



Forss Wind Farm Extension

Volume 1 – SEI Report Text

August 2021

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1 INTRODUCTION AND METHODOLOGY

1.1 INTRODUCTION

This Supplementary Environmental Information (SEI Report) provides information required to be submitted as a result of the amendments to the Forss Wind Farm Extension (the Revised Development).

This Chapter forms an addendum to Chapter 1: Introduction and Chapter 2: EIA Methodology of the Forss Extension Wind Farm November 2020 Environmental Impact Assessment (EIA) Report (the 2020 EIA Report) which should be read in conjunction with this Chapter.

Chapter 1 of the 2020 EIA Report identified the proposal which in summary sought full planning permission for two new wind turbines each of 124.75 m to blade tip. It identified, amongst other things, the description of the development, the Applicant and the EIA team.

Chapter 2 of the 2020 EIA Report established the methodology for the 2020 EIA Report. It set out, amongst other things, the EIA Process, Consultation, EIA Screening and Scoping and an overview the EIA methodology.

This Chapter has been prepared for and on behalf of Abbey Properties Cambridgeshire Limited (the Applicant) by the Planning Director of Abbey Properties Cambridgeshire Limited (Andy Brand MRTPI) together with Arcus Consulting Services Limited (Arcus).

This Chapter includes the following elements:

- The Application;
- The Revised Development;
- Methodology and Scope of Assessment;
- Consultation;
- Baseline Review and Update;
- Structure of the SEI Report; and
- Contact Details.

1.2 THE APPLICATION

This SEI Report has been submitted as part of revisions made to planning application 20/04455/FUL which has resulted in the height of the proposed two wind turbines being reduced following discussions with the Local Planning Authority.

1.2.1 *The Revised Development*

The Revised Development is described within the Updated Planning Statement as:

- *The erection and operation of two up to 100 m high (tip height) three bladed wind turbines which are each capable of generating up to 2.5 Megawatts (MW) of renewably sourced electricity; and*
- *Ancillary development which would include external electrical transformers and substations, electrical cables, an access track, junction widening works and crane pads for erecting and maintaining the turbines.*

The only alteration from the 2020 EIA Report is the reduction in height of the proposed wind turbines as follows.

The wind turbines have been reduced in height to 100 m to blade tip. Each wind turbine would have a hub height of 60 m with the rotor diameter for the turbines blades being 80 m.

Each turbine would have an installed capacity of 2.5MW.

The Revised Development wind turbines are sited within the same location as the proposed turbines within Table 1.1 of the 2020 EIA Report, and as shown Figure 1.2.

1.3 METHODOLOGY AND SCOPE OF ASSESSMENT

The overall methodology and scope of assessment for the SEI Report reflects that of the 2020 EIA Report. The only additional consideration has been the changes in circumstances in the interim which are described where relevant in each SEI Report Chapter.

1.3.1 Consultation

In addition to the consultation undertaken as part of the 2020 EIA Report the consultation responses provided to the Highland Council (the Council) in respect of planning application reference: 20/04455/FUL have been considered. A summary of the consultation responses is provided in Table 1.1 below. Following receipt of the comments within Table 1.1 below the Local Planning Authority wrote to the Applicants on 16th March 2021 to advise that:

"... the Council may be able to support this development if the turbines were reduced in scale. However, we would require the amended information to make a full assessment before we come to a final decision. Therefore we require the following:

- *The proposed turbines reduced in scale to match the consented turbines at Lybster Hill (ref. 20/01655/FUL);*
- *EIA addendum;*
- *Amended ZTV;*
- *Amended Visualisation(s) ..."*

Table 1.1: Summary of Consultation Response to the Planning Application Submission to the Council (20/04455/FUL)

Consultee	Summary of Comments
Scottish Government	No comments
Scottish Water	No objection
SEPA	Refer the Council to Appendix 1 of SEPA standing advice for planning authorities and developers on development management consultations which provides guidance for wind turbine developments below 10 MW.
Transport Scotland	Requests two conditions: The proposed route for any abnormal loads on the trunk road network must be approved by the trunk roads authority prior to the movement of any abnormal load. Any accommodation measures required including the removal of street furniture, junction widening, traffic management must similarly be approved. Any additional signing or temporary traffic control measures deemed necessary due to the size or length of loads being delivered must be undertaken by a recognised Quality Assured traffic management consultant, to be approved by the trunk road authority before delivery commences.
Ministry of Defence	No objection.
Highland Council Transport Planning Team	We are generally satisfied with the applicant's assessment of traffic and transport associated with the development. It is recommended that a number of matters be addressed by condition or agreement, as appropriate, in any permission granted.
NATS	No safeguarding objection.

SNH	Caithness Lochs Special Protection Area (SPA): There are natural heritage interests of international importance on the site, but our advice is that these will not be adversely affected by the proposal. North Caithness Cliffs SPA: There are natural heritage interests of international importance on the site, but our advice is that these will not be adversely affected by the proposal. Caithness and Sutherland Peatlands SPA: In our view, it is unlikely that the proposal will have a significant effect on any qualifying interests either directly or indirectly. An appropriate assessment is therefore not required.
Historic Environment Scotland	Object to this application given the potential for significant adverse impacts on the setting of Crosskirk, St Marys Chapel and broch S of Chapel Pool (Scheduled Monument, Index no. 90086). We consider that these impacts will have an adverse effect on the integrity of the setting of this scheduled monument to the extent that it would affect our ability to understand, appreciate and experience it. We therefore consider that the proposals are not in line with paragraph 145 of Scottish Planning Policy (Scottish Government, 2014) and raise issues of national importance that warrant our objection.
RSPB	Concerns expressed regarding the ornithological assessment.
Highlands and Islands Airports Limited Safeguarding Team	No objections.
Highland Council Environmental Health	No objections subject to noise conditions being attached to any consent with limits as per the predicted levels in Table 10.8 of the 2020 EIA report and which restricts noise levels to no more than 40dB LAeq 1hr within any office building.
Local Residents	7 responses objecting to the proposal.

1.3.2 **Baseline Review and Update**

The baseline has been agreed with the Council¹ prior to the SEI Report being submitted. For the avoidance of any doubt the SEI Report excludes the refused development of 8 no. wind turbines at a site known as Cairnmore given that the developer has confirmed² that an appeal has not been lodged against the Council's refusal of planning permission (Council reference: 20/03833/FUL). There is therefore no change to the baseline utilised within the 2020 EIA Report.

1.3.3 **Mitigation and Residual Effects**

The methodology used for mitigation measures in the SEI Report remains as stated in Section 2.6.4 of the 2020 EIA Report. Each technical chapter within the SEI Report will include an assessment of effects after embedded mitigation has been applied, i.e. the overall predicted (potential) effects of the Revised Development. Additional mitigation may be applied thereafter to reduce a significant effect.

1.3.4 **Cumulative Effect Assessment**

This SEI Report includes an updated cumulative assessment whereby a further search was undertaken to identify sites at pre-application, application or operational stage at the time of this SEI Report. The cumulative assessment methodology used within the SEI Report remains as stated in section 2.6.5 of the 2020 EIA Report.

¹ Emails dated 30/4/21 and 15/06/21

² RES (2021). Cairnmore Hill Wind Farm. Available at: <http://www.cairnmorehill-windfarm.co.uk/> (Accessed 14/06/21)

1.4 THE STRUCTURE OF THIS SEI REPORT

The SEI Report contains the findings of the assessment of likely environmental effects of the Development and comprises of the following volumes:

- **Volume 1** –Text;
- **Volume 2a** – Figures;
- **Volume 2b** – NatureScot Visualisations;
- **Volume 2c** – Highland Council Visualisations;
- Non-Technical Summary.

Volume 1 of the SEI Report is split into 8 separate Chapters are as follows:

Table 1.2: SEI Report Structure

Chapter No.	Chapter Title
1	Introduction and Methodology
2	Updated Development Description and Planning Policy
3	Landscape and Visual Impact
4	Ecology
5	Ornithology
6	Noise
7	Archaeology and Cultural Heritage
8	Other Assessments

In addition to this SEI Report a Non-Technical Summary (NTS) has been produced in order to summarise the SEI Report for the general public.

1.5 CONTACT DETAILS

Enquiries relating to this SEI Report should in the first instance be directed to:

Abbey Properties Cambridgeshire Limited
c/o Andy Brand
Nene Lodge
Funthams Lane
Whittlesey
Cambridgeshire
PE7 2PB

The SEI Report will be publicised in the same manner as the 2020 EIA Report as a result of the ongoing COVID 19 pandemic. All of the documents will be available upon the Council's website.

7 ARCHAEOLOGY AND CULTURAL HERITAGE

7.1 INTRODUCTION

This Chapter of Supplementary Environmental Information (SEI Report) evaluates the effects of the Forss Wind Farm Extension (the Revised Development) on the archaeology and cultural heritage resource.

This Chapter forms an addendum to Chapter 11: Archaeology and Cultural Heritage of the Forss Extension Wind Farm November 2020 Environmental Impact Assessment (EIA) Report (2020 EIA Report) which should be read in conjunction with this Chapter.

This assessment was undertaken by Heather Kwiatkowski, Principal Environmental and Cultural Heritage Consultant at Arcus. This Chapter has been technically reviewed by Stuart Davidson, Registered EIA Practitioner and Operational Director of Arcus.

This Chapter of the SEI Report is supported by the following figures provided in Volume 2 Figures:

- SEI Figure 3.8: Cumulative ZTV 1 – Forss Wind Farm and Neighbouring Turbines;
- SEI LVIA Figure 3.13a to m: Viewpoint 1 – St Mary’s Chapel;
- SEI LVIA Figure 3.15a to k: Viewpoint 3 – Crosskirk;

This Chapter includes the following elements:

- Key Conclusions of the 2020 EIA Report;
- Changes to Legislation, Policy and Guidance;
- Methodology and Scope of Assessment;
- Consultation;
- Baseline Review and Update;
- Assessment of Potential Effects;
- Mitigation and Residual Effects;
- Cumulative Effect Assessment;
- Summary of Effects; and
- Statement of Significance.

7.2 KEY CONCLUSIONS OF THE 2020 EIA REPORT

Chapter 11 of the 2020 EIA Report evaluated the effects of the two turbines up to 124.5 m to blade tip and associated infrastructure (the Development) on archaeological and cultural heritage receptors.

The assessment of archaeological and cultural heritage effects within the 2020 EIA Report considered both potential direct effects arising from proposed construction activities, as well as indirect (primarily visual) effects as a result of changes to the settings of cultural heritage assets.

The assessment was informed by a Desk-Based Assessment (DBA) which aided understanding of impacts on known archaeological remains within the Site Boundary, and the potential for unknown (buried) archaeological remains to be present. The DBA revealed that the archaeological interest of the Site is moderate due to known archaeology within the immediate vicinity of the Development. Mitigation was recommended in the form of trenching evaluation to inform micro-siting and / or ensure preservation by record to ensure no significant effects upon undesignated archaeological remains.

The assessment also considered the potential effect of the turbines in relation to the setting of heritage assets beyond the Site Boundary. This included consideration of selected Scheduled Monuments and Listed Buildings out to 10 km from the Development,

as agreed during consultation with Historic Environment Scotland (HES). The key aim of the assessment was to determine whether the turbines altered the settings of historic assets so that the cultural significance of any assets was diminished.

For the majority of the heritage assets assessed there was no or a negligible change in setting that was not significant. Slight changes in setting that ranged in negligible to minor effect that were not significant were identified for 13 heritage assets as detailed below:

- Hill of Shebster, chambered cairn (SM476);
- Creag Bhreac Mhor, stone rows 200m ESE of (SM2386);
- Cnoc Freiceadain, long cairns (SM90078);
- Green Tullochs Broch and Cairn (SM554);
- Brims Castle (SM5510);
- Five Listed Buildings at Forss (LB1492, 14924-26, 14990);
- Lythmore Farm Steading (LB14953);
- Lybster Farm Steading (LB14991); and
- Forss Water Bridge (LB44721).

One substantial change to setting that was major and significant was identified at St Marys Chapel Monument (SM90086). This reduced to moderate when considered in the cumulative context of the consented Lybster turbine. No mitigation was considered feasible for this effect; however, the landowner indicated their intention to link the core paths which whilst not reducing the effect did provide a means to offset effects by providing a link to access heritage assets along the coast.

7.3 CHANGES TO LEGISLATION, POLICY AND GUIDANCE

There have been to changes to legislation, policy or guidance since the 2020 EIA Report therefore Chapter 11: Archaeology and Cultural Heritage, Section 11.2 Legislation, Policy and Guidance of the EIA Report remains valid.

7.4 METHODOLOGY AND SCOPE OF ASSESSMENT

The Revised Development assessed within this SEI Report proposes no change to the turbine or infrastructure locations with the only change proposed a reduction in the maximum height of the turbines from 124.5 m to 99.5 m to blade tip.

As such, the assessment of potential construction effects presented in Chapter 11: Archaeology and Cultural Heritage, Section 11.5.1 of the 2020 EIA Report remains valid; as does the mitigation proposed for direct effects presented in Section 11.6 (i.e. trenching evaluation to inform micro-siting and / or ensure preservation by record).

As the only change is a reduction in tip height, changes in setting identified in the 2020 EIA Report as slight may reduce as the turbines are more similar in scale to the Operational Forss Wind Farm and consented Lybster turbine (as shown in the visualisation in SEI Figure 3.13a-k); however, as these were negligible and minor effects, they are not considered further in this SEI Report as they would remain not significant with the main focus upon where significant effects were identified (i.e. at SM90086 St Marys Chapel Monument).

The methodology for the assessment will consider the sensitivity of a cultural heritage feature and the magnitude of any potential change, to conclude whether the effect is significant as detailed in Chapter 11: Archaeology and Cultural Heritage, Section 11.3.7 of the 2020 EIA Report. The cumulative assessment is revised within the assessment of potential effects for St Marys Chapel Monument (SM90086) in Section 7.4 with no other cumulative update required as effects remain negligible and minor and not significant.

7.5 CONSULTATION

In its response dated 14th December 2020, HES objected to the Development given the potential significant adverse impacts on the setting of Crosskirk, St Marys Chapel and broch S of Chapel Pool (SM90086). HES considers that these impacts will have an adverse effect on the integrity of the setting of this scheduled monument to the extent that it would affect the ability to understand, appreciate and experience it. HES considers that the Development assessed within the 2020 EIA Report is not in line with paragraph 145 of Scottish Planning Policy (Scottish Government, 2014) and raise issues of national importance that warrant an objection.

HES was unable to suggest any practical mitigation that would reduce these impacts and, also, did not consider that the off-setting measures suggested would provide an effective compensation.

7.6 BASELINE REVIEW AND UPDATE

There is no change to the baseline condition as presented in Chapter 11: Archaeology and Cultural Heritage, Section 11.4 of the 2020 EIA Report.

7.7 ASSESSMENT OF POTENTIAL EFFECTS

As detailed in Section 7.4 of this SEI Report, the assessment has focused upon SM90086 Crosskirk, St Marys Chapel and broch S of Chapel Pool to determine whether the Revised Development's tip height reduction affects the assessment presented in the 2020 EIA Report.

SM90086 Crosskirk, St Marys Chapel and broch S of Chapel Pool

St Mary's Chapel is located 0.3 km north of T8 as shown Plate 1. The chapel survives as a roofless structure surrounded by an enclosed burial ground with a stacked stone marker demarcating the location of the broch to the north of the chapel. The monument is of national importance as the well-preserved remains of a chapel probably of the 12th century, associated with the earlier remains of a broch from which there may be continuity of occupation on the site, and for its potential to contribute to an understanding of prehistoric and medieval architecture, settlement, social and ecclesiastical organisation in prehistoric and medieval Scotland.

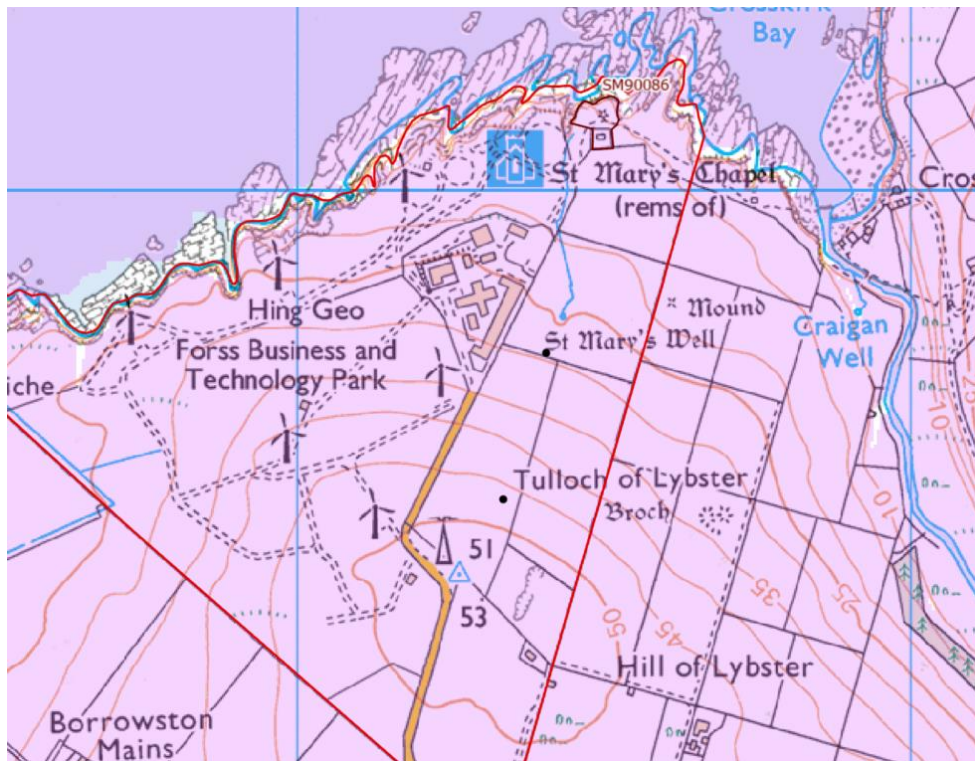


Plate 1 (Top): Extract of SM90086 on OS Map with ZTV in purple
Plate 1 (Bottom): Aerial photography image showing location of SM90086

The prehistoric setting of the broch was the past prehistoric landscape which was characterised by the coastal and waterway occupation of Caithness during this period. The prehistoric landscape survives with other brochs and cairns still present interspersed across the modern landscape though intervisibility is often limited by loss of surviving structures and intervening later occupation. The closest recorded brochs along the coast

is to the west at Green Tullochs (SM554) with an undesignated broch at Tulloch of Lybster, 650 m to the south, following the Forss Water inland. Whilst these brochs no longer retain their large-scale height with limited intervisibility, the relationship and distribution of these assets are key aspects of understanding and appreciating the occupation of Caithness during the prehistoric period.

The medieval setting of the chapel extends to the wider area on both sides of the Forss Water with a concentration of undesignated medieval features found at Crosskirk 500 m to the east on the opposite side of the River Forss. There is evidence associated with cultivation in the form of rig and furrow on either side of the scheduled monument. It is likely that St Marys Chapel, with origins dating to the 12th century, was constructed to serve nearby communities in and around Crosskirk Bay.

These remnants of the historic setting now survive within a modern landscape which includes the existing Forss Wind Farm (with the closest turbine 310 m to the west), the Forss Business & Energy Park, surviving elements of the Lybster Hill US Naval Communications, telecommunications towers, and transmission lines as shown in the baseline photography in SEI Figure 3.13. The key approach to the monument is along the coast from the east via a core path leading from Crosskirk.

From the core path looking from the east to the west, the modern landscape context is visible with the business park and existing Forss Wind Farm, and transmission lines visible as shown on SEI Figure 3.15. This view shows the existing Forss turbines extending south into the more open agricultural landscape beyond the business park. The Revised Development is of a similar height (99.5 m to tip) and would appear more in keeping with the existing Forss Wind Farm. The Revised Development turbines would be seen within a similar context with T8 in the foreground of the business park and T7 in the agricultural fields to the south. Upon approach, the context of this view remains the same until in close proximity to the monument so that the change in setting upon approach is slight until at the monument itself.

In views from the Scheduled Monument itself, the existing Forss Wind Farm lies largely within the visible context of the business park creating a large modern landscape in close proximity to the monument. The Revised Development is sited to the south of the chapel in an area of open fields. The fields contain numerous visible modern elements within the same line of sight of the open field (i.e. telecommunications tower, transmission corridor, business park, the tips of the Operational Baillie Wind Farm and Existing Forss Wind Farm). The Revised Development would be visible within this modern context increasing the view of turbines in views southwards across the fields. The visibility of turbines would extend eastwards as shown on SEI Figure 3.13 though of a similar distance to the closest existing turbine to the west.

The Revised Development turbines are more in keeping with the visual scale of the existing turbines and fit better into the visual envelope; however, they would still be in proximity and visually dominant in sight lines to the south of the monument so that the magnitude of change remains substantial to moderate. As such, the change to the modern setting of the Scheduled Monument remains major and **significant** in terms of the EIA Regulations.

For the cumulative baseline with consented Lybster Turbine, the addition of the single turbine already extends turbines further eastwards with the Revised Development between the Existing Forss Wind Farm and the Consented Lybster Turbine as shown on SEI Figure 3.13. This creates a denser view of turbines but does not increase the horizontal splay of visibility so that the effect is slightly reduced from substantial to moderate though still **significant** in terms of the EIA Regulations.

No mitigation is considered feasible for this effect; however, the landowner has indicated their intentions to link the core paths (2020 EIA Report Figure 13.2) which, whilst this

does not reduce the effect, it does provide a means to offset effects by providing a link to access heritage assets along the coast, most notably Green Tullochs Broch (SM554) and the chapel (SM90086).

7.8 MITIGATION AND RESIDUAL EFFECTS

A significant effect was identified at St Marys Chapel (SM90086). For indirect effects, no mitigation is considered feasible for this effect; however, the landowner has indicated their intentions to link the core paths (2020 EIA Report Figure 13.2) which, whilst not reducing the effect, does provide a means to offset effects by providing a link to access heritage assets along the coast, most notably Green Tullochs Broch (SM554) and the chapel (SM90086). The effect would remain **significant** for the life of the Revised Development but is fully reversible upon decommissioning.

7.9 CUMULATIVE EFFECT ASSESSMENT

The cumulative scenario has not changed and the cumulative assessment remains as presented in Section 11.6 of Chapter 11 within the 2020 EIA Report with the exception of St Marys Chapel and broch (SM90086) which is updated in the assessment of potential effects in Section 7.7.

7.10 SUMMARY OF EFFECTS

Table 7.1 provides a summary of the effects detailed presented within the 2020 EIA Report and updated as per the assessment of SM90086 St Marys Chapel in this chapter.

Table 7.1: Summary of Effects

Receptor	Potential Effect	Significance of Effect	Mitigation Proposed	Residual Effect
Construction Phase – no change from that presented in 2020 EIA Report				
Known Archaeology	None - moderate	Potentially significant in absence of mitigation	Trenching evaluation to inform micro-siting and / or ensure preservation by record	Not Significant
Unknown Archaeology	None - moderate	Potentially significant in absence of mitigation	Trenching evaluation to inform micro-siting and / or ensure preservation by record	Not Significant
Operational Phase				
Designated Heritage Assets except SM90086 remains as presented in the 2020 EIA Report	None – Negligible – Slight	Negligible to Minor and Not Significant	None	Not Significant
St Mary's Chapel (SM90086)	Substantial change in setting	Major and Significant	Connecting Core Paths	Significant (Cumulative effect is moderate and Significant)

7.11 STATEMENT OF SIGNIFICANCE

Effects are considered to be significant for the purposes of the EIA Regulations where the effect is classified as being of 'major' or 'moderate' significance.

There is no change to the assessment of direct effects presented within the 2020 EIA Report which concluded that there is moderate potential for unknown archaeology to survive from the prehistoric to medieval period and to be affected by the construction of the Revised Development. Mitigation recommendations remain to include trenching evaluation to inform micrositing and / or ensure preservation by record which would ensure no significant effect upon archaeology.

This SEI chapter focused upon SM90086 St Marys Chapel. Even the reduction in tip height presents a more visually cohesive scheme with the Existing Forss Wind Farm, the proximity of the turbines still results in a significant indirect (settings) effect which is moderate to substantial which reduces to moderate when considered within the cumulative context of the Lybster turbine. No mitigation is considered feasible for this effect; however, the landowner has indicated their intentions to link the core paths which whilst this does not reduce the effect does provide a means to offset effects by providing a link to access heritage assets along the coast.

All other assessments of heritage assets remains as presented within the 2020 EIA Report with no other significant effects or cumulative effects predicted upon Cultural Heritage receptors in the surrounding historic environment.