Appendix 9.1 Email Consultation with OIC Environmental Health

This page is intentionally blank.

This Appendix provides a record of the agreement of different aspects of the assessment. Excerpts from email strings are provided to make the record more concise and reduce duplication.

Agreement of baseline noise monitoring locations:

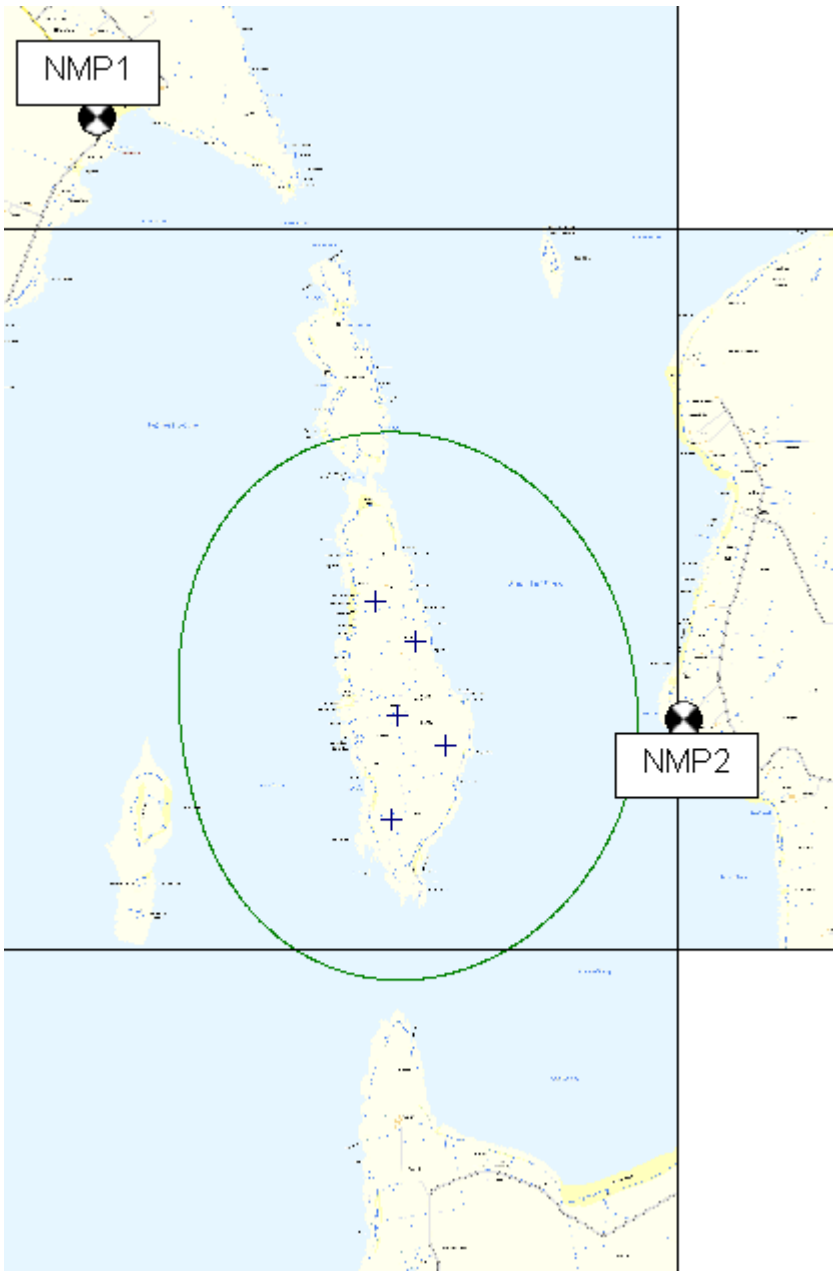
From: Simon Waddell <simon.waddell@itpenergised.com>
Sent: 28 February 2020 17:21
To: Paul Turner <Paul.turner@orkney.gov.uk>
Cc: David Hannon <David.Hannon@orkney.gov.uk>; Sweyn Johnston <Sweyn.Johnston@orkney.gov.uk>; Rebecca Todd <rebecca.todd@itpenergised.com>; Jenny Hazzard <jenny.hazzard@itpenergised.com>; Eliot Weir <Eliot.Weir@itpenergised.com>
Subject: Faray Wind Farm - Noise baseline survey approach and method

Paul,

Further to our previous discussions regarding the evaluation of wind turbine noise from the proposed development on Faray (during site visit to Hoy), I would seek to agree our detailed approach to the baseline noise survey with you.

I provide in Figure 1 a screenshot showing the 35dB contour given the current proposed layout (note that layout and turbine model used may be subject to change), with ground absorption set to G=0.

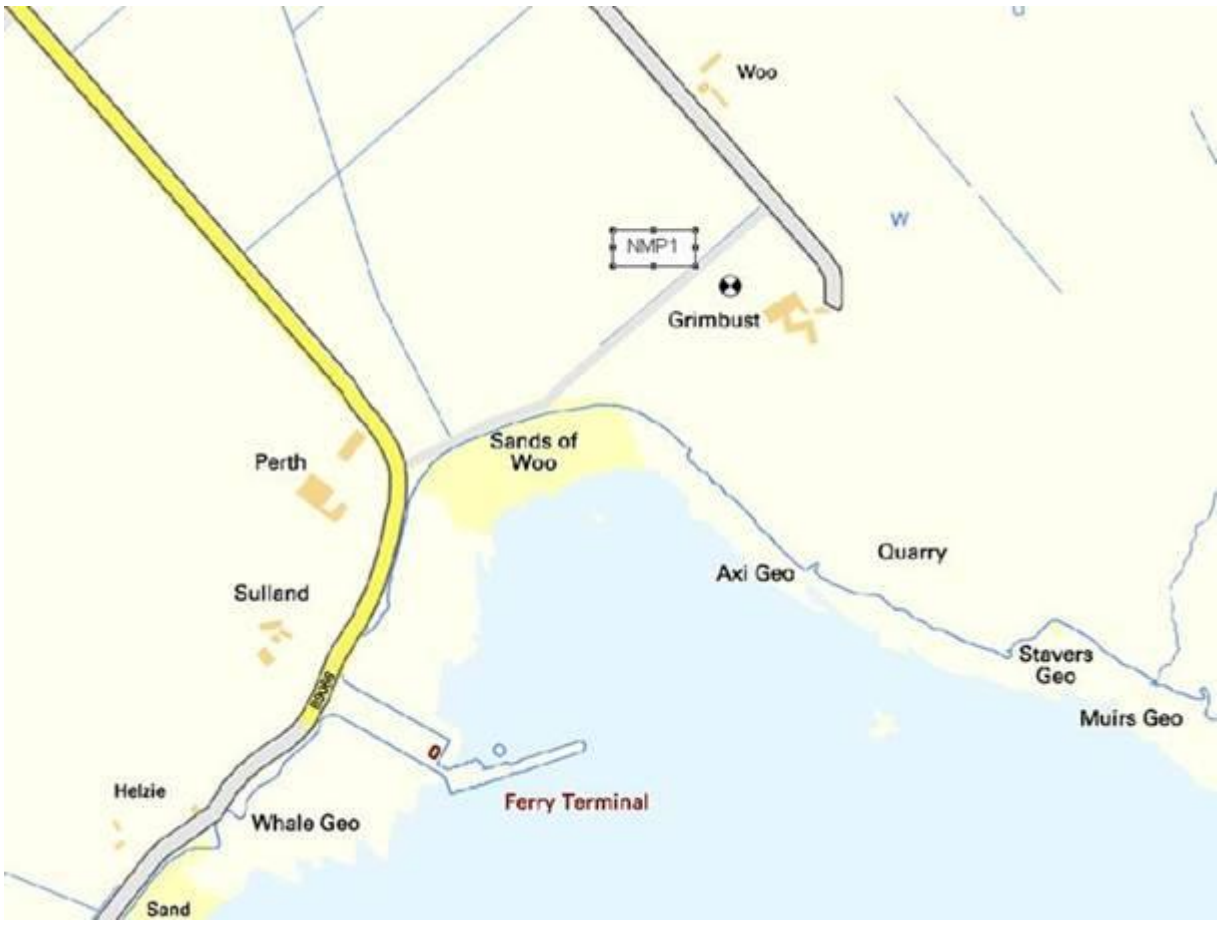
Figure 1 - overview of study area



We propose to monitor at one location on Westray, and one location on Eday.

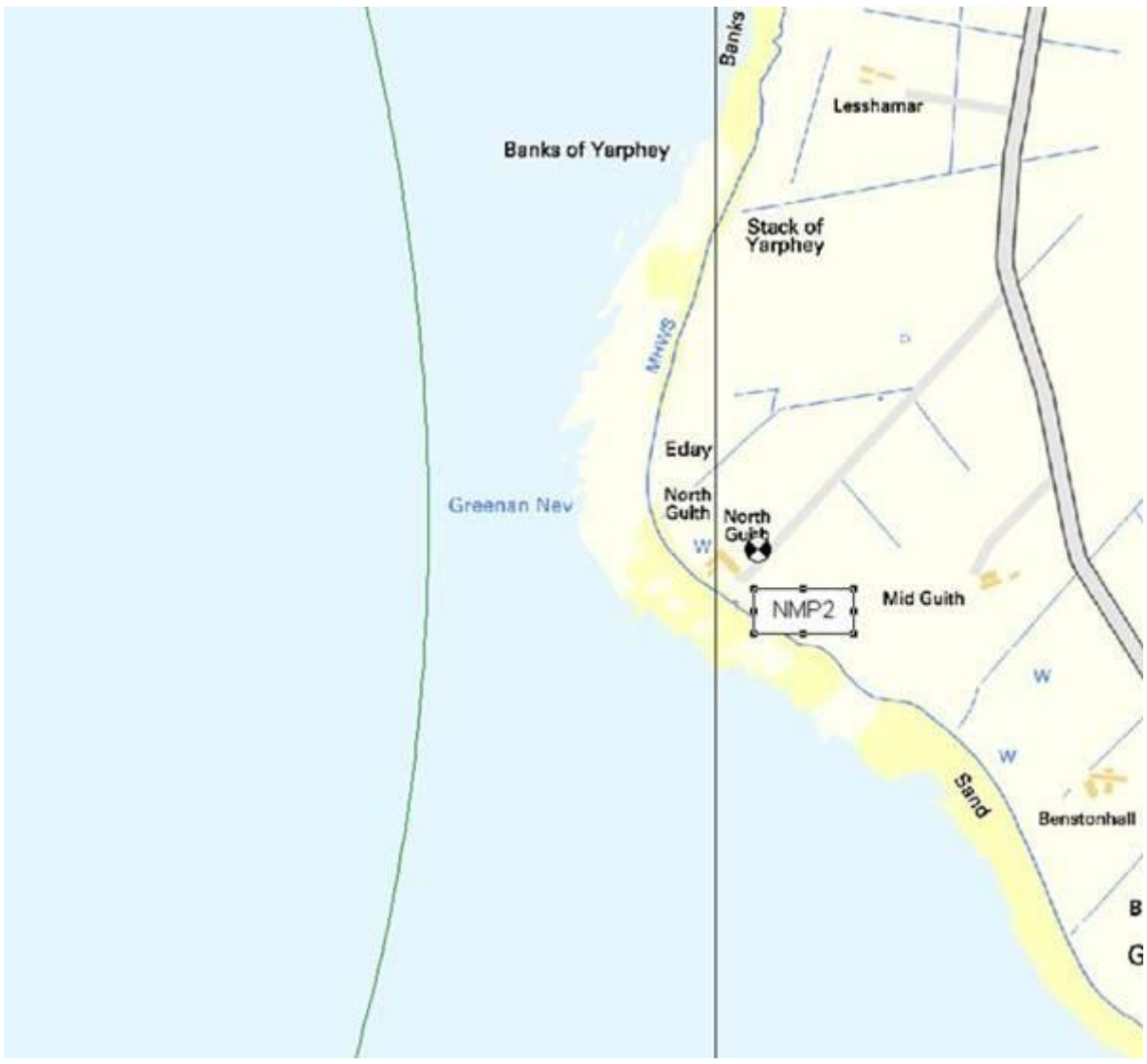
NMP1 will be sited on Westray, likely at a property close to the ferry terminal, making sure to avoid any audible plant. We anticipate that ferries will be infrequent, and predominantly/entirely during the daytime period. Any noise from ferries during weekend daytimes will be identified in data processing and removed from the dataset, with excluded data shown on the noise limit derivation charts. The proposed location is shown in greater detail in Figure 2.

Figure 2 - Westray – NMP1



As shown in Figure 1, Fers Ness on Eday is directly to the south of Faray and close to the 35 dB contour, however, this promontory is likely to be somewhat exposed, and therefore noise from the sea is likely to be higher than at locations to the east of Faray. We therefore propose to monitor at a location on the western side of Eday, as shown in Figure 3.

Figure 3 - NMP2 - Eday



As with previous surveys, monitoring locations will be selected in accordance with the recommendations of the Good Practice Guide, at the quietest area of external residential amenity space, seeking to minimise/exclude noise from air source heat pumps, boiler flues etc. Should any small turbines be identified, monitoring locations will be moved such that noise from these will not affect baseline levels. *To this end, if you are aware of any cumulative turbines which may affect our proposed locations, please let me know*. We will review information on the planning portal, seeking to identify any existing/proposed turbines in the area.

Wind speed will be measured by LIDAR device based on Faray. A rain gauge will be located at either NMP1 or NMP2, adjacent to the noise monitoring location.

Given the wide range of measured wind speeds during the Hoy and Quanterness surveys, we anticipate that the required number of datapoints will be captured within a 21-day survey duration, however, this will be confirmed prior to collection of the meters via interrogation of the LIDAR data.

Following commissioning of the monitoring equipment I will be in touch to provide coordinates of the as-installed monitoring locations, photos of the kit showing the context, and a detailed description of the noise environment, as encountered.

If you could confirm approval or provide comment by response, that would be greatly appreciated.

With thanks and regards,

Simon

Simon Waddell | Principal Noise Consultant | ITPEnergised

Office: +44 (0) 131 557 8325 |Mobile: +44 (0) 7884 278145

7 Dundas Street, Edinburgh EH3 6QG

www.itpenergised.com

From: Paul Turner <Paul.turner@orkney.gov.uk>
Sent: 02 March 2020 10:38
To: Simon Waddell <Simon.Waddell@itpenergised.com>
Subject: RE: Faray Wind Farm - Noise baseline survey approach and method

Classification: OFFICIAL

Simon,

Why do background noise measurements at all if modelling indicates compliance with flat 35dB LA90? - Just a comment / suggestion, I guess background noise measurements now keeps the options for position of turbines / size of development open.

No objection to suggestion re Westray NMP, there are number of small WTG to north of Grimbust, you may need to directional filter the data or perhaps consider a NMP to west of ferry terminal where, from memory, there are fewer domestic WTG's.

NMP2 (Eday) agree with proposed location, the only WTG I can find in the area is at Bredakirk (355400 1036171, kW Evance R9000), but please note there MAY be unauthorised small yacht/DIY type turbines in the area which have not been picked up under Planning enforcement yet.

Ferness - I would suggest you think again about having a (third) NMP in this area, perhaps not at Ferness itself as there is a small WTG to the north. If the proposed turbines are moved further south than currently indicated Ferness may become a more sensitive receptor - are you happy to use proposed NMP2 as basis for Ferness area noise limits?

I would suggest you consider deploying two rain gauges - weather fronts going through may affect south Westray more or less than Eday or at slightly different times (they are ca. 4km apart).

Other developments / noise sources in the area:-

Ferries to Westray – these run to a regular timetable and will probably only affect Westray NMP, there will be increased traffic either side of ferry arrival. Should be easy to filter out, but also watch out for other marine activity (e.g. small commercial fishing boats) which do not run to a timetable.

Flights (Loganair) to Eday (London Airport) – again to a regular timetable, sometimes (depending on wind direction) come in quite low over Ferness/west side of Eday, these will need filtering out.

Eday has an Enercon E44 (hub ht. 55m) at approx.. 354297 1031708 – don't think this will affect measurements but should be considered/commented on in any final report.

European Marine Energy Centre (EMEC) at West Side/Sunnybank (SW of above turbine) includes a Hydrogen production facility, again not likely to affect background noise measurements due to distance, but worth noting and commenting on in final report.

Paul

Paul Turner

Environmental Health Officer

Orkney Islands Council

School Place

KIRKWALL

Orkney

KW15 1NY

01856 873535 ext 2805

From: Simon Waddell <simon.waddell@itpenergised.com>
Sent: 07 August 2020 12:09
To: Paul Turner <Paul.turner@orkney.gov.uk>
Cc: Rebecca Todd <rebecca.todd@itpenergised.com>; Roy Ferguson <Roy.Ferguson@itpenergised.com>; David Hannon <David.Hannon@orkney.gov.uk>
Subject: RE: Faray Wind Farm - Noise baseline survey approach and method

Good afternoon Paul,

I hope you're well & able to get out and enjoy the sunshine!

Further to your email below, and our initial consultation on monitoring locations for Faray, we now have some proposed locations. These are necessarily constrained by where residents are permitting us to site the equipment, but if you could review the below and let me know if you have any comments that would be greatly appreciated. I will be installing the kits on Tuesday 18th August, so if you have any concerns if you could let me know before the end of next week (i.e. before Friday 14th Aug) that would be ideal.

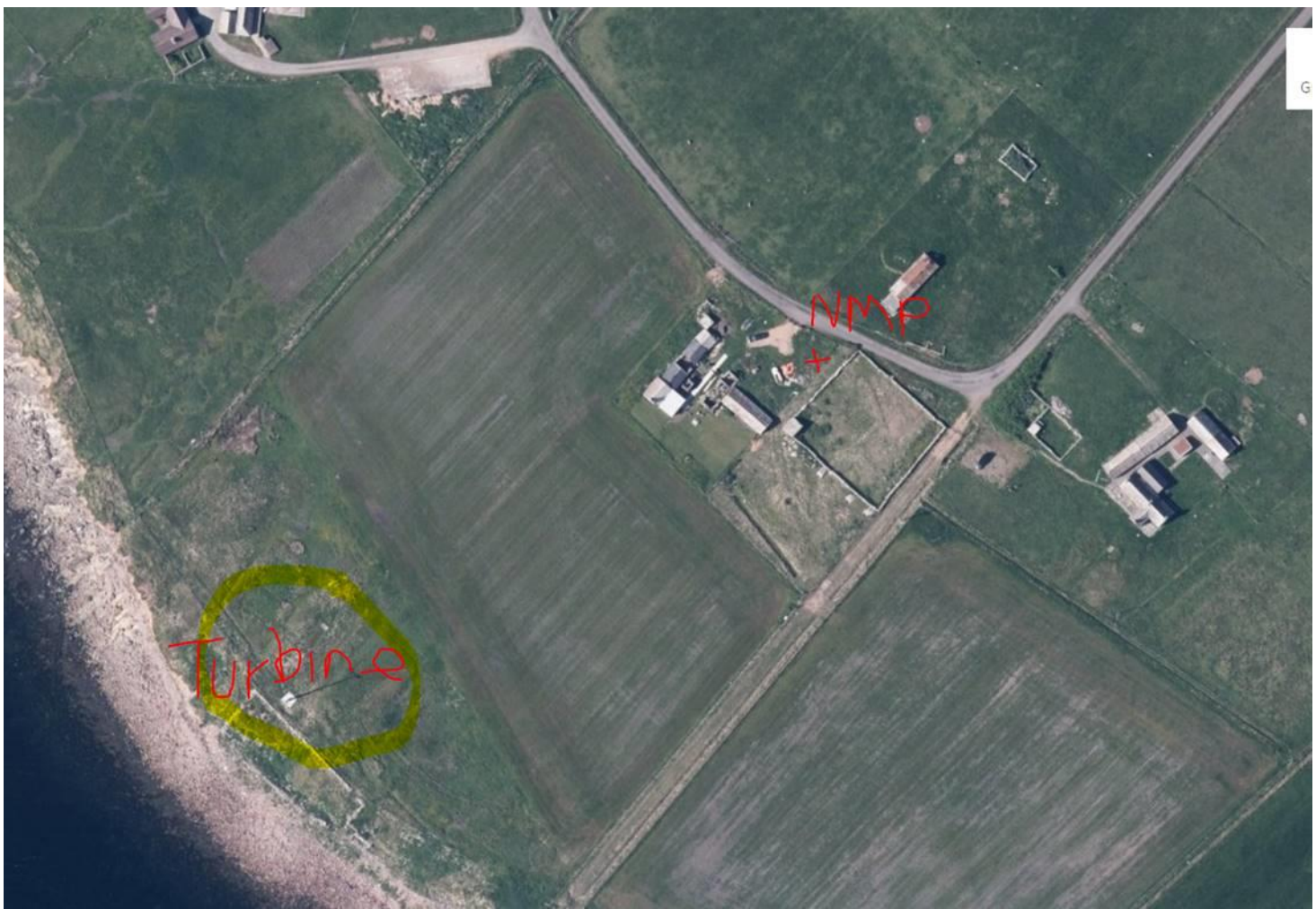
As you noted on your first point in your email, background measurements will not be necessary if predicted levels are below 35 dB. Our propagation over water calcs using the proposed candidate turbine are approx. 3 dB below the 35 dB fixed minimum daytime noise limit at all receptors on Westray, so we do not propose to undertake any monitoring location on Westray. The client has confirmed that the Vestas V136 is the proposed turbine model, and that they are happy for us to undertake our assessment on this basis only.

As luck would have it, the only property we can get permission to monitor at on the western shore of Eday is Bredakirk (where you noted previously there is a small turbine). I have reviewed aerial imagery of the property, and have identified what appears to be the turbine; the location identified matches the grid reference you provided. The turbine is close to the sea, and is reasonably remote from the house.

On the basis of our findings for Hoy, where background noise levels at NMP1 was found to be affected by noise from the sea, under conditions when the monitoring location was downwind of the sea, we will be excluding from our analysis all datapoints when the Bredakirk monitoring location is down-wind of the sea when deriving noise limits. Given the turbine's location, this will also exclude all datapoints when the NMP is down-wind of the turbine. On this basis we propose that no further correction for noise from the existing turbine would be required.

I provide a marked up image, showing the turbine location and the proposed monitoring location in Figure 1.

Figure 1 – proposed Noise Monitoring Position (NMP) at Bredakirk



For the Fersness monitoring location, which as you note also has its own turbine, we propose to site the monitoring equipment on the opposite side of the farm from the turbine (southern side). Given that this property is on a peninsula, it will be affected by noise from the from most wind directions, and we will undertake analysis to determine to what extent wind noise affects the background levels under varying wind directions.

I provide a marked up plan showing the turbine locations and proposed NMP at Fersness in Figure 2.

Figure 2 – proposed NMP at Fersness.

I have asked for confirmation from the landowners whether the turbines are currently operational.

As previously discussed, I will provide photos and videos of the installation, detailing the observed noise environment. I note you said you didn't plan to attend, but please let me know if you've changed your mind.

In your previous response you noted that 2 rain gauges may be required, given the distance between Eday and Westray. Given that we no longer propose to monitor on Westray, I assume that a single rain gauge will suffice.

Your other points regarding noise from flights, ferries, the hydrogen production facility and the E44 turbine are noted and I will make notes while on the island (I shall be there all day, given the ferry times), and we will review the data for outliers during our analysis.

I hope that the above information will allow you to make an informed judgement on the suitability of the proposed monitoring locations and approach, but please feel free to call me should you wish to discuss any aspect.

With thanks and regards,

Simon

Simon Waddell | Principal Noise Consultant | ITPEnergised

Office: +44 (0) 131 557 8325 |Mobile: +44 (0) 7884 278145

4th Floor Centrum House, Dundas Street, Edinburgh EH3 5DQ

www.itpenergised.com

Please note our change of Edinburgh address as of 1st July 2020

NOTE:DUE TO **COVID 19 ADVICE** ITPENERGISED ARE WORKING FROM HOME. PLEASE CALL MOBILE NUMBERS

Simon,

Thank you for the further information:-

I agree that if you predict flat 35dB LA90 can be complied with at nearest noise sensitive receptors (NNSR) on Westray then noise measurements are not required there, please be aware I would almost certainly condition any development (if approved) to flat 35 dB LA90 at NNSR on Westray.

The two proposed NMP's look OK to me, and the proposed method for filtering out any impacts from existing domestic turbines should be OK, please ensure you assess this on site as well.

I agree only one rain measurement would be necessary if Westray is out of the equation.

I trust this answers the points you raise, please let me know if I have missed anything, as I am on holiday w/c 17/08/2020 (all week) I will not be available to attend installation.

Regards

Paul

Paul Turner

Environmental Health Officer

Orkney Islands Council

School Place

KIRKWALL

Orkney

KW15 1NY

01856 873535 ext 2805

From: Simon Waddell
Sent: 24 August 2020 13:55
To: Paul Turner <Paul.turner@orkney.gov.uk>
Cc: David Hannon <David.Hannon@orkney.gov.uk>; Rebecca Todd <Rebecca.Todd@itpenergised.com>; Roy Ferguson <Roy.Ferguson@itpenergised.com>
Subject: RE: Faray Wind Farm - Noise baseline survey approach and method

Good afternoon Paul, I hope you had a relaxing break.

I completed the installation of the noise monitoring positions on Eday on Tuesday last week and I attach my notes from the installation, plus a video of the Shoehall monitoring location (see below).

At Fersness the monitoring location was sited on the opposite side of the steading from the existing small turbine. The turbine was inaudible in up-wind (i.e. monitoring location up-wind of turbine) conditions.

At the Bredakirk property, noise from the small turbine was clearly audible throughout the boundaries of the house. The monitoring location was therefore moved to the adjacent property 'Shoehall', and an outbuilding there used to screen out line of sight and noise from the Bredakirk turbine. A turbine at Newark was visible, but barely audible, despite being directly up-wind of the monitoring location at the time of installation.

I hope that the above meets with your approval, however, please don't hesitate to call me if you have any questions.

Best regards,

Simon

Simon Waddell | Principal Noise Consultant | ITPEnergised

Office: +44 (0) 131 557 8325 |Mobile: +44 (0) 7884 278145

4th Floor Centrum House, Dundas Street, Edinburgh EH3 5DQ

www.itpenergised.com

Please note our change of Edinburgh address as of 1st July 2020

NOTE:DUE TO COVID 19 ADVICE ITPENERGISED ARE WORKING FROM HOME. PLEASE CALL MOBILE NUMBERS

ITPEnergised incorporates Energised Environments Limited & ITPE Ltd.

ITPENERGISED

Please consider the environment before printing this e-mail

Agreement of construction noise assessment approach.

From: Simon Waddell <simon.waddell@itpenergised.com>
Sent: 25 September 2020 10:05
To: Paul Turner <Paul.turner@orkney.gov.uk>
Cc: Rebecca Todd <rebecca.todd@itpenergised.com>; Roy Ferguson <Roy.Ferguson@itpenergised.com>
Subject: Faray wind farm - construction hours

Good morning Paul,

I hope this finds you well.

Given the remote location of the Faray wind farm, we will be proposing construction hours of 07:00 – 20:00, 7 days a week. We will undertake predictions of likely plant noise associated with construction works and evaluate noise levels against BS5228 threshold criteria for weekday daytimes, evenings and weekends, derived using the 'ABC' method.

Please can you confirm whether you are satisfied with this approach?

Many thanks,

Simon

Simon Waddell | Principal Noise Consultant | ITPEnergised

Office: +44 (0) 131 557 8325 |Mobile: +44 (0) 7884 278145

4th Floor Centrum House, Dundas Street, Edinburgh EH3 5DQ

www.itpenergised.com

Please note our change of Edinburgh address as of 1st July 2020

NOTE:DUE TO **COVID 19 ADVICE** ITPENERGISED ARE WORKING FROM HOME. PLEASE CALL MOBILE NUMBERS

ITPEnergised incorporates Energised Environments Limited & ITPE Ltd.

ITPENERGISED

Please consider the environment before printing this e-mail

ITPEnergised Group: Argentina, Australia, China, India, Kenya, New Zealand, Portugal, Spain, United Kingdom.

From: Paul Turner <Paul.turner@orkney.gov.uk>
Sent: 25 September 2020 10:21
To: Simon Waddell <simon.waddell@itpenergised.com>
Subject: RE: Faray wind farm - construction hours

Classification: OFFICIAL

Simon,

Given the unique location and probability that weather could have a major impact on scheduling deliveries to site I have no objection in principle to an application for 7 day a week working.

Not sure if you will need special construction methods (e.g .will the application include a sub-sea cable between Faray & Eday or Westray?, if so will this be directional drilling……), I trust you will be advised and take this into account.

Given the location and distance to nearest residential receptors you may be able to do calcs for impacts and assess against most sensitive time periods (evening/weekends) and if compliant assume less sensitive time periods will be compliant as well – not sure how much work that would save in practice but worth a thought.

Regards

Paul

Paul Turner

Environmental Health Officer

Orkney Islands Council

School Place

KIRKWALL

Orkney

KW15 1NY

01856 873535 ext 2805

From: Simon Waddell
Sent: 22 January 2021 10:58
To: Paul Turner <Paul.turner@orkney.gov.uk>
Cc: Roy Ferguson <Roy.Ferguson@itpenergised.com>; Alasdair Baxter <Alasdair.Baxter@itpenergised.com>; Stuart McGowan <Stuart.McGowan@itpenergised.com>
Subject: Faray wind farm - commercial in confidence

Good morning Paul,

Further to my email yesterday I provide our appendix to the noise chapter of the EIA which sets out the process we have taken to deriving appropriate noise limits, taking into account contributions from existing small turbines.

I also attach our spreadsheet showing the calculations behind the appendix and a couple of figures from the assessment showing the NSRs and cumulative turbines considered.

Our client are keen to get this resolved soon, so that the EIA can be submitted.

I am available on my mobile if you would like to give me a call when convenient, alternatively it might be helpful to have a call via Teams or Zoom so we can guide you through the process we have taken. I would be pleased to set up a call at a time convenient to you.

Many thanks in advance,

Simon

From: Paul Turner <Paul.turner@orkney.gov.uk>
Sent: 31 March 2021 15:08
To: Simon Waddell <simon.waddell@itpenergised.com>
Subject: RE: Faray wind farm

Classification: OFFICIAL

Simon,

Sorry for the delay in getting back to you – at the weekend I managed to go through the information you sent earlier in the year.

I must stress:- I have not checked any of the mathematics/numbers etc so I provide no comment on the accuracy and, any advice given is without prejudice to any decision that may be taken by the Council on receipt of a formal planning application.

As far as I can see the approach used for derivation of noise limits is acceptable and appropriate to the case in hand, I do not at this time comment on the actual values within the document.

I hope this meets your immediate needs.

Regards