A83 Rest and Be Thankful

LTS EIAR VOLUME 4, APPENDIX 11.14 - REPTILES AND OTHER NOTABLE SPECIES REPORT

Transport Scotland

A83AAB-AWJ-EAC-LTS_GEN-RP-LE-000270

A11-14. Reptiles and Other Notable Species Report

A11-14.1. Introduction

Terms of Reference

A11-14.1.1. AtkinsRéalis WSP Joint Venture (AWJV) were commissioned by Transport Scotland as part of the A83 Rest and Be Thankful Project (hereafter referred to as the Proposed Scheme), to prepare a reptiles and other notable species baseline report.

A11-14.1.2. Volume 2, Chapter 4: The Proposed Scheme, provides details of the construction works, the Receptor Sites and Natural Capital (NC) and Biodiversity Net Gain (BNG) enhancement sites. The findings for these enhancement sites are considered in Appendix 11.16: Enhancement Site Survey Report. They are not discussed within this report. The Proposed Scheme, excluding the NC and BNG enhancement sites, will be referred to as the Proposed Scheme (excl. NC & BNG) hereafter.

Purpose of Report

A11-14.1.3. This report is intended to provide baseline information regarding reptiles and other notable species to inform the Environmental Impact Assessment (EIA) Report for the Proposed Scheme.

A11-14.1.4. This report describes the method and results of desk study and field survey to assess potential for reptiles. Other notable species listed in this report are ones for which initial scoping determined that dedicated surveys were not merited, but incidental records are provided for completeness.

A11-14.1.5. The report presents ecological information obtained during the following:

- a review of the geographical information system (GIS) data for incidental species records collected by Jacob AECOM Joint Venture in 2021 and 2022;
- a desk-study involving data collection from various organisations undertaken on 22 February 2023 and updated on 1 August 2024;
- a review of habitat information obtained from botanical surveys undertaken by Jacobs AECOM Joint Venture in 2022 and by AWJV between May 2023 and May 2024. The initial review was undertaken on 23 February 2023 and updated on 1 July 2024 and
- a field survey to record relevant site-specific features suitable to support reptiles undertaken on 12 September 2023 and 2 November 2023.

A11-14.2. Legislation

A11-14.2.1. See Appendix 11.2: Biodiversity Legislation, Policy and Guidance for species legislation.

A11-14.3. Methodology

Desk Study

Data Request

A11-14.3.1. The geographical area for obtaining ecological data through desk studies has been determined using CIEEM Guidelines for Biodiversity Data, CIEEM Guidelines for Preliminary Ecological Appraisal and professional judgement. Baseline data has been gathered through a data request to the local biological records centre and using online resources, within 2km of the Proposed Scheme (excl. NC & BNG) (hereafter referred to as the 'Study Area'). Requests were sent to Argyll Biological Records Centre (ABReC).

A11-14.3.2. The ABReC was unable to complete the data request due to staff illness. However, ABReC did confirm their records could be downloaded from National Biodiversity Network (NBN) Atlas and used in any reports relating to the

search. For species records collected, only those within 10 years of the data collection date (i.e. records submitted since 2014) and were recorded under a data licence for the record to be used for commercial use have been considered within the assessment.

Data Review

A11-14.3.3. A desk-based review of incidental data recorded between 2021 and 2024 survey work was undertaken relating to the Proposed Scheme (excl. NC & BNG). GIS data recorded by Jacobs AECOM Joint Venture (2022): Access to Argyle to Bute (A83), and by AMJV was reviewed to ascertain the presence of reptiles and other notable species to determine the presence of these species with the Study Area and potential species assemblages.

A11-14.3.4. Notable species included in this report are mountain hare, brown hare, red deer and amphibians. Given the protected status of mountain hare and brown hare, and red deer being listed as a priority species for upland flushes, fens and swamps habitat under the Argyll and Bute Biodiversity Technical Note for Planners and Developers, these species have been considered in this report. Even though amphibian species (excluding great crested newt, which are scoped out of the study) do not have the same protection status as other notable species, they have been considered as context for further mitigation as best practice.

A11-14.3.5. To identify historic presence within the Study Area, NBN Atlas was used to identify records within 2km of the Proposed Scheme (excl. NC & BNG) within 10 years of the time the assessment was undertaken.

Desk-based Habitat Suitability Assessment for Reptiles

A11-14.3.6. The exercise to identify suitable habitat for reptiles including land within and up to 50m beyond the boundary of the Proposed Scheme (excl. NC & BNG) (hereafter referred to as the ‘survey area’).

A11-14.3.7. The presence and distribution of habitats within the survey area that are suitable to support reptiles was determined through a review of UK Habitat classification (UKHab) data collected in 2021 and 2022 by Jacob AECOM Joint Venture (2022): Access to Argyle and Bute, and UKHab and National Vegetation Classification (NVC) surveys undertaken by AMJV between May 2023 and May 2024 (see Volume 3, Figure 11.4b Terrestrial Habitats (UKHab), and Volume 3, Figure 11.4c Terrestrial Habitats (NVC)). This habitat data was reviewed with consideration of relevant guidance on suitable reptile habitats, including:

- Joint Nature Conservation Council's (JNCC) Herpetofauna Workers Manual (2003);
- Amphibian and Reptile Conservation Reptile Habitat Management Handbook (2010);
- NatureScot's Standing Advice for Planning Consultations – Reptiles (Adder, Slow Worm and Common Lizard);
- Froglife's (1999) Advice Sheet 10: Reptile Survey;
- Amphibian and Reptile Groups of the United Kingdom (2018) Advice Note 10: Reptile Survey and Mitigation Guidance for Peatland Habitats.

A11-14.3.8. Habitat types for reptiles were classified into two categories, habitats 'of importance' and those 'of moderate importance' (see Table A11-14-2) based on criteria available in Design Manual for Roads and Bridges (2005) Volume 10, Section 4, Part 7 HA 116/05 Nature Conservation Advice in Relation to Reptiles and Roads. While habitat requirements can relate to factors intrinsic to a particular site such as geographic location or topography, many are affected by management. The habitat data collected (see Volume 3, Figure 11.4b Terrestrial Habitats (UKHab) and Volume 3, Figure 11.4c Terrestrial Habitats (NVC)), were used to identify broad habitat types within the survey area. The UKHab broad habitat types were then reviewed against the criteria for 'of importance' and 'moderate importance' habitat types for reptiles.

A11-14.3.9. Only reptile species likely to be encountered within the survey area were included within the assessment: common lizards, slow worms and adders. This is based on the known distribution of UK reptile species.

A11-14.3.10. Table A11-14-1 provides a breakdown of the relative importance of UKHab habitat types (Level 3) within the survey area for common lizards, slow worms and adders. Habitats 'of importance' for reptiles are marked as "I", whilst habitats of 'moderate importance' for reptiles are marked as "MI". Habitats that are considered to be unsuitable are marked as "U".

A11-14.3.11. Available guidance provides an overview of the types of habitats that are important for reptiles. Thus, professional judgement has been used to determine the relative importance of UKHab broad habitat types based on the ecology and known preferences of each species. Only the UKHab broad habitat types are tabulated below; however, there can be variation in suitability within habitat types (e.g. dwarf shrub heath can be further split into upland and lowland heath and further again into dry and wet heaths, all of which vary in relative importance of the habitat for each species). This is reflected within the written justification of suitability of assessed areas (refer Table A11-14-2).

Table A11-14-1 - UKHab Habitats Recorded in the Survey Area and Relative Importance for Reptiles

UKHab Broad Habitat Type	Common Lizards	Slow Worms	Adders
Acid grassland (g1)	I	I	I
Calcareous grassland (g2)	I	I	I
Neutral grassland (g3)	I	I	I
Broadleaved and mixed woodland (w1)	MI	I	MI
Coniferous woodland (w2)	MI	MI	MI
Dwarf shrub heath (h1)	I	MI	I
Dense scrub (h3)	I	I	MI

UKHab Broad Habitat Type	Common Lizards	Slow Worms	Adders
Fen marsh and swamp (f2)	MI	MI	MI
Built-up areas and gardens (u1)	MI	MI	MI
Standing open water and canals (r1)	U	U	U
Rivers and streams (r2)	U	U	U

Field Survey

Reptiles

A11-14.3.12. The geographical area for undertaking ecological field surveys for reptiles has been determined using current survey guidance and professional judgement. A ground truthing exercise was undertaken on 12 September 2023 and 2 November 2023. All the surveys were led by surveyors who have been assessed to be at least of capable experience following the CIEEM competency framework.

A11-14.3.13. The field survey comprised a ground truthing exercise to confirm the suitability of habitats within the survey area and record specific features such as: persistence of a varied structure to the ground and scrub layers or habitat grading; exposure to sunlight; slope and aspect; prey availability; presence of potential hibernacula or refugia; and, level of disturbance.

A11-14.3.14. The surveys followed good practice methodologies and were based on guidance set out by NatureScot's Standing Advice for Planning Consultations – Reptiles (Adder, Slow Worm and Common Lizard) and CIEEM's Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine.

A11-14.3.15. As well as habitat type and complexity, another factor affecting the suitability of habitat for reptiles is connectivity within the landscape. Due to reptiles'

relatively limited dispersal ability, continuity of viable populations relies on connectivity to ensure requirements for habitat, prey abundance and mating opportunities are met. Therefore, each habitat has been considered in its wider context, encompassing adjacent and surrounding habitats. A broad, landscape-level approach was taken to the assessment of the suitability and availability of specific habitat features within the survey area to support reptiles.

Incidental Reptile and Other Notable Species Records

A11-14.3.16. No species-specific reptile or notable species presence/likely absence surveys were undertaken. Species recorded during other protected species survey efforts were documented as an incidental species. Incidental records pertaining to reptiles and notable species addressed in this report are detailed in Section A11-14.1 Results below. All other species records are detailed in Technical Appendices, and summarised in Volume 2, Chapter 11: Biodiversity.

Determination of Habitat Suitability for Reptiles

A11-14.3.17. The desk-based habitat suitability assessment and data collected during the ground-truthing field survey was reviewed along with any incidental records to determine the potential of habitats within the survey area to support reptiles. Information from other ecological surveys and/or secondary codes (used to identify the environment, origin or management of habitats) recorded during the UKHab surveys was also taken into consideration.

A11-14.3.18. A habitat suitability value for reptiles (High, Moderate, Low, or unsuitable) was then determined for habitats within the survey area using criteria presented in Table A11-14-2 and specific site conditions and features recorded during the field survey. This set of criteria was developed using professional judgement, based on the collective results field survey and desk-based habitat suitability assessment. The habitat suitability values assigned are displayed on Volume 3, Figure 11.14a Reptile Habitat Suitability, with habitats of High suitability shown in red, Moderate suitability shown in orange and Low suitability displayed in green. Areas considered unsuitable for reptiles have not been mapped.

Table A11-14-2 - Criteria for Assessing Habitat Suitability Value

Habitat Suitability Value	Criteria
High	Areas comprised predominantly of habitats 'of importance' for reptiles following available guidance and that contain suitable topography (e.g. unshaded areas, slopes with southern aspects likely to receive sunlight suitable for basking) and/or suitable management and/or features (such as hibernacula, basking/shelter mosaics, etc.) as shown in the site-specific data. These are generally large areas of habitat with good connectivity, and which support a mosaic of micro-habitats and features suitable for basking, foraging, sheltering, and hibernation by reptiles.
Moderate	Areas comprised predominantly of habitats 'of importance' following available guidance, but which are generally less suitable when considering topography and site-specific data, when compared to High suitability areas. Areas of 'moderate importance' are also included in this category if the topography and site-specific data show suitable features are present, including good connectivity. The habitats within these areas either exhibit greater homogeneity within the habitat type (less of a mosaic structure), or smaller areas of suitable habitat and, therefore, offer less opportunity for basking, foraging, sheltering and hibernation by reptiles.
Low	Areas comprised predominantly of habitats of 'moderate importance' for reptiles following available guidance and exhibit less suitable site-specific features when compared to areas of Moderate suitability, including topography. This category also includes 'important habitat' following available guidance but has been assessed as offering limited or no basking, foraging, sheltering and hibernation potential (generally due to its homogeneity/lack of mosaic features). For example, extensive areas of woodland habitat or exposed areas of grazed grassland which increase the risk of predation.

Habitat Suitability Value	Criteria
Unsuitable	Areas considered 'unimportant' for reptiles following available guidance.

Limitations

Desk Study

A11-14.3.19. ABReC were not able to provide full data search reports. As such, ABReC data was downloaded from the NBN Atlas with reproduction permissions obtained from the data centre directly, so this is not considered to be a limitation as all records held by ABReC are uploaded to NBN Atlas and were available for inclusion in this assessment.

Field Surveys

A11-14.3.20. Approximately 1ha of habitat in the survey area within and adjacent to the new Active Travel Route incorporated in the Proposed Scheme design in the north west part of the Proposed Scheme was not surveyed during previous UKHab and NVC surveys undertaken by Jacobs and AECOM in 2022 or AWJV in 2023 and 2024. However, the habitats in the un-surveyed area were determined by extrapolating data from adjacent habitats which had been previously surveyed between 2022 and 2024 and aerial imagery. As such this is not considered to be a significant limitation.

A11-14.3.21. The results of this assessment have allowed an evaluation of the presence/likely absence of reptiles, and incidental records of other notable species not recorded elsewhere are also included in this report. However, ecological surveys are limited by factors which affect the presence of animals such as the time of year, migration patterns and behaviour. The absence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

A11-14.3.22. No specific presence/likely absence surveys for reptile were undertaken to inform this assessment. However, the assessment to determine the suitability of habitats within the survey area for reptiles gave sufficient information to inform valuation and impact assessment and plan appropriate mitigation. Given the assessment of habitat suitability this is not considered a significant limitation to the assessment.

A11-14.3.23. Other notable species listed in this report are ones for which initial scoping determined that dedicated surveys were not merited, so the absence of such surveys is not considered a limitation, but incidental records are provided for completeness.

A11-14.3.24. During field surveys in 2023, several locations could not be surveyed fully due to dense vegetation or unsafe ground conditions. This is not considered to be a significant limitation as the areas were able to be viewed from a distance and an assessment of the suitability made based on this.

A11-14.4. Results

A11-14.4.1. This section describes the baseline results following the desk study and field surveys for reptiles and incidental species (including incidental reptile evidence recorded during other field surveys).

A11-14.4.2. Volume 3, Figure 11.14a Reptile Habitat Suitability outlines the habitat suitability for reptiles within the survey area; and Volume 3, Figure 11.14b Incidental and Notable Species Records shows all reptile and notable species records within the Study Area.

Desk Study and Incidental Records

A11-14.4.3. The data collection exercise returned no reptile records, a single record of mountain hare, a single record of brown hare, and a single record of red deer. No other notable species were recorded within 2km of the Proposed Scheme (excl. NC & BNG).

A11-14.4.4. In addition, five reptile records and four amphibian records were obtained incidentally during wider ecological surveys of the Proposed Scheme (excl. NC & BNG) undertaken from 2021 to 2024. None of the amphibian species recorded are priority species. However, the incidental amphibian species recorded have been detailed below for context as good practice.

A11-14.4.5. All records of reptiles and other notable species collated during the desk study are provided in Table A11-14-3 below and are shown in Volume 3, Figure 11.14b Incidental and Notable Species Records.

Table A11-14-3- Records of reptiles and other notable species obtained from desk-based assessment and incidental records

Easting (X)	Northing(Y)	Date	Distance from Proposed Scheme (excl. NC & BNG) (m)	Species	Detail/ Location
224559	704952	17/03/2023	Within the Proposed Scheme (excl. NC & BNG)	Palmate newt	A male palmate newt sighted in a waterbody.
224534	704975	17/03/2023	Within the Proposed Scheme (excl. NC & BNG)	Unidentified amphibian species	Tadpoles observed adjacent to the Old Military Road.
224667	704660	17/03/2023	19m west of the Proposed Scheme (excl. NC & BNG)	Palmate newt	A male palmate newt observed in wet ditches.
223072	707033	01/09/2022	133m south east of the Proposed Scheme (excl. NC & BNG)	Common lizard	Common lizard observed on trial camera running into bracken by badger sett.
223088	707027	17/03/2023	144m south east of the Proposed Scheme (excl. NC & BNG)	Common lizard	A common lizard observed foraging in grassland adjacent to a burn.

Easting (X)	Northing(Y)	Date	Distance from Proposed Scheme (excl. NC & BNG) (m)	Species	Detail/ Location
224873	704474	17/03/2023	237m south east of the Proposed Scheme (excl. NC & BNG)	Common frog	A common frog observed along the embankment adjacent to the existing A83.
224981	704384	07/05/2024	377m south east of the Proposed Scheme (excl. NC & BNG)	Common lizard	A common lizard observed along the vegetated bank of the Croe River.
225000	705000	26/06/2018	377m north east of the Proposed Scheme (excl. NC & BNG) (at the closest point of the 1km grid square of the record)	Brown hare	The record provided by NBN Atlas is located within a 1km grid square.
225462	704445	23/04/2024	786m south east of the Proposed Scheme (excl. NC & BNG)	Common lizard	Observed within upland acid grassland habitat.

Easting (X)	Northing(Y)	Date	Distance from Proposed Scheme (excl. NC & BNG) (m)	Species	Detail/ Location
225457	704424	26/05/2021	786m south east of the Proposed Scheme (excl. NC & BNG)	Common lizard	A common lizard observed near edge of woodland. Located in woodland south east corner of the Proposed Scheme.
222947	709359	29/04/2023	1.6km north of the Proposed Scheme (excl. NC & BNG) (at the closest point of the 100m grid square of the record)	Red deer	The record provided by NBN Atlas is located within a 100m grid square.
227000	707000	19/03/2021	1.7km north east of the Proposed Scheme (excl. NC & BNG) (at the closest point of the 2km grid square of the record)	Mountain hare	The record provided by NBN Atlas is located within a 2km grid square.

Reptiles

A11-14.4.6. The presence of common lizards within 2km of the Proposed Scheme (excl. NC & BNG) was confirmed by incidental records. All five records were located over 100m from the Proposed Scheme (excl. NC & BNG) and therefore, outside the survey area. No other reptile species were identified during the desk-based assessment within Study Area. Habitat suitability for this species is detailed in the Field Survey section below and shown in Volume 3, Figure 11.14a Reptile Habitat Suitability. No reptile records were identified within 1.3km of Receptor Site 1 and 2, also shown in Volume 3, Figure 11.14b Incidental and Notable Species Records.

Other Notable Species

A11-14.4.7. One record of mountain hare documented in 2021 was identified on NBN Atlas. Due to withheld information pertaining to the exact location of the records, the record is presented as a 2km OS grid square overlapping with higher altitudes.

A11-14.4.8. The majority of the Proposed Scheme (excl. NC & BNG) is situated below an altitude of 230m. Mountain hare typically inhabit heather moorland at altitudes of approximately 300m – 400m above sea level and higher. A small section of the Proposed Scheme (excl. NC & BNG) (comprising of purple moor grass and rush pastures) reaches approximately 280m (the highest point of the Proposed Scheme) within the northern extent of the Proposed Scheme, east of the A83. However, suitable habitats such as purple moor grass and rush pastures habitat, conifer plantations and bracken located east of the A83 within the survey area provide suitable habitat and overlap with more typical altitudes mountain hare inhabit.

A11-14.4.9. The upland birchwood habitat within Receptor 1 is situated between an altitude of approximately 170m and 210m above sea level. The neutral grassland habitat in Receptor 2 is located approximately 110m above sea level. Given the altitude the receptor sites are located at, and the abundance of more suitable

habitat present at higher altitudes in the wider landscape to the east, it is considered highly unlikely for mountain hare to be present within these areas.

A11-14.4.10. A single record of brown hare was documented in 2018 and identified on NBN Atlas. Due to withheld information pertaining to the exact location of the records, the record is presented as a 1km OS grid square, the closest point of which is located approximately 377m north east of the Proposed Scheme (excl. NC & BNG).

A11-14.4.11. Brown hare prefer inhabiting arable land, grassland and woodland with vegetation to provide permanent cover. Grassland and woodland habitats are present within and adjacent to the Proposed Scheme (excl. NC & BNG).

A11-14.4.12. Red deer is listed as a priority species for upland flushes, fens and swamps habitat under the Argyll and Bute Biodiversity Technical Note for Planners and Developers. A single record of red deer was identified on NBN within 2km of the Proposed Scheme (excl. NC & BNG). However, due to withheld information pertaining to the exact location of the record, it is presented as a 100m grid square.

A11-14.4.13. Red deer are known to move between sheltered woodland habitat and more open moorland, typically living along woodland margins. These habitats are found within the survey area and are present within and adjacent to the Proposed Scheme (excl. NC & BNG).

Incidental Records of Amphibian Species

A11-14.4.14. Two palmate newts, a common frog, and unidentified tadpole species were identified within the Study Area of the Proposed Scheme (excl. NC & BNG). Waterbodies and wet ditches provide suitable aquatic habitat for amphibians, with High, Moderate and Low suitability habitats for reptiles (refer to Table A11-14-4) providing suitable terrestrial habitat for amphibians as well.

A11-14.4.15. No incidental species were identified within 590m of the receptor sites (see Volume 3, Figure 11.14b Incidental and Notable Species Records). Both receptor sites offer suitable terrestrial habitat for amphibians.

Field Survey

Reptiles

A11-14.4.16. Habitat suitability within the survey area is presented in Table A11-14-4 below and displayed in Volume 3, Figure 11.14a Reptile Habitat Suitability. Areas of suitable habitat have been assigned reference numbers which are displayed on the figure.

Table A11-14-4 - Summary of Reptile Habitat Suitability Assessment Result

Area Reference Number(s)	Suitability	Justification
1, 13, 36, 40	High	Areas of 'important' habitat for reptiles including acid grassland (comprising bracken) and dwarf shrub heath. Areas of 'moderate importance', including fen, marsh and swamp and small stands of lightly wooded coniferous woodland are also included where suitable topography and habitat features are present. This predominantly includes areas that are south facing with good sun exposure, largely undisturbed and contain a mosaic of habitats with a varied structure providing opportunity for reptiles to forage, bask, shelter and hibernate. Refer to Photograph 1, Annex 11.14.A. Photographs.
2, 3, 4, 5, 10, 11, 12, 14, 15, 16, 17, 18, 20, 22, 23, 24, 25, 26, 27 28, 29, 32, 33, 35, 37, 39, 41, 42	Moderate	Areas predominantly comprise a mosaic of habitats ranging from 'important' to 'moderate importance' for reptiles. This includes dense scrub, calcareous grassland, acid grassland (including bracken), neutral grassland, dwarf shrub heath, and fen, marsh and swamp. These areas generally contain only small pockets of important habitats and are limited in their connectivity to other areas of suitable habitat or, exposed to some level of disturbance and grazing pressure creating a more uniform sward. Additionally, they tend to contain limited features suitable for use as refugia. However, mammal burrows (rabbit), some boulders and dry-stone walls create opportunity for shelter and hibernation. Refer to Photograph 2, Annex 11.14.A. Photographs.

Area Reference Number(s)	Suitability	Justification
6, 7, 8, 9, 19, 21, 30, 31, 34, 38	Low	Areas predominantly contain habitats of 'moderate importance' including fen, marsh and swamp, and arable and horticulture but also contain 'important' habitats such as acid grassland (including bracken) and other neutral grassland which are very wet, heavily poached and contain limited habitat features. Therefore, these areas are exposed to predation, with minimal or no opportunity for reptiles to shelter, bask and forage. In these areas prey availability may be limited. Refer to Photograph 3, Annex 11.14.A. Photographs.

A11-14.4.17. The habitat suitability assessment recorded four areas of High suitability. Areas 1 and 13 are located in the northern most extent of the Proposed Scheme (excl. NC & BNG) around Loch Restil and south of the OMR. These areas largely comprise a mosaic of habitats on south facing slopes with scree and boulders providing refugia. The remaining two areas (reference 37 and 40) are located within the southernmost extent of the Proposed Scheme (excl. NC & BNG) and comprise of dense scrub and bracken.

A11-14.4.18. There are 28 areas of Moderate suitability. These are located either side of the A83 and OMR, but primarily to the east. These areas largely comprise habitats on the lower slopes which are subject to some level of disturbance but remain rank with opportunity for refugia amongst vegetated, degraded dry-stone walls, and boulders.

A11-14.4.19. A total of 10 areas of Low suitability were recorded; these are located primarily along the west of the OMR. These areas largely contain limited refugia beyond the boundary dry-stone wall features and are grazed to a short uniform sward.

A11-14.4.20. Overall, within the survey area, there is a predicted temporary loss of approximately 16.09ha of suitable habitat for reptiles, and a predicted permanent loss of approximately 9.6ha of suitable reptile habitat. Table A11-14-5 presents a breakdown of habitat suitability across the survey area and the predicted habitat loss. All findings relating to suitability for reptiles, also apply to the habitat's potential as terrestrial habitat for amphibians.

Table A11-14-5 - Breakdown of Suitable Reptile Habitat Across the Survey Area

Habitat Suitability Value	Total Area of Habitats in Survey Area (ha)	Predicted Area of Permanent Habitat Lost (ha)	Predicted Area of Temporary Habitat Lost (ha)
High	3.79	0.11	0.32
Moderate	75.79	8.84	15.02
Low	11.34	0.65	0.75
Unsuitable	7.93	3.1	1.57
Total	98.85	12.7	17.66

A11-14.4.21. Habitat within Receptor 1 and Receptor 2 was identified as Moderate suitability for reptiles and amphibians. The receptor sites offer suitable opportunities for sheltering, commuting, hibernating and foraging reptiles and amphibians.

A11-14.5. Discussion and Conclusion

Discussion

A11-14.5.1. Common lizard and amphibian species were recorded incidentally within the Study Area. The amphibian species encountered were palmate newt and unidentified species of tadpoles which were recorded within the extents of the Proposed Scheme (excl. NC & BNG). However, neither of these amphibian species are priority species. All findings relating to suitability for reptiles, also apply to the habitat's potential as terrestrial habitat for amphibians.

A11-14.5.2. The majority of the survey area and Proposed Scheme (excl. NC & BNG) is suitable for reptiles with approximately 9.6ha and 16.09ha of suitable habitat to be permanently and temporarily lost, respectively. Of this, the majority of the habitat both temporarily and permanently lost is Moderate suitability habitat, with a small area of High suitability habitat to be lost. All habitat to be lost during construction is adjacent to suitable habitat to be retained. Reptiles may use High, Moderate and Low suitability habitats within and adjacent to the Proposed Scheme (excl. NC & BNG) to commute, forage, shelter and/or hibernate.

A11-14.5.3. Suitable habitat for common lizard was identified within the survey area and the Proposed Scheme (excl. NC & BNG); the presence of this species confirmed by incidental findings. Even though slow worm and adder were not identified or encountered within the Study area, suitable habitat for these species are present within the extents of the Proposed Scheme (excl. NC & BNG) and wider survey area. Therefore, the presence of these species cannot be categorically ruled out. Given small number of reptiles identified within the Study Area (recorded incidentally and historically), the fact that the majority of the habitat to be lost is of Moderate suitability, and abundance of suitable habitat in the wider landscape, overall only a small number of reptiles are anticipated to inhabit land within and immediately adjacent to the Proposed Scheme (excl. NC & BNG).

A11-14.5.4. Habitat within Receptor 1 and Receptor 2 was identified as of Moderate suitability for reptiles. No habitat loss is expected in Receptor 1, and slight habitat modification is potentially required in Receptor 2.

A11-14.5.5. Single records of mountain hare, brown hare and red deer were identified during the desk study, with suitable habitats for all three species identified within the survey area. Brown hare and red deer may use suitable habitats within and adjacent to the Proposed Scheme (excl. NC & BNG) to commute, forage and shelter.

A11-14.5.6. Given the Proposed Scheme (excl. NC & BNG) is located below the typical altitude mountain hare inhabit, and the abundance of more suitable habitat

east of the A83 at higher altitudes, it is considered less likely for this species to be present.

Conclusion

A11-14.5.7. The presence of common lizard, palmate newt and unidentified species of tadpole were confirmed within the Study Area. Habitat suitability assessments indicate that there are areas of Low, Moderate and High suitability habitat for widespread species of reptiles (i.e. adders, slow worms and common lizards) and amphibians within Proposed Scheme (excl. NC & BNG) and survey area.

A11-14.5.8. Approximately 16.09ha of suitable habitat for reptiles will be temporarily lost during works. A total of 9.6ha would be permanently lost to the Proposed Scheme (excl. NC & BNG).

A11-14.5.9. Suitable habitat was also identified for mountain hare, brown hare and red deer within the survey area. Therefore, the presence of these species within the Proposed Scheme (excl. NC & BNG) cannot be definitively ruled out and individual animals and their habitat may be adversely impacted as a result of works.

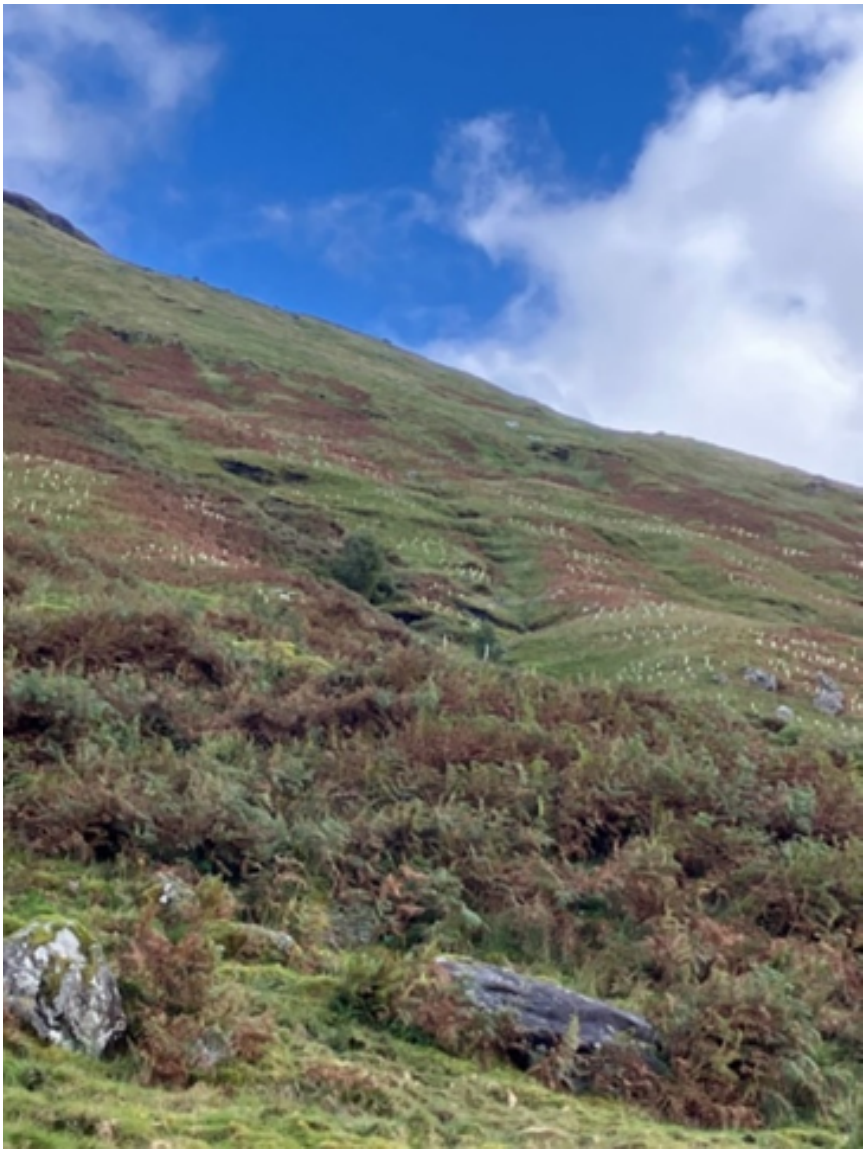
Report Validity

A11-14.5.10. The botanical data used to inform the habitat suitability assessment for reptiles in this baseline report are valid for 18 months post survey (May 2024). Additionally, the desk-based assessments detailed this baseline report are valid for 18 months post assessment (July 2024). These timeframes for which the data is valid are in line with CIEEM lifespan of reports guidance. Assessments and surveys are recommended to be repeated should the time between survey and work commencing reach beyond the 18-month period (i.e. beyond November 2025 for botanical surveys, and January 2026 for desk-based assessments).

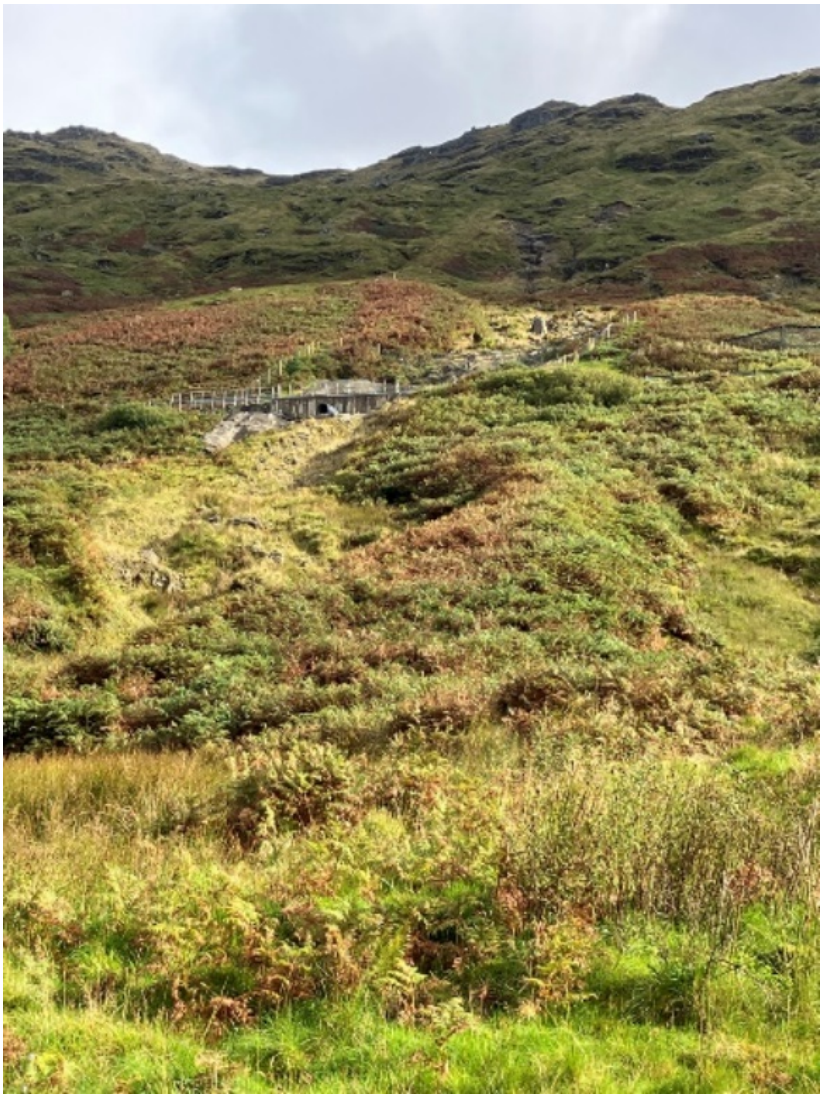
Annexes

Annex 11.14.A. Photographs

Photograph 1: Photo showing an area of 'important' habitat for reptiles including acid grassland (comprising bracken) and dwarf shrub heath. This predominantly includes areas that are south facing with good sun exposure, largely undisturbed and contain a mosaic of habitats with a varied structure providing opportunity for reptiles to forage, bask, shelter and hibernate.



Photograph 2: Photo showing an area predominantly comprising a mosaic of habitats ranging from 'important' to 'moderate importance' for reptiles. This includes dense scrub, calcareous grassland, acid grassland (including bracken), neutral grassland, dwarf shrub heath, and fen, marsh and swamp. These areas generally contain only small pockets of important habitats and are limited in their connectivity to other areas of suitable habitat or, exposed to some level of disturbance and grazing pressure creating a more uniform sward. Additionally, they tend to contain limited features suitable for use as refugia. However, mammal burrows (rabbit), some boulders and dry-stone walls create opportunity for shelter and hibernation.



Photograph 3: Photo showing an area predominantly contain habitats of ‘moderate importance’ including fen, marsh and swamp, and arable and horticulture but also contain 'important’ habitats such as acid grassland (including bracken) and other neutral grassland which are very wet, heavily poached and contain limited habitat features. Therefore, these areas are exposed to predation, with minimal or no opportunity for reptiles to shelter, bask and forage. In these areas prey availability may be limited.