Balliemeanoch Pumped Storage Hydro

Environmental Impact Assessment Report

Volume 5: Appendices
Appendix 6.5: Bats

ILI (Borders PSH) Ltd

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Quality Information

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Revision History

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1	July 2024	Submission	DL	David Lee	Technical Director

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1.Introduction

This appendix accompanies *Chapter 6: Terrestrial Ecology* of the EIAR *(Volume 2 Main Report)*. It describes in detail the desk study and field survey carried out to establish the baseline conditions with respect to bats. This appendix is supported by the following figures located within *Volume 3 Figures*:

- Figure 6.11 Bat survey areas, transect routes and static detector locations;
- Figure 6.12 Bat roost suitability assessment results;
- Figure 6.13 Bat transect survey results.

Throughout this appendix, species are given their common and scientific names when first referred to and their common names only thereafter. All distances are cited as the shortest distance 'as the crow flies', unless otherwise specified. Locations are given as Ordnance Survey Grid References (OSGR).

2.Legislative and Planning Policy Context

2.1. Relevant Planning Policy

Relevant national and local planning policy is discussed in *Chapter 6: Terrestrial Ecology* of the EIAR *(Volume 2: Main Report)*.

Argyll and Bute Local Biodiversity Action Plan

The local biodiversity action plan for Argyll is the Argyll and Bute Local Biodiversity Action Plan (2010-2015) (https://www.argyll-bute.gov.uk/sites/default/files/migrated_files/Unknown/AandB%2520BAP%2520Draft.pdf), (herein referred to as the 'LBAP'). Details of this plan relevant to the Development, and of the Biodiversity Technical Note for Planners and Developers (https://www.argyll-bute.gov.uk/sites/default/files/migrated_files/biodiversity_technical_note_feb_2017_4.pdf) produced by Argyll and Bute Council, are provided in *Chapter 6: Terrestrial Ecology* of the EIAR (*Volume 2: Main Report*).

Specifically relevant to this appendix, the LBAP's 'Species Selected for Action' lists soprano pipistrelle *Pipistrellus maeus*, brown long-eared bat *Plecotus auritus* and noctule bat *Nyctalus noctula*.

3.Methods

All species of bat found in Scotland are protected under the Habitats Regulations, and most that occur in Scotland are also SBL priority species. All bat species are consequently considered to be notable in this EIA.

3.1. Desk Study

A desk study was carried out to identify:

- International nature conservation designations for which bats are qualifying/notified species within 10 km of the Development Site;
- National statutory nature conservation designations for which bats are qualifying/notified species within 2 km of the Development Site;
- Local non-statutory nature conservation sites within 1 km of the Development for which bats are an identified reason for designation or, where no designation information is available, for which bats are likely to be part of the reason for site selection;
- Records of bats within 2 km of the Development Site.

The distances used in the desk study are hereafter referred to as the 'study area'. The desk study was carried out using the data sources detailed in *Table 1*.

Table 1. Desk Study Data Sources

Data Source	Date Last Accessed	Data Obtained
Argyll and Bute Council website (https://www.argyll-bute.gov.uk/)	30 October 2023	• Local Development Plan policies relevant to nature conservation. • Argyll and Bute LBAP information. • Relevant planning applications which could give rise to cumulative effects.
Argyll and Bute Council Open Data website (https://data-argyll-bute.opendata.arcgis.com/datasets/d05f7337b41e48b4af933404dc0592a2/explore)	06 July 2023	• Local non-statutory nature conservation designations within 1 km of the Development Site.
Highland Biological Records Group (HBRG)	11 August 2023	• Records of important ecological species, obtained via the National Biodiversity Network (NBN) (see below – the Highland Biodiversity Recording Group (HBRG) advised that records were uploaded to NBN and should be obtained from there).
NatureScot SiteLink website (https://sitelink.nature.scot/home)	02 August 2023	• Information on international and national statutory designations.
NBN Atlas Scotland (https://scotland.nbnatlas.org/)	11 August 2023	• Commercially-available records of protected and notable mammals from the last twenty years (i.e. since 2003).
Ordnance Survey (OS) 1:25,000 maps	31 October 2023	• Habitats and connectivity relevant to interpretation of planning policy and potential presence of important features that could be used by roosting, commuting and foraging bats.
OS 1:50,000 maps and Bing aerial (https://www.bing.com/maps/)	31 October 2023	

3.2. Field Survey

Fieldwork comprised bat roost suitability assessment (from ground level, and, for some trees, inspection at height and/or with endoscope) followed by roost emergence/re-entry survey where appropriate, general bat activity (transect) surveys, and static bat detector monitoring within the Development Site. A description of the field survey methods employed is provided below.

Methods followed guidance published by the Bat Conservation Trust (BCT) (Collins, 2016). This guidance has recently been superseded (Collins, 2023), after the completion of all fieldwork. This is discussed in the Limitations.

Bat roost surveys (ground level roost assessment, aerial / endoscope inspection and emergence / re-entry survey) took place where there were features with potential suitability at potential risk from the Development, which were mainly localised patches of mature woodland. Activity surveys (transects and static bat detector surveys) also took place on open moorland. The areas in which bat surveys took place have been split into the following, for which the methods occasionally differ and results are presented separately:

- **Moorland Zone** – the central upland areas containing the proposed Headpond and associated infrastructure; The survey area at this location comprised all above ground infrastructure (proposed Headpond, embankments, access tracks etc) plus a minimum 30 m buffer;
- **Allt a' Chrosaid** – mature woodland following the Allt a' Chrosaid watercourse, south-east of Loch Awe, and partly within the Loch Awe area. In 2019, the survey area in the Allt a' Chrosaid comprised a 50 m buffer around an early iteration of a proposed access route. In 2021 and 2023 this area was surveyed using the buffers described as for Loch Awe (below);
- **Loch Awe** – the outfall area and surrounding woodland along the loch edge, extending up to encompass some of the Allt a' Chrosaid woodland; This area was not surveyed in 2019. In 2021 and 2023 the survey area at Loch Awe comprised a 50 m buffer around the field containing proposed infrastructure;
- **Inveraray** – includes Inveraray north-east (following an existing track running to north and east of Inveraray), and Inveraray south-west (largely following Upper Avenue, an existing track running west and south of Inveraray to the proposed jetty). This area was not surveyed in 2019. In 2021 the survey area at this location comprised all above ground infrastructure in this area (proposed new and upgraded access tracks, temporary construction compounds and jetty, as known at the time of survey), plus up to a 50 m buffer on the planned works at the time. The same area was covered in 2023 in Inveraray south-west. The

Development design at Inveraray north-east part was confirmed prior to the 2023 surveys, and these therefore covered a smaller 30 m buffer in this area only (as shown on *Figure 6.11*).

Survey at Upper Sonachan was not carried out because there are no features likely to support roosting bats, and the habitat is suboptimal at best for foraging / commuting bats (see below).

Additionally, prior to confirmation that the Development would not include any works there, bat surveys were carried out along the existing forest / farm track at Three Bridges in 2021 and 2023. The survey area at this location comprised the existing track plus a minimum 30 m buffer.

Surveys were carried out within buffers around the above ground infrastructure of the Development Site in these areas as it stood at the time of survey. The survey buffers are referred to together as the 'survey area' and are described below. The survey areas used in 2019, 2021 and 2023 are shown on *Figure 6.11*. Note that since the surveys took place the Development footprint has evolved. However, the survey areas were planned to cover a larger than needed area to allow for movement of the Development, and as such this is only a limitation in localised areas. Notes on limitations to the surveys are provided in below.

The above are hereafter referred to together as the 'survey area', and are shown on *Figure 6.11*.

3.2.1. Bat suitability assessment

Ground level roost assessment

The bat roost suitability (BRS) of all trees and structures within Development Site plus a minimum 30 m buffer (as shown on *Figure 6.11* and *Figure 6.12*) was assessed following best practice guidance in use at the time of survey (Collins, 2016).

Potential roost features (PRF) were identified from the ground and externally (i.e. without entering buildings and without use of an endoscope), using binoculars and torch where necessary, and trees and buildings were classified as having 'Negligible', 'Low', 'Moderate' or 'High' BRS, according to the definitions provided in Collins (2016).

PRFs searched for included suitable holes, cracks or splits in trees, and any possible ingress points to buildings or structures. Where such features existed, searches were made as far as possible for evidence of bat use such as droppings, staining, foraging remains, auditory evidence and the presence of live or dead bats.

The general suitability of the habitat within the Development Site was also classified according to the definitions provided in Collins (2016) (see *Table 2*). The general habitat suitability of the Moorland Zone and Inveraray areas were determined prior to bat activity surveys in 2019 and 2021 respectively.

Table 2. Bat roosting and commuting/foraging suitability categories (taken from Collins (2016))

Suitability	Description of roosting habitats	Description of commuting and foraging habitats
Negligible	Negligible habitat features likely to be used by roosting bats.	Negligible habitat features likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream but which is isolated (i.e. not very well connected to the surrounding landscape by other habitats). Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more PRFs that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more PRF(s) that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by

Suitability	Description of roosting habitats	Description of commuting and foraging habitats
	periods of time due to their size, shelter, protection, conditions and surrounding habitat.	commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Close to and connected to known roosts.

The assessment was carried out between 2019 and 2023 and was updated as required based on changes to the layout of infrastructure associated with the Development, or to prevent results becoming invalid due to passage of time. Following changes in the design of the Development, the locations of an access track and temporary works compound to the west of Balliemeanoch Farm have not been surveyed (see Limitations).

Significant parts of the Development Site (including the Moorland Zone, Upper Sonachan and Blarghour) are obviously unsuitable for roosting bats, containing neither trees nor viable structures, or only large blocks of commercial conifer plantation of Negligible suitability for roosting bats. The below locations were subject to ground level roost assessment:

- **Allt a' Chrosaid** – initial ground level roost assessment on 23/25 April, and 07/08 May 2019. Several trees with roost suitability were subject to aerial/endoscope inspection and emergence / re-entry survey in 2019. An update of the ground level roost assessment was carried-out on 10 May 2021, to check the relevant trees had not fallen or required reclassification, and to note any additional suitable trees;
- **Loch Awe (excluding Allt a' Chrosaid)** – initial ground level roost assessment on 10 and 12 May 2021. Several trees with roost suitability were subject to aerial/endoscope inspection the same year. An update of the ground level roost assessment was carried out on 18 May 2023, to check the relevant trees had not fallen or required reclassification, and to note any additional suitable trees;
- **Inveraray** – initial ground level roost assessment on 12, 14, 28 – 30 April and 10 June 2021. Several trees / structures with roost suitability were subject to aerial/endoscope inspection the same year. An update of the ground level roost assessment was carried out on 09, 12 and 15 May 2023, to check the relevant trees had not fallen or required reclassification, and to note any additional trees with suitability.

Although now not relevant since the Development will now not involve works there, initial ground level roost assessment was also carried-out at Three Bridges on 26 April 2021. No aerial/endoscope inspections were carried out here. An update of the ground level roost assessment, for accessible trees in this area, was carried out on 31 May 2023.

Aerial / endoscope inspection of PRFs

Trees identified by the ground level roost assessment as having Moderate or High BRS were then subject to aerial survey (where appropriate and possible) using specialist equipment (ladder, rope and harness), and where possible PRF were re-inspected with an endoscope, to gain more detailed information and further inform BRS assessment and further survey requirements. All PRF were inspected using a torch and/or endoscope, to search for presence or evidence of bats. Evidence searched for included droppings, staining, foraging remains, auditory evidence and sightings of live or dead bats. Descriptions were recorded of all PRF on each tree. Features identified as having BRS during the ground level roost assessment but found to be unsuitable during aerial / endoscope inspections were also described and recorded. During all aerial / endoscope inspections, at least one member of the survey team held a valid bat survey license issued by NatureScot.

The aerial/endoscope inspections took place as follows:

- **Allt a' Chrosaid** – 12 and 13 June 2019;
- **Loch Awe (excluding Allt a' Chrosaid)** – 01 July 2021;
- **Inveraray** – between 28 June and 01 July 2021.

3.2.2. Emergence / re-entry survey

Dusk emergence and dawn re-entry surveys were carried out in 2019 on trees with BRS (recorded by the above surveys) likely to be directly impacted or disturbed by the Development (as known at the time of survey). Only trees in the Allt a' Chrosaid area were subject to emergence / re-entry survey.

These surveys were carried out by suitably qualified AECOM ecologists in accordance with industry-standard recommendations applicable at the time (Collins, 2016) as far as was practicable. During the emergence and re-entry surveys, the PRF in relevant trees were watched carefully by experienced bat surveyors and, if any bats emerged, the surveyors noted the exact location, species (using bat detection equipment, see below) and number of bats emerging (where light conditions allowed). General bat activity was also noted during the surveys to provide further information on use of the wider area by bats.

Dusk emergence surveys commenced approximately fifteen minutes prior to sunset and ended at least 1.5 hours after sunset. Dawn emergence surveys commenced at least 1.5 hours before sunrise and ended approximately fifteen minutes after.

The surveyors used Elekon Batlogger M ('Batlogger') detectors to detect, identify and record bats and their calls. The Batloggers recorded continuously throughout the surveys in real-time (i.e. including both calls and gaps, which permits distinctive 'rhythms' to be identified) and in full spectrum (i.e. all frequencies used by bats were recorded continuously).

Note that since these surveys, additional guidance has been produced. An Interim Guidance Note produced by the BCT (2022) suggests the use of infra-red (IR) cameras during emergence / re-entry survey, however this technology was not widely in use at the time of surveys, and was not used.

Due to the fluid nature of the Development design, and the resulting changes to the zone of construction / construction disturbance over the course of the surveys, no emergence / re-entry surveys were carried out at Loch Awe. This is due to the likelihood of further changes to the design that would have likely caused a significant amount of abortive work.

Allt a' Chrosaid

Dusk emergence and dawn re-entry surveys were carried out on four trees (T03, T15, T17 and T29). Detailed survey timings and weather conditions can be found in *Table 3*.

Note that following updates to the design, trees T15, T17 and T29 are now more than 30 m from the Development, thus only tree T03 is now relevant in the Allt a' Chrosaid area. These trees are shown on *Figure 6.12*.

Table 3. Allt a' Chrosaid Woodland: Details of emergence and re-entry surveys

Survey date	Tree ref	Sunset/ sunrise	Start time	End time	Weather conditions
19 June 2019	T15, T17, T29	22:12	21:57	23:43	Light drizzle throughout (3/5). Full cloud. Temperature 13°C.
03 July 2019	T03	04:38	03:00	04:52	No precipitation. No wind. Full cloud. Temperature 9°C - 13°C.
15 July 2019	T03, T15	21:58	21:45	23:28	No precipitation. No wind. Full cloud. Temperature 16°C.
16 July 2019	T17, T29	04:55	03:25	05:10	No precipitation. Light air. Clear. Temperature 14°C.
06 August 2019	T03, T17	05:32	04:02	05:45	No precipitation. No wind. Full cloud. Temperature 15°C-16°C.

3.2.3. Bat activity surveys

Transect Surveys

Two bat activity survey (transect) routes were devised, covering the Moorland Zone (2019) and Inveraray (2021).

The transect routes were designed to cover typical examples of habitat suitable for bat foraging and commuting within the Development Site, or habitat that would be particularly impacted by the Development. In particular, the transect routes targeted habitat or linear features that may be important to local bat populations and would be impacted by the Development. The suitability for foraging / commuting bats of the Moorland Zone and of Inveraray were determined separately, and in accordance with Collins (2016) (see *Table 2*).

Transects followed the guidelines in Collins (2016) and comprised walking the pre-determined transect at a frequency determined by the overall suitability of the habitats for foraging / commuting bats. The transects were walked in differing configurations across the visits to allow temporal variations in bat activity across the transect route to be recorded. The surveyors used Batlogger detectors to detect, identify and record bats and their calls, and recorded additional detail (direction of flight, number of bats etc.) using ESRI FieldMaps on a GPS-enabled tablet. Each bat call registration is hereafter referred to as a 'pass'. Note that bat passes do not indicate individual bats, as one bat may pass the detector several times in a short period. Analysis of recorded bat calls was carried out using Kaleidoscope Pro software, which enables identification to species level (for most species).

Bat suitability of the Moorland Zone and Inveraray transect areas were deemed to be Moderate and High respectively. In accordance with Collins (2016), transect surveys were therefore carried out monthly throughout the main bat activity season (May – September in Scotland), as far as this was possible. This was carried out, with the exception that the recommendation in Collins (2016) for one of the surveys to comprise a dusk and pre-dawn (or dusk to dawn) survey within one 24 hour period did not take place (see Limitations).

Details of the surveys for each transect route are provided below.

Transect 1 (Moorland Zone and Loch Awe)

In 2019, transect surveys covered the proposed Headpond area including Lochan Airigh and surrounding moorland habitat, the route following the track down the slope towards Loch Awe, including pastures associated with Balliemeanoch Farm and a section of tree-lined road. This transect route (hereafter 'Transect 1') is shown on Figure 6.11 and Figure 6.13. Details of the conditions during Transect 1 surveys are shown below in *Table 4*.

Table 4. Details of Transect 1 (Moorland Zone and Loch Awe) surveys

Survey Date	Time of sunset/ sunrise	Start time	End time	Weather conditions
20 May 2019	21:37	21:50	01:10	No precipitation. Still. Cloud 50-90%. Temperature 6-10°C.
10 June 2019	22:06	22:06	23:34	No precipitation. Light air. Cloud 40%. Temperature 10°C.
11 June 2019	22:07	22:16	00:05	No precipitation. Light/gentle breeze. Cloud 100%. Temperature 9-11°C.
16 July 2019	21:57	21:58	00:45	No precipitation. Light breeze. Cloud 90%. Temperature 14°C.
5 August 2019	21:21	21:19	23:00	No precipitation. Temperature 14-20°C.
9 September 2019	19:55	20:00	23:50	No precipitation. Light/gentle breeze. Cloud 25-90%. Temperature 10-14°C.

Note that the June transect finished slightly early on the 10 June due to an accident involving a surveyor, and was completed on the following night (see Limitations).

Transect 2 (Inveraray)

In 2021, transect surveys covered the north-east and south-west tracks and surrounding farmland / woodland in Inveraray, and crossing the River Aray to the north. This transect route (hereafter 'Transect 2') is shown on Figure 6.11 and Figure 6.13. Details of the conditions during Transect 1 surveys are shown below in *Table 5*.

Table 5. Inveraray: Details of Transect 2 surveys

Survey Date	Time of sunset/ sunrise	Start time	End time	Weather conditions
12 April 2021	20:22	20:22	22:55	No precipitation. Temperature 5-9°C. Previous day cool, clear, light breeze.
10 May 2021	21:19	21:23	23:55	Light showers. Gentle breeze. Cloud 100%. Temperature 12-13°C.
10 June 2021	22:06	22:03	23:36	No precipitation. Light air. Cloud 100%. Temperature 16°C. Light rain previous evening and previous day humid.
No survey carried out in July				
20 August 2021	06:01	03:17	06:02	No precipitation. Light air. Cloud 80%. Temperature 11°C.
28 September 2021	19:03	19:15	21:04	Light rain in middle of survey. Still. Cloud 10–30%. Temperature 10°C.

Static bat detector monitoring

Static bat detectors were deployed to record general bat activity over an extended period of time in locations at or near areas of most significant habitat loss, with a minimum of one location per transect (see above), targeted to where the most significant works would occur.

The detectors were programmed to start recording 30 minutes prior to sunset and to finish recording 30 minutes after sunrise. All detectors were deployed with the same settings, and the same model (Wildlife Acoustic SM4+) was used as far as practicable. The static detectors were set with standard settings such that bat passes were

recorded in 15 second sound files. For the purposes of static monitoring analysis, the presence of a bat call within a single sound file constituted a single pass.

Static bat detectors were deployed only within the Moorland Zone and Allt a' Chrosaid areas, at four locations between May and August 2019. Detectors were deployed over two main periods; May/June and July/ August, however the exact dates each detector actively recorded during each period varied.

SD1 did not record between 31 May and 03 June due to the memory being full, or after the 16 July for an unknown technical issue.

Static bat detector locations are shown on *Figure 6.11* and described in *Table 6*, which also gives the monitoring survey details.

Table 6. Moorland Zone / Allt a' Chrosaid: Static Detector Locations

Ref	Location / habitat	Active recording periods	OSGR
SD1	**Allt a' Chrosaid** On the edge of the Allt a' Chrosaid woodland, approximately 180 m from proposed Tailpond infrastructure and close to proposed access track (on a previous iteration of the proposed access track, which was afterwards shifted to the existing farm track). Adjacent to highly suitable foraging habitat including semi-natural woodland, a watercourse, rough grassland, marsh and field edges, approximately 180 m from and connected to the edge of Loch Awe with nearby known roosts and numerous trees with PRFs. Surrounding habitat also includes agriculturally-improved fields in a lowland setting.	20 – 31 May and 03 June – 02 July (40 days); and, 02 – 16 July (14 days). Total = 54 days	NN 01090 16103
SD2	**Allt Beochlich – Reservoir** Adjacent to the existing reservoir on the Allt Beochlich watercourse, near the existing and proposed access track and proposed temporary construction compound TC07. Approximately 15 m downstream of the reservoir outfall, and near commercial plantation. Slightly more sheltered than the vicinity of the proposed Headpond but still within exposed upland habitat. No trees / structures with PRFs nearby.	20 May – 02 July (43 days); and, 02 July – 06 August (35 days). Total = 78 days	NN 02907 15351
SD3	**Allt Beochlich – Ravine** Adjacent to a steep ravine on the Allt Beochlich watercourse, approximately 500 m upstream of the Allt Beochlich Reservoir and approximately 200 m downstream of a proposed access track crossing point and permanent compound on the watercourse for water flow regulation (PC90). Surrounding land is open and exposed upland moorland. No known trees / structures with PRFs within 1.3 km (nearer trees and structures are unsuitable Sitka spruce/reservoir structures).	29 May – 02 July (34 days); and, 02 July – 07 August (36 days). Total = 70 days	NN 03567 15852
SD4	**Lochan Airigh** Adjacent to Lochan Airigh, within the proposed Headpond area. Surrounding land is open and exposed upland moorland. No known trees / structures with PRFs within 2.1 km (nearer trees and structures are unsuitable Sitka spruce/reservoir structures).	21 May – 02 July (42 days); and, 02 July – 03 August (32 days). Total = 74 days	NN 04193 16427

3.3. Data analysis

Analysis of recorded bat calls was carried out using Kaleidoscope Pro software, which allows identification to species level where possible (in some cases, such as *Myotis* species, this may not be possible with complete certainty based on call parameters alone, although in view of geographic location and habitat the most likely species can usually be stated). All recordings from the walked bat activity surveys and static bat detectors were first processed using the Kaleidoscope Pro auto-identification feature. An ecologist experienced in bat call analysis then checked a proportion of auto-analysed recordings, including a minimum of 5% of common pipistrelle and soprano pipistrelle call registrations, 100% of registrations of all other bat species, and at least 5% of noise files. This analysis was then audited by an expert bat call ecologist to verify identifications.

It was intended to use the Mammal Society Ecobat online tool[1] to determine whether the recorded bat data is typical, poorer or more notable than bat data held by Ecobat for the region in question. However, Ecobat was offline at the time of producing this Report. In the absence of Ecobat, a qualitative assessment of the importance of the bat populations within the Development area was undertaken.

3.4. Limitations

The aim of the desk study was to help characterise the baseline context of the Development and provide valuable background information that may not be captured by field survey alone. Information obtained during a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular species does not necessarily mean that they do not occur in the study area. Likewise, the presence of records for particular species does not automatically mean that these still occur within the area of interest or are relevant to the Development.

All bat surveys described were undertaken within the optimal period described in best practice guidance at the time of survey (Collins, 2016), and this optimal period remains the same in subsequent guidance (Collins, 2023). However, a lack of evidence of bat species identified by field survey does not preclude their future occurrence, and the likelihood of changes in the baseline described increases with elapsed time.

The survey methods followed guidance published by BCT (Collins, 2016), the guidance in use at the time of survey. This was superseded by Collins (2023) in September 2023, and other guidance was released regarding the use of infra-red cameras (BCT, 2022), however these were published after completion of all fieldwork. Survey methods under the updated Bat Survey Guidelines (Collins, 2023) would not significantly differ from the methods used, and would not produce significantly different results. The use of infra-red cameras (BCT, 2022) could have improved the quality of the data obtained during emergence / re-entry surveys, however these were not widely used at the time of survey.

NatureScot states that bat surveys normally remain valid for two survey periods (i.e. in general, two years). In this Appendix surveys carried out within this timeframe (2022 survey season onwards, inclusive, at the time of writing) are termed “recent”. Some of the data, in particular the results of some transect surveys, emergence surveys, and aerial / endoscope inspections are older than this. However, the majority of trees with BRS were re-checked in 2023 and in general exhibited no or minor changes in BRS, and the habitats within the Site have not changed between 2019 and 2023. It is therefore likely that both the BRS of individual trees/structures and overall habitat suitability of the Site for bats are very similar to the situation at the time of survey, and consequently local bat status is unlikely to have significantly changed between the time of the older surveys and the time of writing.

No emergence / re-entry surveys were carried out in 2021 or 2023, and no aerial / endoscope inspections were undertaken in 2023. This is because the design of the Development evolved over time resulting in several changes to the extents of areas potentially affected by works, and further changes were expected that were liable to result in a significant amount of abortive tree survey work. Additionally, access and safety limitations prevented aerial / endoscope inspection of all Moderate / High BRS trees at Loch Awe, and in some cases roost suitability was considered present in earlier surveys and not identified until a late date. These are limitations, although not considered major one for the purposes of judging overall likely impact on bat conservation status, considering the relatively few relevant trees compared with the known plentiful resource even within the surveyed areas (and undoubtedly still more in nearby woodland outside the surveyed areas), and the prevalence of common bat species in the transect and static detector monitoring data.

No emergence / re-entry surveys have been carried out on any of the trees or structures at Inveraray (or Three Bridges, although that area is now less relevant because the Development will not construct the access track here,

[1] http://www.ecobat.org.uk

and will only use it if already consented and constructed by Blarghour Wind Farm), and aerial / endoscope inspection of Moderate / High BRS trees was in 2021. In addition, not all Moderate / High trees were subject to aerial / endoscope inspection in 2021 due to access restrictions or safety concerns, or occasionally because they were not identified until 2023. However, this is not a significant limitation because the Development here largely uses existing forestry/estate tracks, and none of the relevant trees will be removed (seven BRS trees are immediately adjacent to these tracks, but will be retained).

Due to an evolution in the design of the Development, the locations of the temporary diversion track and temporary works compound (TC01) to the west and north-west of Balliemeanoch Farm were not subject to any ground level assessment (or other bat surveys). Some trees will be removed to facilitate the temporary diversion track, however these were observed during site visits as small and scrubby, and are not of sufficient age / size to support bat roosts. This is therefore not a significant limitation.

Collins (2016) recommends at least one dusk to dawn survey for areas with Moderate or High suitability for bats. This was not carried out in the moorland zone for safety reasons (given more remote and difficult terrain), but is inconsequential since static detector monitoring was carried out and is more than sufficient in more exposed upland environments. Dusk to dawn transects were not carried out at Inveraray, nor static bat detectors deployed, however, the transect data for Inveraray is sufficient given that the Development here largely follows existing access tracks, incurring negligible habitat loss or change. Since the habitat is very poor for bats at Upper Sonachan (dense upland Sitka plantation) (and also poor for much of Three Bridges and Blarghour, although these are now of limited relevance since the Development will not construct access tracks here), impact assessment for bats does not require activity surveys in these areas.

4.Results

4.1. Nature conservation sites with bat interests

There are no nature conservation sites designated for bats within the desk study search distances.

4.2. Desk study

No records of bats were returned by the NBN Atlas Scotland from the last 10 years from within 2 km of the Development. The most recent was a NatureScot record of more than 50 Daubenton's bat *Myotis daubentonii* bat from 2014, within a 2 km OS grid square spanning Loch Awe. No further information was provided though the record most likely referred to a large roost in Inverinan (there are no buildings within this 2 km OS grid square on the east bank of Loch Awe).

4.3. Bat habitat suitability assessment

The two main areas of the Development Site (the Moorland Zone/Loch Awe area and Inveraray) were assessed separately for their suitability for commuting and foraging bats.

Moorland Zone/Loch Awe

The Moorland Zone/Loch Awe area was assessed as having Moderate suitability habitat for commuting and foraging bats because, although the area as a whole is exposed to the elements and mostly lacks sheltered areas within which bats would preferentially forage, there are some features including lochans, streams and plantation edges which are connected to the wider landscape, in particular to more favourable foraging habitat around Lochan Romach, and to woodland downstream on the Allt Beochlich watercourse which links to Loch Awe and the woodland along its edge, and the Allt a Chrosaid area, within which are known bat roosts.

Inveraray

Inveraray was assessed as having High suitability for commuting and foraging bats due to the large extents of mature broad-leaved and mixed woodland, which contain numerous trees with BRS, in a more sheltered lowland environment. This woodland is connected to wider expanses in the surrounding landscape. The large expanses of grazed farmland often have scrubby or tree-lined field boundaries providing connectivity across the Site and beyond it. Further connectivity to the wider landscape is provided by watercourses of various sizes, many tree-lined. Furthermore, though outside of the Development Site, numerous vernacular buildings within Inveraray town and

nearby are within commuting distance of the Development Site for bats and of sufficient age and condition that some are likely to support roosting bats.

4.4. Bat roost suitability assessment

Bat roosts within the zone of construction or of possible construction disturbance, taken to be 30 m from the Development Site, were considered as part of the impact assessment.

A total of 60 trees have the suitability to support roosting bats within 30 m of the Development (excluding trees at Three Bridges, which is no longer relevant to the scheme).

In the below tables, where "BRS" is shown as "N/A", this indicates that the indicated survey did not take place. Moderate or High BRS trees where "BRS: Aerial / endoscope inspection" is shown as "N/A" include trees which could not be climbed or otherwise further inspected for safety reasons. Further survey of Low BRS trees is not required (Collins, 2016) and as such these were not climbed in the majority of cases.

The 'BRS: Final" is derived from a combination of aerial / endoscope inspection and/or the most recent bat roost suitably assessment results. Trees and structures are shown according to their BRS: Final on *Figure 6.12*. Where trees (and structures) are outside the zone of construction or of possible construction disturbance (more than 30 m) from the Development, or had a Negligible BRS: Final, these are shown as faded symbols and have not been labelled (except where they were subject to emergence / re-entry survey).

Details of the PRFs on all trees (and structures), including those beyond 30 m, are provided in the BRS Survey Details Annex (*Table 15* and *Table 16*). Photographs of trees with BRS are provided in the Photograph Annex.

Allt a' Chrosaid

The BRS assessment identified 32 trees with the potential to support roosting bats within the initial survey area which was based on a previous iteration of the Development. Of these, seven are within the current zone of construction or of possible construction disturbance (taken to be 30 m) of the Development. No structures with BRS were recorded.

Nine of the trees with High or Moderate BRS were within 30 m of a previous iteration of the Development and therefore received aerial / endoscope inspection in 2019. BRS was reviewed and revised as appropriate following these inspections.

The most significant finding was a Daubenton's bat maternity roost at tree T03 (within the current potential zone of construction disturbance) during aerial / endoscope inspection. Ten bats were observed within a crack on the underside of a branch approximately 3 m high with a clear drop-zone towards the adjacent stream. This tree was subject to three further bat emergence / re-entry surveys.

One tree (T17, now outside the potential zone of construction disturbance) was confirmed as a bat roost during the ground level roost assessment, where one unidentified bat was recorded in a callus roll on the trunk at 3 m height. This tree was subject to two bat emergence / re-entry surveys to determine the bat species.

The trees were rechecked in 2021 and no change in BRS was recorded.

No other bat roosts, or evidence of bat roosting, were found during any surveys in the Allt a' Chrosaid area.

The results of the ground level roost assessment and aerial / endoscope inspections in the Allt a' Chrosaid area are summarised below in *Table 7*. Only trees that are within 30 m of the current iteration of the Development, or which were subject to emergence / re-entry survey, are included.

Table 7. Allt a' Chrosaid: BRS Assessment Results

Tree ref	Tree species	BRS: Ground level assessment (2019)	BRS: Aerial / endoscope inspection (2019)	BRS: Final*	OSGR		Distance from Development	Impact from Development
T01	Mature oak	Low	N/A	Low	NN 16080	01133	7 m from track	Possible disturbance
T02	Mature oak with two leaders	Low	N/A	Low	NN 16069	01145	11 m from track	Possible disturbance

Tree ref	Tree species	BRS: Ground level assessment (2019)	BRS: Aerial / endoscope inspection (2019)	BRS: Final*	OSGR		Distance from Development	Impact from Development
T03	**Mature oak**	**High**	**High (Confirmed)**	**High (Confirmed)**	**NN 16070**	**01049**	**30 m from TC02**	**Possible disturbance**
T05	Hazel	Low	N/A	Low	NN 16029	01003	25 m from TC02	Possible disturbance
T11	Mature oak	High	Low	Low	NN 16112	01077	23 m from TC02	Possible disturbance
T12	Mature ash	Low	N/A	Low	NN 16123	01079	17 m from TC02	Possible disturbance
T15	**Oak with two trunks and sprouting ash**	**Moderate**	**Moderate**	**Moderate**	**NN 16042**	**01079**	**>30 m**	**None likely**
T17	**Mature oak with 3 trunks**	**Low (Confirmed)**	**Low**	**Low (Confirmed)**	**NN 16032**	**01070**	**>30 m**	**None likely**
T23	Oak	Moderate / Low	Low	Low	NN 16037	01033	29 m from TC02	Possible disturbance
T29	**Oak**	**Moderate**	**Moderate**	**Moderate**	**NN 16019**	**01038**	**>30 m**	**None likely**

Grey background = confirmed roost. ***Bold*** *= tree was subject to emergence/re-entry survey in 2019.*
**Also the result of the 2021 ground level assessment re-survey, which found no change from the 2019 surveys.*

Several additional trees with BRS were also identified during surveys, however following the refinement of the design, these are now more than 30 m from the Development (i.e. outside the zone of construction / possible construction disturbance). They have been excluded from *Table 7* (except where they were subject to emergence / re-entry survey) but are detailed in the BRS Survey Details Annex (*Table 15*) and shown unlabelled on *Figure 6.12.*

Loch Awe (excluding Allt a' Chrosaid)

The BRS assessments undertaken in 2021 and 2023 identified 22 trees with suitability to support roosting bats (six High, six Moderate and ten Low BRS) within the zone of construction / possible construction disturbance (taken to be 30 m) of the Development. Ten of these (three High, three Moderate and four Low BRS) will be lost during construction of the Tailpond. The remaining twelve trees (and any bat roosts therein, if present) are at risk of disturbance from construction works.

Trees identified as having BRS within 30 m of the Development (excluding those later assessed as Negligible – see below) and the possible impacts on these are summarised below in *Table 8*.

No structures with BRS were recorded.

Table 8. Loch Awe (excluding Allt a' Chrosaid): BRS Assessment Results

Tree ref	Tree species	BRS: Ground level assessment (2021)	BRS: Aerial/ endoscope inspection (2021)	BRS: Ground level assessment (2023)	BRS: Final	OSGR	Distance from Development	Impact from Development
Awe01	N/A	Low	N/A	Low	Low	NN 01104 16212	Within temporary compound	Possible disturbance
Awe03	Mature gnarly alder	Moderate	N/A	Moderate	Moderate	NN 00964 16324	In footprint of Tailpond	Will be lost
Awe05	N/A	High	N/A	High	High	NN 00970 16302	Adjacent to Tailpond	Will be lost
Awe06	Damaged alder	N/A	N/A	Low	Low	NN 00961 16292	In footprint of Tailpond	Will be lost
Awe07	Significantly damaged alder	High	N/A	High	High	NN 00951 16287	In footprint of Tailpond	Will be lost

Tree ref	Tree species	BRS: Ground level assessment (2021)	BRS: Aerial/ endoscope inspection (2021)	BRS: Ground level assessment (2023)	BRS: Final	OSGR	Distance from Development	Impact from Development
Awe08	Large mature ash	Moderate	N/A	High	High	NN 00972 16274	In footprint of Tailpond	Will be lost
Awe09	Mature alder	Low	N/A	Low	Low	NN 00969 16267	Adjacent to Tailpond	Will be lost
Awe10	Leaning alder	Low	N/A	Low	Low	NN 00935 16246	Adjacent to Tailpond	Will be lost
Awe11	Damaged alder	Low	N/A	Low	Low	NN 00945 16230	Adjacent to Tailpond	Will be lost
Awe12	Two mature oak	Low	N/A	Moderate	Moderate	NN 00917 16195	In footprint of Tailpond	Will be lost
Awe13	Mature damaged oak	Moderate	Moderate	High	Moderate	NN 00917 16183	Adjacent to Tailpond	Will be lost
Awe14	Alder	N/A	N/A	Low	Low	NN 00895 16147	23 m from temporary compound	Possible disturbance
Awe15	Dying alder	Low	N/A	Low	Low	NN 00879 16129	25 m from temporary compound	Possible disturbance
Awe19	Mature ash	Low	N/A	High	Low	NN 00851 15992	22 m from temporary compound	Possible disturbance
Awe20	Mature oak	High	High	High	High	NN 00863 15988	24 m from temporary compound	Possible disturbance
Awe21	Mature ash	Moderate	High	High	High	NN 00892 15997	22 m from temporary compound	Possible disturbance
Awe22	Mature oak	Moderate	Moderate	Moderate	Moderate	NN 00900 16001	20 m from temporary compound	Possible disturbance
Awe23	Dead unknown	Moderate	N/A	N/A	Moderate	NN 00902 16003	19 m from temporary compound	Possible disturbance
Awe24	Dead ash	Low	N/A	N/A	Low	NN 00901 16004	17 m from temporary compound	Possible disturbance
Awe25	Large ash	Moderate	N/A	N/A	Moderate	NN 00922 16006	21 m from temporary compound	Possible disturbance
Awe31	Large mature ash	High	N/A	N/A	High	NN 00960 16015	21 m from temporary compound	Possible disturbance
Awe32	Oak	Low	N/A	N/A	Low	NN 00987 16016	27 m from temporary compound	Possible disturbance

An additional two trees (Awe02, Awe04) were initially assessed as having BRS, but the PRFs were lost prior to the 2023 ground level assessment (they were in branches that had since fallen off the trees). These trees are now considered to have Negligible BRS.

Several additional trees with BRS were also identified during surveys, however following the refinement of the design, these are now more than 30 m from the Development (i.e. outside the zone of construction / possible construction disturbance) and are at no risk of being impacted. They have been excluded from *Table 8* but are detailed, along with the now Negligible trees mentioned above, the BRS Survey Details Annex (*Table 16*) and shown unlabelled on *Figure 6.12*.

Note that Awe20 also contained evidence of pine marten during the 2021 aerial / endoscope inspection. This is detailed in *Appendix 6.2 - Mammals* of the EIAR *(Volume 5: Appendices)*, where the associated pine marten den is referred to as "PM01".

Inveraray

The BRS assessments undertaken in 2021 and 2023 identified 31 trees / structures with the potential to support roosting bats within the zone of construction / possible construction disturbance (taken to be 30 m) of the Development. Five of these trees (one High, one Moderate and three Low BRS) are sufficiently close to the track upgrade that they are at risk lopping or loss (although tree loss will be avoided wherever possible). The remaining 24 trees and two structures (and any bat roosts therein, if present) are at risk of disturbance from construction works. An additional two trees were initially assessed as having BRS, but these were either discounted by aerial inspection in 2021 (IS37), or the tree had fallen prior to the 2023 ground level assessment (IN16).

One tree (IN63, now outside the potential zone of construction disturbance) was confirmed as a bat roost during the ground level roost assessment in 2021, where one bat (likely a brown long-eared) was recorded in a cracked beam at 2 m height.

Trees identified as having BRS within 30 m of the Development (excluding those later assessed as Negligible – see below) or which one is a confirmed roost, and the possible impacts on these, are summarised below in *Table 9*.

Distances are measured to the provided line feature in GIS indicating the proposed track, or to the edge of the existing track as shown by aerial imagery, whichever is closest.

Table 9. Inveraray: BRS Assessment Results

Tree / structure ref	Tree species / structure type	BRS: Ground level assessment (2021)	BRS: Aerial/ endoscope inspection (2021)	BRS: Ground level assessment (2023)	BRS: Final	OSGR	Distance from Development	Impact from Development
Inveraray (north-east)								
IN01	Beech	Low	N/A	N/A	Low	NN 10747 10185	19 m from track upgrade.	Possible disturbance
IN04	Yew	Moderate	N/A	Moderate	Moderate	NN 10678 10044	11 m from track upgrade.	Possible disturbance
IN09	Mature beech	Low	N/A	N/A	Low	NN 10352 09708	Immediately adjacent to track upgrade.	Possible disturbance, lopping
IN10	Semi-mature sycamore	Low	N/A	Low	Low	NN 10314 09662	6 m from track upgrade.	Possible disturbance
IN11	Semi-mature sycamore	Low	N/A	Low	Low	NN 10313 09662	5 m from track upgrade.	Possible disturbance
IN12	Semi-mature sycamore	Moderate	N/A	Moderate	Moderate	NN 10311 09663	4 m from track upgrade.	Possible disturbance
IN13	Sycamore	Low	N/A	Low	Low	NN 10301 09661	Immediately adjacent to track upgrade.	Possible disturbance, lopping
IN14	Dying mature sycamore	High	High	High	High	NN 10262 09682	10 m from track upgrade.	Possible disturbance
IN19	Dying beech	High	High	High	High	NN 10037 09716	9 m from track upgrade.	Possible disturbance
IN24	N/A	High	Moderate	Moderate	Moderate	NN 09861 09650	Immediately adjacent to track upgrade (but up a slight slope).	Possible disturbance
IN31	Sycamore	Moderate	Moderate	Moderate	Moderate	NN 09757 09670	Immediately adjacent to track upgrade 9at	Possible disturbance

Tree / structure ref	Tree species / structure type	BRS: Ground level assessment (2021)	BRS: Aerial/ endoscope inspection (2021)	BRS: Ground level assessment (2023)	BRS: Final	OSGR	Distance from Development	Impact from Development
							location where track has already received upgrades).	
IN46	Lime	Moderate	N/A	Moderate	Moderate	NN 09452 09782	30 m from track upgrade.	Possible disturbance
IN49	Mature lime	Moderate	Moderate	Moderate	Moderate	NN 09356 09838	15 m from track upgrade.	Possible disturbance
IN57	Wall	Low	N/A	Low	Low	NN 09124 09748	6 m from track upgrade.	Possible disturbance
IN61	Dead unidentified	Low	N/A	Low	Low	NN 09042 09728	21 m from track upgrade.	Possible disturbance
IN62	Dead unidentified	Moderate	N/A	High	High	NN 09019 09697	3 m from track upgrade.	Possible disturbance
IN63	Sweet chestnut	High (Confirmed)	N/A	N/A	High (Confirmed)	NN 08844 09811	52 m from track upgrade.	None likely
Inveraray (south-west)								
IS13	Willow	Low	N/A	Low	Low	NN 09003 08578	24 m from track upgrade.	Possible disturbance
IS14	Icehouse	N/A	N/A	High	High	NN 08863 08562	9 m from track upgrade.	Possible disturbance
IS15	Dead unidentified	N/A	N/A	Moderate	Moderate	NN 08738 08462	26 m from TC21.	Possible disturbance
IS18	Mature oak	High	Moderate	N/A	Moderate	NN 08817 08337	24 m from track upgrade.	Possible disturbance
IS19	Massive oak	Moderate	Moderate	Moderate	Moderate	NN 08789 08322	14 m from track upgrade.	Possible disturbance
IS20	Mature oak	Moderate	High	High	High	NN 08784 08306	19 m from track upgrade.	Possible disturbance
IS21	Mature oak	Moderate	Moderate	Moderate	Moderate	NN 08779 08295	21 m from track upgrade.	Possible disturbance
IS22	Mature oak	Moderate	N/A	Moderate	Moderate	NN 08763 08282	15 m from track upgrade.	Possible disturbance
IS23	Massive oak	Moderate	High	High	High	NN 08750 08286	Immediately adjacent to track upgrade.	Possible disturbance, lopping
IS24	Large, damaged oak	Moderate	Moderate	Moderate	Moderate	NN 08741 08277	Immediately adjacent to track upgrade.	Possible disturbance, lopping
IS25	Mature oak	Moderate	N/A	Moderate	Moderate	NN 08751 08267	14 m from track upgrade.	Possible disturbance
IS26	Oak	Low	N/A	Low	Low	NN 08761 08258	27 m from track upgrade.	Possible disturbance
IS27	Mature oak	N/A	N/A	Low	Low	NN 08723 08230	19 m from track upgrade.	Possible disturbance
IS28	Massive oak	Moderate	Low	Low	Low	NN 08625 08094	Immediately adjacent to track upgrade.	Possible disturbance, lopping, loss
IS29	Dead unidentified	Moderate	N/A	N/A	Moderate	NN 08614 07991	23 m from track upgrade.	Possible disturbance

An additional two trees were initially assessed as having BRS. One (IN16) had fallen when assessed in 2023, and another (IS37) was ruled out by endoscope survey. These trees are now considered to have Negligible BRS.

Several additional trees with BRS were also identified during surveys, however following the refinement of the design, these are now more than 30 m from the Development (i.e. outside the zone of construction / possible construction disturbance) and are at no risk of being impacted. They have been excluded from *Table 8* but are detailed, along with the now Negligible trees mentioned above, in the BRS Survey Details Annex (*Table 16*) and shown unlabelled on *Figure 6.12*.

Three Bridges

The initial BRS assessment identified four trees with suitability to support roosting bats, two with Moderate BRS (BRI02, BRI50) and one with Low BRS (BRI01). BRI02 is of sufficient size and maturity to contain PRFs, but is on private land that was not accessed. The results are presented below in *Table 10*.

None of the trees at Three Bridges were subject to aerial / endoscope surveys.

Table 10. Three Bridges: BRS Assessment Results

Tree ref	Tree species	BRS: Ground level assessment (2021)	BRS: Aerial/ endoscope inspection (2021)	BRS: Ground level assessment (2023)	BRS: Final	OSGR
BRI01	Mature oak	No access	N/A	No access	Unknown	NN 08790 12429
BRI02	Mature oak	Moderate	N/A	Low	Low	NN 08741 12388
BRI03	Large dead oak	Low	N/A	Low	Low	NN 08730 12386
BRI04	Mature oak	Moderate	N/A	Moderate	Moderate	NN 08274 12279

Two additional trees beyond 30 m from the existing track were also identified and are excluded from *Table 10* but are detailed in the BRS Survey Details Annex (*Table 16*) and shown unlabelled on *Figure 6.12*.

4.5. Emergence/re-entry surveys

Emergence re-entry surveys were only undertaken in the Allt a' Chrosaid area in 2019. The surveys above found this area to contain two trees with Moderate bat roost suitability and two with confirmed roosts (including the confirmed Daubenton's maternity roost) within 50 m of the Development footprint at the time of survey in 2019. These four trees were subject to bat emergence and re-entry surveys.

Bats were observed emerging from both trees with already-confirmed roosts. Two soprano pipistrelle bats were observed likely leaving tree T17 at 22:41 on 19 June 2019 from a previously unidentified feature in the higher branches. Two *Myotis* sp. (likely Daubenton's bat) were also recorded as likely to have exited an unidentified PRF on tree T03 (above the PRF with the previously-observed Daubenton's) at 22:37 on 15 July 2019. No bats emerged from the two Moderate BRS trees (T15 and T29). The locations of the confirmed bat roosts (at trees T03 and T17) are shown on *Figure 6.12*.

Overall bat activity was relatively low during the emergence / re-entry surveys, with a maximum of three bats seen at any one time. The majority were soprano pipistrelles with common pipistrelle and *Myotis* species recorded occasionally. Soprano pipistrelles were recorded during all the surveys. *Myotis* bat species and common pipistrelle bats were recorded on four nights out of the five surveyed. Foraging activity ('feeding buzzes') were recorded along the woodland edge adjacent to grassland habitat and above the tree canopy.

In summary:

- Soprano pipistrelle bats were recorded during surveys of all four trees (T03, T15, T17 and T29), and two were thought to have roosted in tree T17;
- C ommon pipistrelle bats were recorded during surveys of trees T03, T15 and T17, but no roosts were found;
- *Myotis* bat species were recorded during surveys of trees T03, T15 and T29, and two (likely Daubenton's bat) were thought to have roosted in tree T29, in a different PRF to the previously-recorded maternity roost.

The results of the emergence / re-entry surveys described above are shown in *Table 11*. As stated earlier, only T03 remains within the zone of construction or of possible construction disturbance.

Table 11. Allt a' Chrosaid: Emergence / re-entry survey results

Tree ref (BRS)	Survey date	Survey type	Results
T03 (Confirmed)	03 July 2019	Dawn	Immediate recordings of activity when bat detector was switched on at 03:01. Multiple pipistrelle species were observed foraging above tree canopy and up and down the forest edge. *Myotis* species were also recorded. Last recording of activity at 04:03.
	15 July 2019	Dusk	**Two *Myotis* sp. (likely Daubenton's bat) likely emerged from feature behind the targeted feature at 22:37.** Low bat activity with 8 passes recorded throughout the survey. Species included both common and soprano pipistrelle as well as *Myotis* species.
	06 August 2019	Dawn	Low activity levels of both common and soprano pipistrelle, all heard not seen. Seven recordings in total during the survey.
T15 (Moderate)	19 June 2019	Dusk	No bat activity recorded.
	15 July 2019	Dusk	Constant activity of bats foraging along woodland edge. The majority of recordings were of soprano pipistrelle with 6 occurrences of *Myotis* species. A maximum of three bats were seen at one time.
T17 (Confirmed)	19 June 2019	Dusk	**Two soprano pipistrelle bats likely emerged from branches above targeted feature.** Low bat activity consisting mainly of soprano pipistrelle, all heard not seen. Six bat passes in total throughout the survey.
	16 July 2019	Dawn	Low activity levels with both common and soprano pipistrelle species recorded. All recordings heard not seen. Activity recorded from 03:39 until 04:07.
	06 August 2019	Dawn	Very low activity levels, including 3 passes of soprano pipistrelle from 04:19 until 04:33.
T29 (Moderate)	19 June 2019	Dusk	Low bat activity, three *Myotis* species with one soprano pipistrelle recording. Observed foraging around the tree canopy.

	16 July 2019	Dawn	Constant activity from 04:03 until 04:43 consisting largely of soprano pipistrelle with a few recordings of *Myotis* species. Feeding buzzes heard but bats not seen.

Grey background = confirmed roost.

4.6. Bat activity surveys

4.6.1. Transect surveys

Transect 1 (Moorland Zone and Loch Awe)

Activity levels on Transect 1 surveys increased as the months progressed but were low in general. The majority of recordings were from along the Balliemeanoch farm track, and along the B840 parallel with the edge of Loch Awe. Bat activity was only recorded within the actual proposed Headpond area in July 2019, and this comprised a maximum of two soprano pipistrelles and one common pipistrelle recorded over the western extent of the proposed southern Headpond embankment, close to Allt Beochlich (along which the bats are likely to have commuted).

Soprano pipistrelles were the most commonly-encountered species (accounting for 53.8% of passes) with common pipistrelle occasional throughout (25.6% of passes). In total, pipistrelle passes accounted for all but 4 of the passes (97.9%) recorded over the course of the surveys.

Two individual *Myotis* sp. passes were recorded during the May transect, which from call analysis were determined to most likely be Daubenton's and Natterer's bat. A single unknown *Myotis sp.* (likely Daubenton's or Natterer's bat) pass was also recorded during the July transect. *Myotis* sp. calls are difficult to identify to species level and it is possible that the Natterer's bat (and unknown *Myotis* sp.) passes were Daubenton's bat, which is considered more likely than Natterer's given the large number of likely Daubenton's passes recorded at the nearby SD2 (see below), the known Daubenton's roost nearby in Allt a Chrosaid and the several large waterbodies in the vicinity, the preferred foraging habitat of Daubenton's bat. However, *Myotis* sp. calls cannot be determined to species level with certainty. All *Myotis* passes were from the B840 or the lower part of the Balliemeanoch farm track (also within commuting distance of the known Daubenton's roost). A single brown long-eared bat pass was also recorded on the lower half of the access track, near woodland along Allt Beochlich. *Myotis* passes accounted for approximately 1.5% of the passes recorded, and brown long-eared for approximately 0.5%.

The results are detailed in *Table 12* and shown on *Figure 6.13*.

Table 12. Transect 1 – 2019 Results

Survey	Summary	Brown long-eared	*Myotis* Natterer's –	*Myotis* Daubenton's –	Unidentified *Myotis sp.*	Common pipistrelle	Soprano pipistrelle	Unidentified pipistrelle	Total
20 May 2019	Activity was generally low and concentrated along the loch side, where a small number of recordings of soprano pipistrelle and unidentified pipistrelle were made. Additional recordings of *Myotis* sp. (two individual recordings of likely Daubenton's and Natterer's bats), and a single recording of and unidentified pipistrelle social calling were made along the Balliemeanoch farm track.	0	1	1	0	0	14	9	**25**
10 and 11 June 2019	The June transect was completed over the course of two nights. A small number of soprano, common and unidentified pipistrelle passes were on the access track within the Moorland Zone. Continuous foraging by a single soprano pipistrelle was also recorded on the track where it crosses Allt a' Chrosaid (hence the large number of recordings for this species at this location).	0	0	0	0	37	3	4	**44**
16 July 2019	July was the only month during which bats were observed in the proposed Headpond area. This included only common, soprano and unidentified pipistrelle. In addition to this, common and soprano pipistrelles were recorded along the access track (along with unidentified pipistrelle passes), as was a single pass of unidentified *Myotis* sp.	0	0	0	1	7	26	23	**57**

Survey	Summary	Brown long-eared	*Myotis* – Natterer's	*Myotis* – Daubenton's	Unidentified *Myotis sp.*	Common pipistrelle	Soprano pipistrelle	Unidentified pipistrelle	Total
05 August 2019	No bats were recorded during this survey.	0	0	0	0	0	0	0	**0**
09 September 2019	No bat activity was recorded on the higher parts of the access track or within the proposed Headpond area this month. Soprano pipistrelle, common pipistrelle and a single brown long-eared bat pass were recorded along the access track in the lower part of the Moorland Zone, and an additional small number of soprano pipistrelle passes were recorded along the B840.	1	0	0	0	6	62	0	**69**
Total number of bat passes		**1**	**1**	**1**	**1**	**50**	**105**	**36**	**195**
Proportion of total number of bat passes (%)		**0.5**	**0.5**	**0.5**	**0.5**	**25.6**	**53.8**	**18.5**	**~100**

Transect 2 (Inveraray)

Activity levels on Transect 2 were moderate overall, with the highest activity recorded on the May transect. Species recorded comprised soprano pipistrelle, common pipistrelle and *Myotis* sp., most likely Daubenton's bat and Natterer's bat.

Soprano pipistrelle was the most commonly-encountered species on all transects except for the April transect, where common pipistrelle was more frequent. Soprano pipistrelles were recorded along much of the length of Transect 2. Common pipistrelles were found mostly along the Upper Avenue on the plantation edge, with fewer recorded on the north-east track. A small number of Natterer's bat passes were recorded in May only (also along the Upper Avenue). A few Daubenton's bat passes were also recorded in May, in the vicinity of the River Aray and associated woodland, where several passes of unidentified *Myotis* species were recorded in the July, August and September transects.

Although it is difficult to make a comparison between the results of Transect 1 and Transect 2 (given they were undertaken in different years), the total number of bat passes recorded across the months that were surveyed for both transects (May, June, August and September) were 138 for Transect 1 and 545 for Transect 2 - with Transect 2 recording almost four times as many passes. This is not unexpected given the superior habitat of Transect 2, and is consistent with the lack of roosting habitat within the Moorland Zone.

The results are detailed in *Table 13* and shown on *Figure 6.13*.

Table 13. Transect 2 – 2021 Results

Survey	Summary	Brown long-eared	*Myotis* – Natterer's	*Myotis* – Daubenton's	Unidentified *Myotis sp.*	Common pipistrelle	Soprano pipistrelle	Unidentified pipistrelle	Total
12 April 2021	Activity was generally low and concentrated along Upper Avenue (mainly common pipistrelles) with single soprano pipistrelle passes recorded near to the River Aray and towards the junction between Upper Avenue and the A819.	0	0	0	0	18	2	0	**20**
10 May 2021	Activity was generally high and bats were recorded along the majority of the route. Mainly soprano pipistrelle were recorded along the north-east forest track, with a single likely Daubenton's pass near to the river Aray. Common and soprano pipistrelles were frequently recorded along Upper Avenue, with five likely Natterer's passes (likely from a single bat) and a single likely Daubenton's pass also	0	5	2	0	45	222	5	**279**

Survey	Summary	Brown long-eared	*Myotis* – Natterer's	*Myotis* – Daubenton's	Unidentified *Myotis sp.*	Common pipistrelle	Soprano pipistrelle	Unidentified pipistrelle	Total
	recorded in this area (though calls cannot be attributed to specific *Myotis* sp. bats with complete confidence).								
10 June 2021	Activity during this transect was lower than in May but higher than April. Likely Daubenton's were recorded on the north-east forest track, near to the River Aray (as were two unidentified *Myotis* sp., likely also Daubenton's). Soprano pipistrelle were recorded along the length of the transect whereas common pipistrelle (and additional unidentified *Pipistrellus* sp.) were restricted to Upper Avenue.	0	0	0	2	30	60	0	**95**
20 August 2021	The Batlogger data recorded in August is lacking spatial references and therefore it is not possible to determine the exact location of individual passes. However, surveyors also made notes on the GIS enabled tablet during the survey. Records of bat passes were restricted to Upper Avenue with soprano and common pipistrelle passes scattered throughout this area. A small number of unidentified *Myotis* sp. passes were also recorded near the quarry pond (near TC21).	0	0	0	7	34	41	5	**87**
28 September 2021	Activity was moderate in September and similarly to previous months, soprano pipistrelle bats were recorded along almost the full transect. A single likely Daubenton's bat was recorded along the north-east forest track. Soprano pipistrelle passes were scattered throughout, with more localised recordings of common pipistrelle (and unidentified *Pipistrellus* sp.).	0	0	0	1	16	66	1	**84**
Total number of bat passes		**0**	**4**	**3**	**10**	**143**	**391**	**11**	**562**
Proportion of total number of bat passes (%)		**0**	**0.7**	**0.5**	**1.8**	**25.4**	**69.6**	**1.9**	**~100**

4.6.2. Static bat detector monitoring

The results of the static bat detector monitoring are shown below in *Table 14*.

Soprano pipistrelle, common pipistrelle, *Myotis* sp. and brown long-eared bats were detected at all locations. Soprano pipistrelle was the most commonly-encountered species at all monitoring locations (between 6 to 107 passes recorded per night on average), except at SD4 by Lochan Airigh in the proposed Headpond area, where *Myotis* sp. (thought by analysis most likely to be Daubenton's bat) were most frequent with on average 24 passes per night. At SD2 by the Allt a' Beochlich reservoir, two passes of *Myotis* sp. thought likely to be Natterer's bat were recorded, though this was far less than the *Myotis* sp. passes thought to be Daubenton's bat at this location (681). *Myotis* sp. calls are difficult to identify to species level and it is possible that the two Natterer's bat passes were actually Daubenton's bat, which is considered more likely for the reasons discussed above for the Transect 1 results. The numbers of recordings were expectedly highest at SD1 (on the Allt a' Chrosaid relatively near Loch Awe) with on average 112.6 passes per night, more than twice as many as the other locations and consistent with the lowland setting, ample woodland foraging habitat and two known roosts in the vicinity.

Detectors SD4 and SD3 recorded approximately one tenth to one quarter respectively compared to the activity recorded at SD1, and SD2 exhibited about half the activity compared to SD1. The higher activity at SD2 compared to SD3 and SD4 will likely be because the reservoir is not quite as exposed or at as high altitude as the proposed Headpond, or as distant from more lowland habitats which include woodland, and there is a clear plantation edge with adjacent incised stream with scattered trees along it (and solid woodland lower down) leading to the reservoir from the Loch Awe area.

Table 14. Summary of static bat detector data

Monitoring location	Species	Survey period 1[1]		Survey period 2[2]		Total		Passes per day of active recording[3]
		Number of passes	%	Number of passes	%	Number of passes	%	
SD1 Allt a' Chrosaid	Soprano pipistrelle	5797	95.9	31	91.2	5828	95.9	107.9
	Common pipistrelle	225	3.7	3	8.8	228	3.8	4.2
	Myotis (Daubenton's)	11	0.2	0	0.0	11	0.2	0.2
	Myotis (Natterer's)	0	0.0	0	0.0	0	0.0	0.0
	Brown long-eared	12	0.2	0	0.0	12	0.2	0.2
	Total	**6045**	**100.0**	**34**	**100.0**	**6079**	**100.0**	**112.6**
SD2 Allt Beochlich - Reservoir	Soprano pipistrelle	922	59.9	1050	63.6	1972	61.8	25.3
	Common pipistrelle	286	18.6	246	14.9	532	16.7	6.8
	Myotis (Daubenton's)	329	21.4	352	21.3	681	21.3	8.7
	Myotis (Natterer's)	0	0.0	2	0.1	2	0.1	0.0
	Brown long-eared	1	0.1	2	0.1	3	0.1	0.0
	Total	**1538**	**100.0**	**1652**	**100.0**	**3190**	**100.0**	**40.9**
SD3 Allt Beochlich - Ravine	Soprano pipistrelle	101	69.2	363	72.3	464	71.6	6.6
	Common pipistrelle	30	20.5	82	16.3	112	17.3	1.6
	Myotis (Daubenton's)	15	10.3	55	11.0	70	10.8	1.0
	Myotis (Natterer's)	0	0.0	0	0.0	0	0.0	0.0
	Brown long-eared	0	0.0	2	0.4	2	0.3	0.0
	Total	**146**	**100.0**	**502**	**100.0**	**648**	**100.0**	**9.3**
SD4 Lochan Airigh	Soprano pipistrelle	28	5.7	71	4.9	99	5.1	1.3
	Common pipistrelle	12	2.4	16	1.1	28	1.4	0.4
	Myotis (Daubenton's)	452	91.9	1356	93.9	1808	93.4	24.4
	Myotis (Natterer's)	0	0.0	0	0.0	0	0.0	0.0
	Brown long-eared	0	0.0	1	0.1	1	0.1	0.0
	Total	**492**	**100.0**	**1444**	**100.0**	**1936**	**100.0**	**26.2**

[1] SD1 = 20 – 31 May and 03 June – 02 July (40 days); SD2 = 20 May – 02 July (43 days); SD3 = 29 May – 02 July (34 days); SD4 = 21 May – 02 July (42 days)

[2] SD1 = 02 – 16 July (14 days); SD2 = 02 July – 06 August (35 days); SD3 = 02 July – 07 August (36 days); SD4 = 02 July – 03 August (32 days)

[3] SD1 = 54 days; SD2 = 78 days; SD3 = 70 days; SD4 = 74 days

5.Summary

The area encompassing the Moorland and Loch Awe parts of the Development were considered together as having Moderate suitability for commuting and foraging bats. This area was covered by Transect 1 during bat activity surveys, and static bat detector deployment. Following bat activity surveys, it was determined that bat activity in the open moorland vicinity of the proposed Headpond itself was low, with only one of the transects (July) recording any bats in the vicinity of the proposed Headpond. This was consistent with the findings of the static detector monitoring – SD3 and SD4 (located within the upper Moorland Zone) recorded the lowest numbers of bat passes. SD1 (Allt a' Chrosaid) recorded the highest numbers, consistent with the lowland setting, mature broad-leaved woodland and riparian habitat and known roosts nearby. Transect results along the B840 and lower part of the western (Balliemeanoch) access track expectedly found the most bat activity, mainly moderate levels of common/soprano pipistrelles, rarely *Myotis* sp. (potential Natterer's bat as well as Daubenton's bat).

The area encompassing the Development at Inveraray was assigned High suitability for commuting and foraging bats. This area was covered by Transect 2 during bat activity surveys. Transect 2 recorded soprano pipistrelle, common pipistrelle and a small minority of *Myotis* sp., most likely Daubenton's bat and Natterer's bat, with passes recorded frequently throughout the length of the route, and particularly concentrated along the northern part of the forestry track west of Inveraray. The majority of the few *Myotis* sp. calls were from this location, and from the bridge crossing the River Aray or nearby.

A total of 60 trees with BRS are located within 30 m of the Development, with more beyond it.

At Allt a' Chrosaid seven trees with BRS (one with High BRS containing a confirmed roost, and six with Low BRS) are located within 30 m of the Development. The confirmed roost is a Daubenton's maternity roost, confirmed by aerial inspection emergence survey in 2019 and located 30 m from works. These trees (and any bat roosts therein, if present) are at risk of disturbance from nearby works, but none will be lost. An additional roost of a single bat (T17) was confirmed nearby in 2019 but will not be impacted by works.

At Loch Awe (excluding Allt a' Chrosaid) 22 trees with BRS are within 30 m of the Development. Ten of these (three High, three Moderate and four Low BRS) will be lost to the Tailpond, but the others will be retained. The three High BRS trees (Awe05, Awe07, Awe08) and two of the Moderate BRS trees (Awe03, Awe12) that will be lost were not subject to aerial / endoscope inspection or to emergence / re-entry survey for the reasons given in the Limitations above, however these trees represent a small proportion of the known resource of trees with similar BRS even in the surveyed area, with more undoubtedly present in nearby woodland beyond the survey area.

At Inveraray 27 trees with BRS (five High, fourteen Moderate and ten Low) and two structures with BRS (one High, one Low) are located within 30 m of the Development. All these trees and structures will be retained, however five trees (IN09, IN13, IS23, IS24 and IS28) are immediately adjacent to the existing forestry track such the disturbance might occur if bats were present, although the existing track is already used by forestry vehicles and has been used by other construction vehicles. No emergence / re-entry surveys took place at Inveraray, and no endoscope inspection at IN09 and IN13 (though this was not necessary given these were both assessed as having Low BRS), however this is a minor limitation given that all relevant trees will be retained. A roost of a single bat (IN63) was however found, but is too distant to be impacted by the Development.

Four trees with BRS were also identified at Three Bridges, but are now less relevant since the Development will not construct an access track here.

6.References

Bat Conservation Trust (2022). Interim Guidance Note: Use of night visions aids for bat emergence surveys. Bat Conservation Trust, May 2022.

CIEEM (2021). Bat Mitigation Guidelines: A guide to impact assessment, mitigation and compensation for developments affecting bats. Beta version 1.0, June 2021.

Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust, London.

Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). Bat Conservation Trust, London.

BRS Survey Details Annex

Table 15. Allt a' Chrosaid: BRS Assessment Details[2]

Tree ref	Tree species	Ground level assessment description (2019)	BRS: Ground level assessment (2019)	Aerial / endoscope inspection description (2019)	BRS: Aerial / endoscope inspection (2019)	BRS: Final[3]	OSGR	Impact from Development
T01	Mature oak	30 cm wide crack in branch facing south-east. Feature 4 m from the ground with clear drop-zone (DZ)[4]. Narrow crack in cut-off branch. South facing hole at the bottom of cut-off branch, 3.5 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01133 16080	Possible disturbance
T02	Mature oak with two leader branches	Lifted bark under a dead branch on westernmost leader, 6 m from the ground and facing south-west. Cluttered DZ. East facing crack along the bottom of dead branch on the easternmost leader, 6.5 m from the ground. Clear DZ. Dead branch on E stem with downward facing splits at 6.5 m. On east side of tree with a clear DZ.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01145 16069	Possible disturbance
T03	**Mature oak**	**South facing callus roll, 3 m high with a clear DZ.** **Snapped off branch on east face of tree, pointing south. Feature is 3.5 m off the ground with clear DZ.** **Callus roll next to Feature 2 at the same height and facing the same direction.** **Lifted bark throughout, especially south-west face.** **Two north facing snapped forked branches, 6 m high with apparent cavities inside.** **Multiple large, snapped branches on east face of tree at 4 m, 5 m, and 8 m high.**	**High**	**Confirmed Daubenton's maternity roost.** **At least 10 bats in crack on underside of branch at 3 m on east / south-east side (facing towards stream). Cavity in branch extends a substantial distance up (towards end of branch). Clear drop zone to stream. Flies present at entrance.**	**Confirmed roost (High)**	**Confirmed roost (High)**	**NN 01049 16070**	**Possible disturbance**
T04	Dead tree	South facing rot hole 3 m from the ground where a branch has broken off. Clear DZ.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01055 16067	None likely

[2] *Grey background = confirmed roost.* ***Bold*** *= tree was subject to emergence / re-entry survey in 2019.*
[3] Also the result of the 2021 ground level assessment re-survey, which found no change from the 2019 surveys.
[4] Drop-zone (DZ) refers to the area / flight-path immediately outside a feature, which a bat would have to navigate through to access and egress the potential roost.

Tree ref	Tree species	Ground level assessment description (2019)	BRS: Ground level assessment (2019)	Aerial / endoscope inspection description (2019)	BRS: Aerial / endoscope inspection (2019)	BRS: Final[3]	OSGR	Impact from Development
T05	Hazel	Rot hole facing north-west with crack on westerly branch at 2.5 m high. Crack is 40 cm long and appears to extend into branch. Slightly cluttered DZ.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01003 16029	Possible disturbance
T06	Mature oak	Lifted bark throughout tree.	Low / Negligible	No aerial / endoscope inspection carried out.	N/A	Low	NN 01062 16081	None likely
T07	Mature oak	Two south facing knotholes on western branch at 6 m and 7 m from the ground.	Moderate / Low	Knotholes had no crevices.	Negligible	Negligible	NN 01078 16077	None likely
T08	Mature oak	North facing callus roll on branch pointing north towards caravans.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01080 16075	None likely
T09	Oak	North facing hole on the main tree trunk, 8 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01083 16074	None likely
T10	Mature oak	Large rot hole facing north-west on a north pointing branch. Hole appeared damp with woodlice, but could extend upwards.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01087 16075	None likely
T11	Mature oak	Lifted bark throughout, especially on north-westerly branch. Broken branch facing north-east. Underside of branch is completely exposed and there is a gap where bark meets heartwood at 7 m high. Knothole on north facing branch at 3 m with potential cavity inside. Hole facing north-west in a snapped branch, 5 m from the ground and a rot hole immediately above it on the opposite side of the branch. Multiple broken branches on south-west face of tree. Downward facing cavity where a branch grows out of a callus roll on the south-west face of tree at 10 m high. South facing rot hole at 5 m high and another small hole 1 m below.	High / Moderate	Only good feature is small hole at 5 m, Open, dry cavity.	Low	Low	NN 01077 16112	Possible disturbance

Tree ref	Tree species	Ground level assessment description (2019)	BRS: Ground level assessment (2019)	Aerial / endoscope inspection description (2019)	BRS: Aerial / endoscope inspection (2019)	BRS: Final[3]	OSGR	Impact from Development
T12	Mature ash	North-westerly facing hole, 4 m off the ground where a snapped branch used to be.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01079 16123	Possible disturbance
T13	Oak	North-east facing callus roll at 5 m high.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01086 16053	None likely
T14	Mature oak	North-west facing hole in a dead branch on the north side of tree. Branch extends from main trunk. Feature is 12 m high. Snapped branch with a potential cavity at the base. Feature faces south-west and is 7 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01076 16066	None likely
T15	**Two trunked oak with sprouting ash**	**Two similar rot holes, one facing west directly below a dead branch at 1 m high, and the other facing south at 1.5 m high.** **East facing damaged branch with 1 m long cavity, 3.5 m from the ground.** **Two similar features on the other trunks, both facing east.** **North facing callus roll at 2 m.**	**Moderate**	**Rot hole isn't deep and is not a feature.** **North facing upper tear out 20 – 25 cm up is Moderate.** **Angled trunk has small crevices.**	**Moderate**	**Moderate**	**NN 01079 16042**	**None likely**
T16	Mature oak	East facing slit with an opening running down the dead branch, 3 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01060 16053	None likely
T17	**3 stemmed Oak**	**South-west facing callus roll at 3 m high. Single bat seen roosting within.** **North facing callus roll on south-west pointing branch 5 m from the ground.**	**Confirmed (Low)**	**Roost cavity inspected. Dry and extends up for approximately 15 cm with room for 2 or 3 bats only.** **No bats present.**	**Confirmed (Low) (no bats present at time of survey)**	**Confirmed (Low)**	**NN 01070 16032**	**None likely**
T20	Dying oak.	South facing callus roll where a thin dead branch extends 2 m off the ground. Clear DZ. North-east facing callus roll with apparent cavity inside at 3.5 m high with clear DZ. East facing fissure wound at 4 m high with cavities where heartwood meets the bark.	Moderate	Only Feature 3 has suitability but it is low. Small crevice behind roll within itself is quite open and exposed.	Low	Low	NN 01066 16032	None likely

Tree ref	Tree species	Ground level assessment description (2019)	BRS: Ground level assessment (2019)	Aerial / endoscope inspection description (2019)	BRS: Aerial / endoscope inspection (2019)	BRS: Final[3]	OSGR	Impact from Development
T21	Oak	North-east facing split on the underside of a branch 2.5 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01055 16034	None likely
T22	Oak	Potential cavity extending upwards into tree at 2.5 m above water level.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01048 16051	None likely
T23	**Oak**	**Main trunk snapped showing heartwood with east facing cavities at 5 m high. There is potential for rain to enter. Likely cluttered DZ when tree is in full leaf.** **Small north facing callus roll at 2.5 m high.** **South-east facing cavity surrounded by moss, 2 m from the ground on the secondary trunk.**	**Moderate / Low**	**Upper break in trunk not inspected but low potential due to openness.** **Upward facing, small knothole negligible.** **Low hole open with little shelter.**	**Low**	**Low**	**NN 01033 16037**	**Possible disturbance**
T24	4 stemmed Oak	Narrow cracks up the main trunk. East facing callus roll at 7 m high. Difficult to determine if cavity is present within.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01024 16026	None likely
T25	Oak	South facing callus roll, 8 m from the ground with slightly cluttered DZ.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01027 16023	None likely
T26	Oak	West facing callus roll at 2.5 m high which appears to extend upwards. DZ is clear.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01028 16024	None likely
T27	Oak	Crack in north-east facing branch. Upward facing callus roll on south-west face of tree.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01035 16030	None likely
T28	Oak	South facing callus roll at 5 m high blocked by a small piece of wood, but with space for a bat to enter. Woodpecker hole at m high on south side on dead branch.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01035 16024	None likely
T29	**Oak**	**Callus roll at end of south facing branch. Cavity extends a few inches but is wet and narrows beyond this.** **South-west facing broken branch with potential upward facing cavity.**	**Moderate / Low**	**Feature 3 has Moderate BRS. Couldn't be investigated as branch too dead to anchor to.**	**Moderate**	**Moderate**	**NN 01038 16019**	**None likely**

Tree ref	Tree species	Ground level assessment description (2019)	BRS: Ground level assessment (2019)	Aerial / endoscope inspection description (2019)	BRS: Aerial / endoscope inspection (2019)	BRS: Final[3]	OSGR	Impact from Development
		North facing small callus roll on west facing branch growing upwards with potential cavity inside.						
T30	Oak	North facing cavity at the bottom of a large, snapped branch at 2 m high. Cavity extends up and downwards.	High / Moderate	Endoscoped. Open facing upwards and damp at downward extension. Very little space and insufficient dry shelter.	Negligible	Negligible	NN 01046 16024	None likely
T31	Oak	East facing rot hole on south-east facing branch, 2 m from the ground. DZ is clear.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01047 16019	None likely
T32	Oak	South-east facing rot hole at 6 m high.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01050 16023	None likely
T33	Oak	South-east facing split at 8 m high. Woodpecker hole and possible cavity 0.5 m from this. Areas where dead branch comes out of trunk.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01055 16023	None likely
T34	Oak	South-west facing callus roll at 7 m. South-west facing hole with possible cavity in a broken branch, 4 m from the ground. 3Similar feature facing south at the same height.	Low	No aerial / endoscope inspection carried out.	N/A	Low	NN 01056 16017	None likely

Table 16. Loch Awe (excluding Allt a Chrosaid), Inveraray and Three Bridges: BRS Assessment Details[5]

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
Loch Awe (excluding Allt a Chrosaid)										
Awe01	Unknown	Potentially hollow branch pointing south-east.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 01104 16212	Possible disturbance
Awe02	Mature willow	Crack in twisted pointing southwards branch. Feature likely extends upwards.	Low	No aerial / endoscope inspection carried out.	N/A	Feature gone.	Negligible	Negligible	NN 01032 16252	None possible
Awe03	Mature, gnarly alder	Hole 1.5 m from the ground facing east and extending upwards into the trunk. Another small hole on the trunk faces west at 2 m high.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 00964 16324	Will be lost
Awe04	Mature, dying alder	Rot holes 2 m from the ground in westernmost trunk which is hollow. Also lifted bark at 3 m high.	High	Very limited potential. Main stem is hollow and open at top from 2 m. Lifted bark is small and quite open to the elements in most places.	Low	Feature gone.	Negligible	Negligible	NN 00972 16306	None possible
Awe05	Unidentified	Hollow limb facing north-east with access via small rot hole facing north at 1 m high. Missing branch 1 m from the ground, facing south-west and extending upwards into hollow trunk	High	No aerial / endoscope inspection carried out.	N/A	Also central rotten trunk with peeling bark may be low in its own right.	High	High	NN 00970 16302	Will be lost
Awe06	Damaged alder	First identified in 2023.	N/A	N/A	N/A	Mossy hole facing south in northerly stem. Slit extending up for ~10 cm. Room for 1 or 2 bats. 50 cm from the ground.	Low	Low	NN 00961 16292	Will be lost
Awe07	Significantly damaged alder	Hole into hollow trunk, 1 m high and facing west.	High	No aerial / endoscope inspection carried out.	N/A	As before but with cobwebs over west facing feature. No droppings	High	High	NN 00951 16287	Will be lost

[5] *Grey background = confirmed roost.*

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
		Small rot holes in another trunk which is also hollow. Feature is 1.5 m from the ground, facing east.				within. Can see back of east facing feature.				
Awe08	Large mature ash	Rot hole 6 m from the ground, under a south facing branch. Damage to a branch 7 m from the ground, possibly extending upwards into cavity	Moderate	No aerial / endoscope inspection carried out.	N/A	large cavity at 3 m facing west (new 2023)	High	High	NN 00972 16274	Will be lost
Awe09	Mature alder	Small hole on trunk where lifting bark is present, 6 m high and facing east. A similar feature 2 m high faces west.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 00969 16267	Will be lost
Awe10	Leaning alder	Crack in trunk extends into branch, 1.5 m from the ground facing north.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 00935 16246	Will be lost
Awe11	Damaged alder	Two knot holes 3 m from the ground, one facing west, the other faces east and has bird nest in it.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 00945 16230	Will be lost
Awe12	Two mature oaks	Significant damage to both trees but no obvious features identified.	Low	No aerial / endoscope inspection carried out.	N/A	As before but with potential for features at height.	Moderate	Moderate	NN 00917 16195	Will be lost
Awe13	Mature damaged oak	North-east facing branch broken off and split. Crack extends into a hole in a possibly hollow limb 3.5 m from the ground. Other possible features present where there is damage higher in the tree.	Moderate	Lower dead limb extends in 30 cm, birds nest at entrance but extends on around and back into trunk. Also higher callous roll with no real opportunities present.	Moderate	As before.	Moderate	Moderate	NN 00917 16183	Will be lost
Awe14	Alder	First identified in 2023.	N/A	N/A	N/A	Lifting bark and rotten patches all over.	Low	Low	NN 00895 16147	Possible disturbance
Awe15	Dying alder	Lifting bark throughout tree could fit only a very small number of bats.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 00879 16129	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
Awe16	Mature ash	Wound in limb facing west 2 m from the ground, extends for 20 cm.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 00852 16085	None likely
Awe17	Ash	Crack in trunk extends upwards into cavity, faces north-west and is 1.5 m high.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 00838 16077	None likely
Awe18	Warty ash	Gash in trunk 2 m from the ground, facing east. Tree may be hollow.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 00839 16062	None likely
Awe19	Mature ash	Fairly open and exposed crevices in bark on all aspects except south facing.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 00851 15992	Possible disturbance
Awe20	Mature oak	Crack in branch facing north-west, 8 m from the ground. Hollow limb behind heart wood 6 m high Lots of damage facing north-east. Knot hole m from the ground facing south-east.	High	Multiple broken / split branches. Multiple high potential features extending along northern trunk, large cavities extending along branches with space for multiple bats (~5). Also hole within main trunk extends up trunk for 50 cm. Sheltered with small entrance hole. Smooth, clean interior walls and an uncluttered DZ.	High	As before.	High	High	NN 00863 15988	Possible disturbance
Awe21	Mature ash	Callus roll in hollow branch 5 m from the ground, facing south.	Moderate	Callus roll at 5 m with good potential, extends 1 m up the limb and 50 cm down with birds nest at bottom. Uncluttered DZ and sheltered cavity. Rot hole extending into branch laterally for 45 cm with birds nest at entrance, hole extends behind this into small cavity.	High	As before.	N/A	High	NN 00892 15997	Possible disturbance
Awe22	Mature oak	Multiple cracked branches and healed wounds, difficult to examine from ground level.	Moderate	Multiple small features for bats identified.	Moderate	As before.	N/A	Moderate	NN 00900 16001	Possible disturbance
Awe23	Dead hollow unidentified	Several possible entrance points to hollow trunk on all aspects. Between 0.5 m and 3 m above ground level.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 00902 16003	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
Awe24	Dead ash	Damage to trunk on all aspects but no apparent extension into cavity.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 00901 16004	Possible disturbance
Awe25	Large ash	Hole in trunk extending upwards into trunk. 1 m high and facing towards the river. Other possible features further up.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 00922 16006	Possible disturbance
Awe26	Large mature oak	Cracks in two hollow branches 4 m from the ground; both facing south. A further hole where a branch has broken off 3 m from the ground facing south-east.	High	Multiple features. Knot holes on limb facing south-east at 3 m high; both good but no bats present. Old birds nest in one. Two large cavities in big limbs 4 m high, south facing with good roost potential. Tear out feature on horizontal limb, north-west facing at ~3 m high.	High	Not re-checked.	N/A	High	NN 00933 15991	None likely
Awe27	Semi-mature oak	Hole in a small branch pointing west. 2.5 m high, facing north.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 00926 15964	None likely
Awe28	Oak	Gap behind lifted bark 4 m from the ground, facing east. Space for a single bat.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 00942 15960	None likely
Awe29	Mature oak	Multiple holes in branch 9 m high, facing west and slightly angled upwards.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 00979 15994	None likely
Awe30	Mature ash	Multiple knot holes, facing slightly upward. Additional small crevice in trunk with space for one bat.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 00960 16002	None likely
Awe31	Large mature ash	Hole in north facing broken branch 2.5 m from the ground. Possible to endoscope. Numerous other features from 2 m up, facing north, east, and west.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 00960 16015	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
Awe32	Oak	Crevice behind rotten wood facing down into north-east facing branch 1.5 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 00987 16016	Possible disturbance
Awe33	Mature unidentified	Hole in trunk 2.5 m high, facing river. Cluttered DZ.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 00993 16007	None likely
Awe34	Old rowan	Damage to trunk 2.5 m from the ground, facing downwards.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 01000 16009	None likely
Awe35	Ash	Small, slightly upward angled, south facing hole in trunk 4.5 m above ground level. More damage to trunk further up.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 01005 16008	None likely
Inveraray (north-east)										
IN01	Beech	Butt rot extends up into rolled slit with possible cavity at top. Exposed.	Low	No aerial / endoscope inspection carried out.	N/A	Not rechecked.	N/A	Low	NN 10747 10185	Possible disturbance
IN02	Sycamore	Several knotholes in a large horizontal branch, 2 m from the ground. One deeper hole (~4 cm diameter) positioned towards end of branch extends back >10 cm.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 10703 10187	None likely
IN03	Huge, gnarled beech	No obvious visible features but branches pointing uphill (4 m high) and downhill (10 m high) have damage on top sides. Trunk may be hollow judging from extensive damage. Unlikely to be climbable due to damage and steep slope.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 10705 10167	None likely
IN04	Yew	Two potential holes in trunk from 1 m high.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 10678 10044	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IN05	Mature beech	Minor branch with hazard beam pointing downhill. Branch may be hollow.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 10563 10074	None likely
IN06	Semi-mature sycamore	Rot in trunk 1 m from the ground, extends up to 2 m high with cavity at top.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 10468 09921	None likely
IN07	Mature horse chestnut	Damage throughout tree but no obvious features. Rotten / torn off limb facing west 6 m from the ground is most likely feature but is exposed. Unlikely to be climbable.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 10390 09813	None likely
IN08	Mature twisted beech	Large cavity in tear out, 2 m high facing north-east. May extend upwards into tree.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 10374 09801	None likely
IN09	Mature beech	Butt rot in uphill facing aspect to 1 m high. Hollow inside to approx. 1.5 m above ground level. No bats present at time of survey and cavity is sightly open/damp. Entrance is low and DZ is cluttered with branches.	Low	No aerial / endoscope inspection carried out.	N/A	Not rechecked.	N/A	Low	NN 10352 09708	Possible disturbance, lopping, loss
IN10	Semi-mature sycamore	Large crack in the trunk. Small tree with potential cavity 8 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 10314 09662	Possible disturbance
IN11	Semi-mature sycamore	Large crack in the trunk. Small tree with potential cavity 5 m from the ground.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 10313 09662	Possible disturbance
IN12	Semi-mature sycamore	Large crack in the trunk. Potential cavity above this 3 m from the ground.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 10311 09663	Possible disturbance
IN13	Sycamore	Vertical crack in trunk from 1 m to 4 m above ground level. Unclear if a cavity extends upwards beyond surface damage.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 10301 09661	Possible disturbance, lopping, loss.

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IN14	Dying mature sycamore	Large cavity behind facade of rotten heartwood, 3 m from the ground facing towards minor track. Rolled crack in branch 8 m from the ground. Facing the same way.	High	Decaying trunk. Feature extends >1 m up inside trunk from top of feature. Multiple crevices enter deep into trunk which are dry and sheltered throughout. Smaller crevices present within rotten heartwood occurring lower down on feature. Hollow knot hole. Hole within vertical branch. Extends upwards through branch with 2nd opening at top giving little shelter form elements.	High	As before.	High	High	NN 10262 09682	Possible disturbance
IN15	Semi mat ash	Butt rot to 1.5 m high, facing away from minor track with cavity behind rotten facade. Another similar rot feature at 5 m from the ground facing north.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 10222 09730	None likely
IN16	Very damaged mature beech	Significant butt rot to 2 m high and network of small rot cavities within, facing south-west. Similar feature 7 m above ground, facing same direction. No daylight observed through to butt rot.	Moderate	No aerial / endoscope inspection carried out.	N/A	Tree fallen.	Negligible	Negligible	NN 10191 09696	N/A
IN17	Huge beech	Massive hole 3 m to 4 m high facing south-west. The hollow behind extends upwards out of sight. Feature may be wet as some fungal growth evidence in- and outside.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 10155 09742	None likely
IN18	Large beech	Two branches pointing south have damage that may extend upwards into cavities.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 10132 09735	None likely
IN19	Mature oak	Multiple woodpecker holes on high branches, surrounded by rhododendron which limited visibility.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 10083 09744	None likely
IN20	Mature oak	Woodpecker holes 15 m high facing east, surrounded by rhododendron which limited visibility.	Moderate	A few split ends of branches look to provide some roosting potential. May be hard to undertake emergence on this tree due to dense	Moderate	As before.	Moderate	Moderate	NN 10080 09738	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
				undergrowth and height of features being too far away.						
IN21	Dying beech	Damage to trunk and branches. Woodpecker holes facing track.	High	Hollow and heart wood exposed. No real cavities with roosting potential within this hollow. Decaying trunk. Inaccessible due to rotten branches. Viewed from 1 m below feature. Smaller crevices extending 2-3 m up trunk. Small knot hole within canker growth on trunk. Extends into trunk for ~7 cm. Small entrance and cavity.	High	As before.	High	High	NN 10037 09716	Possible disturbance
IN22	Massive oak	Lifting bark, some woodpecker holes and possible holes within damaged trunk all present at east side of tree.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09962 09756	None likely
IN23	Mature birch	Large rot feature at 1.5 m facing south. Leads into cavity but unknown if this extends up into trunk.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09956 09749	None likely
IN24	Mature unidentified	Hole in trunk 3.5 m high facing track which seems to extend upwards.	High	Lower hole extending up trunk terminating at upper cavity where there is a small hole at top. Bobbly and bumpy with small crevices inside. Does not extend downwards. Sheltered from elements with small entrance compared to cavity size.	Moderate	As before.	Moderate	Moderate	NN 09861 09650	Possible disturbance
IN25	Dead unidentified	Woodpecker holes 10 m high facing west.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09876 09563	None likely
IN26	Dead unidentified	Two holes 0.5 m from the ground facing east.	Moderate	No aerial / endoscope inspection carried out.	N/A	Holes don't appear to extend far. Downgrade to Low.	Low	Low	NN 09780 09602	None likely
IN27	Unidentified	Tall, skinny tree with north facing hole 2 m from the ground extending upwards into hollow trunk.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09762 09617	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
IN28	Lopsided, dead unidentified	Downwards facing hole in trunk 1 m up the tree. Extends upwards into hollow trunk.	Moderate	No aerial / endoscope inspection carried out.	N/A	Hole is very small. Downgrade to Low.	Low	Low	NN 09745 09608	None likely
IN29	Mature horse chestnut	Bark shrinkage and some possible crevices on branches.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 09744 09588	None likely
IN30	Hawthorn	Small hole in trunk, only big enough for a single bat.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 09749 09582	None likely
IN31	Sycamore	North facing butt rot up to 50 cm high. Unable to determine if it extends into a cavity.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09757 09670	Possible disturbance
IN32	Mature lime	Crack in bark of hollow tree 1.5 m high, facing north. Another fallen branch over the ditch appears hollow.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 09655 09681	None likely
IN33	Lime	Potential cavities behind suckering but all with highly cluttered DZs. Branch tear out 4 m from the ground shows remaining limb is hollow but with only a small cavity.	Moderate	Open hollow in trunk. Large open hollow within trunk with flat bottom. Provides no shelter from the elements and no roosting potential. Hole in trunk. Hole extends upwards for 30 cm with damp walls. Entrance to cavity 10 x 4 cm extending into larger cavity. Sheltered.	Moderate	As before.	Moderate	Moderate	NN 09656 09686	None likely
IN34	Mature lime	Hollow base likely extends upwards but unclear how far. Visible from north-east facing butt rot 1.5 m from the ground with uncluttered DZ.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09648 09692	None likely
IN35	Lime	South facing hole 3 m high extending upwards into trunk.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09651 09659	None likely
IN36	Immature lime	Butt rot up to 1 m high facing south, extends upwards but only room for one or two bats.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 09625 09652	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IN37	Dead unknown	Tree is extremely rotten with rot holes or lifted bark on all aspects. North facing crevice from ground to 1.5 m high may have cavity behind heartwood. Treecreeper nesting on north face.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09610 09681	None likely
IN38	Mature beech	Small hole extends into hollow trunk 1.5 m high facing west.	High	No aerial / endoscope inspection carried out.	N/A	As before.	High	High	NN 09593 09690	None likely
IN39	Mature cypress	Two vertical fissures from 1 - 2 m high facing eastwards. Cobwebs and sap evident.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09552 09718	None likely
IN40	Mature lime	Opening in the base of hollow trunk up to 0.5 m high facing towards the field.	High	No aerial / endoscope inspection carried out.	N/A	As before.	High	High	NN 09544 09699	None likely
IN41	Mature beech	Damage to branch 8 m high facing towards the field.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09506 09698	None likely
IN42	Lime	Large south-west facing crack at base of hollow trunk.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09503 09710	None likely
IN43	Lime	Lime tree, 30 m tall, hollow with north-east facing hole 1 m from the ground.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09489 09708	None likely
IN44	Mature lime	Numerous very minor opportunities for bat roost potential in exposed heart wood, all facing north-east.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 09472 09758	None likely
IN45	Dead standing stump	Minor lifted bark on all aspects.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 09459 09754	None likely
IN46	Lime	Crevices among suckering growth 1.5 m high. On all aspects but especially notable on north-east face.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09452 09782	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IN47	Mature beech	Rot feature facing south-west on opposite side of branch from tear out 6 m high where several limbs originate. Obscured by branches and fungus.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09430 09783	None likely
IN48	Beech	Rotten branch 10 – 12 m from the ground on the north-east face.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09416 09776	None likely
IN49	Mature lime	Hollow tree trunk. No obvious features identified but good potential for moderate suitability if features present high in the tree.	High	Knot hole on underside of branch extending horizontally back into branch towards trunk. Entrance 5 cm diameter. Extends 6 cm back to a tapered point. Split branch end on underside of horizontal branch. Extends horizontally along branch towards trunk 15 cm. Hole in trunk of tree entering into hollow, large trunk. Entrance 10 cm x 1.5 cm. Extends into hollow cavity inside tree. Highly cluttered entrance and drop zone but large cavity within. Multiple dead/ decaying limbs at top of canopy but these are negligible.	Moderate	As before.	Moderate	Moderate	NN 09356 09838	Possible disturbance
IN50	Mature oak	Small hole in hollow branch facing towards field.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 09409 09891	None likely
IN51	Dead unknown	Lifted bark evident on all aspects.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 09407 09892	None likely
IN52	Mature ash	Rot hole in trunk 0.5 m high facing away from field. Extends upwards.	High	No aerial / endoscope inspection carried out.	N/A	As before.	High	High	NN 09408 09900	None likely
IN53	Mature lime	Multiple possible features from damaged branches. Great tit nest present in one hole.	High	No aerial / endoscope inspection carried out.	N/A	As before.	High	High	NN 09300 09772	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
IN54	Mature sweet chestnut	Significant damage to multiple branches. Several small knot and woodpecker holes on branches and trunk on all aspects.	High	No aerial / endoscope inspection carried out.	N/A	As before.	High	High	NN 09297 09842	None likely
IN55	Mature beech	Large hole in trunk 2 m high, facing east. Other significant trunk damage.	High	No aerial / endoscope inspection carried out.	N/A	As before.	High	High	NN 09255 09860	None likely
IN56	Mature beech	Small crevices on trunk that could fit 1 to 2 bats. Possible additional crevice in north facing branch, 2 m high.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 09245 09855	None likely
IN57	Wall	2 m tall stone and mortar wall. The top row of stones is loose with occasional gaps between cap stones and main wall. Often exposed but occasional small suitable crevices.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 09125 09748	Possible disturbance
IN58	Dead yew	Crack in trunk 0.5 m high facing towards track. Could fit 1 or 2 bats.	Low	No aerial / endoscope inspection carried out.	N/A	Feature considered too open.	Negligible	Negligible	NN 09096 09765	None likely
IN59	Yew	Crack in trunk 1 m from the ground facing track. Could fit 1 or 2 bats.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 09049 09758	None likely
IN60	Mature horse chestnut	Hole in broken branch 10 m high facing east, other similar features on other aspects don't appear to extend.	Moderate	No aerial / endoscope inspection carried out.	N/A	Tree very large and senescent. Could be unseen features. Upgrade to High.	High	High	NN 09055 09747	None likely
IN61	Dead unidentified	Lifting bark throughout.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 09042 09728	Possible disturbance
IN62	Dead unidentified	Crack in trunk extending upwards into possible crevice facing away from track, 2 m from the ground.	Moderate	No aerial / endoscope inspection carried out.	N/A	Feature still present. Tree very damaged.	High	High	NN 09019 09697	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IN63	Sweet chestnut	Broken branches at multiple heights. Brown long-eared bat present in east facing cracked beam 2 m from the ground.	Confirmed (High)	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Confirmed (High)	NN 08844 09811	None likely
IN64	Massive dead sweet chestnut	Damage throughout including snapped off branches on all aspects, healed gouges facing all aspects, and potential woodpecker holes facing north from 4 m high. Upward facing hole facing south-east 3 m from the ground that may extend into trunk.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 08829 09826	None likely

Inveraray (south-west)

IS01	Dying unidentified (likely lime)	First identified in 2023.	N/A	N/A	N/A	Crack 1 m from ground in hollow trunk (~10 cm diameter) extends upwards.	Low	Low	NN 09248 09002	None likely
IS02	Mature sycamore	First identified in 2023.	N/A	N/A	N/A	Butt rot into hollow trunk, 0.5 m from ground at highest.	High	High	NN 09254 08986	None likely
IS03	Semi-mature sycamore	First identified in 2023.	N/A	N/A	N/A	Crack in trunk that extends upwards. 2 m high facing north-west.	Low	Low	NN 09252 08949	None likely
IS04	Mature oak	First identified in 2023.	N/A	N/A	N/A	Lifting bark on branches high up and potential cavities in holes from 3 m high.	Low	Low	NN 09214 08911	None likely
IS05	Mature oak	First identified in 2023.	N/A	N/A	N/A	Broken branch 10 m from the ground with a west facing pistol hole. Lifting bark on topmost branches.	Low	Low	NN 09200 08890	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IS06	Very mature lime	First identified in 2023.	N/A	N/A	N/A	Cracked and hollow trunk, with east facing hole 4.5 m from the ground. Knot hole on lower branch on the west side.	High	High	NN 09218 08891	None likely
IS07	Mature oak	Multiple boughs with dead split wood.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 09232 08889	None likely
IS08	Mature oak	First identified in 2023.	N/A	N/A	N/A	Knot hole 20 m high on a branch.	Low	Low	NN 09188 08860	None likely
IS09	Mature oak	First identified in 2023.	N/A	N/A	N/A	Multiple decks and peeled bark. All features facing the path (SE). DBH around 80 cm, features are more than 10 m high.	Low	Low	NN 09184 08849	None likely
IS10	Semi-mature lime	First identified in 2023.	N/A	N/A	N/A	Cracked trunk with a north-east facing hole extending upwards for 4.5 m. Cavity is small, ~3 cm wide.	Low	Low	NN 09200 08844	None likely
IS11	Mature oak	Multiple boughs with dead split wood	Moderate	Multiple features. Knothole 5 m on south-west limb. Space for a single bat only. Four snags / splits on north-east side of stem. 2 are unsuitable and 2 with very good features. No droppings present but 2 are features smooth and clear of cobwebs; suspect in frequent use. 3 cavities on limbs 4 m cavity at end of feature.		Several broken branches with lifting bark. Crack on upper branch facing south-east, 3.5 m high.	Moderate	High	NN 09191 08835	None likely
IS12	Dead unidentified	Damage at 10 m high on aspect facing the track. Limited visibility to determine extension into cavity.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 09069 08763	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IS13	Willow	Knothole in a thin branch over field at 3 m. Potentially doesn't go anywhere.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 09003 08578	Possible disturbance
IS14	Ice house	First identified in 2023.	N/A	N/A	N/A	Small structure (likely old ice house or similar) in woodland. Stone walls with some large gaps between stone roof and front wall. Inside appears intact with no gaps	High	High	NN 08863 08562	Possible disturbance
IS15	Mature dead unidentified	First identified in 2023.	N/A	N/A	N/A	Large hole on trunk, possibly exposed.	Moderate	Moderate	NN 08738 08462	Possible disturbance
IS16	Mature oak	Small amount of dead wood and wounds. Appears well sealed.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08849 08316	None likely
IS17	Mature oak	Wound hole on south face. Goes down at an angle but is sheltered. Thick ivy stems with gaps growing on tree.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 08834 08326	None likely
IS18	Mature oak	Large mossy cracks on north-east and north-west faces, gives access to hollow trunk.	High	Hole at 1.5 m entrance 15 x 3 cm into hollow trunk of tree with very large cavity. Insulated and sheltered. Smooth clean walls with no smaller cavities on inner walls.	Moderate	Not re-checked.	N/A	Moderate	NN 08817 08337	Possible disturbance
IS19	Massive oak	Damage to branch 4 m high facing east.	Moderate	Large knot hole facing south at 4 m with big cavity extending 1 m north. No droppings but some potential. Small hole with good potential. Cobweb free. Room for single bat.	Moderate	As before.	Moderate	Moderate	NN 08789 08322	Possible disturbance
IS20	Mature oak	Knot hole 4 m high and a second hole in branch. Both features face east.	Moderate	Linear knot hole horizontal in branch. 4 m up. Entrance 30 x 3 cm extends towards trunk horizontally for 40 cm. Cavity around 3 cm diameter. Cavities within and rough surface. Extends horizontally	High	As before.	High	High	NN 08784 08306	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
				towards end of branch 10 cm smaller cavity. Small knot hole in trunk 4 m up. 5 x 3 cm entrance. Extends in 6 cm. Small cavities within rough walls.						
IS21	Mature oak	Damage to trunk 6 m up facing north.	Moderate	Feature contains multiple small crevices that a small number (1-2) bats could fit in but no suitability as maternity roost. Feature does not extend above or below. Multiple small crevices behind callus role edges and behind rotten heartwood suitable for a small number of bats (1-3)	Moderate	As before.	Moderate	Moderate	NN 08779 08295	Possible disturbance
IS22	Mature oak	Damage to trunk and branch from 6 m up facing north.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 08763 08282	Possible disturbance
IS23	Massive oak	Massive oak with damage to branch 11 m up facing towards track, visibility limited.	Moderate	Main trunk has rot and cavities for multiple bats from 6 m to 10 m up. Dead limb at 3 m up has multiple cavities (facing west). Feature above 7 m not fully inspected due to active birds nest. DBH >2 m, loads of epicormic growth. Features in limbs overhanging track west (11 m & 20 m up). Checked but unsuitable. Many snags facing south and east with limited potential for small number of bats. Knot hole in south-west limb 13 m up. Good potential and other features on this limb also. Could also be additional features in canopy beyond hight of top anchor.	High	As before.	High	High	NN 08750 08286	Possible disturbance, lopping, loss
IS24	Large, damaged oak	Potential features on multiple aspects from 3 m up.	Moderate	Knot hole. 3 m up on trunk with 3 cm diameter. Entrance extends back 5 cm. Small cavity large enough for 1/2 bats. Sheltered but small.	Moderate	As before.	Moderate	Moderate	NN 08741 08277	Possible disturbance, lopping, loss

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
				Rot hole 4 m up with 40 x 25 cm entrance. Large opening into cavity with rotted plate of wood blocking most of entrance giving some shelter. Cavity extending upwards into heartwood at back of main cavity and 10 cm up 6 cm wide 3 cm diameter. Dead limb end with entrance 4 cm diameter extends straight back into branch 10 cm. No shelter. Open heartwood 4 to 7 m long. Cavity at top. Large entrance but has smaller cavities within. One extends upwards into trunk behind wood plate. Sheltered.					
IS25	Mature oak	Damage to trunk and branch 5 m up, facing south-west.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 08751 08267	Possible disturbance
IS26	Oak	Possible small hole 7 m high, facing east.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 08761 08258	Possible disturbance
IS27	Mature oak	N/A, identified 2023	N/A	N/A	N/A	Cracks in trunk 1.7 m high on south-east and north-east aspects. Appears to extend, but limited visibility.	Low	Low	NN 08723 08230	Possible disturbance
IS28	Massive oak	Possible hole in base of damaged branch at 4 m facing track	Moderate	Oval cavity extending 7 cm into trunk of tree with clear old birds nest. Crevice within main trunk at base of rotten branch, extends 8 cm into trunk but is only 4 cm tall and slightly damp.	Low	As before.	Low	Low	NN 08625 08094	Possible disturbance, lopping, loss
IS29	Dead unidentified	Two holes where branches are missing 1 m high facing south.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 08614 07991	Possible disturbance

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IS30	Large, damaged oak	Woodpecker holes from 4 m up, facing south-east.	Moderate	Openings within heartwood. All interconnected behind plate of wood. Provides small amount of shelter from elements but no insulation. Large entrances compared to smaller sheltered areas. Woodpecker hole with domed roof does not extend upwards. Smooth walls. Extends downwards 3 cm to flat bottom with birds nest at base. Large entrance compared to cavity within giving little protection from elements.	Low	Not re-checked.	N/A	Low	NN 08451 07776	None likely
IS31	Mature oak	Hole in large branch 7 m up facing south-east.	High	No aerial / endoscope inspection carried out.	High	Not re-checked.	N/A	High	NN 08453 07756	None likely
IS32	Oak	Woodpecker holes 3.5 m up facing south, could be climbed.	High	Woodpecker hole with domed roof but does not extend upwards. Extends downwards 10 cm to flat bottom. Cavity diameter 6 cm wide. Smooth walls and very wet soil at base of cavity.	Moderate	Not re-checked.	N/A	Moderate	NN 08408 07642	None likely
IS33	Mature oak	Small holes where branch is missing 4 m up and hole in small branch 8 m up, both facing east.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08549 07615	None likely
IS34	Mature oak	Knot hole in thin branch 7 m up, facing east and angled slightly upwards.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08544 07606	None likely
IS35	Huge dead beech	No obvious features but lifted bark and likely woodpecker holes.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not rechecked	N/A	Moderate	NN 08449 07518	None likely
IS36	N/A	First identified in 2023.	N/A	N/A	N/A	Lifted bark around trunk.	Low	Low	NN 08404 07456	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	**Tree species / structure type**	**Description**	**BRS**	**Description**	**BRS**	**Description**	**BRS**	**Final BRS**	**OSGR**	**Impact from Development**
IS37	Large dead/dying sycamore	Large dead/dying sycamore amongst conifers with multiple stems. Central trunk has a hole in heartwood facing north-east 5 m from the ground.	Moderate	Endoscoping showed feature as very exposed with dead-end.	Negligible	Not re-checked.	N/A	Negligible	NN 08386 07345	N/A
IS38	Mature beech	Long cavity in trunk to 2 m, extends upwards. Potential for crevices within cavity.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 08484 07499	None likely
IS39	Huge, mature oak	Small knothole on leaning branch facing south-east. Likely extends back into small cavity.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 08563 07439	None likely
IS40	Huge dead unknown	No obvious features but lifted bark throughout.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 08608 07402	None likely
IS41	Dead	Crack in trunk 1.5 m up, facing away from loch.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 08616 07416	None likely
IS42	Beech	Slightly upward facing hole 6 m up where trunk missing, facing towards loch.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 08624 07404	None likely
IS43	Massive oak	Hole in branch facing north 3 m from the ground.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 08710 07431	None likely
IS44	Birch	Multiple small holes in trunk from 0.5 m up, all facing south.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 08790 07456	None likely
IS45	Large oak	Hole in damaged trunk 6 m up facing northeast. Potential for other features obstructed from view.	High	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	High	NN 08773 07379	None likely
IS46	Sycamore	Narrow butt rot extending upwards into trunk on north aspect, 0.5 m up the tree.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08767 07339	None likely

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
IS47	Sycamore	Hole 5 m up facing north. Only space for small cavity.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08766 07329	None likely
IS48	Alder	Small hole in south face of trunk 1.5 m up, extending upwards.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08773 07321	None likely
IS49	Birch	Damage to trunk with a small south-east facing hole extending upwards.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08977 07441	None likely
IS50	Mature cherry	First identified in 2023.	N/A	N/A	N/A	South-west facing hole 2 m up trunk extending up into smaller cavity.	Low	Low	NN 08937 07529	None likely
IS51	Massive beech	Possible hole in trunk 4 m up, facing north-east.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 08944 07551	None likely
Three Bridges										
BRI01	Mature oak	No features identified as could not be inspected closely.	Unknown	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	N/A	NN 08790 12429	N/A
BRI02	Mature oak	Butt rot to 70 cm up hollow trunk. Other damage comprising minor rot features on branches which are likely negligible.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before but entrance at base is very cluttered.	Low	Low	NN 08741 12388	N/A
BRI03	Large dead oak	No obvious features but lifted bark throughout. Could be hollow with hidden features.	Low	No aerial / endoscope inspection carried out.	N/A	As before.	Low	Low	NN 08730 12386	N/A
BRI04	Mature oak	Damage/potential cavity on north pointing branch.	Moderate	No aerial / endoscope inspection carried out.	N/A	As before.	Moderate	Moderate	NN 08274 12279	N/A
BRI05	Mature birch	Cavity within roots/stone overlooking burn.	Moderate	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Moderate	NN 08481 12465	N/A

		Ground level assessment (2021)		Aerial / endoscope inspection (2021)		Ground level assessment (2023)				
Ref	Tree species / structure type	Description	BRS	Description	BRS	Description	BRS	Final BRS	OSGR	Impact from Development
BRI06	Mature birch	Some cracked bark with no obvious associated features but tree is potentially hollow. North facing butt rot to 50 cm.	Low	No aerial / endoscope inspection carried out.	N/A	Not re-checked.	N/A	Low	NN 08759 12521	N/A

Photograph Annex

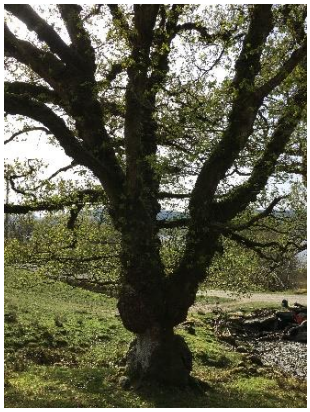
Photograph Annex

Trees with bat roost suitably found during surveys are shown below on *Table 1.17*.

Table 1.17. Photographs of trees with bat roost suitability

Tree location and number

Allt a' Chrosaid

T01	T02	T03
		
T04	**T05**	**T06**
		
T07	**T08**	**T09**
		

Tree location and number

T10

T11

T12

T13

T14

T15

T16

No photo available.

T17

T20

T21

T22

T23

Tree location and number

T24

T25

T26

T27

T28

T29

T30

T31

T32

T33

T34

Tree location and number

Loch Awe (excluding Allt a Chrosaid)

Awe01

Awe02

Awe03

Awe04

Awe05

Awe06

Awe07

Awe08

Awe09

Tree location and number

Awe10	Awe11	Awe12
		
Awe13	**Awe14**	**Awe15**
		
Awe16	**Awe17**	**Awe18**
		
Awe19	**Awe20**	**Awe21**
		

Tree location and number

Awe22

Awe23

Awe24

Awe25

Awe26

Awe27

Awe28

Awe29

Awe30

Awe31

Awe32

Awe33

Tree location and number

Awe34

Awe35

Inveraray (north-east)

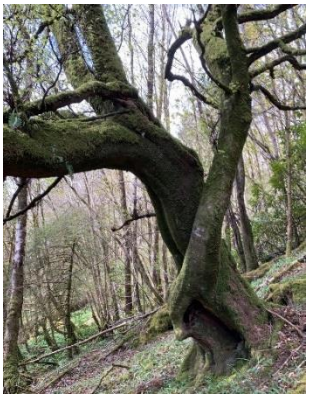
IN01

IN02

IN03

IN04

IN05



IN06

Tree location and number

IN07

IN08

IN09

IN10

IN11

IN12

IN13 BT06

IN14

IN15

Tree location and number

IN16

(now fallen)

IN17

IN18

IN19

IN20

IN21

IN22

IN23

IN24

Tree location and number

IN25

IN26

IN27

No photo available.

IN28

No photo available.

IN29

No photo available.

IN30

No photo available.

IN31

IN32

IN33

IN34

IN35

No photo available.

IN36

Tree location and number

IN37

IN38

IN39

IN40

IN41

IN42

IN43

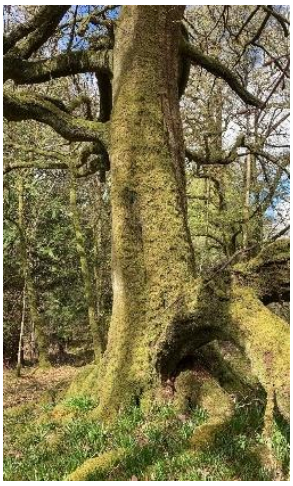
IN44

IN45

Tree location and number

IN46

IN47



IN48

IN49

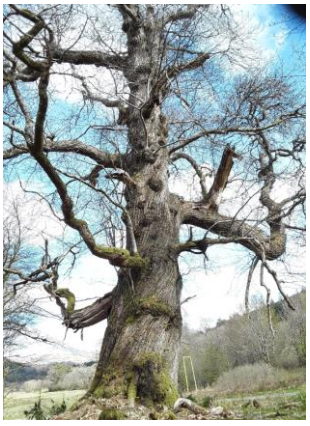
IN50

IN51

IN52

IN53

IN54



Tree location and number

IN55

IN56

IN57

IN58

IN59

IN60

IN61

IN62

IN63

Tree location and number

IN64

Inveraray (south-west)

IS01

IS02

IS03

IS04

IS05

IS06

Tree location and number

IS07

No photo available.

IS08

No photo available.

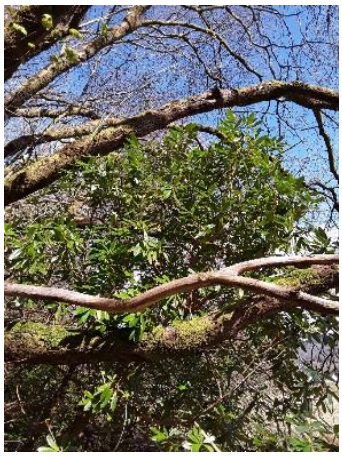
IS09

IS10

IS11

IS12

IS13



IS14

IS15

IS16

No photo available.

IS17

No photo available.

IS18

No photo available.

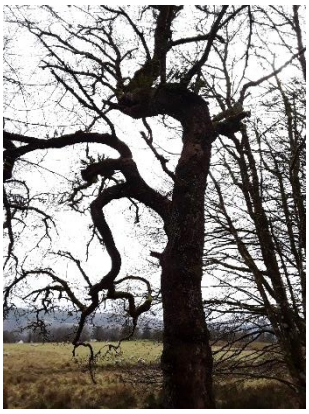
Tree location and number

IS19

IS20

IS21

IS22



IS23

IS24

IS25

IS26

IS27

IS28

IS29

IS30

Tree location and number

IS31

IS32

IS33

IS34

IS35

IS36

IS37

IS38

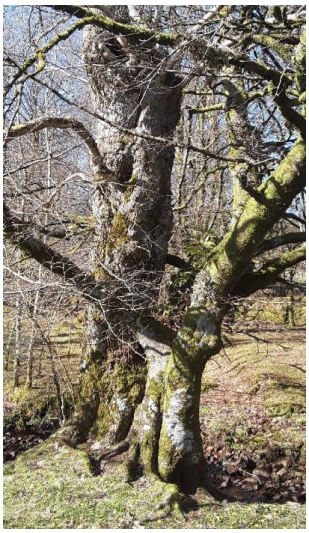
IS39

Tree location and number

IS40

IS41

IS42



IS43

IS44

IS45

IS46

IS47

IS48

Tree location and number

IS49

IS50

IS51

Three bridges

BRI01

BRI02

BRI03

BRI04

BRI05

BRI06