aberdeenshire coast to a new Onshore Substation in the proximity of New Deer.

The Onshore Scoping Report identified an Onshore Scoping Area which took the form of a corridor between potential Landfall Sites along the Aberdeenshire coast and the Onshore Substation Scoping Area in the proximity of New Deer.

Since submission of the Onshore Scoping Report, Caledonia Offshore Wind Farm Limited has refined the Proposed Development study area boundary through technical and environmental constraint analysis as well stakeholder consultation. The refined boundary now identifies the

Job number 286850-13
Date 15 November 2023

proposed landfall location, a proposed cable corridor and a potential onshore substation site (see Figure 1).

The environmental impact assessment report (EIAR) which will support the planning application will consider this refined boundary. Caledonia Offshore Wind Farm Limited is seeking Planning Permission in Principle (PPP) for the OnTI. The PPP application for the Proposed Development will be submitted in September 2024. Subsequent Approval for Matters Specified within Conditions (AMSC) would be submitted at detailed design stage.

The EIAR will adopt a design envelope approach to inform the EIA for the Proposed Development. The design envelope will identify a range of parameters associated with each aspect of the Proposed Development, enabling a realistic assessment of the likely worst-case environmental effects upon a particular receptor. By employing the design envelope approach, Caledonia OWF seeks to retain a reasonable level of flexibility in the design of the Proposed Development within certain maximum extents and ranges, all of which will be fully assessed in the EIAR. The design envelope will be developed in parallel with the wider iterative EIA, and design development (including the identification of embedded mitigation) process and will be influenced by the results of ongoing environmental and technical studies as well as feedback from stakeholder consultation.

Response to Scoping Opinion Advice

ITPEnergised has been appointed to undertake the noise assessment of the OnTI. The assessment will comprise evaluation of noise during the construction phase, including construction activities relating to the cable corridor from landfall to the substation, plus noise during operation of the substation.

The proposed substation will lie immediately adjacent to the existing New Deer substation, to the north. An annotated aerial image (Figure 2) showing the site location and identified Noise Sensitive Receptors (NSRs) is provided.

Overall approach to assessment

In the determination of our overall scope and approach we note the following:

- Construction noise, both for the cable corridor and the substation itself, will be assessed in accordance with BS5228;
- We do not expect that significant vibration will be generated by the construction phase, and we are not currently aware of specific activities for which there are methods for the prediction of vibration provided in BS5228; we therefore propose to scope out prediction and evaluation of construction vibration; and
- Noise from the operational phase will be assessed in accordance with BS4142, with appropriate reference to existing criteria set for the recent adjacent substation developments, with which cumulative impacts could arise.

An indicative layout drawing of the substation site will be included with the planning application, however, we provide below an aerial image (Figure 2) showing the proposed locations of the various project components and the closest identified Noise Sensitive Receptors (NSRs). Note that

Job number 286850-13
Date 15 November 2023

the layout of the proposed substation provided in Figure 2 is for indicative purposes only and will be subject to change.

Characterisation of Baseline Noise Environment

We do not propose to undertake comprehensive baseline monitoring along the entire cable corridor; there is currently insufficient information on the cable route to identify appropriate locations and the length of the corridor make this impractical. We will therefore assume the most stringent evaluation criterion of the 'ABC method' for the weekday daytime, weekends and evenings and night-time periods, as provided in the Annex to BS5228:

- 65 $\text{dBL}_{\text{Aeq,T}}$ weekday daytimes (07:00 -19:00) and Saturday mornings (07:00 - 13:00);
- 55 $\text{dBL}_{\text{Aeq,T}}$ weekday evenings (19:00 – 23:00), Saturday afternoons (13:00 – 23:00) and Sundays (07:00 – 23:00); and
- 45 $\text{dBL}_{\text{Aeq,T}}$ night-time (23:00 – 07:00).

We will monitor for up to 24 hours at a location representative of the closest receptors to the Landfall Site of the cable (see 'landfall' in attached kmz file). In addition, we will undertake a brief site visit to record subjective observations of the prevailing noise environment at selected locations along the cable corridor.

We note that a baseline noise survey was undertaken in 2014 as part of the planning application for the adjacent (operational) Moray East and New Deer substations, which included the following locations:

- 1. Burnside (south)
- 2. Swanford
- 3. Burnside (north)
- 4. Maryhill
- 5. The Neuk
- 6. East Swanford access
- 7. Upper Mains of Asleid

The locations are shown in the attached kmz.

The previously measured levels are not reported, however, background noise levels were found to be objectively low, which BS4142 identifies as levels below 30 $\text{dBL}_{\text{A90,T}}$.

We propose to undertake supplementary monitoring at the following locations (subject to land access):

- NMP1 - Burnside (north)
- NMP2 – East Swanford
- NMP3 – Mains of Asleid

Monitoring will be undertaken for between 24 and 48 hours. Measurements will be undertaken in accordance with BS4142 and BS7445 and will be predominantly unattended, with observations

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noted during installation and decommissioning. A weather station will be located adjacent to one of the monitoring locations, and data affected by rainfall or elevated wind speeds will be screened out.

We will undertake supplementary spot measurements at appropriate locations around the study area, where appropriate to advance our understanding of the prevailing noise environment.

Following the survey we will analyse the data to determine the representative background level, accounting for noise from existing sources (expected to include substations and wind turbines) and will derive evaluation criteria in accordance with BS4142.

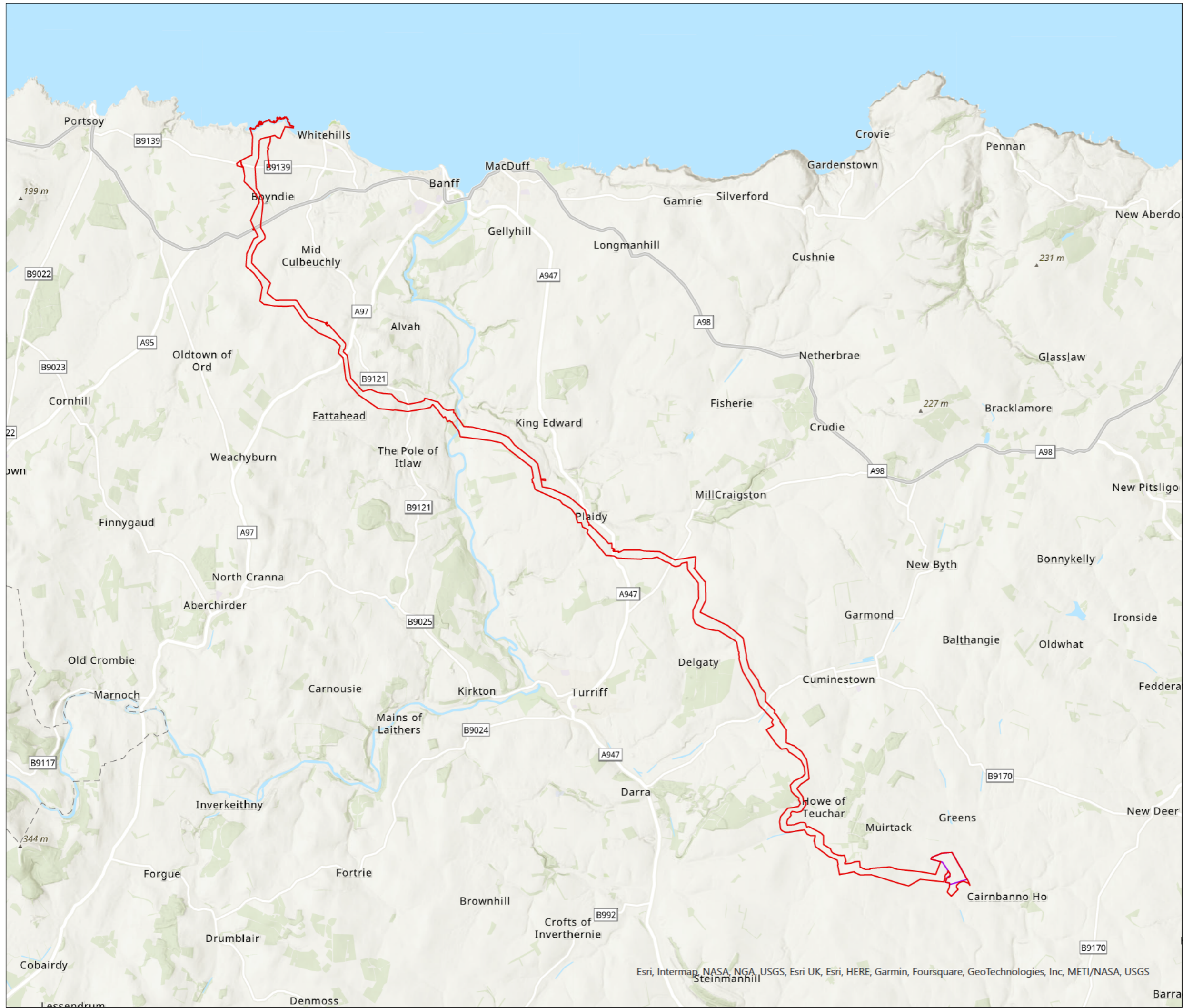
Our assessment will make supplementary reference to noise rating (NR) criteria provided in BS8233, consistent with the approach followed for the New Deer and Moray East substations as follows:

- Internal noise levels in bedrooms: 25 $\text{dBL}_{\text{Aeq},5 \text{ mins}}$ / NR 20
- Internal noise levels in living rooms: 30 $\text{dBL}_{\text{Aeq},1 \text{ hour}}$ / NR 25
- Noise levels in external amenity areas: 35 $\text{dBL}_{\text{Aeq},1 \text{ hour}}$ / NR 25

Conclusion

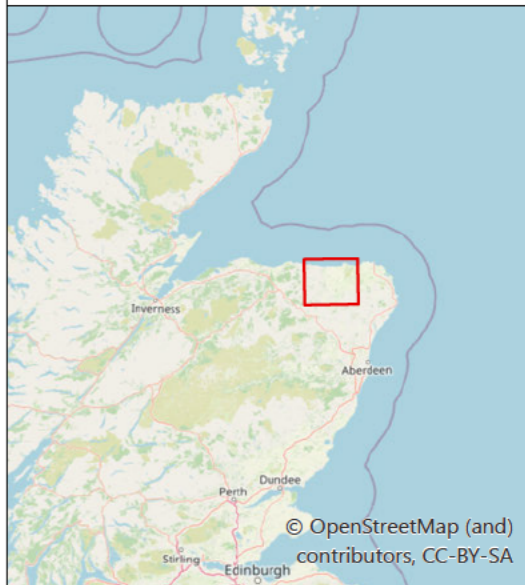
It is the intention for this note to clarify the position with Aberdeenshire Council in regards the consultation response received. Should you wish to discuss any aspect, please call Simon on the contact details listed within the email correspondence or email to arrange a Teams call.

We hope to undertake the baseline survey in the next available weather window, so if you can confirm by response at your earliest convenience, that would be greatly appreciated.



- Onshore Corridor
- DS3 Burnside Substation Land

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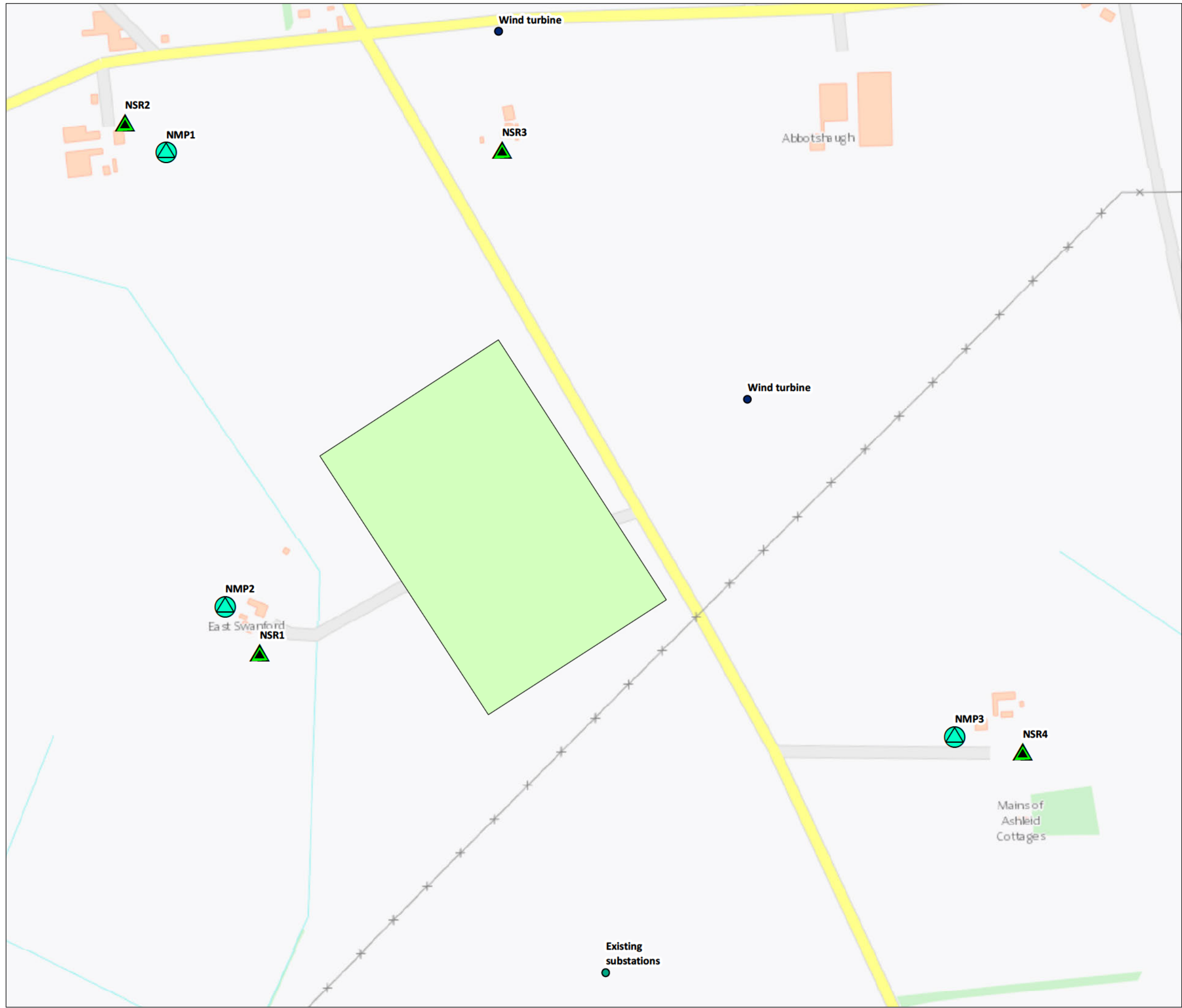
Scale at A3: 1:100,000
 0 2.5 5 km N

CRS: British National Grid (EPSG:27700)

Produced:	Reviewed:	Approved:
■	■	■
Date: 11/10/2023		Revision: 01
REF: DS3 Boundary Overview		

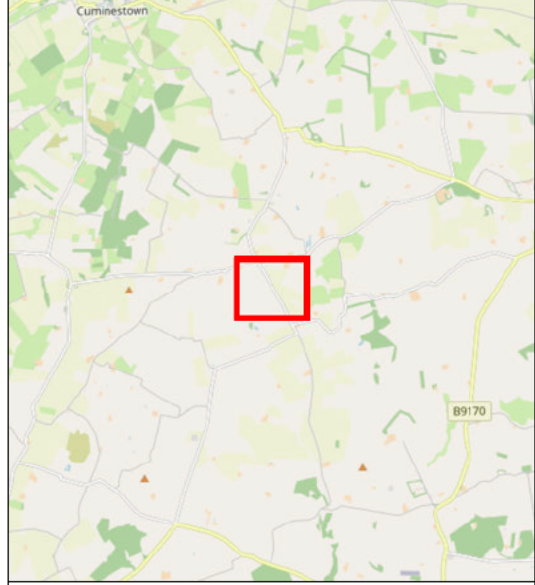
Figure 1
DS3 Onshore Corridor





- Legend**
- Indicative Substation Location
 - Noise Monitoring Position
 - Noise Sensitive Receptor
 - Existing Substations
 - Existing Wind Turbines

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Scale at A3: 1:4,000

0 0.1 0.2 km

CRS: WGS 1984 UTM Zone 30N (EPSG:32630)

Produced:	Reviewed:	Approved:
Date: 14/11/2023	Revision: 01	
REF: UKCAL1-ARP-WNF-ENV-MAP-XXXXX		

Figure 2
 Site Location, NMPs, NSRs
 & Existing Noise Sources



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