

Earraghail Renewable Energy Development

Additional Environmental Information (AEI)

November 2023

Index

1.	Introduction	5
1.1.	Background	5
1.2.	Purpose of the Additional Environmental Information (AEI)	5
1.3.	Availability of the AEI Report	6
1.4.	Representations to the Application	6
2.	Context and Assessment Methodology	8
2.1.	Introduction	8
2.2.	The position of the AEI in the context of the application	8
2.3.	Assessment Methodology	8
3.	Changes to the proposed development	10
3.1.	Correction of the location of Turbine 5	10
	Table 3.1: Turbine Co-ordinates	10
3.2.	Revised reduced lighting scheme	11
3.2.1.	Introduction	11
3.2.2.	Mitigation	11
3.2.3.	Additional Information on Reduced Lighting Scheme	12
	Table 3.2 Earraghail RED LVIA Viewpoints	12
3.2.4.	Aircraft Detection Lighting System (ADLS) at Earraghail RED	14
3.2.5.	ADLS Workstream Update	16
3.3.	Information arising from the Applicant's discussions with the Woodland Trust	16
3.3.1.	Introduction	16
3.3.2.	Proposed Access Track Route	18
3.3.3.	Baseline	18

3.3.4.	Embedded Mitigation	19
3.3.5.	Additional Mitigation	20
3.3.6.	Potential Impacts	21
3.3.7.	Summary	21
4.	Comparative Environmental Impact Assessment	24
Table 4.1 Comparative assessment for the changes to the proposed Development		25
5.	Conclusion	30
6.	References	33
Appendix 1 List of Consultees		
Appendix 2 Aviation Lighting Material (Presented Separately)		
Appendix 3 Additional Environmental Information in relation to Ancient Woodland (Presented Separately)		

01.

Introduction

1. Introduction

1.1. Background

The Applicant, ScottishPower Renewables (UK) Ltd (SPR) has applied to the Scottish Ministers for consent under Section 36 of the Electricity Act 1989 to construct and operate the Earraghail Renewable Energy Development (hereafter referred to as the ‘proposed Development’) on land between the village of Tarbert, to the north east, and the village of Skipness, to the south, situated within the northern part of the Kintyre Peninsula in Argyll & Bute (Central Grid Reference NR 88732 63637, hereafter “the Site”). The installed capacity of the proposed generating station would be over 50MW, comprising up to 13 turbines with a maximum ground to blade tip height of 180 metres, and around 5 MW of ground mounted solar arrays. The proposed Development also includes around 25 MW of a battery energy storage system (BESS).

The proposed Development is subject to Environmental Impact Assessment (EIA) and an EIA Report was produced to accompany the application for consent and received by the Scottish Ministers on 21st February 2022 (Reference: ECU00003421).

Additional information was requested by NatureScot in response to the application in May 2022 regarding landscape impacts, viewpoints and visualisation material from the Isle of Arran. During the course of post-submission evaluation of the application, correspondence was also undertaken with various key stakeholders for the purposes of clarifying matters within the EIA Report. An Additional Information (AI) report was produced and received by the Scottish Ministers on 10th February 2023.

In June 2023, the application was referred to the Scottish Government’s Planning and Environmental Appeals Division (DPEA) following objections from the Planning Authority, Argyll and Bute Council (ABC) and NatureScot, causing a Public Local Inquiry (PLI) to be called by the Scottish Ministers.

1.2. Purpose of the Additional Environmental Information (AEI)

In accordance with paragraphs 21 to 26 and Appendix 3 of the note of the Pre-examination meeting (PEM) held on 12th October 2023, this Additional Environmental Information (AEI) Report has been produced to provide the DPEA and consultees with additional information in relation to the following aspects:

- Information arising from the correction of the coordinates for Turbine 5, including details of consultees whose responses may have been affected
- A reduced lighting scheme and accompanying maps and visuals
- Information arising from the Applicant’s discussions with Woodland Trust Scotland

The AEI Report addresses where the changes have a bearing on the EIA Report (February 2022) in relation to baseline conditions, effects and/or mitigation.

1.3. Availability of the AEI Report

In accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 Regulation 20, copies of the AEI Report will be available for inspection by the public. Notice of the AEI Report and details of copies being available for inspection shall, in accordance with Regulation 20, be published in the Edinburgh Gazette, and in a relevant newspaper in the locality of the proposed Development.

Electronic copies of the AEI Report can be accessed at
<https://www.dpea.scotland.gov.uk/CaseDetails.aspx?ID=123724>

Copies of the AEI Report may be obtained from the Applicant using the contact details below at a charge of £50 per hard copy and £10 per copy on DVD/CD or USB memory stick.

Earraghail Renewable Energy Development Project Team

ScottishPower Renewables

9th Floor ScottishPower House

320 St Vincent Street

Glasgow

G2 5AD

Email: EarraghailRenewableEnergyDevelopment@scottishpower.com

Website:
www.scottishpowerrenewables.com/pages/earraghail_renewable_energy_development.aspx
x

1.4. Representations to the Application

Any representations to the application should be made directly to the DPEA. An explanation of how to take part in the process can be found at the DPEA website at
<https://www.gov.scot/publications/planning-and-environmental-appeals-division-guidance-on-taking-part-in-planning-appeals-and-other-cases/pages/appeals/>

Representations can be sent by email to DPEA@gov.scot.

Representations can also be sent by post to:

Planning and Environmental Appeals

Hadrian House

Callendar Business Park

Falkirk

FK1 1XR

02.

Context and Assessment Methodology

2. Context and Assessment Methodology

2.1. Introduction

This section describes the approach to the assessment of likely significant environmental effects resulting from the amendments to the proposed Development described in **Section 3**.

2.2. The position of the AEI in the context of the application

As described in **Section 1** above, an application for consent was submitted in February 2022, with AI submitted in February 2023.

Subsequently, a Planning Statement Addendum was prepared for the proposed Development and received by the Scottish Ministers on 16th March 2023.

This AEI Report builds upon the information presented in the above documents, specifically in relation to the three matters identified in **Section 1.2** above.

2.3. Assessment Methodology

A comparative assessment approach has been taken in the AEI Report, which is considered to be proportionate to the scale of the changes in the proposed Development. For each assessment chapter within the EIA Report, a comparative assessment has been undertaken comparing the findings of the EIA Report assessment with the amendments identified in **Section 3**, and assessing whether there is any change to the potential for likely significant effects.

The assessment methodology remains unchanged to that set out in the EIA Report **Volume 2 Chapter 5: EIA Approach and Methodology** and the subsequent assessment chapters; however, it does take into consideration relevant identified change to the baseline condition, cumulative situation, assessment guidance and planning policy which has occurred in the interim.

03.

Changes to the proposed Development

3. Changes to the proposed development

3.1. Correction of the location of Turbine 5

The Applicant identified an error in the **Volume 2 – Chapter 3 Project Description** of the EIA Report (February 2022). Table 3.1 in Chapter 3 gives the incorrect coordinates for proposed Turbine 5 (T5).

The correct location of Turbine 5 as shown in Error! Reference source not found. below, is displayed on all of the figures (e.g. **Figure 3.1 Proposed Site Layout** in **Volume 3a**) associated with the EIA Report (February 2022) and AI report (February 2023). **The correct location of Turbine 5 was used throughout all assessments within the EIA.**

The correct coordinates for Turbine 5 are presented in **Table 3.1**. The coordinates for all other turbines remain unchanged.

Table 3.1: Turbine Co-ordinates

Turbine No.	OS Easting	OS Northing
1	187956	662033
2	190341	662135
3	190737	660952
4	190110	661402
5	189898	660807
6	190711	661790
7	187801	662725
8	188481	662728
9	189075	662686
10	Removed	Removed
11	190073	662403
12	189156	662083
13	188515	661414
14	188473	660921

The incorrect Turbine 5 coordinates are quoted in two consultee responses received to the application. The full list of consultees that were contacted in relation to the application (February 2022) is presented in **Appendix 1** below. All such consultees will be contacted in relation to this AEI Report.

3.2. Revised reduced lighting scheme

3.2.1. Introduction

The Applicant would like to clarify their position with regard to the mitigation solution for the Aviation Lighting at Earraghail RED and provide an update to the trial work being carried out in relation to the concept of an Aircraft Detection Lighting System (ADLS) in UK airspace.

The UK Civil Aviation Authority (CAA) requires any obstacle over 150m to be lit for the purposes of aviation safety. In practical terms this means that without mitigation every turbine in the proposed Earraghail RED should have a red medium intensity aviation light on the nacelle and low intensity light on the tower. This could create a significant visual impact at night.

The Applicant is proposing to utilise a number of mitigation techniques, including ADLS and a reduced lighting scheme, in order to reduce the visual impacts to as low as reasonably practicable.

The Applicant is taking this opportunity to provide the additional material requested at the PEM. This included a request for confirmation of:

- finalised reduced lighting scheme;
- updated table of all Landscape and Visual Impact Assessment (LVIA) viewpoints with numbers of lights visible;
- updated aviation ZTV; and
- updated dusk/dawn visuals for aviation lighting for viewpoints 7 (Ostel Bay/Kilbride Bay Ardlamont), 8 (Cock of Arran), 9 (Lochranza, Arran) and 18 (Mullach Buidhe near Beinn Bhreac).

3.2.2. Mitigation

There are a number of recognised mitigation techniques already widely used in the UK. Any variation to the standard lighting requirements has to be agreed by the CAA.

The Applicant is proposing the following mitigation:

- A reduced lighting scheme has been agreed with the CAA. This means that visible aviation safety lighting would be required on the nacelles of turbines 1, 3, 5, 6, 7, 9, 11, 12 and 14 (9 of the 13 turbines). There would be no requirement for additional lights on the towers. There would be infrared lights on all turbines to provide mitigation for MOD and Search and Rescue (SAR) using night vision equipment.
- The lights would only be on at 'night' (defined as in Air Navigation Order (ANO) 2016 Schedule 1, as 30 minutes after sunset until 30 minutes before sunrise) and would be

controlled by a timer, and not by photocells or similar that respond to particular light levels, thereby not incurring effects in the daytime.

- During periods of 'good' visibility (meteorological visibility in excess of 5km) there will be an automatic dimming of the lights (controlled by sensors installed on the turbines) from 2000 candela to a nominal intensity of 200 candela, a 90% reduction in intensity. The lights would still be visible, but they would be considerably less bright.
- The nacelle lights would also be specified to include directional intensity mitigation as part of the light design to focus the nacelle lighting in the horizontal plane (+ or – a few degrees) which noticeably reduces the light from above and below. Whilst this would not eliminate visibility of the nacelle lights, it would have the effect of reducing their brightness. However, given that this mitigation is specific to a particular light design, this has not been relied upon as part of the embedded mitigation in the assessment, but has been committed to as part of the embedded design.

These measures by themselves would reduce the visual impact significantly, however in the interest of ensuring that all appropriate mitigation techniques are implemented, the Applicant has also committed within the Indicative Aviation Lighting Landscape and Visual Impacts Mitigation PLAN (ALLVIMP) (Appendix 15.4 of the Environmental Impact Assessment Report (EIAR)) to not commence development unless and until an ALLVIMP has been approved by the Scottish Ministers (in consultation with the CAA and NatureScot). This ALLVIMP contained mitigation measures as noted above, in addition to the use of an ADLS. In plain terms, this means that the windfarm would not be constructed unless an ADLS was enabled on site.

3.2.3. Additional Information on Reduced Lighting Scheme

As noted above, a reduced lighting scheme has been agreed with the CAA and this is attached in **Appendix 2** and illustrated in **Figure 1**, Drawing Number AR-I-032. This means that visible aviation safety lighting would be required on the nacelles of turbines 1, 3, 5, 6, 7, 9, 11, 12 and 14 (9 of the 13 turbines) but none of the tower lights. There would be infrared lights on all turbines.

The following is a list of the Earraghail RED LVIA viewpoints with updated information regarding visible lighting.

Table 3.2 Earraghail RED LVIA Viewpoints

VP No	Viewpoint	Distance	ADLS for majority of the time	Reduced Lighting Scheme lights visible including screening (bare earth)
1	Kintyre Way between Tarbert and Skipness	0.45 km	No visible lights	9 nacelle lights (9 nacelle lights)
2	B8001 Kintyre Way at Skipness Village	2.7 km	No visible lights	No lights (No lights)
3	B8001 southwest of Site	3.3 km	No visible lights	No lights

VP No	Viewpoint	Distance	ADLS for majority of the time	Reduced Lighting Scheme lights visible including screening (bare earth)
				(No lights)
4	B842, Claonaig Bay	5.0 km	No visible lights	No lights (1 nacelle light)
5	Portavadie	6.9 km	No visible lights	2 nacelle lights (6 nacelle lights)
6	Kintyre Way at Cruach nam Fiadh	7.6 km	No visible lights	9 nacelle lights (9 nacelle lights)
7*	Ostel Bay/Kilbride Bay Ardlamont	7.8 km	No visible lights	6 nacelle lights (7 nacelle lights)
8*	Cock of Arran	9.3 km	No visible lights	9 nacelle lights (9 nacelle lights)
9	Lochranza, Arran	9.8 km	No visible lights	9 nacelle lights (9 nacelle lights)
10	A83 at Meall Mhor	11.4 km	No visible lights	1 nacelle lights (2 nacelle lights)
11	B842, Crossaig	12.3 km	No visible lights	9 nacelle lights (9 nacelle lights)
12	A83 south of Clachan	14.0 km	No visible lights	No lights (No lights)
13	Ettrick Bay, Bute	14.2 km	No visible lights	8 nacelle lights (9 nacelle lights)
14	Tarmore Hill, Bute	14.4 km	No visible lights	9 nacelle lights (9 nacelle lights)
15	Cnoc Mhic Dhugaill, Achrossan Forest Cowal	14.5 km	No visible lights	9 nacelle lights (9 nacelle lights)
16	Cowal Way, north of Tighnabruaich at Rubha Ban	14.8 km	No visible lights	4 nacelle lights (5 nacelle lights)
17	B8024, high point south of Kilberry	15.2 km	No visible lights	No lights (No lights)
18*	Mullach Buidhe near Beinn Bhreac	17.7 km	No visible lights	9 nacelle lights (9 nacelle lights)
19	Goatfell, Arran	21.1 km	No visible lights	9 nacelle lights (9 nacelle lights)
20	Northern point of Gigha	22.5 km	No visible lights	3 nacelle lights (3 nacelle lights)
21	Carradale Harbour	23.1 km	No visible lights	9 nacelle lights (9 nacelle lights)

VP No	Viewpoint	Distance	ADLS for majority of the time	Reduced Lighting Scheme lights visible including screening (bare earth)
22	Lochgilphead	25.0 km	No visible lights	5 nacelle lights (5 nacelle lights)
23	Torr Nead	12.4 km	No visible lights	9 nacelle lights (9 nacelle lights)
24	Lochranza	11.0 km	No visible lights	7 nacelle lights (7 nacelle lights)
25	Catacol	11.2 km	No visible lights	9 nacelle lights (9 nacelle lights)
26	Thundergay	14.3 km	No visible lights	9 nacelle lights (9 nacelle lights)
27	Whitefarland	18.7 km	No visible lights	9 nacelle lights (9 nacelle lights)
W1	Wild Land Assessment	14.6 km	No visible lights	9 nacelle lights (9 nacelle lights)

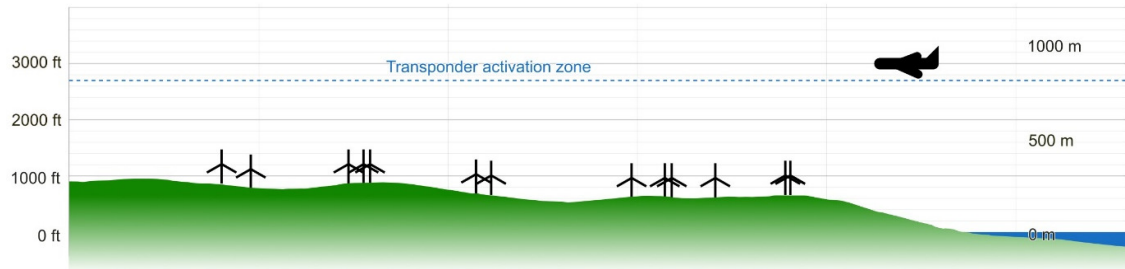
* EIAR Night time viewpoints

In accordance with paragraph 25 of the PEM note, as requested by the DPEA, **Figures 7.11 and 7.12**, Aviation ZTVs have been updated as a result of the agreed reduced lighting scheme and located in **Appendix 2**. The dawn/dusk photomontages produced in the EIAR to illustrate the view when the lights would be visible have also been updated as requested. These include Viewpoint 7: Ostel Bay/Kilbride Bay Ardlamont, Viewpoint 8: Cock of Arran and Viewpoint 18: Mullach Buidhe near Beinn Bhreac. A dawn/dusk photomontage has also now been produced for VP 9: Lochranza, Arran at the request of NatureScot during the PEM. They have been updated to show a reduced number of lights and these are located in **Appendix 2**. Some of the original night-time visualisation files uploaded to the ECU website were of low quality, which made them difficult to use, so higher resolution digital versions are included in this submission.

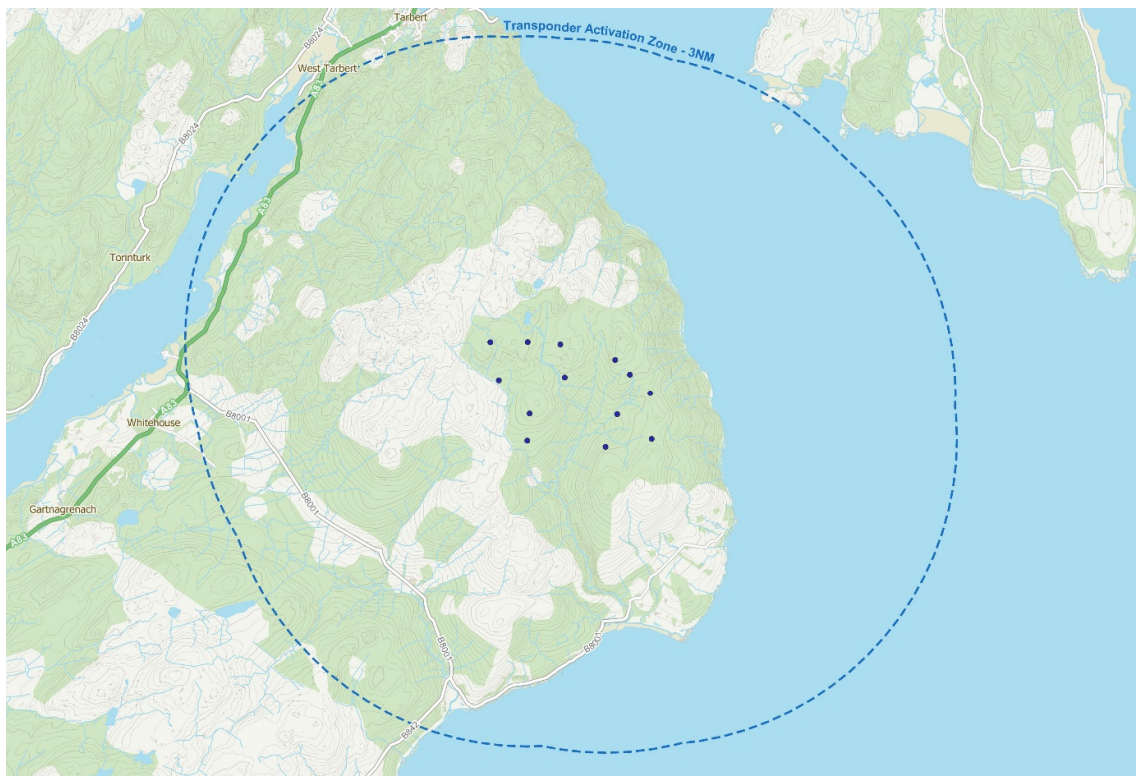
3.2.4. Aircraft Detection Lighting System (ADLS) at Earraghail RED

By implementing ADLS, the lighting as outlined above, would only be visible at night when an aircraft was flying directly overhead or within 3 nautical miles (5.556 km) of the boundary of the site at a height of 2700ft or below. Given the height of the turbines and topography of the area, this height is also considered the minimum safety altitude for an aircraft. A minimum safety altitude is determined by a pilot prior to flight to ensure avoidance of collision and safe flight practice is being observed. As a result, it is likely that the only time an aircraft would be flying below 2700ft (thus triggering the ADLS and turning on the turbine lights) would be when an aircraft is in danger by flying dangerously low or carrying out SAR operations. This is referred to as the Transponder Activation Zone within this document and has been illustrated in Drawing EAR-SH_L-113 and included in **Appendix 2**. Further details on the regulatory change required to implement a Transponder Mandatory Zone (TMZ) are provided in **Section 3.2.5**.

Extract from Drawing EAR-SH_L-113: Transponder Activation Zone in elevation



Extract from Drawing EAR-SH_L-113: Transponder Activation Zone in plan¹



When taken together with the evidence gathered from Aviation Safety sessions of previous public local inquiries (Clauchrie Windfarm, DPEA ref: WIN 370-3 and Sanquhar II Windfarm, DPEA Ref: WIN-170-2006) and from the initial stakeholder engagement work undertaken by the Applicant for the ADLS trial, the likely number of aircrafts that would activate the lights would be very low. As noted in the Indicative ALLVIMP (Earraghail RED EIAR Technical Appendix 15.4), in the rare event of an aircraft transiting the TMZ around Earraghail RED, the lights would only be on for approximately 1.5 to 3 minutes. The combination of mitigation

¹ Note, the 3nm buffer is shown around the proposed Development turbine locations

solutions proposed for Earraghail RED would result in the aviation lights having short duration visual effects of limited frequency.

3.2.5. ADLS Workstream Update

Since the Clauchrie PLI, the Applicant continues to be at the forefront of regulatory change required to implement ADLS within the UK and have commenced work on a trial for ADLS at one of their operational windfarm sites in south west Scotland.

ADLS is already in widespread use in Europe and is in the process of becoming mandatory in Germany. The systems require any aircraft in the vicinity of the windfarm to be equipped with a transponder which sends out a signal from the aircraft to equipment stationed at the windfarm. Earraghail RED and the trial windfarm site both lie in Class G (also known as uncontrolled) airspace. At present, the UK does not currently mandate the carriage of transponders for aircraft operating in Class G airspace. For this reason, and for the purposes of the trial, SPR have applied to the CAA via the CAPI616 process for a temporary change to the airspace around the trial windfarm. This change would establish a TMZ around the trial windfarm for the purposes of the trial only. The CAPI616 process for the trial TMZ is a more focused version of the full process that would be required to establish a permanent TMZ for Earraghail.

As part of this trial process there has been extensive engagement with key aviation stakeholders both locally and nationally. The feedback has been positive with very few concerns raised by the general aviation community, largely due to a very low volume of night flying carried out by aircrafts that are not already equipped with a transponder.

The CAPI616 process for the temporary TMZ is expected to be complete by December 2023, allowing for implementation in January 2024.

The Applicant has engaged a supplier of ADLS systems from Germany to install their equipment at the trial windfarm and there is an agreement in place for radar data from a nearby radar to be used to help validate the results of the trial. Once the Temporary TMZ is in place the trial is expected to run for 6 months.

The ADLS equipment itself is well established and fairly straightforward to install and operate. The trial will provide the evidence to the CAA for the purposes of gaining regulatory approval to use it in the UK. In order to deploy the equipment at Earraghail RED, an application for a permanent TMZ would be made via the CAA CAPI616 process.

3.3. Information arising from the Applicant's discussions with the Woodland Trust

3.3.1. Introduction

The Woodland Trust initially objected to the proposed Development on the basis of impacts to ancient woodland (April 2022), due to the potential felling and direct loss required for the proposed construction compound, together with potential clearances required to facilitate site access along the existing Forestry Land Scotland (FLS) timber haul road ('the existing timber haul road') sited within an area mapped as ancient woodland, as shown in **Figure 3.1 (AEI) Ancient Woodland**.

In its AI Report (February 2023), the Applicant responded to the objection to clarify that the proposed construction compound was located in the Tarbert Holiday park, and no woodland was located within it.

In its response to the AI Report, the Woodland Trust (March 2023) withdrew its objection in relation to the construction compound, but maintained its objection to the proposed Development on the grounds that any widening of the existing timber haul road would result in a loss of the ancient woodland resource in Bardaravine Wood; therefore, it would contradict NPF4 Policy 6 - Forestry, woodland and trees.

This section provides more detailed information on the woodland resource along the existing timber haul road and considers the potential for any significant effects that could occur as a result of widening works to the existing timber haul road.

This additional information has been informed by an arboricultural survey undertaken in September 2023 along the existing timber haul road. The survey was undertaken in line with the guidance set out within BS5837 (2012) 'Trees in relation to design, demolition and construction – Recommendations' including quality grading and indications of above ground (tree canopy extent) and below ground (root protection area) constraints.

The survey area comprised a 20 m buffer of the existing timber haul road serving the Skipness and Corranbuie woodland areas, encompassing potential areas of felling that may be necessary to facilitate the proposed Development, together with adjacent areas of woodland.

A summary of baseline conditions established by the survey in relation to woodland composition and the presence of ancient or veteran trees, or trees with high biodiversity value, to inform discussion on NPF4 Policy 6, is presented below.

Further detail of the survey findings is provided in the following documents:

- Survey findings and detailed assessment of Ancient, Veteran and Notable Trees and Native woodlands, hedgerows and individual trees of high biodiversity value as **Appendix 3.1**;
- A tree stock overview plan, presented as **Appendix 3.2**;
- A tree constraints plan, including root protection zones, presented as **Appendix 3.3**; and,
- A tree survey schedule in accordance with BS5837 (2012) presented in **Appendix 3.4**.

Other key documentation relevant to the consideration of impacts on woodland arising from the proposed Development are as follows:

- EIA Report (February 2022) Volume 4 - Chapter 8 - Technical Appendix 8.5 - Habitat Management Plan;
- EIA Report (February 2022) Volume 4 - Chapter 15 - Technical Appendix 15.1 Forestry Assessment; and,
- AI Report (February 2023) Appendix D Letter to Scottish Forestry and Response.

3.3.2. Proposed Access Track Route

The existing timber haul road serving the Skipness and Corranbuie forestry parcels is typically between 3 m and 4.5 m wide. In order to deliver turbine components to the Site, upgrades to the existing timber haul road will be necessary. An access track with a 4.5 m-wide running width, with a 0.5 m shoulder verge to either side will be required although there may be some localised widening such as at bends ('the proposed access track').

3.3.3. Baseline

The proposed access track commences off the A83 routing through the Tarbert Holiday Park within Bardaravine Wood. It then routes to the Site along the existing timber haul road towards the Skipness and Corranbuie forestry parcels.

The Ancient Woodland Inventory (AWI) of Scotland identified areas of ancient woodland either side of the proposed access track route, comprising Bardaravine Wood and areas of the Achachoish Plantation.

The AWI of Scotland is a provisional guide to the location of ancient woodland in Scotland.. It identifies areas of habitat that are currently wooded and have been continually wooded, at least since 1750. It includes woodlands of plantation origin, though it is noted that much of the assumption of the value of ancient woodland centres on the irreplaceability of the habitat, and as such rotationally harvested conifer plantation may be included on the AWI due to having been managed as woodland for the long-term, but it cannot be considered ancient or irreplaceable.

Bardaravine Wood is classified as an AWI site of ancient semi-natural origin (ASNO) with compartments of the Achachoish Plantation, classified as a combination of Long Established of Plantation Origin (LEPO) and ASNO. An overview of AWI sites relevant to the Proposed Development are presented in **Figure 3.1 (AEI) Ancient Woodland**. As noted in the Woodland trust Scotland consultation response in on 22nd March 2023, it acknowledged that *"the existing holiday park has previously resulted in the removal of Bardaravine Wood at this location"*.

A survey of arboricultural features within AWI sites was undertaken in September 2023. The survey area comprised a 20 m buffer of the existing timber haul road, encompassing a conservative worst-case extent (albeit highly unlikely) of potential areas of tree felling/trimming works that may be necessary to facilitate the proposed access track, together with adjacent areas of woodland. The survey was undertaken in line with the guidance set out within BS5837 (2012) 'Trees in relation to design, demolition and construction – Recommendations', including quality grading and indications of above ground (tree canopy extent) and below ground (root protection area) constraints.

The composition of arboricultural features within the survey area was found to be predominantly comprised of native species, including birch, rowan, grey willow, pine, hazel, ash, oak, holly, alder with a small number of non-native conifers and broadleaf specimens including Sitka spruce, larch and sycamore present. Woodland within the survey area is therefore reasonably identified as mixed semi-natural native woodland as indicated in **Appendix 3.4 Tree Survey Schedule**.

The survey recorded the presence of 121 arboricultural features comprising 75 individual trees and 46 groups of trees. No arboricultural features, including individual trees or groups of trees within the survey area, were identified to be ancient, veteran or notable trees in accordance with a Recognition of Ancient, Veteran and Notable Trees (RAVEN) assessment. The root protection zones of any such trees should they be present in the wider local area are therefore located outwith the survey area. There is no potential for adverse impacts upon the ecological condition of any such tree.

The Woodland Trust Ancient Tree Inventory does also not identify any existing known 'Ancient' or 'Veteran' trees within the survey area or wider Site of the proposed Development.

Adopting scales of transferable characteristics, i.e. veteran characteristics, no trees/groups of trees of high biodiversity value are present within the survey area, and would therefore be impacted by tree works along the proposed access track route to facilitate the proposed Development (see **Appendix 3.1**).

A small number of trees/groups of trees within the survey area were identified as potentially having a higher level of local biodiversity value (see **Appendix 3.1**) i.e. features assigned a BS5837 (2012) A1, A2 or A3 category classification (see **Appendices 3.1** and **3.4**). These trees are however very likely to represent a relatively small proportion of similarly higher value arboricultural features present locally, beyond the survey area and which contribute to the overall biodiversity interest of woodland habitats locally.

It can therefore be ascertained that the survey area within the AWI sites and through which the proposed access track route passes supports ancient woodland in the context of the AWI site classifications i.e. they support semi-natural mixed woodland coverage, but which is not necessarily of ancient/veteran character, of high biodiversity value or irreplaceable.

3.3.4. Embedded Mitigation

Section 8.7.2.3 of the EIA Report commits that an Ecological Clerk of Works (ECoW) will be appointed to the project, and states the following:

"A suitably qualified ECoW would be employed for the duration of the construction and reinstatement periods, to ensure ecological interests are safeguarded, although this may not necessarily be a full-time role throughout.

The role of the ECoW would include the following tasks:

- *provide toolbox talks to all staff onsite, so staff are aware of the ecological sensitivities within the Site and the legal implications of not complying with agreed working practices;*
- *agree and monitor measures designed to minimise damage to retained habitats;*
- *undertake pre-construction surveys and advise on ecological issues and working restrictions where required; and*
- *complete site-supervision works as required, in relation to sensitive habitats and protected species."*

One of the duties of the ECoW will be to seek to minimise as far as is practicable impacts on sensitive habitats such as areas of semi-natural woodland. This will be achieved by undertaking the following:

- At detailed design stage:
 - Surveying the areas of sensitive habitats their extent and condition.
 - Advising on the requirement for additional protected species surveys e.g. in relation to the presence/absence of roosting bats or other protected species.
 - Feeding back to the designers on how to minimise impacts to sensitive habitats/protected species.
 - Reviewing the detailed design to ensure that impacts on sensitive habitats are minimised and enable legislative compliance.
- At construction stage:
 - Supervising construction activities in areas close to sensitive habitats so that impacts are minimised.
 - Supervising any translocation activities to the receptor site (see below) where impacts on woodland habitats are unavoidable.

Impacts upon individual trees/woodland will therefore be minimised in so far as is possible, including on arboricultural features of higher value.

3.3.5. Additional Mitigation

Ancient Woodland Restoration and Compensatory Planting Scheme

Given the presumption within the Scottish Government's Control of Woodland Removal Policy against the loss of any AWI Woodland, additional mitigation within an Ancient Woodland Restoration and Compensatory Planting Scheme (AWRCPS) proposed.

It is proposed that as part of decommissioning and restoration proposals for the proposed Development, any areas of widening for the proposed access track route, which have replaced areas mapped as AWI sites will be replanted as woodland. This would mean that the loss of AWI habitat, which in these locations demonstrably does not correspond to ancient or irreplaceable habitat, would be long-term but temporary, with no permanent loss of woodland in these AWI areas.

Further measures are also proposed to enhance biodiversity value of the AWI sites over the operational lifetime of the proposed Development, and which can be secured by way of a suitably worded planning condition and finalised in consultation with the Woodland Trust and FLS.

Woodland translocation is also proposed to compensate for losses of arboricultural features within AWI sites. The main suitable receptor site identified for translocation of ancient woodland trees/soils is Unit 3 of the proposed Development's Habitat Management Plan (HMP). **Volume 4 - Chapter 8 - Technical Appendix 8.5 - HMP** of the EIA Report, details biodiversity enhancement measures committed to by the Applicant over the lifetime of the

proposed Development, should it be consented. Delivery of the HMP and translocation as mitigation under the AWRCPs, including the identification of alternative appropriate receptor sites, would be secured by way of a suitably worded condition.

Alternative appropriate receptor sites may include unwooded areas of AWI sites through which the existing timber haul road passes, or areas adjacent to these AWI sites, where agreed in consultation with relevant landowners.

In consultation with the Woodland Trust and Forestry Land Scotland, it is proposed that the AWRCPs is expanded to include measures to increase the biodiversity interest of the Bardaravine and Achachoish AWI sites, where these can be secured with the landowners. For example, this may be through the targeted removal of non-native tree specimens (i.e. larch, sycamore, spruce), the creation of standing dead wood, supplementary planting of native species and the preservation of individual trees/groups of trees to encourage the prevalence of veteran characteristics.

3.3.6. Potential Impacts

The design of the proposed Development has sought to minimise habitat losses by utilising the existing timber haul road. There will however be the expectation of unavoidable but localised losses of arboricultural features along the proposed access track route within AWI sites. The approach would be to minimise this loss by prioritising lopping/pollarding where possible and only considering whole tree removal as a last resort. It is anticipated that, while a survey area of 20 m was established for the arboricultural survey, the majority of impacts will be limited to the areas immediately adjacent to the existing timber haul road in order to accommodate road widening and turbine component delivery.

On the basis of embedded and additional mitigation, overall woodland area losses from within the AWI sites will be extremely limited and not ancient or veteran in character. Any tree removal may include some features of higher local biodiversity value. Such features will however remain prevalent within the survey area and likely within the wider AWI sites and connected woodland.

Therefore, any loss of features of higher local biodiversity value would not meaningfully reduce the availability of features with existing veteran characteristics or features which may develop these characteristics over the lifetime of the proposed Development. In EIA context, the potential impacts are considered to be of no greater than low adverse magnitude at a Regional scale, resulting in a minor adverse effect which is not significant.

3.3.7. Summary

Following the consultation responses received by the Woodland Trust the Applicant undertook an additional arboricultural survey to define the baseline conditions of the woodland resource within AWI sites along the existing timber haul road. The survey found that no arboricultural features, including individual trees or groups of trees within the survey area, were identified to be ancient, veteran or notable trees; however, a small number of trees/groups of trees within the survey were identified as potentially having a higher level of local biodiversity value. These trees are very likely to represent a relatively small proportion of similarly higher value arboricultural features present locally, beyond the survey area and which contribute to the overall biodiversity interest of woodland habitats locally. Considering

the potential for adverse impacts of the proposed access track, on the basis of embedded and additional mitigation, overall woodland area losses from within the AWI sites will be extremely limited and not result in the permanent loss of woodland which is ancient or veteran in character and therefore irreplaceable. The likely loss of features of higher local biodiversity value would not meaningfully reduce the availability of such aboriginal features or veteran characteristics over the lifetime of the proposed Development. Therefore, potential impacts would not be significant in EIA terms. Any update in forestry loss resulting from localised widening once details are confirmed will be compensated for in line with the Scottish Government's Control of Woodland Removal Policy. Specifically, it is proposed to prepare an Ancient Woodland Restoration and Compensatory Planting Scheme in consultation with the Woodland Trust and FLS.

The results of this additional baseline survey and appraisal of potential impacts indicate that there is no change in the Applicant's position as stated in previous submissions.

04.

Comparative Environmental Impact Assessment

4. Comparative Environmental Impact Assessment

The correct location of Turbine 5, in line with the coordinates presented in **Table 3.1** of this AEI Report, were used in all of the assessments associated with **Chapters 7 to 15** of the EIA report (February 2022), Additional Information (February 2023) and associated figures and appendices.

Table 4.1 below presents the comparative assessment for all the topics considered within the EIA Report.



Table 4.1 Comparative assessment for the changes to the proposed Development

EIA Report Chapter	Key Conclusions of the EIA Report	Change to proposed Development	Comparative assessment: amendments presented in Section 3	Statement of Significance compared to EIA Report
Chapter 7: Landscape and Visual Impact Assessment	There were some localised significant impacts on landscape and visuals receptors.	The reduced lighting scheme and further information regarding the frequency of their activation presented in Section 3.2 .	The EIA Report concluded that with just the embedded mitigation included in the proposed Development, there would be Significant night-time impacts on residents and some recreational receptors on the western Ardlamont peninsula and at Lochranza on the northern tip of Arran. The reduced lighting scheme represents a reduction from 13 lights to just 9 nacelle lights and tower lights are no longer required. In addition, and as stated in the ALLVIMP, the proposed Development would not be built without the additional mitigation of an ADLS and with further information regarding the potential frequency of activation being so low, all night-time impacts have been rendered Not Significant, due to the short duration the lights would be lit.	As stated in the EIAR, there would no Significant impacts on landscape or visual receptors at night, as a result of the proposed Development with the full suite of mitigation including ADLS.
Chapter 8: Ecology	No likely significant adverse effects were concluded.	Further information and assessment of impact on the Ancient Woodland is presented in Section 3.3 .	Section 3 provides additional information regarding the requirement for woodland losses within Ancient Woodland Inventory (AWI) sites along the proposed access track route for the proposed Development. It sets out the approach to mitigation in line with the mitigation hierarchy and concludes that impacts would not occur on woodland that is ancient or veteran in character, or of substantial biodiversity value and such losses where unavoidable would be inherently minimised. Additional mitigation is provided and which will	There will be no Significant impacts upon AWI sites, and no change in the Significance of Effects upon ecological features reported within the EIAR.

EIA Report Chapter	Key Conclusions of the EIA Report	Change to proposed Development	Comparative assessment: amendments presented in Section 3	Statement of Significance compared to EIA Report
			serve to result in overall benefits to AWI sites at a local level. 3	
Chapter 9: Ornithology	No likely significant adverse effects were concluded.	Further information and assessment of impact on the Ancient Woodland is presented in Section 3.3 .	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 10: Hydrology, Hydrogeology, Geology and Soils	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor.	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 11: Archaeology and Cultural Heritage	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 12: Access, Traffic and Transport	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 13: Noise	No significant adverse effects predicted.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for noise.	No change in Significance of Effects
Chapter 14: Socio-economics	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects

EIA Report Chapter	Key Conclusions of the EIA Report	Change to proposed Development	Comparative assessment: amendments presented in Section 3	Statement of Significance compared to EIA Report
Chapter 15: Other Issues: Shadow Flicker	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 15: Other Issues: Solar Glint and Glare	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 15: Other Issues: Climate and Carbon Balance	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 15: Other Issues: Air Quality	No likely significant adverse effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 15: Other Issues: Aviation and Radar	No likely significant effects were concluded.	Further information presented in Section 3 above is not directly relevant to this factor	The changes presented in Section 3 above have not altered the assessment of impact for this factor.	No change in Significance of Effects
Chapter 15: Other Issues: Forestry	No likely significant effects were concluded.	The localised widening of the proposed access track has the potential to increase loss of forestry resource, including trees designated under the Ancient Woodland Inventory.	The changes presented in Section 3 above have not altered the assessment of impact for this factor and any update in forestry loss resulting from localised widening once details are confirmed will be compensated for in line with the Scottish Government's Control of Woodland Removal Policy. Specifically, it is proposed to prepare an Ancient Woodland	No likely significant effects were concluded.

EIA Report Chapter	Key Conclusions of the EIA Report	Change to proposed Development	Comparative assessment: amendments presented in Section 3	Statement of Significance compared to EIA Report
			Restoration and Compensatory Planting Scheme in consultation with the Woodland Trust and FLS.	

05.

Conclusion

5. Conclusion

This AEI Report has been prepared and submitted to provide the DPEA and consultees with additional information in relation to the following aspects:

- Information arising from the correction of the coordinates for Turbine 5, including details of consultees whose responses may have been affected.
- A revised reduced lighting scheme and accompanying maps and visuals.
- Information arising from Applicant discussions with Woodland Trust Scotland.

Table 3.1 of this AEI Report confirms the correct coordinates for Turbine 5. The correct location of Turbine 5 is displayed on all the figures and visualisations (e.g. **Figure 3.1 Proposed Site Layout in Volume 3a**) associated with the EIA Report (February 2022) and AI report (February 2023). **The correct coordinates for Turbine 5 were used for all assessments in the EIA.**

The Applicant prepared a revised reduced lighting scheme for CAA's review and agreement. The following maps and visuals accompany the agreed reduced lighting scheme:

- Updated Zone of Theoretical Visibility (ZTV) of reduced lighting scheme;
- Updated list of number of nacelle lights visible from LVIA viewpoints (including from the additional viewpoints submitted in February 2023); and
- New lighting visualisations showing the aviation lighting from viewpoints 7 (Ostel Bay/Kilbride Bay Ardlamont), 8 (Cock of Arran), 9 (Lochranza) and 18 (Mullach Buidhe).

The proposed Development received an objection from the Woodland Trust Scotland. In response, the Applicant has undertaken additional baseline data-gathering in the form of an arboricultural survey.

Section 4 of the AEI addresses where the changes have a bearing on the EIA Report (February 2022) in relation to baseline conditions, effects and/or mitigation. An assessment of likely significant effects as a result of changes presented in **Section 3** has been undertaken as a comparative assessment exercise against the assessment previously undertaken in the EIA Report to assess any changes to the significance of effects.

No change in the significance of effects reported in the EIA report (February 2022) has been reported for the following factors:

- Chapter 7: Landscape and Visual Impact Assessment
- Chapter 8: Ecology
- Chapter 9: Ornithology
- Chapter 10: Hydrology, Hydrogeology, Geology and Soils
- Chapter 11: Archaeology and Cultural Heritage
- Chapter 12: Access, Traffic and Transport

- Chapter 13: Noise
- Chapter 14: Socio-economics
- Chapter 15: Other Issues: Shadow Flicker
- Chapter 15: Other Issues: Solar Glint and Glare
- Chapter 15: Other Issues: Climate and Carbon Balance
- Chapter 15: Other Issues: Air Quality
- Chapter 15: Other Issues: Aviation and Radar
- Chapter 15: Other Issues: Forestry

06.

References

6. References

Scottish Government (2017). The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. Available online at:
<http://www.legislation.gov.uk/ssi/2017/101/contents/made>.

ScottishPower Renewables (2022). Earraghail Renewable Energy Development Environmental Impact Assessment Report. ScottishPower Renewables, Glasgow.

ScottishPower Renewables (2023). Earraghail Renewable Energy Development Additional Information Report. ScottishPower Renewables, Glasgow.

Appendices

Appendix 1 List of Consultees

Based on the responses received to the application (February 2022) and the AI Report (February 2023), the Applicant anticipates that the following consultees may wish to review their responses to the application in light of the corrected location of T5

- Planning Authority - Argyll and Bute Council
- NatureScot
- Historic Environment Scotland
- BT
- Civil Aviation Authority - Airspace
- Defence Infrastructure Organisation
- Joint Radio Company
- NATS Safeguarding
- Glasgow Prestwick Airport
- Highlands and Islands Airport (HIAL)
- Glasgow Airport
- Tarbert and Skipness Community Council

Full list of consultees approached for the proposed Development

Statutory Consultees

- Planning Authority - Argyll and Bute Council
- SEPA
- NatureScot
- Historic Environment Scotland
- Scottish Government Library
- North Ayrshire Council
- Internal Scottish Government Advisors
- Ironside Farrar
- Scottish Forestry Perth and Argyll
- Transport Scotland
- Marine Scotland

Non Statutory Consultees

- BT
- Civil Aviation Authority - Airspace (use this for WIND FARMS)
- Crown Estate Scotland
- Defence Infrastructure Organisation (use this for WIND FARMS)
- Argyll Fisheries Trust
- Argyll District Salmon Fisheries Board
- Joint Radio Company
- John Muir Trust
- Mountaineering Scotland
- NATS Safeguarding
- RSPB Scotland
- Scottish Rights of Way and Access Society (ScotWays)
- Scottish Water
- Scottish Wildlife Trust
- Scottish Wild Land Group (SWLG)
- Visit Scotland
- BAA Aerodrome Safeguarding (Aberdeen)
- Edinburgh Airport
- BAA Aerodrome Safeguarding (Edinburgh)
- Arran Community Council
- Glasgow Prestwick Airport
- Highlands and Islands Airport (HIAL)
- Glasgow Airport
- Maritime and Coastguard Agency
- West of Scotland Archaeology Service
- Royal Yachting Association Scotland
- The Woodland Trust Scotland
- Aberdeen International Airport
- Ofcom (Spectrum Licensing)
- Ericsson
- Atkins

Community Councils

- West Kintyre Community Council
- East Kintyre Community Council
- Gigha Community Council
- South Knapdale Community Council
- Tarbert and Skipness Community Council
- Ardrishaig Community Council
- Kilfinnan Community Council
- Bute and Cowal Community Council

Other

- Skipness Estate and Community
- Lochranza and Catacol Community Association

Appendix 2 Aviation Lighting Material (Presented Separately)

Appendix 2.1 CAA Letter and Aviation Lighting Figures

Figure 1 Reduced Lighting Scheme

Proposed Updated Obstacle Lighting Scheme for Earraghail Wind Farm, letter of agreement from the CAA

Drawing EAR-SH-L-113 Transponder Activation Zone

Updated Zone of Theoretical Visibility (ZTV) of reduced scheme

Figure 7.11 Aviation Lighting ZTV

Figure 7.12 Aviation Lighting ZTV with Screening

Appendix 2.2 Aviation Lighting Visualisations

Viewpoint 7: Ostel Bay/Kilbride Bay Ardlamont (night)

Viewpoint 8: Cock of Arran (night)

Viewpoint 9: Lochranza, Arran (night)

Viewpoint 18: Mullach Buidhe near Beinn Bhreac (night)

Appendix 3 Additional Environmental Information in relation to Ancient Woodland (Presented Separately)

Appendix 3.1 - Survey findings and detailed assessment of Ancient, Veteran and Notable Trees and Native woodlands, hedgerows and individual trees of high biodiversity value as;

Appendix 3.2 - A tree stock overview plan

Appendix 3.3 - A tree constraints plan, including root protection zones

Appendix 3.4 - A tree survey schedule in accordance with BS5837 (2012)

Appendix 3.1 Survey Findings

A survey of arboricultural features within Ancient Woodland Inventory (AWI) sites along the existing timber haul road, was undertaken in September 2023. The survey area comprised a 20 m buffer of the existing Forestry Land Scotland (FLS) timber haul road serving the Skipness and Corranbuie woodland areas, together with adjacent areas of woodland.

The survey was undertaken in line with the guidance set out within BS5837 (2012) 'Trees in relation to design, demolition and construction – Recommendations' including quality grading and indications of above ground (tree canopy extent) and below ground (root protection area) constraints.

The survey recorded the presence of 121 arboricultural features comprising 75 individual trees and 46 groups of trees.

- A tree stock overview plan is presented as **Appendix 3.2**.
- A tree constraints plan, including root protection zones is presented as **Appendix 3.3**.
- The tree survey schedule in accordance with BS5837 (2012) is presented in **Appendix 3.4**.

Ancient, Veteran and Notable Trees

No arboricultural features, including individual trees or groups of trees within the survey area, were identified to be ancient, veteran or notable trees in accordance with a RAVEN assessment. The root protection zones of any such trees should they be present in the wider local area are therefore located outwith the area potentially impacted by track widening required to facilitate the proposed Development ('the proposed access track'). As such, there will be no adverse impacts upon the ecological condition of any such tree.

Native Woodlands, Hedgerows and Individual Trees of High Biodiversity Value

The existing timber haul road, typically between 3 m and 4.5 m width surfaces track, is devoid of woodland (see Tree Stock Overview Plan, **Appendix 3.2**).

The composition of arboricultural features within the survey area either side of the existing timber haul road is predominantly comprised of native species, including birch, rowan, grey willow, pine, hazel, ash, oak, holly, alder with a small number of non-native conifers and broadleaf specimens including Sitka spruce, larch and sycamore present. Woodland within the survey area, with the potential to be impacted by the proposed access track is therefore reasonably identified as semi-natural mixed native woodland.

Woodland areas within the survey area do however, represent a very small proportion of the wider AWI sites and connected woodland areas through which the existing timber haul road passes.

There are no hedgerows within the survey area with the potential to be impacted by the proposed access track.

NPF4, in relation to Policy 6 ii, does not define “individual trees of high biodiversity value”. In the absence of this, it is therefore necessary to assign a measurable diversity and scale of tree features, which may support/or be important for biodiversity.

An appropriate, recognisable and transferable scale of characteristics in identifying trees of high biodiversity value and applied in this case is “veteran characteristics”. Veteran trees may not be very old, but support decay features, which contribute to their often exceptional biodiversity value.

In assigning “veteran characteristics” industry standard guidance includes:

With reference to Natural England’s Biodiversity Metric 3.1, veteran trees can be classified if they have four out of the five following features:

1. Rot sites associated with wounds which are decaying >400 cm².
2. Holes and water pockets in the trunk and mature crown >5 cm diameter.
3. Dead branches or stems >15 cm diameter.
4. Any hollowing in the trunk or major limbs.
5. Fruit bodies of fungi known to cause wood decay

With reference to the RAVEN assessment, veteran trees can be classified if they have a very large girth and qualify under either Step Two or Step Tree of the assessment.

Some individual trees and groups of trees located within the survey area, predominantly English oak specimens, were found to exhibit some features associated with veteran trees such as split branches, crevices and rot and were associated with various mosses, lichens and ferns. However, such trees did not exhibit sufficient features to classify them as veteran trees, and therefore of exceptional, or at least high biodiversity value, in accordance with industry standard good practice guidance.

Adopting scales of transferable characteristics, there will be no adverse impacts upon any trees of a high biodiversity value during works for the proposed access track.

Adopting a more precautionary approach in the absence of definition within NPF4, arboricultural features with some higher level of local biodiversity value could be defined as high quality mature trees/groups of trees. This approach considers the overall quality of individual tree/groups of trees and remaining contribution of some or possibly emerging “veteran characteristics” to the biodiversity interest of the surrounding woodland area over much of the lifetime of the proposed Development i.e. the individual trees/groups of trees estimated remaining life expectancy, in accordance with BS5837 (2012).

Under this definition, arboricultural features of higher biodiversity value within the survey area includes 30 trees/groups of trees assigned a BS5837 (2012) A1, A2 or A3 category classification as detailed in the tree survey schedule (**Appendix 3.4**). Trees primarily comprise English oak specimens.

Ancient Woodland

This section provides an overview of arboricultural features within AWI sites within the survey area either side of the existing timber haul road

Note: there are a number of arboricultural features identified in the tree survey schedule (**Appendix 3.4**) which are not located in an AWI site and are therefore discounted from discussion in relation to the potential for impacts upon ancient woodland. These are as follows:

G117
G3
G41
T107
T116
T39
T40
T95

Bardaravine Wood AWI (Wood ID 23,594)

Classification - Ancient (of semi-natural origin)

The existing timber haul road and adjacent areas through the Bardaravine Wood AWI Site was established to be largely cleared of woodland (without tree cover) to accommodate the Tarbert Holiday Park (see Tree Stock Overview Plan and Tree Constraints Plan).

Woodland within the survey area includes an area of planted Scots pine (G68) and areas of young to semi-mature colonising native species, with limited connectivity to wider woodland (G66 and G69). The latter are comprised of planted and regenerating woodland stock within a previously felled area (see Tree Stock Overview Plan, Tree Constraints Plan and Tree Survey Schedule).

No individual trees within the survey area supported veteran characteristics and no trees/groups of trees were classified as A1, A2 or A3.

It can therefore be ascertained that the survey area within this AWI site supports Ancient Woodland in the context of its AWI classification i.e., it supports some woodland coverage, but not necessarily of ancient/veteran character with high biodiversity interest.

Achachoish Plantation (Wood ID 23,581)

Classification: Long-Established (of plantation origin)

The existing timber haul road through this AWI Site was established to be cleared of woodland (without tree cover) as shown on the Tree Stock Overview Plan. The existing timber haul road serving as a linear fragmentation of the AWI Site.

A small number of individual trees within the survey area supported veteran characteristics and which provide biodiversity interest, but do not currently support sufficient characteristics to classify the trees as Ancient, Veteran or Notable trees with high biodiversity interest.

8 trees were classified as A1, and as such may have some level of local biodiversity interest.

It can therefore be ascertained that the survey area within this AWI site supports Ancient Woodland in the context of its AWI classification i.e., it supports woodland coverage, but not necessarily of ancient/veteran character with high biodiversity interest.

Achachoish Plantation (Wood ID 23,590)

Classification: Ancient (of semi-natural origin)

The existing timber haul road through this AWI Site was established to be cleared of woodland (without tree cover) as shown on the Tree Stock Overview Plan. The existing timber haul route serving as a linear fragmentation of the AWI Site.

A small number of trees/groups of trees with the survey area supported veteran characteristics (e.g. minor deadwood) and which provides some biodiversity interest, but no trees were identified to currently support sufficient characteristics to classify them as Ancient, Veteran or Notable trees with high biodiversity interest.

7 trees/groups of trees were classified as A1, and as such may have some level of local biodiversity interest.

It can therefore be ascertained that the survey area within this AWI site supports Ancient Woodland in the context of its AWI classification i.e. it supports woodland coverage, but not necessarily of ancient/veteran character with high biodiversity interest.

Achachoish Plantation (Wood ID 23,591)

Classification: Ancient (of semi-natural origin)

The existing timber haul road through this AWI site was established to be cleared of woodland (without tree cover) as shown on the Tree Stock Overview Plan. The existing timber haul route serving as a linear fragmentation of the AWI site.

A small number of trees/groups of trees (12 features) within the survey area supported veteran characteristics (minor deadwood, branch failure wounds) and which provide some biodiversity interest, but no trees were identified to currently support sufficient characteristics to classify them as Ancient, Veteran or Notable trees with high biodiversity interest.

A small number of ash trees were identified as having advanced ash dieback disease.

12 trees/groups of trees were classified as A1, A2, or A3, and as such may have some level of local biodiversity interest.

It can therefore be ascertained that the survey area within this AWI site supports Ancient Woodland in the context of its AWI classification i.e., it supports woodland coverage, but not necessarily of ancient/veteran character with high biodiversity interest.

Unnamed (Wood ID 23,586)

Classification: Other (on Roy map)

The existing timber haul road through this AWI Site was established to be cleared of woodland (without tree cover) as shown on the Tree Stock Overview Plan. The existing timber haul route serving as a linear fragmentation of the AWI Site.

The survey area within this AWI site, supports very limited arboricultural features and which includes a single group of trees as summarised below. Extensive areas of the AWI site had been recently clearfelled at the time of survey.

No trees within the survey area supported veteran characteristics (all C1 or C2) or were considered to have some level of local biodiversity interest.

It can therefore be ascertained that the survey area within this AWI site supports Ancient Woodland in the context of its AWI classification i.e., it supports some woodland coverage, but not necessarily of ancient/veteran character with high biodiversity interest.

Recommended *Mitigation*

- Works to A1, A2 or A3 category trees/groups of trees would be confirmed and undertaken under the supervision of an Ecological Clerk of Works, as committed to within the EIA Report (Section 8.7.2.3 in Chapter 8). Where possible works would be avoided by micro-siting.
- Planting of oak trees (from source seed) within Unit 3, or in adjacent AWI areas, monitored and protected over the operational lifetime (i.e. 40 years).
- In consultation with the Woodland Trust and FLS:
 - Identify tree specimens within the survey area which could be managed to prolong life, improve quality and biodiversity interest, and which would be monitored and protected in so far as is possible over the operational lifetime of the Proposed Development.
 - Identify the potential for creation of standing deadwood within AWI sites.
 - Identify non-native tree specimens or specimens exhibiting disease for removal.

The above may require the identification of additional trees over the lifetime of the proposed Development, subject to FLS felling requirements, other consents and/or to control disease/public safety.