Ventient Energy Limited

Farr Wind Farm Life Extension

Section 36 Variation Application Supporting Information:

Environmental Report

662852

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RSK GENERAL NOTES

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Section 36 Variation Application Supporting Information
Environmental Report

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PREFACE

Farr Windfarm Limited ('the Applicant'), a wholly owned subsidiary of Ventient Energy Limited (Ventient) is submitting an application under Section 36C (s36C) of The Electricity Act 1989 ('the Act') as amended in order to extend the operational period of Farr Wind Farm (hereafter referred to as Farr) from 25 years to 35 years. The Applicant is the owner and operator of Farr.

Farr is located on the Kyllachy Estate, 8 miles south of Inverness and comprises 40 wind turbines, each with a capacity of 2.3MW providing an overall capacity of 92 MW. The wind farm is located south-east of Farr and west of Tomatin, Inverness-shire, on open moorland to the east of the Monadhliath Mountains. It is located off the A9 between the Findhorn and Nairn valleys. Farr has been operational since December 2005 and the current Section 36 planning consent expires in December 2030. A s36C variation application would allow the continuation of operations rather than decommissioning after the consented 25 years. No changes to existing turbines or infrastructure are proposed.

Within their portfolio, Ventient has a number of wind farms that are significantly older than Farr. Over the last three years, Ventient has conducted Engineering Life Extension analysis on a number of wind farms, which provides information on the needs of each individual wind farm but also gives assurance that other wind farms in the portfolio can operate beyond the term of their original planning consent. Further details are provided in the Statement on the Inspection, Servicing, Maintenance and Repair Programme for Farr Wind Farm (Appendix 1).

RSK Environment Limited has been commissioned by Ventient to compile the Section 36 variation application. Following advice from The Scottish Government Energy Consents Unit (ECU) and The Highland Council (THC) planning department, this document augments the information already available within the Environmental Statement (ES) originally prepared for Farr. It contains the necessary information required to allow the application to be considered by the ECU, THC and statutory consultees such as Scottish Natural Heritage (SNH) and The Scottish Environment Protection Agency (SEPA).

Given that the proposed development has not been altered in any way from that described in the ES, it is not considered that the granting of the Section 36 variation would create any additional significant environmental effects, nor would it increase or intensify any existing environmental effect. Hard copies of the environmental report (including ES Volume 2 Written Statement, Volume 1, Non-Technical Summary and Volume 4, Technical Appendices produced as part of the original ES[1]) are available subject to a charge of £100 (plus P&P). A digital version of the environmental report on CDROM or via file sharing can be obtained for a fee of £10. Copies are available on written request from:

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[1] As a consequence of the wind farm owner changing and the length of time that has passed since the Farr ES was produced, a copy of Volume 3, was not available for review.

1 INTRODUCTION

1.1 Structure of the Document

Utilising a topic-based structure, this document assesses the predicted effects occurring as a result of extending the life of Farr.

This document is structured as follows:

- Section 1 sets out the document purpose, project background, development planning requirements, physical characteristics, benefits and location of the development and describes the pre-application consultation undertaken and method of assessment used;
- Section 2 describes the characteristics of likely effects on landscape, ecology and ornithology, archaeology, hydrology, noise, socio economic assessment, transport and electromagnetic interference and other issues;
- Section 3 provides a schedule of mitigation; and
- Section 4 provides a summary and conclusions.

Appendices to the document include:

- Appendix 1: Supporting Information; and

  Appendix 2: Consultation Information

For ease of reference, the main chapters from the Farr ES are detailed in Table 1.1 along with a reference to the relevant section of this document which describes the characteristics of likely effects and any mitigation requirements.

Table 1.1 Reference to Farr ES

Farr ES Chapter Details	Section of Variation Application Report
Chapter 5 – Landscape and Visual Assessment	2.1 – Landscape & Visual Effects
Chapter 6 – Ecology	2.2 – Ecology and Ornithology Effects
Chapter 7 – Ornithology	2.2 – Ecology and Ornithology Effects
Chapter 8 – Archaeology	2.3 – Cultural Heritage and Archaeology Effects
Chapter 9 - Hydrology	2.5 – Scoped out Effects
Chapter 10 – Noise	2.4 – Noise Effects
Chapter 11 – Socio-Economic Assessment	2.5 – Scoped out Effects
Chapter 12 - Transport	1.6 – Physical Characteristics of the Development
Chapter 13 – Electromagnetic Interference and Other Issues	2.5 – Scoped out Effects

1.2 Document Purpose

By a decision letter dated 05 October 2004, the Scottish Ministers granted consent under Section 36C of the Electricity Act 1989 (the 's36 consent') together with a direction under Section 57 (2) of the Town and Country Planning (Scotland) Act 1997 (the permission) granting deemed planning permission for Farr.

The Applicant seeks a variation under s36C of the Electricity Act 1989 and the Electricity Generating Stations (Applications for Variation of Consent) (Scotland) Regulations 2013 to the duration of the consent from 25 years to 35 years as described in Section 3.1, page 1 of the decision notice dated 05 October 2004.

Following advice received in consultation with the ECU and THC, using a topic-based structure, this document augments the information already available within the Farr ES. For ease of reference, Volume 1: Non-Technical Summary, Volume 2: Written Statement and Volume 4: Technical Appendices produced for Farr are provided separately as part of the application.

1.3 Background

Ventient Energy Ltd

Ventient Energy has a strong track record in operating wind farms. They own and operate 103 onshore wind farms in Europe with a total installed capacity of around 1.9GW. Of these, 12 are located in Scotland with an installed capacity of 390MW.

RSK

RSK Environment Limited has been commissioned by the Applicant to compile the Section 36 variation application and to provide environmental and planning advice.

RSK is a fully integrated, environmental, health, safety and engineering consultancy with extensive experience of providing environmental, health, safety and engineering services to the renewable energy onshore sector.

Life Extension Assessment

Ventient has developed considerable in-house engineering capability to allow them to safely operate their wind farms for longer and are currently showing this on wind farms that are already 25 years old. Over the last three years, Ventient has conducted Engineering Life Extension analysis on a number of wind farms, which provides information on the needs of each individual wind farm but also gives assurance that other wind farms in the portfolio can operate beyond the term of their original planning consent.

A range of maintenance improvements are already being implemented on Farr including blade inspections using drone technology which can help identify potential issues earlier. In addition, all wind turbines at Farr are installed with vibration monitoring systems which provide advance notification of defect formation and allows proactive monitoring and change out of components before potential failure. Further details are provided in the Statement on the Inspection, Servicing, Maintenance and Repair Programme for Farr (Appendix 1).

1.4 Location of the Development

Farr is located on the Kyllachy Estate, near Inverness, and comprises 40 (2.3MW) wind turbines, with a hub height of 60m, a blade length of 40m and a tip height of approximately 101m. The wind farm has an installed capacity of 92 MW, has been operational since December 2005 and the current s36 consent expires in December 2030.

The location and layout of Farr is shown in Figure 1 (Appendix 1).

The site is located on the Kyllachy Estate which is located approximately 8 miles south of Inverness. It is located on the eastern fringes of the Monadhliath Mountains, between Strathnairn, to the north and to the west of the site and Strathdearn to the south and east.

The landholding within which Farr is located lies on open moorland with some isolated hills to the south and west, and more continuous high ground of the Monadhliath Mountains to the west of the site.

The site was selected originally for the construction of a wind farm for a range of reasons which included high average wind speed and access to grid infrastructure. The site is not located within any area of national environmental importance and it was considered that a wind farm could be developed on the site with limited environmental effects. Additional information about the site is included in the following section (Section 2) titled 'Assessment of Effects'.

1.5 Physical Characteristics of the Development

As outlined in section 1.3, Farr is an existing wind farm comprising 40 (2.3MW) wind turbines, with a hub height of 60 m, a blade length of 40 m and an installed capacity of 92 MW. The wind farm generates enough clean electricity to supply energy to around 58,518 homes every year[2]. The turbines are of a typical modern design incorporating tubular towers with three blades attached to a nacelle housing the generator, gearbox and other operating equipment.

Each turbine is based on a reinforced concrete foundation, approximately 16 m in diameter. The turbines are accessed by and were constructed by the use of stone access tracks, the total length of which is approximately 18 km long and 6m wide with passing places and turning points. The power output from all the turbines is delivered by underground cables which run in trenches along the access track to an onsite substation. From the substation, the wind farm power output is carried by overhead line to join the existing Scottish and Southern Electricity distribution system.

Activities on site are, and will continue to be, low intensity. The site asset manager visits the control building on the site approximately two to three times a week depending on requirements, weather conditions etc. The site is also attended by operational and maintenance technicians when required. A summary of the average vehicle journeys to

[2] Based on an average energy yield and assumed annual household usage of 4,115 kWh per year^ = 58,518 homes.

^Typical Domestic Consumption Values from Ofgem. Electricity: Profile Class 2 Medium 4.2MWh

the site is set out in Table 2.1 to 2.3. In terms of gaining access, the site is accessed via the Garbole Road off the A9 at Daviot with the A9 / Moy junction used for heavy haul activities only.

Table 2.1: Routine Maintenance (Servicing/Faults/Re Sets)

Vehicle Type	Quantity	Reason	Average Frequency
Mercedes Sprinter 4x4 Crew Service Van Toyata Hilux 4x4 vehicle	3 2	Servicing, Faults, Re-setting of WTGs Contractor supervisors/management	6 times per week including weekends 3 times per week, no weekends
Toyata Hilux 4x4 vehicle	1	Site visits /Landowner Liaison	4-6 times per month
Small car derived van	2	Vermin control, meter readings , electrical tests / infrastructure maintenance	2x per month

Table 2.1: Major Components / Major Works (Gearbox / Generator Replacements / Blade Inspections & Repair / High Voltage Works)

Vehicle Type	Quantity	Reason	Average Frequency
Mercedes Sprinter 4x4 Crew Service Van	2	Support for up tower works	3 times per year including weekends (in addition to Routine frequency)
Toyata Hilux 4x4	1	Safety overview, contractor audits /	2-3 times per month (in addition to Routine frequency)
Crane – 200 Tonne	1 x Crane 1 x Ballast truck	Lifting components in and out of turbine	4 times per year (16 days)
Mobile Elevated Work Platform	1	Blade inspections and repairs	10 days per year
Delivery Truck for components	1	Components to and from site	16 times per year

Table 2.3: Civil Support for Major Components*

Vehicle Type	Quantity	Reason	Average Frequency
Toyata Hilux 4x4	1	Civil Crew Support	20 times per year (35 days) SNOW CLEARING INCLUDED
Specialist vehicles	1 1	Road prep, crane hardstand prep Movement of ground material	4 times per year (16 days) 4 times per year (16 days)
Mobile Elevated Work Platform	1	Blade inspections and repairs	10 days per year

*To allow for major works to be completed, civil works needs to be completed to allow larger vehicles to get onto site and to also provide tested ground support when the vehicle is in use.

Due to the low level of activity on site and thus volumes of vehicular traffic required, effects on transport and traffic are not considered any further in this report.

Within at least 18 months from the end of the proposed extended operational period, Farr will start to be decommissioned. Decommissioning will involve the removal of all above ground infrastructure, including demolition of the substation building. The top surface of the wind turbine foundation bases would be broken up and removed to approximately 0.5 m below ground level and all cabling cut out and removed at the same depth. The area would then be reinstated with a final layer of topsoil over the foundations. Across the rest of the site, the cabling would be left in situ. Tracks would either be left for use by the landowner (Kyllachy Estate) or covered in topsoil. This approach is considered to be less environmentally damaging than seeking to remove all foundations, tracks and underground cables entirely. A decommissioning method statement would be prepared and agreed with THC and other relevant consultees prior to decommissioning of the site.

1.6 Benefits of Farr Wind Farm Life Extension

Community Benefits

There will continue to be some limited employment associated with the ongoing operation and maintenance of Farr. The Applicant is committed to continuing to provide community benefits throughout an extended period of operation. The Farr community benefit fund will be increased to £3,500 per MW. The increased payment would take effect when the new consent came into effect (i.e. December 2030) and would continue for the extended life of the wind farm. The increase takes account of the age of the wind farm.

The community fund is divided between and administered by two separate bodies namely the Strathdearn Community Charitable Trust and the Strathnairn Community Benefit Fund. To date, the Strathnairn and Strathdearn Community Benefit Fund have both supported a large number of local projects within the Strathnairn and Strathdearn Community Council areas, including:

- the provision of Public Access Automated Defibrillators positioned at the local village halls, church hall and a local inn
- part funding the purchase of a new 9 seat community minibus with wheelchair access
- helping with music classes for The Strathnairn Music Initiative
- Farr and Tomatin community halls
- funding extracurricular activities at Farr primary school
- funding for local athletes coaching

Further benefits from the extended operation of Farr will include the active participation of Ventient in community projects such as delivering schools lectures, presentations to support educational programmes, open visits to the wind farm for students, local residents and other interested parties and helping enhance local tourism by making the wind farm a site of interest. There will also be potential opportunities for Ventient to participate in other charitable projects.

During these unprecedented times, Ventient has been particularly attentive to the impact of the Covid-19 emergency throughout communities in the vicinity of their operational wind farms. Ventient has supported national charities in order to help those who have been most vulnerable during these challenging times. Ventient has also directly helped local communities where required, through donations to food banks and other financial support beyond community funds to provide fast aid where it was needed due to the Covid-19 outbreak.

There will therefore also be significant positive notable social and economic benefits associated with the continued operation of the wind farm as a result of the provision of the community fund.

Kyllachy Estate

Kyllachy Estate has remained an upland estate where deer and grouse are husbanded for shooting. Kyllachy Estate is a working estate which undertakes numerous commercial activities. Formal recreational activities are also a part of the estate, organised by the estate office, and include fishing, stalking and shooting. Other activities that are carried out within the vicinity include walking and hiking, bird watching, golf, croquet, table tennis and visiting Tomatin's famous whisky distilley.

These activities have continued during the operational phase of Farr and could continue should the operational life of the wind farm be extended.

Positive contribution to UK and Scottish Government targets for renewable electricity generation

With an installed capacity of approximately 92 MW, extending the operational period of Farr from 25 years to 35 years would contribute further to the attainment of the UK and Scottish Government policies of encouraging renewable energy developments, and in turn contribute to the achievement of UK and Scottish Government currently unmet targets for renewable electricity generation. The Government has confirmed its long-term commitment to the decarbonisation of electricity generation and the proposal would help advance this policy objective.

Furthermore, the UK legally binding target of 15% of energy to come from renewables by 2020 (and the Scottish Government target of 50% by 2030) remain major challenges.

At the start of 2019, Scotland had 11.0 gigawatts (GW) of installed renewable electricity capacity[3]. Renewable electricity generation in Scotland was 26,708 GWh in 2018, making up 74% of gross electricity consumption[4]. Scottish renewable generation makes up approximately 25% of total UK renewable generation[5].

A key benefit of wind energy (in common with other renewable energy technologies) is the generation of low carbon electricity. This contrasts with the majority of electricity distributed on the UK's national grid which is generated by fossil fuels such as gas which give rise to significant emissions of greenhouse gases (GHGs). Operating wind farms delivers GHG savings by offsetting the consumption of fossil fuel generated mains electricity.

Extending the life of the wind farm will allow the continued generation of electricity from a renewable resource which, compared to fossil fuel based generating methods, will reduce the amount of carbon dioxide from long-term carbon stores being emitted into the atmosphere. The extension of the life of the wind farm by 10 years after the date it was originally intended to be decommissioned will generate enough clean electricity to supply energy to around 58,518[6] homes every year. The ongoing operation of Farr will make a valuable contribution towards government targets.

1.7 Drivers for Renewable Energy

In response to the Covid-19 pandemic, the Scottish Government established an independent Advisory Group on Economic Recovery who released their report titled "Towards a Robust, Resilient Wellbeing Economy for Scotland" on 22 June 2020. The Advisory Group recommended in their report that there should be prioritisation and delivery of green investment because "the green recovery is central to recovery overall". It will be important to deliver projects that combine emissions reductions, development of natural capital and creation of jobs. The Environment, Climate Change and Land Reform

[3] BEIS Energy Trends Renewables. www.gov.uk

[4] Renewables in Numbers www.scottishrenewables.com

[5] Energy Trends: March 2018 – Publications – www.gov.uk

[6] Based on an average energy yield and assumed annual household usage of 4,115 kWh per year^ = 58,518 homes. Typical Domestic Consumption Values from Ofgem. Electricity: Profile Class 2 Medium 4.2MWh

Committee have launched an inquiry, on behalf of the Scottish Government, to establish the key principles and actions that would help deliver a "green, just and resilient recovery".

The UK Government, Scottish Government and The Highland Council have all declared a 'climate emergency' and are committed to ensuring that an increased proportion of electricity is generated from renewable energy sources in order to meet carbon emission targets. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 introduced a target of net zero greenhouse gas emissions by 2045 at the latest. Scotland will also have to reduce emissions by at least 56% by 2020, 75% by 2030 and 90% by 2040. These are currently the most ambitious statutory targets in the world. Scotland's Climate Change Plan 2018-2032, which sets out the roadmap for achieving those targets, has set the goal of 50% of Scotland's energy need to be met by renewable energy by 2030.

1.8 Pre-Application Consultation

As part of the Section 36 variation application process, consultation and information relevant to the proposal were sought by RSK from a number of organisations. Responses relevant to this assessment have been taken into consideration and include responses from:

- The Highland Council
- Scottish Environment Protection Agency
- Scottish Natural Heritage
- The Scottish Government Energy Consents Unit

This consultation assisted in focussing the scope of the application and associated assessment described herein and the key correspondence received from SNH and SEPA is provided in Appendix 2.

1.9 Screening

A letter dated 13 May 2020 was issued to the ECU by RSK requesting, on behalf of the Applicant, a screening opinion in respect of a proposed application under s36C of the Electricity Act 1989 to vary the existing consent granted under section 36 of said Act for Farr.

The proposed variation requires to be screened by the Scottish Ministers in accordance with regulation 7 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) ('the regulations'). Following a request for a screening opinion made under regulation 8(1), Scottish Ministers are required to adopt an opinion on whether the proposed variation is or is not EIA development.

A screening opinion from Scottish Ministers was received dated 03 July 2020. This confirmed that Scottish Ministers are of the opinion that the proposal does not constitute EIA development and that any application submitted for this development does not require to be accompanied by an EIA report.

The screening opinion is included in Appendix 2.

1.10 Public Engagement

Although not a statutory requirement for a Section 36 Variation Application, Ventient decided to undertake public engagement activities with the local community to inform them about the proposed application.

Zoom meetings were undertaken with Strathnairn and Strathdearn Community Council on the 3rd and 4th June respectively. Each meeting was attended by members of the community councils and in the case of Strathdearn Community Council, this included a representative of Strathdearn Community Developments. Ventient gave a presentation which comprised background information on Ventient as a company, the day to day running of Farr and the scope of a life extension application and what this would mean for local communities. A question and answer session then followed. Both meetings were considered productive and appeared to be well received by the attendees.

Ventient discussed with each Community Council how they could best reach all members of the community and agreed to provide further information to be disseminated through a number of channels including as an insert to a newsletters (which reaches all homes in the community), the Community Council's websites and social media channels.

Consultation leaflets were produced and emailed to Community Councils on the 26th June 2020 and hard copies of the leaflets have also subsequently been provided to both Councils for inclusion and distribution with their Council newsletters.

A dedicated e-mail address has been publicised as part of the community engagement activities which anyone with queries and questions about the proposed life extension can utilise to secure feedback.

Information on the proposed application and community engagement activities has also been sent to ward councillors.

A copy of the presentation delivered by Ventient to Strathnairn and Strathdearn Community Councils and the consultation leaflets are included in Appendix 2.

1.11 Development Planning requirements

The original consent for Farr included a planning condition (condition 3.1) which set out that:

"The consent is for a period from the date of this consent until 25 years from the date of commissioning. The company is required to obtain by no later than the end of said 25 year period, written confirmation from the planning authority that all decommissioning works have been in accordance with the approved decommissioning scheme referred to in condition 3.4 of this consent. Written confirmation of the date of the commissioning shall be provided to the planning authority within 1 month of the commissioning of the development, and the date of commissioning will be no later than 5 years from the date of this consent, or such longer period as the Scottish Ministers may hereafter direct in writing. This consent shall cease to have effect after the end of 5 years from the date

hereof if any material operation relevant to the development has not been substantially commenced by that date."

The Applicant wishes to secure planning consent to extend the operational lifetime of Farr for an additional ten years. The wind farm has been operational since December 2005 and the current s36 consent expires in December 2030.

It is not proposed to alter or physically change any aspect of the existing Farr Wind Farm.

Emerging guidance and advice from SNH on repowering of existing wind farms recommends that "the baseline for the assessment should be the 'current state of the environment' as set out in the EIA regulations."[1] As that is the case for repowering of an existing wind farm where the existing wind turbines would be removed and replaced potentially with different dimensions and layout of turbines, it would seem reasonable that an assessment of extension of life, where there is no physical change to the consented development, should also use the 'current state of the environment' as its baseline.

Whereas repowering generally involves replacement of existing wind turbines and potentially additional works and change to the parameters of the development assessed in the original ES, extension of life does not generally involve a change to any of the parameters of the development other than duration of the consent. The potential for additional significant environmental effects is therefore unlikely. That is the case with Farr extension of life application. The screening opinion from Scottish Ministers states that the proposed variation will not have a likely significant effect on the factors specified in regulation 4(3) of the regulations. The scope of this environmental report is therefore focussed upon landscape and visual, ornithology and noise.

It is acknowledged that the baseline environment has changed since Farr became operational primarily through the construction of new wind farms. However, Farr is part of the established baseline and the applicants for those new wind farms would have been required to assess the cumulative effects of their development with Farr. It may be assumed that operational and consented wind farms present since Farr became operational have adequately assessed cumulative effects and such effects have been considered acceptable by determining authorities otherwise those developments would not have been consented with Farr as part of the baseline. Any new applications that come forward during the extended period of life of Farr will need to consider Farr as part of the baseline and any cumulative effects of the new development with Farr will be assessed giving determining authorities the information required to make a decision.

1.12 Method of Assessment

Consultation was undertaken with THC and ECU in May and June 2020 to discuss requirements for the Farr life extension Section 36 Variation Application. This consultation informed the scope of the assessment to be applied, which broadly follows

[1] https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-renewable-energy [accessed 02/07/2020].

the recently approved s42 application to extend the Novar Wind Farm also located in the Highland Council area for another 10 years[7] and is as follows:

- Undertake a desk-based review of the previous Farr application and assessments;
- Review relevant operational environmental monitoring documents;
- Review application documents relating to the neighbouring Glen Kyllachy Wind Farm application (currently under construction);
- Complete additional consultation with SNH and SEPA in respect of any considerations relating to plans for an extended operational period for Farr Wind Farm;
- Undertake a noise, ecological and landscape site appraisal; and
- Undertake an assessment of potential environmental effects resulting from the new proposed extension period and identify relevant requirements for mitigation.

With specific regard to ecology, a baseline review of the existing ecological and ornithological information was undertaken by Ruth Morton, Principal Ecological Consultant in April 2020 to ascertain whether the site had undergone any significant ecological or ornithological changes since Farr was built. This was augmented by a review of operational site reports relating to monitoring and historical consultations with SNH. Application documents relating to the neighbouring Glen Kyllachy Wind Farm application were also reviewed as part of this baseline review.

With respect to landscape, a review of the landscape and visual impact assessment (LVIA)[8] produced in 2002, followed by a review of the wider study area was also undertaken by Ross Allan, Associate Director at RSK in April 2020 to ascertain whether the site had undergone any significant changes since Farr was built.

With respect to noise, a review of the original noise assessment produced in 2002, the conditions applied to the Farr consent in 2004 and the adjacent Glen Kyllachy Wind Farm consented in 2015 was undertaken by Matthew Cand, Senior Associate at Hoare Lea in April 2020. The purpose of this review was to identify any significant noise issues which may have a bearing on how predicted effects are assessed.

The baseline reviews undertaken for ecology, landscape and noise are referred to in respective chapters and the full reviews are provided in Appendix 2.

Additional commentary relating to access, traffic and transport, cultural heritage and archaeology, hydrology and hydrogeology, noise, electromagnetic interference and other issues, socio-economics, including land use, recreation and tourism has also been provided in this report.

[7] Novar Wind Farm s42 extension of life application (Ref: 19/05504/54)

[8] Landscape Assessment section of the of the Farr Wind Farm Limited Environmental Statement (ES) Volume 3 which supported the original application for Farr Wind Farm

Given that the proposal is to extend the operational period of Farr on the site, the baseline for likely effects is considered to comprise the operational site as of the date of this report, that is, with the operational wind farm present.

On this basis and given that the proposal is to extend the operational life of an existing wind farm, no additional natural resources such as water, soil or land will be used. Whilst limited waste may be generated by the replacement of parts and servicing of machinery, this will be managed in accordance with existing regulatory requirements and waste management best practice.

In relation to adverse human health impacts, including those which may be caused by climate change and risks from major accidents and disasters, Farr has operated for over 14 years without any major accidents, pollution incidents or health related incidents being reported. In addition, Farr is operated in accordance with a site pollution prevention plan to ensure prevention of pollution to land, air or water and compliance with current environmental legislation. It is proposed to retain the existing control measures as these provide a benchmark for best practice such that all possible preventative measures will be continued to be taken and updated in accordance with best practice and changing legislation as appropriate to avoid pollution of land or the water environment. Extending the life of Farr is not considered likely to result in any additional risk from major accidents, impacts on human health or disasters.

2 ASSESSMENT OF EFFECTS

2.1 Landscape and Visual Effects

Introduction

A desk based review of Chapter 5 Landscape and Visual Assessment of the Farr Wind Farm Environmental Statement (ES) (hereinafter referred to as the '2002 ES') prepared by Enviros Aspinwall and National Wind Power in 2002[9], followed by a desk based review of the wider study area, was undertaken by Ross Allan, Associate Director, Landscape at RSK to ascertain whether the site and study area had undergone any significant changes since the original planning application. The desk based review included analysis of aerial imagery and a review of relevant landscape policy and guidance pertinent to the landscape and visual baseline.

The review also identified wind farms in the study area which have been consented but not yet constructed. In particular, the review included a specific analysis of potential cumulative effects reported in Chapter 6 Landscape and Visual Assessment of the Glen Kyallachy Wind Farm ES 2013 (undertaken for the proposed Glen Kyllachy Wind Farm and hereinafter referred to as the '2013 ES'). Glen Kyllachy Wind Farm is a consented scheme under construction immediately to the south of Farr Wind Farm comprising of 20 wind turbines each with a maximum tip height of 110 m.

Since the 2002 ES was published, the following relevant guidance and advice has been published and is current:

- Cairngorms National Park Authority. 2009. Landscape Character Assessment;
- Landscape Institute. 2019. Visual representation of Development Proposals;
- Landscape and Institute and Institute of Environmental Management and Assessment. 2013. Guidelines for Landscape and Visual Impact Assessment;
- Scottish Natural Heritage. 2019. Landscape Character Assessment in Scotland;
- Scottish Natural Heritage. 2017. Assessing Impacts on Wild Land Areas – Technical Guidance;
- Scottish Natural Heritage. 2017. Siting and Designing Wind farms in the Landscape Version 3a;
- Scottish Natural Heritage. 2017. Visual Representation of Wind Farms Version 2.2;
- Scottish Natural Heritage. 2012. Assessing the Cumulative Impact of Onshore Wind Energy Developments;

[9] Farr Wind Farm Environmental Statement, Volume 2, Written Statement and Volume 3 Figures.

- Scottish Natural Heritage. 2010. The Special Qualities of the National Scenic Areas. Scottish Natural Heritage Commissioned Report No. 374 (iBids and Project No 648);

- The Highland Council. 2017. Landscape Sensitivity Appraisal: Black Isle, Surrounding Hills, Moray Firth Coast and Caithness;

- The Highland Council. 2016. Visualisation Standards for Wind Energy Developments;

- The Highland Council. 2016. Onshore Wind Energy Supplementary Guidance; and

- The Highland Council. 2011. Assessment of Highland Special Landscape Areas.

The review considers the guidance and advice listed above and has been split into three main sections below. The first provides a summary of the main conclusions of the Landscape and Visual Impact Assessment (LVIA) described in Chapter 5 of the 2002 ES. The second section provides an overview of the changes known to have occurred since the assessment described in the 2002 was completed and development permission secured. Sections 1 and 2 provide the basis upon which an appraisal of the likely effects of extending the operational life of the wind farm has been undertaken and reported in Section 3.

The full desk based review of landscape and visual effects is provided in the Landscape Appraisal, Appendix 1 and the main findings are presented in this chapter.

Farr Wind Farm 2002 Landscape and Visual Assessment

The 2002 ES uses the following published landscape character assessments published by Scottish Natural Heritage (SNH):

- Richards, J. 1999. Inverness District Landscape Character Assessment. Scottish Natural Heritage Review No 114;

- Fletcher, S. 1998. Inner Moray Firth Landscape Character Assessment. Scottish Natural Heritage Review No 90;

- Turnbull Jeffrey Partnership, 1998. Moray and Nairn Landscape Assessment. Scottish Natural Heritage Review No 101; and

  Turnbull Jeffrey Partnership, 1996. Cairngorms Landscape Assessment. Scottish Natural Heritage Review No 75.

Farr Wind Farm is in the Rolling Uplands Landscape Character Type (LCT) and adjacent to the Farmed Straths LCT. These two LCT are described in detail in the 2002 ES with Rolling Uplands being assessed as High-medium sensitivity to change and Farmed Straths as Medium sensitivity. The potential effects of Farr Wind Farm on landscape character within the 25km LVIA study area are assessed using 16 viewpoints. Of these 16 viewpoints, six are in the Rolling Upland LCT and four are in the Farmed Strath LCT.

The 2002 ES identifies the following specific landscape characteristics of Rolling Uplands LCT in the immediate vicinity of the wind farm site:

- 'This landscape possesses a simple visual composition, its main elements being the sky, gently rounded summits and extensive moorland cover.

- Occasional boulders dot upper hill slopes and tops and disrupt the smooth cover of heather and grass. Areas of muir burn and hagging occur within some parts of moorland, the former attracting attention on account of its geometric strip pattern. Isolated trees and scrubby juniper occur in glens and on some hillsides.

- Hills are more craggy topped to the west of the site, with narrow rocky gorges cutting through and allowing slot views of distant mountain summits.

- The Allt Tarsuinn cuts a deep and narrow sheer sided glen to the south-west of the site, flowing through Glen Kyllachy to the River Findhorn in Strathdearn. This grassy-banked winding glen is a striking feature in views from the minor public road between Farr and Garbole and leads the eye up to the smoothly rounded hill tops.

- A single track road is aligned over the hills immediately to the west of the site, linking Strathdearn with Strathnairn. An overhead powerline is aligned close to this road and is a highly visible feature on account of the openness of the hills.

- Extensive coniferous plantations occur on the fringes of this type as it borders Strathnairn, Strathdearn and the A9 corridor. Many of these are currently in the process of restructuring with recently felled areas appearing raw and contrasting with the smooth texture of adjacent moorland.

  The area of the Rolling Uplands in the vicinity of the site is uninhabited, this combined with the extensiveness of the hills and with few roads, give a sense of remoteness. The site lies on the eastern fringes of the Rolling Uplands where although 'Wildland' qualities of remoteness and lack of built artefacts are evident (and striking in relation to the area's proximity to the A9 corridor), they are diminished to some extent by the pylon line and nearby forestry.'

The 2002 ES identifies the following specific landscape characteristics of Farmed Straths LCT:

Strathnairn

- 'Within Strathnairn, landscape character changes from east to west. Towards its eastern end and adjacent to the A9 corridor, industry is evident in the extensive quarrying and forestry operations being carried out at Meall Mor. Towards the middle of the strath at Inverarnie, the flat valley floor becomes more undulating and broken by glacial deposits and flanking slopes are shallower.

- Further to the west in the Farr area, estate policies and buildings are particularly evident and include avenues of lime, stone walls – fringed at the base with ferns, parkland and extensive areas of rhododendron. This part of the strath has an intimate scale created by the undulating valley floor and woodland.

- Upper Stathnairn opens out into a broad 'U' shaped valley and merges with Farmed and Wooded Foothills where the strath floor becomes less open and flat being broken by knolls and dominated by a matrix of woodlands and small undulating fields which diminish the contrast between the strath floor and flanking hill slopes.

- The River Nairn is edged by birch woodland and is generally a visually insignificant feature in views from the road.

- This is a relatively well-settled strath with a higher proportion of newer housing than Strathdearn. Housing tends to be aligned along roads and at junctions at the transition between the strath floor and hill slopes.

- Isolated farms and houses are often set against forest edges on lower and mid hill slopes with square pastures to the front.

- The forests of Meall Mor and Farr comprise extensive stands of commercial conifers and form a dark backdrop on the southern hill slopes of Strathnairn.'

Strathdearn

- 'Strathdearn has a more remote character than Strathnairn due to its sparser population and lack of through roads to major settlements.

- The meandering River Findhorn is a focus within the open farmland within the broad strath floor. Pasture on the valley floor is interspersed with rush infested ground. Occasional Scots pine shelterbelts cross the floor, disrupting the openness.

- Birch woodlands are extensive on the southern hill slopes of the strath, hill tops are open, covered with heather moorland. Coniferous plantations are a prominent feature further up the valley and displace farmland, extending onto an increasingly constricted strath floor as it merges with the Rolling Uplands.

  The architectural integrity of estate buildings is a distinctive feature of Strathdearn. Cottages, farmsteads and shooting lodges are generally located either side of the strath floor on lower hill slopes, a few extend on the valley floor itself. Many of these buildings are traditional in style with grey painted timber detailing. Large houses set within wooded, and sometimes ornamental, grounds are located either side of the strath.'

The 2002 ES assessed the effects on Rolling Uplands LCT as significant in a small part of the LCT and would '*…occur in an area where the influence of adjacent forestry and communications is apparent.'*

The ES concluded that effects on Farmed Straths LCT would be to '*…diminish the present contrast between the complex patterns and settlement of this type and the openness, simplicity and scale of the Rolling Uplands to some extent.'* However, the effects on landscape character would not be significant.

Regarding effects on visual amenity, the 2002 ES assessed effects on four viewpoints within 6km of Farr Wind Farm as being significant. Two of the viewpoints were used to represent views from a minor road to the west of the site and two viewpoints were used to represent walkers using hill land to the south of Strathdearn residents in the strath and residents and motorists to the west of the village of Farr.

Cumulative effects of Farr with the existing Novar Wind Farm and the proposed Dunmaglass wind farm were assessed. The cumulative assessment indicated that significant cumulative effects on landscape and visual amenity would occur at a single viewpoint: Viewpoint 16, Carn Sgulan which is 22.5 km to the south.

Overall, the 2002 ES concluded that significant effects on landscape and visual amenity would occur within a 6.1 km radius of Farr Wind Farm and it is on that basis that it was subsequently consented.

Changes to the Landscape and Visual Baseline and Guidance Since 2002 ES

Key changes that have occurred since the publication of the 2002 ES and subsequent consenting of the Farr Wind Farm are detailed below.

Wind farm developments

The main changes to the landscape and visual baseline with respect to wind farm development in the 25 km LVIA study area used in the 2002 ES are:

- Glen Kyllachy wind farm (consented in 2013 and Section 42 consent in 2019) which is under construction 0.5 km to the south of Farr Wind Farm comprising of 20 No. wind turbines each with a tip height of 110 m;
- Operational (since 2016) Moy wind farm 7.5 km to the northeast comprising of 20 No. wind turbines each with a tip height of 125 m;
- Operational (since 2017) Dunmaglass wind farm 11 km to the southwest comprising of 33 No. wind turbines each with a tip height of 117.5 m;
- Operational (since 2017) Tom nan Clach wind farm 13 km to the northeast comprising of 13 No. wind turbines each with a tip height of 125 m;
- Operational (since 2016) Corriegarth wind farm 20 km to the southwest comprising of 23 No. wind turbines each with a tip height of 119 m;

- Consented in 2017 but not constructed Aberarder wind farm 10 km to the southwest comprising of 12 No. wind turbines each with a tip height of 130 m; and

- Consented in 2017 but not constructed Cairn Dhuie wind farm 25 km to the northeast comprising of 20 No. wind turbines each with a tip height of 110 m.[10]

Landscape Designations

In 2009, the Cairngorms National Park Authority (CNPA) published the *Cairngorms National Park Landscape Character Assessment* which is coincident with the area covered by the 1996 Cairngorms Landscape Assessment. The Cairngorms National Park was established in September 2003. The 2002 ES does not include an assessment of the potential effects of Farr Wind Farm on the National Park.

In 2010, SNH published a description of the special qualities of each National Scenic Area (NSA) in Scotland[11]. The nearest NSA to Farr Wind Farm is The Cairngorm Mountains NSA approximately 22 km to the southeast which is coincident with the Cairngorms National Park. The 2002 ES includes a viewpoint (Viewpoint 3: Ptarmigan Station, Cairngorm) in The Cairngorm Mountains NSA.

In 2011, The Highland Council (THC) undertook a review of Special Landscape Areas (SLA) and prepared citations for each of the 27 SLA in THC administrative area which are described in *Assessment of Highland Special Landscape Areas*. The nearest SLA to Farr Wind Farm is Loch Ness and Duntelchaig SLA approximately 4.5 km to the west. Drynan, Lochindorb and Dava Moors SLA is 7 km to the north-east and 8 km to the east. The 2002 ES does not include an assessment of the potential effects of Farr Wind Farm on SLAs.

In 2014 SNH published a map of 42 Wild Land Areas (WLA) and in 2017 published descriptions of each WLA. The nearest WLA to Farr Wind Farm is WLA 20 Monadhliath which is approximately 12 km to the south. The 2002 ES does not include an assessment of the potential effects of Farr Wind Farm on WLA.

In summary, and taking account of the above, the key landscape designations within the 25 km LVIA study area for Farr Wind Farm are:

- The Cairngorm Mountains NSA approximately 22 km to the south-east;

- The Cairngorms National Park although not solely designated for landscape reasons is 8 km to the southeast;

- A number of Gardens and Designed Landscapes (GDL) of which Leys Castle GDL is the nearest approximately 12 km to the north-west;

[10] Wind farm data sourced from The Highland Council, Highland Wind Turbine Mapping – Jan 2020 https://highland.maps.arcgis.com/apps/webappviewer/index.html?id=5ec04b13a9b049f798cadbd5055f1787 and The Highland Council planning portal [accessed 18/03/2020].

[11] Scottish Natural Heritage (2010). The Special Qualities of the National Scenic Areas. Scottish Natural Heritage Commissioned Report No. 374 (iBids and Project No 648).

- Loch Ness and Duntelchaig SLA approximately 4.5 km to the west;
- Drynan, Lochindorb and Dava Moors SLA 7km to the north-east and 8 km to the east which is coincident with the Cairngorms National Park; and
- Wild Land Area 20 Monadhliath which is approximately 12 km to the south. Wild land areas are not a landscape designation although they are identified by SNH as being of national importance.

Landscape Character

The four SNH landscape character publications used in the 2002 ES have been updated by *Landscape Character Assessment in Scotland* in 2019 which was a review of all landscape character assessments published by SNH at the level of Landscape Character Types.

Farr Wind Farm is situated in the Rolling Uplands LCT as identified in the 1999 Inverness District Landscape Character Assessment which is referred to as LCT 221 Rolling Uplands – Inverness in the 2019 update. The 2019 description of key characteristics states there are '*few signs of active management in the interiors, creating a strong perception of remoteness, although this is affected by a number of large wind farm development.'* The landscape character description also refers to '*a number of large wind farm developments in this Landscape Character Type, in the southern and western fringes of the Monadhliath mountains above Loch Ness and near Moy and Farr'* which reduce the perception of remoteness.

The presence of wind energy development is the main difference between the 1999 description of landscape character and the 2019 update.

The Farmed Strath LCT identified in the 1999 Inverness District Landscape Character Assessment is approximately 3.5 km to the north-west of Farr Wind Farm. It is referred to as LCT 227 Farmed Strath – Inverness in the 2019 update. The 2019 description of key characteristics states there is 'and overall sense of enclosure, which directs distant views along the strath and allows uninterrupted views of the flanking hill slopes.' The 2019 update does not mention wind farms in the Monadhliath or to the north-east of the A9 at Moy and Tom nan Clach. The enclosed character of LCT 227 Farmed Strath and the location of Farr Wind Farm and other wind energy development on the higher plateau of LCT221 Rolling Upland means there is limited visibility of Farr Wind Farm from the strath floor and sides.

There is no notable change to baseline landscape character of LCT 227 Farmed Strath.

Visual Amenity

Farr Wind Farm is situated in a rural area of upland character at a height of between 500-550 m AOD. The upland area is largely uninhabited, and the majority of residential properties, settlements and roads are in the lower lying straths to the north, west and east of Farr Wind Farm. Residents and the majority of road users, with the exception of the minor road 1.1km to the west, experience longer distance views of Farr Wind Farm. It is a noticeable feature in existing views from the wider area although not an overbearing or dominating influence on views experienced by residents and the majority of road users.

The upland area is used for recreation by walkers and cyclists and Farr Wind Farm is a very noticeable feature in short range views receding in scale in longer distance views where the large scale Rolling Uplands landscape is the defining feature in views.

The 2002 ES includes viewpoints representative of sensitive visual receptors that include residents, road users, walkers and tourists. The main change to the visual baseline since 2002 is the presence of the operational wind farms listed earlier in this File Note. With regard to new visual receptors, there are adopted Core Paths in Strathnairn to the northwest and at Tomatin in the east in addition to National Cycle Network (NCN) route 7 which runs parallel to the A9. For the purposes of this assessment it is RSK's view that the assessment of receptors in Strathnairn, at Tomatin and using the A9 in the 2002 ES and in the 2013 ES have captured the likely effects on new visual receptors identified above both singly and cumulatively.

Onshore Wind Energy Supplementary Guidance

The Highland Council published the Onshore Wind Energy Supplementary Guidance (OWESG) in 2016 which included a sensitivity study of landscape character in the Loch Ness area followed by a sensitivity study for the Black Isle and surrounding Hills, Moray Firth Coast and Caithness in 2017. The OWESG sets out how THC will manage onshore wind energy development proposals in line with the Town and Country Planning Act 1997 as amended by the Planning etc. (Scotland) Act 2006. The OWESG is part of the Highland-wide Local Development Plan (HwLDP) supplementing key principles set out in policies of the HwLDP and is a material consideration in determining planning applications.

Farr Wind Farm has been operational since 2006 and is part of the landscape baseline on which the OWESG is based. Judgements on sensitivity and the guidance on siting and design in the OWESG take into account the presence of Farr Wind Farm in the landscape. For the purposes of this assessment Moy, Dunmaglass, Tom nan Clach and Corriegarth wind farms, which are all operational, form part of the landscape baseline. Glen Kyllachy wind farm is under construction and is anticipated to be operational in late 2021. It forms part of the future baseline and is a key consideration in this assessment.

Farr Wind Farm is situated in Landscape Character Area 6 or LN6: Monadhliath ridge and tops, Rolling Uplands as identified in the OWESG. LN6 is described in the OWESG as *'the most extensive landscape in the Study Area. External views are mostly from elevated viewpoints north of loch Ness where it presents a multi-layered receding landscape, giving an impression of vast extent. From within the LCA itself views are varied in character according to elevation.'*

The OWESG identifies key views of the LCA are obtained from Loch Ness West including Loch End, Aldourie Castle GDL, Dores Beach and An Torr on Loch Ness. The south western part only of LN6 is important to the integrity of these views. Key views are obtained from the Great Glen from Meall Fuar-mhonaidh, a hill with a height of 699 m Above Ordnance Datum (AOD) approximately 27 km to the southwest of Farr Wind Farm. The OWESG indicates that while Rolling Uplands are highly visible from Meall Fuar-mhonaidh, they do not form part of the main direction of views. Key routes identified in the OWESG are the B862 Stratherrick and the A9 from which there are long views

towards existing wind farm developments within the LCA travelling south from Tore which is approximately 25 km to the northwest of Farr Wind Farm.

The OWESG does not identify any gateways relevant to LN6.

The OWESG evaluates the sensitivity of LN6 as slightly higher than Rolling Uplands in general *'in recognition of existing density of* (wind farm) *development.'* The pattern of development is described as:

- 'Large wind farms set 2.5-3 km back from Rolling Uplands boundary with Farmed Straths LCAs;
- Generally the layout is deeper in the axis perpendicular to the Great Glen than the parallel axis;
- Tend to be contained within shallow 'bowls' in the landscape which are visible from within the LCA but not in more distant views; and
- Earlier developments appear at a regular spacing of 7-10 km edge to edge. More recent applications/scoping reduce this spacing.'

Regarding the potential for wind energy development, the OWESG states there is limited scope for additional large turbines within the existing pattern and gives the following guidance:

Turbines should:

- 'Not breach skyline when viewed from north side of Loch Ness.
- Be set back from Key Routes
- Preserve mitigation established by current schemes
- Maintain the landscape setting of each existing scheme.
- Avoid coalescence with current positioning
- Respect spacing and scale of existing development pattern.

Development of turbines (all scales) in other locations within the LCA should be avoided to ensure that the scale of the landform is maintained and that perspective - when viewed across the loch in particular - is not adversely affected.'

The summary of key findings of the landscape and visual sensitivity appraisal concludes that:

'The remaining capacity for larger scale development is limited. The study identifies that any remaining capacity for this scale of development should be focused around existing clusters that are generally found in rolling uplands, rugged massif and rocky moorland Landscape Character Types, but only where these are well designed, integrated into the existing pattern of development and do not undo the landscape and visual mitigation

agreed for existing schemes. These limitations will help to limit any additional cumulative effect and increase the potential for future development to share existing site infrastructure.'

The OWESG indicates that Farr Wind Farm occupies an area that is both in *'Group 2: Areas of significant protection'* and '*Group 3 Areas with potential for wind farm development'*, as shown on the Spatial Framework for Onshore Wind Energy map. Scottish Planning Policy (SPP) Table 1 defines Group 2 Areas as areas in which '*wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.'* SPP defines Group 3 Areas as areas in which '*wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.'*

RSK's Assessment of Effects of the Proposed Extension of Life

This section describes an assessment of an extension of life of the existing Farr Wind Farm from 25 years to 35 years meaning it would be operational until 2040. The existing wind turbines would remain at their current positions and height and not increase in number.. The existing tracks and ancillary development would remain unaltered and would be subject to maintenance and repair during the operational period of Farr Wind Farm.

The main effect of the ten year extension of life of Farr Wind Farm would be to extend the duration of effects on landscape and visual resources.

Emerging guidance and advice from SNH on repowering of existing wind farms recommends that "the baseline for the assessment should be the 'current state of the environment' as set out in the EIA regulations."[12] As that is the case for repowering of an existing wind farm where the existing wind turbines would be removed and replaced potentially with different dimensions and layout of turbines it would seem reasonable that an assessment extension of life, where there is no physical change to the consented development, should also use the 'current state of the environment' as its baseline.

Appraisal Against OWESG Criteria

The OWESG provides a list of ten criteria that set out the key landscape and visual aspects that THC will use as a framework for assessing proposals for wind farm development. The criteria do not set absolute requirements but provide information on key constraints. THC expect applicants to site and design wind farms to *'avoid significant adverse impacts in order that they reflect the criteria.'* Table 1 describes an appraisal of Farr Wind Farm against the 10 criteria. The appraisal takes into account the current baseline of operational wind farm development and a future baseline that would include an operational Glen Kyllachy wind farm which is currently under construction.

[12] https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-renewable-energy [accessed 02/07/2020].

Table 2.1: Appraisal of Farr Wind Farm Against OWESG Criteria

Criterion 1	Measure	Appraisal of Farr Wind Farm Life Extension
Relationship between Settlements/ Key locations and wider landscape respected.	The extent to which the proposal contributes to perception of settlements or key locations being encircled by wind energy development	It is an existing wind farm set back from settlements and key locations in a large scale landscape. Moy and Tom nan Clach wind farms are also set back and the perception of encirclement is not apparent. Glen Kyllachy Wind Farm adds to Farr Wind Farm resulting in concentration of development in one place rather than extending the influence of wind farm development more widely
Development should seek to achieve a threshold where:	Turbines are not visually prominent in the majority of views within or from settlements/ Key Locations or from the majority of its access routes.	
Criterion 2	**Measure**	**Appraisal of Farr Wind Farm Life Extension**
Key Gateway locations and routes are respected	The extent to which the proposal reduces or detracts from the transitional experience of key Gateway Locations and routes.	No Gateway locations are likely to be affected by Farr Wind Farm. There would be no visibility of Farr Wind Farm the B862. Farr Wind Farm would be visible from sections of the A9 between Tore and Inverness, Daviot and Milton of Leys and between Slochd and Tomatin. When considered with operational cumulative development, the extension of life of Farr Wind Farm would increase the duration of time during which cumulative sequential effects would be experienced.
Development should seek to achieve a threshold where:	Wind turbines or other infrastructure do not overwhelm or otherwise detract from landscape characteristics which contribute the distinctive transitional experience found at key gateway locations and routes.	
Criterion 3	**Measure**	**Appraisal of Farr Wind Farm Life Extension**
Valued natural and cultural landmarks are respected	The extent to which the proposal affects the fabric and setting of valued natural and cultural landmarks	As per SNH guidance, the existing baseline includes Farr Wind Farm, which does not diminish the prominence of local landmarks.
Development should seek to achieve a threshold where:	The development does not, by its presence, diminish the prominence of the landmark or disrupt its relationship to its setting.	

Criterion 4	Measure	Appraisal of Farr Wind Farm Life Extension
The amenity of key recreational routes and ways is respected.	The extent to which the proposal affects the amenity of key recreational routes and ways (e.g. Core Paths, Munros and Corbetts, Long Distance Routes etc.)	Farr Wind Farm would be visible in distant views from Munros and Corbetts in the Monadhliath to the south such a Carn Sgulain at a distance of 22.5 km. It would also be visible from short sections of the Great Glen Way 20 km to the west and from short sections of NCN route 7, 5 km to the east. From these locations it would be visible primarily in combination with Glen Kyllachy Wind Farm and in the case of Carn Sgulain, Dunmaglass (operational) and Aberarder wind farms (consented not constructed) would be noticeable and appear closer in views. Farr Wind Farm is an established feature in views in combination with cumulative development. An extension of life would increase the duration of effects but would not introduce effects not already considered during determination of Farr Wind Farm and the operational and cumulative development present in the baseline environment.
Development should seek to achieve a threshold where:	Wind turbines or other infrastructure do not overwhelm or otherwise significantly detract from the visual appeal of key routes and ways.	
Criterion 5	**Measure**	**Appraisal of Farr Wind Farm Life Extension**
The amenity of transport routes is respected	The extent to which the proposal affects the amenity of transport routes (tourist routes as well as rail, ferry routes and local road access)	The 2002 ES assessed effects on the A9 as ranging from Minor to Moderate and concluded that effects would not be significant. The 2002 ES identified significant effects on the minor road that passes 1.1 km to the west of the Farr Wind Farm. There would be cumulative sequential effects on users of the A9 and cumulative effects on the minor road to the west of Farr Wind Farm. Cumulative effects have been considered during determination of Farr Wind Farm and the operational and cumulative development present in the baseline environment. An extension of life would increase the duration of effects but would not introduce effects not already assessed in the operational and consented developments.
Development should seek to achieve a threshold where:	Wind turbines or other infrastructure do not overwhelm or otherwise significantly detract from the visual appeal of transport routes	

Criterion 6	Measure	Appraisal of Farr Wind Farm Life Extension
The existing pattern of Wind Energy Development is respected.	The degree to which the proposal fits with the existing pattern of nearby wind energy development, considerations include: • Turbine height and proportions; • density and spacing of turbines within developments; • density and spacing of developments; • typical relationship of development to the landscape; • previously instituted mitigation measures; and • Planning Authority stated aims for development of area	Farr Wind Farm would not affect the existing pattern of operational and consented wind farm
Development should seek to achieve a threshold where:	The proposal contributes positively to existing pattern or objectives for development in the area.	
Criterion 7	**Measure**	**Appraisal of Farr Wind Farm Life Extension**
The need for separation between developments and/ or clusters is respected	The extent to which the proposal maintains or affects the spaces between existing developments and/ or clusters	Farr Wind Farm would not affect the existing separation distances between operational and consented wind farms.
Development should seek to achieve a threshold where:	The proposal maintains appropriate and effective separation between developments and/ or clusters	
Criterion 8	**Measure**	**Appraisal of Farr Wind Farm Life Extension**
The perception of landscape scale and distance is respected	The extent to which the proposal maintains or affects receptors' existing perception of landscape scale and distance.	Farr Wind Farm would extend the duration of time over which cumulative effects with Glen Kyllachy Wind Farm would occur on recreational receptors to the south whose perception of scale and distance is more likely to be affected. However, the degree of change resulting from Glen Kyllachy and Farr Wind Farm has been accepted in combination with Dunmaglass and Aberdarder and the extension of life would not result in effects not already assessed.
Development should seek to achieve a threshold where:	The proposal maintains the apparent landscape scale and/ or distance in the receptors' perception.	

Criterion 9	Measure	Appraisal of Farr Wind Farm Life Extension
Landscape setting of nearby wind energy developments is respected	The extent to which the landscape setting of nearby wind energy developments is affected by the proposal.	Farr Wind Farm would not alter the present baseline. Glen Kyllachy Wind Farm is under construction and it is anticipated that it will be operational in 2021 with an operational life of 25 years until 2046. The Farr Wind Farm extension of life would be until 2040. The principal of combined development in Farr and Glen Kyllachy wind farms has been established and the extension of life would not result in effects not already assessed.
Development should seek to achieve a threshold where:	Proposal relates well to the existing landscape setting and does not increase the perceived visual prominence of surrounding wind turbines	
Criterion 10	**Measure**	**Appraisal of Farr Wind Farm Life Extension**
Distinctiveness of Landscape character is respected	The extent to which a proposal affects the distinction between neighbouring landscape character types, in areas where the variety of character is important to the appreciation of the landscape.	The landscape character baseline has changed since the 2002 ES primarily by the addition of wind farm development in the Rolling Upland LCT. However, as mentioned above, Farr Wind Farm would not affect the existing pattern, massing or spacing of existing and consented wind farm development. Farr Wind Farm would not result in any additional effects that would affect the integrity and variety of landscape character areas.
Development should seek to achieve a threshold where:	Integrity and variety of Landscape Character Areas are maintained.	

Conclusions

The proposal is for an extension of the operational life of the existing Farr Wind Farm by 10 years. The extension of life would not result in the installation of any additional wind turbines nor would the position or dimensions of the existing wind turbines be altered. No new infrastructure would be constructed or installed, and the existing access track and ancillary development would be unaltered.

New guidance and advice relevant to landscape and visual assessment of wind energy development has been published since the Farr Wind Farm ES was prepared in 2002. The landscape and visual baseline has changed primarily by the construction of new wind farms in the 25 km LVIA study area used in the 2002 ES and particularly in the Rolling Uplands LCT. Four new wind farms became operational in the Rolling Uplands LCT in 2016/2017: Moy, Dunmaglass, Tom nan Clach and Corriegarth. The most recent is Glen Kyllachy Wind Farm which, at the time of writing is under construction and for which an ES was prepared in 2013.

Regarding policy and designations which were not considered in 2002, the following are of most relevance:

- The Cairngorms National Park established in 2003;
- A description of the special qualities of National Scenic Areas published by SNH in 2010;
- The Highland Council Assessment of Special Landscape Character Areas in 2011; and
- Publication of a map of Wild Land Areas by SNH in 2014 and subsequent descriptions in 2017.

While these matters were not a consideration in the 2002 ES, there was a thorough assessment of the underlying landscape character baseline and an assessment of effects on visual amenity. In addition, these matters have been a consideration in the determination of the cumulative wind farm developments mentioned above including Glen Kyllachy wind farm consented in 2013 and 2019.

Farr is not in a Special Landscape Area (SLA). As mentioned above there is an SLA 4.5 km to the west and another 7 km to the north-east. The SLA designation protects the character and quality of the landscape in the designated area from inappropriate development. The presence of Farr in the baseline environment for an additional 10 years would not result in additional effects on these two SLAs. However, any new proposed wind farm development might result in additional cumulative effects and these would need to be assessed accordingly by applicants of new proposed wind farms with Farr as part of the baseline environment. This was the case with Glen Kyllachy where the 2013 LVIA assessed the effects of Glen Kyllachy on SLA (the maps and citations for which were published in 2011 and updated in 2019 including a minor amendment to Drynan, Lochindorb and Dava Moors SLA) and considered the presence of Farr in the baseline environment.

Farr is 12 km to the north of Wild Land Area (WLA) 20 Monadhliath. SNH published their map of Wild Land areas in 2014 and published citations in 2017. While Farr is an existing landscape feature that is likely to be visible from WLA 20, an extension of life would not introduce new or different effects on WLA 20 as it was present in the baseline environment when the boundary of the WLA was drawn in 2014. Given the distribution of existing and consented development that is closer to WLA 20 than Farr e.g. Dunmaglass, Corriegarth, Stronelairg and Glen Kyllachy, it is unlikely that the extension of life of Farr would introduce new or significant effects on WLA 20.

Regarding the OWESG, published in 2016, Farr is in Landscape Character Area 6, LN6: Monadhliath Ridge and Tops, Rolling Uplands in which the guidance states there is "limited scope for additional large turbines within the existing pattern".

The guidance on capacity and siting and design described in the OWESG was underpinned by a sensitivity study of each Landscape Character Area. Farr would have been considered as part of the baseline environment and with the cumulative sites present or consented at the time the OWESG was being prepared. The OWESG would also have considered landscape designations and WLA in its assumptions on sensitivity, capacity, siting and design. Farr extension of life would not conflict with the advice in the OWESG as it is part of the existing baseline.

The review of baseline environment and assessment of effects on landscape and visual amenity of Farr Wind Farm indicates that the extension of life would not result in effects not already assessed and taken into account in the determination of Farr and operational and consented cumulative wind farm development in the study area. SNH guidance on repowering recommends that any assessment of effects of proposed repowering should consider the baseline as 'the current state of the environment' in accordance with the EIA regulations. This means that the baseline would be with the existing wind farm present. It is not unreasonable to take the same approach to establishing the baseline for an extension of life application where there would be no physical change to the development which is part of the baseline environment. The extension of life of Farr Wind Farm would increase the duration of time in which cumulative effects arising from Farr Wind Farm in addition to other wind farm development would be experienced i.e. beyond the year 2030. However, cumulative effects without Farr Wind Farm would continue until at least 2041 as a result of the combined effects of Moy, Dunmaglass, Tom nan Clach, Corriegarth and Glen Kyllachy, with Glen Kyllachy being present in the vicinity of Farr Wind Farm until 2046.

The Cumulative Landscape and Visual Impact Assessment (CLVIA) of any new wind farm development where there could be the potential for cumulative effects with Farr would need to consider those receptors likely to be significantly affected by Farr in combination with the new proposed development. During scoping of a new wind farm proposal, consultees including THC and SNH would have the opportunity to advise on which receptors they consider likely to experience significant cumulative effects. Therefore, the potential for a future application to inadequately address cumulative impacts of new development in combination with Farr is unlikely.

The appraisal of effects described in Table 1 has taken account of the existing baseline and cumulative effects beyond the consented operational life of Farr wind farm. The

appraisal indicates that the extension of life of Farr Wind Farm meets the requirements of the 10 criteria and no additional significant effects not already considered in the determination of Farr Wind Farm and other operational and consented wind farm developments are likely to occur.

2.2 Ecology and Ornithology Effects

RSK Biocensus has undertaken a baseline review of the existing ecological and ornithological information for the site to inform this s36 variation application. In addition, the available baseline information from the adjacent Glen Kyllachy Wind Farm has also been reviewed insofar as it provides further relevant information in terms of the wider environment around the Farr Wind Farm site.

The full desk based review of ecology and ornithology effects is provided in the Ecology and Ornithology Appraisal, Appendix 2 and the main findings are presented in this chapter.

Baseline Review - Ornithology

Reference material

The following documents have been used in this review:

- Farr Section 36 Conditions (2004);
- Ecology UK (2009) Farr Wind Farm Raptor Monitoring Summary Report March 2007—August 2007;
- Ecology UK (2009) Farr Wind Farm Raptor Monitoring Summary Report September 2007—February 2008;
- Ecology UK (2009) Farr Wind Farm Raptor Monitoring Summary Report March 2008—August 2008;
- Ecology UK (2008) Farr Wind Farm 2006 and 2007 Breeding Wader Report;
- Ecology UK (2008) Farr Wind Farm 2008 Breeding Bird Survey Report
- Ecology UK (2009) Farr Wind Farm 2009 Draft Breeding Wader Report;
- Ecology UK (2009) Farr Wind Farm Raptor Monitoring Summary Report March 2009—August 2009;
- Ecology UK (2009) Farr Wind Farm Raptor Monitoring Summary Report September 2008—February 2009;
- National Wind Power (2002) Farr Wind Farm Environment Statement;
- Rob Firth and Associates Ltd (2011) Farr Wind Farm 2011 Draft Breeding Wader Report;

- Rob Firth and Associates Ltd (2011) Farr Wind Farm Raptor Monitoring Summary Report March 2010-August 2010;
- Rob Firth and Associates Ltd (2011) Farr Wind Farm Raptor Monitoring Summary Report September 2011-December 2011;
- Rob Firth and Associates Ltd (2012) Farr Wind Farm Ornithological Surveys Data Summary; and
- Shaun P. Coyle (2016) Farr Wind Farm 2016 Golden Plover Report and 10-year summary

The results of the review are presented below.

Farr Wind Farm ES

The environmental statement (ES) completed for Farr Wind Farm concluded that there would be some short-term displacement of breeding birds within the wind farm site during construction, but no significant impacts were expected during the operation of the wind farm.

Whilst the data within the ES provides a robust initial data set for the review below, the focus of the review below relates primarily to the data collated following the consenting of the wind farm as opposed to the original ES and associated surveys. Such data offers two main advantages, those being that it represents the most up to date information in relation to the avian species observed on site and also provides an analysis of the ongoing effects of the wind farm on those species.

Pre-Construction and Construction Surveys

Pre-construction bird surveys were undertaken at the site, as well as during construction, in order to ensure that construction practices adhered to legal and best practice requirements in terms of safeguarding avian species. These revealed that the following species were present in and around the site: Black Kite (*Milvus migrans*) (a single flight in 2002), Buzzard (*Buteo buteo*), Dunlin (*Calidris alpina schinzii*), Eurasian Sparrowhawk (*Accipiter nisus*), European Golden Plover (*Pluvialis apricaria*), Golden Eagle (*Aquila chrysaetos*), Greylag Goose (*Anser anser*), Hen Harrier (*Circus cyaneus*), Kestrel (*Falco tinnunculus*), Merlin (*Falco columbarius*), Northern Goshawk (*Accipiter gentilis*), Osprey (*Pandion Haliaetus*), Peregrine falcon (*Falco peregrinus*), Pink Footed Goose (*Anser brachyrhynchus*), Red Kite (*Mivus milvus*) and Short Eared Owl (*Asio flammeus*). No Schedule 1 raptors were found to be breeding on or near the site however, breeding Dunlin and Golden Plover were recorded within the site.

Red Grouse (*Lagopus lagopus scoticus*) were recorded over the entire site while Common Skylark (*Alauda arvensis*) and Meadow Pipit (*Anthus pratensis*) were also recorded in low numbers. Several common woodland or woodland edge species were recorded along access tracks and the possible presence of Scottish Crossbill (*Loxia scotica*) was also noted but not confirmed.

Planning Conditions

The planning consent for Farr Wind Farm included several conditions in relation to ornithology. Of those, the requirements of, and resultant survey data relating to, conditions 3.9, 3.10 and 3.11 are considered most relevant to this review and are described below.

Condition 3.9: Relates to the requirement to conduct breeding bird surveys at the site: "*The company shall undertake six years of monitoring of breeding birds from the date of this consent: first, annually for a period of 3 years following the final commissioning of the development, and second at five yearly intervals, at 5, 10 and 15 years after the construction phase is completed. This monitoring should be conducted to an identical standard on both the wind farm site and an appropriate reference site. The detail of this monitoring and of the reference site shall be submitted to and approved by the Scottish Ministers in consultation with the planning authority and Scottish Natural Heritage. The findings of these surveys shall be collated into two reports, after three and fifteen years, and all of the original data (in formats agreed by the Scottish Ministers in consultation with Scottish Natural Heritage), and the reports will be made available to the Scottish Ministers, the planning authority and Scottish Natural Heritage. After the first report, any mitigation measures developed and approved by Scottish Ministers in consultation with Scottish Natural Heritage shall be implemented*."

Conditions 3.10 and 3.11, related to the recording and reporting of bird flight activity through the wind farm site as detailed below.

Condition 3.10: *A group, chaired by an officer of the Scottish Executive as appointed by the Scottish Ministers to be known as the Farr Windfarm Monitoring Group ("FWMG") shall be established. Membership of the group (apart from the Chair) shall comprise representatives of Scottish Natural Heritage and the Royal Society for the Protection of Birds and the independent ecological contractor.*

Condition 3.11: *Prior to any work commencing on site, the company shall identify an independent contractor whose appointment has been approved by the Scottish Ministers in consultation with Scottish Natural Heritage and the Royal Society for the Protection of Birds. If at any point in this process, the Scottish Ministers determine that the independent contractor has failed to implement these provisions, the company shall identify a replacement whose appointment shall be approved in accordance with the foregoing terms. This contractor shall to undertake a programme of monitoring for a schedule of species to be agreed by FWMG. All costs relating to this programme shall be met by the company. This programme of monitoring shall include:*

1) three three-hour watches from a minimum of three vantage points each month from the date of this consent until 5 years after the commissioning of the development. These observations shall record flight-lines, any collisions or avoidance activity, narrative report as specified by FWMG; and

2) observations to identify individual red kites in the area from their wing-tags; and

3) studies of searches for collision casualties; and

4) searches for available carrion and its removal from the area.

The contractor shall present written reports and a full dataset to FWMG on a twice yearly-basis. These reports and datasets shall be made available to all parties expressing an interest. Following the first year of these studies, if in the opinion of FWMG a significant number of red kites use the site, FWMG shall advise the company whether a radio-tracking study of red kites in this part the of Scotland and any further mitigation measures, are required. Said mitigation measures may include temporary shutdown of turbines which have been identified as responsible for red kite mortalities. FWMG shall advise on the conditions which would lead to the consideration of shutdown and the duration of proposed shutdown. The company shall, implement the required supplementary monitoring and mitigation measures, as identified by FWMG in their entirety."

The following summarises the findings of the monitoring surveys undertaken to satisfy the conditions above.

Condition 3.9 - Breeding Wader Monitoring Surveys

Monitoring of breeding Dunlin and Golden Plover has suggested that breeding populations of both species are stable.

Ecology UK (later known as Rob Frith and Associates Ltd) began undertaking bird surveys at the wind farm site in 2002 and in April 2007 were re-appointed as the approved ecological contractor by Farr Wind Farm Limited to undertake the breeding bird surveys in compliance with condition 3.9.

The principle reason for these breeding bird surveys was to record and assess the post construction breeding densities of Dunlin and European Golden Plover at the site in a manner comparable with the pre-construction surveys. The results of these surveys generally suggested that the number of territories of both these species remained fairly consistent across the whole study area. In 2010, there was a reduction in Golden Plover on the wind farm, however this was attributed to an exceptionally cold winter followed by a cold and wet breeding season and breeding pairs increased again in 2011.

Shaun P. Coyle (formerly Ecology UK and Rob Frith and Associates Ltd) was commissioned to undertake further breeding wader surveys from 2012 to 2016. The results from this period showed that Golden Plover breeding pairs generally fluctuated depending on the conditions during the breeding season, as expected, and the number of breeding pairs in 2016 was 40 which is considered to be the average over the 10 year post construction monitoring period. The results of the Dunlin monitoring between 2012 and 2016 were also considered to show a stable breeding population, as in previous years.

Condition 3.11 Raptor and Bird Flight Monitoring

Raptor and bird flight monitoring suggest there has been no overall significant impact on bird species during operation of the wind farm.

Ecology UK were also appointed to undertake bird monitoring required under Condition 3.11, commencing in 2005 and lasting until 2011. This included a review of vantage point surveys in 2006 when most of the turbines at the site had been erected, in order to monitor any site avoidance exhibited by raptors as well as to continue with the recording of flight activity at the site. In addition, radio-tracking of tagged Red Kite was undertaken

as well as breeding Merlin surveys. All species recorded during post-construction and construction vantage point surveys were again recorded between 2007 and 2011 (i.e. post construction) with the exception of Black Kite (one record from 2002 only), Osprey (one record from 2002 and one from 2004) and Pink Footed Goose (recorded in 2004, 2005 and 2006 only). There was only a single flight by a Golden Eagle post construction and only five flights were recorded pre 2006.

Turbine collision monitoring (TCM) was also undertaken at the site to cover all 40 turbine bases. Carcass removal monitoring was also undertaken, commencing in 2007, to determine the efficiency of collision monitoring. At the end of 2011, the total number of bird carcasses found on the site was 53. Of these, 49 were Red Grouse with 82 % being found within 30 m of the turbine column. The others were one each of Common Gull (*Larus canus*), European Golden Plover, Mallard (*Anas platyrhynchos*) and Willow Warbler (*Phylloscopus trochilus*).

Glen Kyllachy Wind Farm

Bird surveys have also been undertaken on a neighbouring wind farm site – Glen Kyllachy Wind Farm. These comprised breeding bird surveys in 2011 and 2012 and non-breeding walkover surveys conducted over the 2011-12 winter season as well as vantage point surveys throughout the 2011-2013 survey period. These surveys revealed that three target species had a low to moderate risk of being displaced during the breeding season while the wind farm was being constructed. As with Farr Wind Farm, these species were Dunlin and Golden Plover but also included Lapwing (*Vanellus vanellus*). It was stated that the risk of permanent disturbance to all of these species would be low.

In regard to collision risk, collision risk assessment was undertaken on several target species including Curlew (*Numenius arquata*), Golden Eagle, Oystercatcher (*Haematopus ostralegus*), Peregrine Falcon and Red Kite. It was determined that the wind farm would not have a significant impact on the majority of target species in terms of both displacement and turbine collision. Red Kite were identified as having the greatest risk from collision. Population modelling for this species was undertaken and it was concluded that the wind farm would not cause a significant impact on the northern Scotland population.

Baseline Review - Ecology

Reference material

The following documents have been used in this review:

- National Wind Power (2002) Farr Wind Farm Environment Statement;
- Boreas Ecology (2005) Farr Wind Farm Proposals for Habitat Management, Mitigation and Enhancement;
- Kyllachy Wind Farm (2013) Environmental Statement Volume 1 – Non-Technical Summary; and
- Kyllachy Wind Farm (2013) Environmental Statement Volume 2.

The results of the review are presented below.

Farr Wind Farm ES

Ecological surveys of Farr Wind Farm were undertaken by Dr. T. Dargie (of Boreas Ecology) and Mr. P. James in 2002 to inform the ES. These comprised a phase 1 habitat survey and national vegetation classification (NVC) survey. The wind farm site was reported to be dominated by blanket bog with small areas of acidic flush, dry heath and wet heath with some juniper scrub, woodland and areas of bare peat. Surveys at this time identified evidence of Otter (*Lutra lutra*) and Water Vole (*Arvicola amphibius*) with Common Frog (*Rana temporaria*), Common Lizard (*Zootoca vivipara*) and Mountain Hare (*Lepus timidus*) all being recorded during the phase 1 habitat walkover survey. Large Heath butterfly (*Coenonympha tullia*) was also recorded as its main larval food source, *Eriophorum vaginatum* (Hare's-tail Cottongrass), was recorded to be present throughout the site.

The ES concluded that the only residual effects on ecological receptors would be minor losses of wet heath and dry heath during construction, considered to be of minor negative significance. A document was produced by Boreas Ecology in 2005 to detail the habitat management, mitigation and enhancement which was included within the ES for the wind farm, this document also included details from the environmental management plan for the site as well as a detailed re-instatement method statement.

Glen Kyllachy Wind Farm

Ecological surveys at Glen Kyllachy Wind Farm were undertaken by Boreas Ecology in 2008 and 2009. These comprised a phase 1 habitat survey and NVC survey as well as protected species surveys. Otter, Pine Marten (*Martes martes*), Red Squirrel (*Sciurus vulgaris*) and Water Vole were all recorded during these surveys, although Red Squirrel evidence was found only outside the site boundary.

Update surveys for Badger (*Meles meles*), Otter, Pine Marten, Water Vole and Wildcat (*Felis silvestris)* were undertaken by SLR Consulting Ltd in 2011 and 2012 to inform the ES. In addition, bat surveys using static detectors on met masks were undertaken at the site by Central Environmental Surveys (CES) in 2011 and 2012. Fish surveys were undertaken by The Spey Foundation in 2011 and a habitat suitability index survey of a single pond was undertaken for Great Crested Newt (GCN) by SLR Consulting Ltd in 2011. These additional surveys confirmed the continued presence of Otter and Water Vole within the site but did not find any evidence of Badger, Pine Marten, Red Squirrel or Wildcat. Common Pipistrelle (*Pipistrellus pipistrellus*) was the only species of bat recorded on the static detectors. The surveyed pond was deemed to be of low suitability for GCN and no further surveys were undertaken. Common Lizard were seen within the site and the fish surveys revealed the presence of Salmon (*Salmo Salar*) and Sea Trout (*Salmo trutta trutta*) in watercourses within the site. The ES stated that, provided the proposed avoidance and mitigation was implemented, there would not be any residual impacts of significance on ecological receptors with the exception of blanket bog, wet heath and upland dry heath. The loss of these habitats remained as a significant residual impact at the local level, similar to the conclusions of the Farr ES.

Section 36 Application

Based on the information provided above, it is clear that a substantial amount of data regarding ornithological interests in and around the wind farm is available from both the site itself and the neighbouring wind farm. Monitoring surveys on Farr Wind Farm itself have provided substantial additional data to that collected during the planning process and no further concerns in regard to bird species have been raised by these monitoring visits. In regard to non-ornithological receptors, as the turbines and related infrastructure will not be altered, it is not considered necessary to undertake any additional ecology surveys to inform the application for a section 36 variation for an extension of life of the wind farm as no additional habitat will be lost or affected and it is considered highly likely that any species present on or near the site have habituated to the presence of infrastructure and turbines over the 14 years it has already been in operation.

2.3 Cultural Heritage and Archaeology Effects

No known archaeological sites of more than local significance are located within the proposal area, although a number of sites ranging from prehistoric settlement and burial monuments to the traces of much more recent land use and settlement flank both the Findhorn and Nairn river valleys.

One site of National Importance (General Wade's Military Road, site 026) and three sites of Regional importance (Badachreamh – site 027, Uaigh an Duine-bheo – site 028 and Rout of Moy – site 029) were identified. The rest of the sites of archaeological interest identified are of local importance.

Although all of the archaeological sites within the area of the wind farm are subject to a high degree of visual impact. None of these sites were assessed as being individually or collectively of enough archaeological significance in their local and regional context for this visual impact to be a concern.

Assuming that appropriate mitigation measures were applied, as described within the Farr ES, and that particular attention was paid to the construction of the access route passing near to General Wade's Military Road, no detrimental physical impacts on these sites were anticipated.

As the application does not involve any new ground disturbance, no significant direct effects on either previously recorded or unrecorded archaeological interests are considered likely. It is therefore concluded that the proposal to extend the operational life of Farr will not have a significant environmental effect on cultural heritage interests.

2.4 Noise Effects

Hoare Lea has undertaken a baseline review of the existing noise information for the site to inform this s36 variation application. A Noise Appraisal is provided in Appendix 2.

General guidance and policy in Scotland concerning noise, both in general and that associated with windfarm developments specifically, is presented in the following documents:

- Planning Advice Note 1/2011: Planning and Noise; and
- The Scottish Government's Web Based Advice on Onshore Wind Turbines (last updated in May 2014).

This references the methodology presented in the ETSU guidance on "The Assessment and Rating of Noise from Windfarms" (ETSU-R-97) which remains accepted good practice for assessing the effects of noise from wind farms. This sets out limits for operational noise from wind farms which apply to the total cumulative noise levels.

The noise assessment included in the 2002 Environmental Statement (ES) for the Farr Wind Farm was undertaken in line with the ETSU-R-97 methodology. This identified that the closest noise-sensitive residential receptors were approximately 3 to 5 km away from the turbines. The ES did not include baseline background noise measurements, and this was not necessarily according to ETSU-R-97 because of the relatively large separation distance between turbines and dwellings. Nonetheless, measurements were subsequently undertaken in July-August 2005 at a representative number of neighbouring dwellings.

The 2004 consent for the Farr Wind Farm includes conditions on noise, including condition 7.13 which sets out operational noise limits in line with ETSU-R-97 at neighbouring dwellings. The noise limits are however generic with no specific numerical values specified, as is now common good practice.

This was effectively superseded by the assessment for the Glen Kyllachy Wind Farm submitted in 2013 (initially referenced as the Kyllachy Wind Farm). This scheme comprises additional turbines to the south-west and south-east of those of the Farr Wind Farm and which are located in closer proximity to some of the receptors previously identified. The noise assessment presented in Chapter 14 of the ES for the Glen Kyllachy Wind Farm (and the relevant technical appendix) is in line with ETSU-R-97, including an assessment of cumulative noise from both wind farm sites (other wind farms in the area are relatively distant and have negligible noise contributions). This assessment, based on the 2005 baseline noise measurements, demonstrated that noise from the Farr Wind Farm turbines, combined with the (then) proposed Glen Kyllachy Wind Farm turbines, would not result in an excess of noise criteria determined in line with the ETSU-R-97 guidance.

The Glen Kyllachy Wind Farm was consented on appeal (reference PPA-270-2115) in April 2015 and is currently under construction. Condition 20 of this consent sets out noise limits which apply to the cumulative noise from both wind farms, which means that Glen Kyllachy Wind Farm is equivalent to an extension of the Farr Wind Farm from the point of view of this condition.

Operational noise, both from each of the wind farms in isolation and cumulatively, is not anticipated to change from the present situation which is considered to be the baseline. This was previously considered acceptable based on the cumulative assessment presented in the ES for the Glen Kyllachy Wind Farm, and this assessment remains

relevant. As such, no additional significant effects are considered likely. We are not aware of other cumulative sites that have been proposed or consented within 5 km of either wind farm since the Glen Kyllachy Wind Farm was consented, and any further proposal coming forward would have to consider the baseline of both sites being present as part of any cumulative noise analysis.

The existing cumulative noise limits which apply to the Glen Kyllachy Wind Farm (see Noise Appraisal, Appendix 2) could therefore also be applied in a consent for a life extension of the Farr Wind Farm to reflect the most up-to-date position in terms of cumulative noise.

It is considered therefore that there will be no additional effects from the continued operation of Farr and it is appropriate that the same noise levels specified in the noise impact assessment undertaken for Farr should continue to apply when considering a life extension to Farr and no significant effects are considered likely.

Pre-application discussion

Pre-application discussions were undertaken with THC Environmental Health Department in June 2020, setting out the approach proposed above. It was agreed that the existing cumulative noise conditions imposed for the Glen Kyllachy Wind Farm could also be applied to the Farr life extension.

General comments were raised by the Environmental Health Department regarding the ETSU-R-97 noise guidelines and the more stringent requirements (particularly at night) which are considered in the Highlands. However, the noise conditions imposed in the Glen Kyllachy Wind Farm consent were determined following extensive consultation with THC and are relatively stringent, with lower limits of 35 dB for day-time period (the minimum recommended in ETSU-R-97) and 38dB at night (instead of the 43dB(A) recommended in ETSU-R-97). These consent noise limits therefore accord with general THC guidance on noise from wind farms.

THC also explains that it is now standard practice for them to impose a condition requiring a noise monitoring and mitigation scheme to be submitted and agreed prior to completion of the Development. This would set out the procedures to be used for any noise measurements if required in the event of a complaint and subsequent steps required if necessary.

2.5 Scoped out Issues

Other issues have been duly considered however because nothing will materially change for any of them from the baseline situation and measures in place will continue in practice, they have not been considered further. These issues are:

- Aviation and Telecommunications
- Geology and Soils (including peat)
- Hydrology and Hydrogeology
- Socio-Economics

- Shadow Flicker
- Climate Change

Scoped out issues are cross referenced in Table 3.1, Schedule of Environmental Commitments, Section 3 as appropriate.

3 SCHEDULE OF MITIGATION

3.1 Introduction

The original assessment of Farr identified a number of impacts that would arise as a result of the proposed development including during the construction, operation and decommissioning phases of the wind farm. Mitigation measures were identified and developed to counter adverse impacts and reduce the significance of residual effects on the receiving environment.

Environmental mitigation measures identified during the EIA process were reported in the technical studies presented in the Farr ES.

For the purposes of this assessment, the operational and decommissioning environmental commitments (mitigation measures) specific to Farr that are relevant to its continued operation are summarised in Table 3.1. Responsibility for the delivery of the remaining programme of mitigation relating to operation and decommissioning of Farr will sit with Farr Windfarm Limited as the current asset owner.

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3.2 Summary of Environmental Commitments

Table 3.1 Summary of Environmental Commitments

Ref	Issue	Contexts and description of mitigation measure (reference within text)	Timing	Responsible Party
General				
2.2 Ecology and Ornithology				
1	Maintenance of site for a period of 5 years after completion of decommissioning and restoration works	The company shall decommission and restore the site, within such period as the Scottish Ministers in consultation with the planning authority may direct, and said works shall be carried out in accordance with the scheme outlined in condition 3.4. Thereafter, the company shall, on receipt of written confirmation from the planning authority that they are content that all decommissioning and restoration works are complete, undertake to maintain the site for a period of 5 years in accordance with the terms of condition 3.4 which requires an indicative scheme of reinstatement. **(See condition 3.3 on decision notice for Farr, ref: 02/00871/S36IN)**	Decommissioning	Contractor or Asset Owner
2	Compliance with the ecological safeguards built within the consent	Following the completion of reinstatement as set out in condition 3.4 above a report shall be prepared by the project ecologist whose appointment is approved by the Scottish Ministers in consultation with the planning authority and Scottish Natural Heritage. This report shall set out the degree of compliance with the ecological safeguarding conditions and thereafter shall specify steps to be taken to secure any remedial action as required by the project ecologist. The remedial action set out in the report shall be implemented. **(See condition 3.5 on decision notice for Farr, ref: 02/00871/S36IN)**	Decommissioning	Asset Owner

2.2.8 Geology and Soils (inc. Peat)				
1	Compliance with decommissioning method statement	Decommissioning will involve the removal of all above ground infrastructure, including demolition of the substation building. The top surface of the wind turbine foundation bases would be broken up and removed to approximately 0.5 m below ground level and all cabling cut out and removed at the same depth. The area would then be reinstated with a final layer of topsoil over the foundations. Across the rest of the site, the cabling would be left in situ. Tracks would either be left for use by the landowner (Kyllachy Estate) or covered in topsoil. This approach is considered to be less environmentally damaging than seeking to remove all foundations, tracks and underground cables entirely. A decommissioning method statement would be prepared and agreed with THC and other relevant consultees prior to decommissioning of the site. **See section 3.56 Decommissioning in Chapter 3 Project Description, Volume 2 of the Farr ES)**	Decommissioning	Contractor

4 SUMMARY AND CONCLUSIONS

Farr Windfarm Limited seeks a variation under s36C of the Electricity Act 1989 and the Electricity Generating Stations (Applications for Variation of Consent) (Scotland) Regulations 2013 attached to planning permission Ref: 02/00871/S36IN in order to extend the operational period of Farr from 25 years to 35 years.

Utilising a topic-based structure, this document examines the likelihood of significant effects occurring with particular regard to landscape, ecology, ornithology and noise and concludes that no significant effects are likely to occur as a result of extending the life of Farr. All other environmental effects have been scoped out by virtue of there being no change and no effects predicted in each case. The report concludes by identifying all the operational and decommissioning environmental commitments (mitigation measures) specific for Farr that are relevant to its continued operation.

Farr was one of the first wind farms to be approved and constructed in Scotland. Whilst the planning consent is due to expire in December 2030, with continued application of management and maintenance measures and controls, it is considered that the wind farm can continue to operate for an additional 10 years with no material change to previously reported impacts.

APPENDIX 1 – SUPPORTING INFORMATION

1. Statement on the Inspection, Servicing, Maintenance and Repair Programme for Farr Wind Farm, Ventient Energy July 2020.
2. Farr Site Layout
3. Farr Wind Farm File Note, Ecology and Ornithology Appraisal, April 2020
4. Farr Wind Farm File Note, Landscape Appraisal, April 2020
5. Farr Wind Farm File Note, Noise Appraisal, April 2020
6. Decision Notice for Farr Wind Farm (Ref: 02/00871/S36IN)
7. Farr Wind Farm Environmental Statement Volume 1: Non-Technical Summary
8. Farr Wind Farm Environmental Statement Volume 2: Written Statement
9. Farr Wind Farm Environmental Statement Volume 4: Technical Appendices

APPENDIX 2 – CONSULTATION INFORMATION

1. Farr Wind Farm Life Extension Application – Pre-application response (SEPA), May 2020
2. Farr Wind Farm Life Extension Application – Pre-application response (SNH), May 2020
3. Farr Wind Farm Life Extension Application – Screening Opinion, July 2020
4. Farr Wind Farm Life Extension Application – Consultation Leaflets, July 2020
5. Farr Wind Farm Life Extension Application – Community Council Presentation, June 2020