

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

146 Southampton Street, Reading, RG1 2RD

Client:

Chike Ezechukwu

Survey date:

21st April 2025

Project:

This report is prepared to inform a planning application with the Reading Borough Council. The proposal is described as:

A single story rear extension, two story side extension, construction of an outbuilding and associated landscaping.

PEA survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

PRA survey methodology and legislation can be found in the Arbtech Supplement: [PRA Methodology and Legislation - 2024.](#)

The survey results and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion.

The site survey was undertaken by Ashleigh Domblides (Natural England Bat Licence Number: 2025-12729-CL17-BAT)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
21/04/2025	12	82	75	2	None
Executive Summary					
B1 has been assessed as providing high habitat value for roosting bats. Therefore, three emergence surveys are required during the optimal survey season (Mid-May – August) to determine presence or likely absence of roosting bats.					
Precautionary working measures are required for reptiles, birds, and small mammals.					

Ecological Survey Factor	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
Conclusion, Impact or Recommendations	
Habitats and plants (see habitat map in appendix 1, PRA plan in appendix 2, location plan in appendix 3, proposed plans in appendix 4 and photos in appendix 5).	
Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
<i>Summary of Survey Findings</i> <i>(UKHab codes used)</i>	<u>Site Description:</u> The survey site is centred on National Grid Reference SU71747266 and has an area of approximately 0.045ha. The site consists of one residential dwelling (B1), with associated front and rear garden, bare ground, scattered trees and some areas of hardstanding and shingle. The site is set within an urban area and completely surrounded by other residential dwellings and gardens with a small number of recreational fields in the wider local area. To the authors knowledge, there are no known previous reports for this site. The river Kennet runs north to south ~275m west of site and continues through Waterloo Meadows and other substantial habitat including coastal and floodplain grazing marsh, woodland and grassland to the southwest of site. Local connectivity is limited, with scattered trees and hedgerows within nearby residential gardens providing fragmented connectivity to other nearby habitat.

UK Habs Description and Codes:Developed Land: Sealed Surface [u1b]

There is a hardstanding pathway along the southeastern site boundary leading to B1 in addition to an area of hardstanding which appears to have been partially removed to the west of B1.

Artificial unvegetated – unsealed surface [u1c]

Two small areas of shingle, one to the southeast of B1 and one to the southwest, are present on site.

Built-up areas and gardens [u1] vegetated garden [828] and bare ground [510] with ruderals [81]

Both the eastern and the western gardens have been stripped. These are thought likely to have previously been predominantly lawn, and while the eastern area is recovering the western portion is still predominantly bare ground with some ruderals scattered throughout. The two parcels are distinct with the following composition:

The western garden is dominated by **bare ground** with **ruderals** scattered throughout. Species present include cleavers *galium aparine* (A), Spanish bluebell *hyacinthoides hispanica* (O), stinging nettle *urtica dioica* (O), dandelion *taraxacum officinale* (O), broad leaves dock *rumex obtusifolius* (O), forget me not *myosotis sylvatica* (R), rose sp. *rosa* (R) and lily sp. *lilium* (R).

The eastern garden is dominated by unmanaged lawn with substantial bare ground throughout and sward length of ~10-25cm. Species include the above with similar distribution in addition to perennial rye grass *lolium multiflorum* (A), common bugleweed *ajuga reptans* (F), lungwort *Pulmonaria* (F), primrose *primula* (O) and star of Bethlehem *ornithogalum umbellatum* (R).

Scattered trees [u1 32]

There are 11 trees scattered across site:

Tree number	Species	Size	Condition
T1	Silver Birch	Medium	Moderate
T2	Maple	Medium	Moderate
T3	Storax	Small	Moderate
T4	Kohuhu	Small	Moderate
T5	Sweet Bay	Small	Moderate

	T6 – T7	Apple	Medium	Moderate
	T8	Plum	Medium	Moderate
	T9	Beech	Small	Moderate
	T10	Kohuhu	Small	Moderate
<u>Native Hedgerow [h2a]</u> H1 is a native hedge bordering the western site boundary. It is dominated by beech <i>fagus sylvatica</i>, with holly <i>Ilex aquifolium</i>, dogwood <i>Cornus sanguinea</i>, honeysuckle <i>Lonicera periclymenum</i> and firethorn <i>pyracantha</i> also scattered throughout. Native hedgerow is a habitat of principle importance. <u>Non-Native Ornamental Hedgerow [h2b]</u> H2 is a non-native ornamental hedgerow along the northern site boundary within the eastern garden. It is dominated by cherry laurel <i>prunus laurocerasus</i>, with holly <i>Ilex aquifolium</i>, beech <i>fagus sylvatica</i>, box <i>buxus sempervirens</i>, ivy <i>hedera helix</i> and yew <i>taxus baccata</i> scattered throughout. <u>Buildings [u1b5]</u> There is 1 permanent building on site designated as B1. It is a residential dwelling in the centre of site. <u>Local notable habitats</u> Within a 2km radius of the site the following priority habitats have been identified: • Chalk river, closest parcel ~275m west of site • Deciduous woodland, closest parcel ~400m west of site • Coastal and floodplain grazing marsh, closest parcel ~750m southwest of site. • No main habitat but additional habitat exists, closest parcel ~1km south of site • Woodpasture and parkland, closest parcel ~1.5km east of site				
Foreseen Impacts	The habitats on site are widespread and not notable, aside from the native hedgerow which will not be impacted by the proposed development. The eastern non-native hedgerow and one tree is expected to be removed in addition to bare ground and vegetated garden based on the proposed plan. No impact on adjacent or nearby habitats off site is foreseen.			

<i>Recommendations</i>	A biodiversity net gain (BNG) report will be required for the proposal, as more than 25m² of habitat is affected by the proposal. Retained trees and hedgerows should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). <u>Biodiversity Enhancement Opportunities:</u> The following habitat creation and enhancement opportunities could be incorporated into the proposed development: ▪ Native wildflowers could be planted within the bare ground along the southeastern site boundary ▪ Additional native hedgerow could be planted along site boundaries ▪ Native shrubs could be planted within designated flower beds on site
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	The site is not subject to any designation, and there are no known statutory sites within 2km of site. In addition, there are no European designations within 10km of site. The site is within the Site of Special Scientific Interest (SSSI) Impact Risk Zone for Bramshill, however, there are no anticipated risks associated with the proposed development.
<i>Foreseen Impacts</i>	There are no anticipated impacts to designated sites as a result of the proposed development.
<i>Recommendations</i>	None
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	No problematic invasive and non-native species recorded on site.
<i>Foreseen Impacts</i>	N/A
<i>Recommendations</i>	No further surveys but remain vigilant.
Invertebrates	
<i>Summary of Survey Findings</i>	No habitat for protected or notable invertebrates is found on site, however the hedgerows and scattered trees on site provide good habitat for other more common invertebrate species. The loss of such habitats is likely to be inconsequential to local invertebrate populations owing to their low value and the presence of more extensive habitat locally.

Foreseen Impacts	None foreseen.			
Recommendations	No further surveys. The following habitat creation and enhancement opportunities could be incorporated into the proposed development: - Native wildflowers could be planted within the bare ground along the southeastern site boundary - Additional native hedgerow could be planted along site boundaries - Native shrubs could be planted within designated flower beds on site			
Bats				
Summary of Survey Findings	The following ESPLs and local survey returns were identified within 2km of the site:			
	EPSSL reference	Bat species affected	Distance from site	Impacts allowed by licence
	2016-22301-EPS-MIT	Common pipistrelle	~400m northeast	Damage and destruction of a resting place
	2019-44194-EPS-MIT	Common and soprano pipistrelle	~750m north	Destruction of a resting place
	2017-32379-EPS-MIT	Common pipistrelle	~800m west	Damage and destruction of a resting place
	2014-3941-EPS-MIT	Common and soprano pipistrelle	~1km east	Damage and destruction of a resting place
	EPSM2013-6155	Common pipistrelle	~1.05km north	Destruction of a resting place
	2017-28045-EPS-MIT	Daubentons	~1.2km north	Unspecified
	EPSM2010-2126	Common pipistrelle	~1.7km east	Destruction of a resting place
	EPSM2010-2266	Common pipistrelle and brown long-eared	~1.95km southeast	Destruction of a breeding and resting place
One building was surveyed to identify its suitability for roosting bats; B1, a terraced residential dwelling in the centre of site. Limitations: While the majority of the interior of B1 could be assessed, the building is derelict with portions of the floor unstable. Small areas of the building were therefore deemed unsafe and were not assessed. In addition, due				

	<i>to the height of the building the roof could not be seen in places. As 3 additional emergence are required, this is not considered to be a major limitation.</i>
Feature	Description
Bat foraging and commuting habitat	The scattered trees and hedgerow on site (Fig 1) provide suitable habitat for commuting and foraging bats. While more substantial habitat is present nearby, with woodland, a river and marshes to the southwest of site, the local connectivity is fragmented, with only scattered trees and disconnected hedgerow within surrounding residential gardens providing some low to moderate suitability for commuting and foraging bats. The overall sites suitability for foraging and commuting bats is moderate.  Fig 1
B1 - overview	B1 (Fig 2) is a terraced, gabled residential dwelling constructed of brick and mortar with a slate tile-clad roof. There are two, single-story extensions to the west of site with a pitched, slate tile clad roof. There are windows and doors on both the eastern and western elevations.

	 Fig 2
B1 – exterior	There are gaps in the mortar between bricks throughout (Fig 3), providing a suitable roosting feature for crevice dwelling bat species. There are gaps around window frames (Fig 4), providing a suitable roosting feature for crevice dwelling bat species. There is lifted lead flashing throughout the western elevation (Fig 5), providing a suitable roosting feature for crevice dwelling bat species.    Fig 3 Fig 4 Fig 5 Roof tiles are lifted (Fig 6) and missing/slipped (Fig 7) throughout, providing a suitable roosting feature for crevice dwelling bat species and a potential point of access to the interior for void dwelling bat species. Some areas of the roof are heavily damaged and/or have been removed (Fig 8), providing a potential point of access to the interior for void dwelling bat species.

**Fig 6****Fig 7****Fig 8**

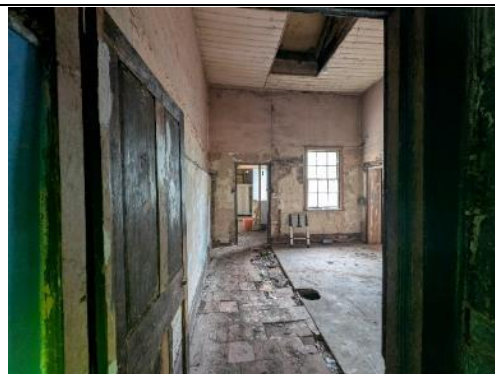
There is a gap at the eaves on the western elevation (Fig 9), and the southwestern extension (Fig 10), providing a suitable roosting feature for crevice dwelling bat species and a potential point of access to the interior for void dwelling bat species.

**Fig 9****Fig 10**

B1 – interior

There are two separate areas within B1.

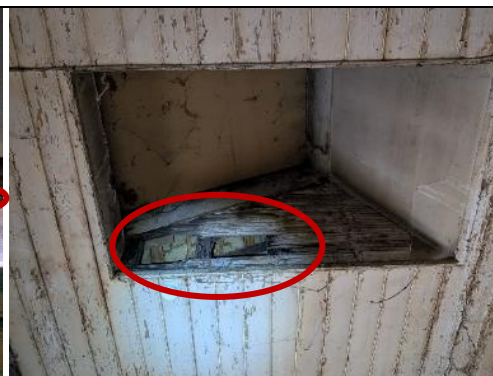
B1 – Interior: B1 is a derelict building (Fig 11), and as such the interior of the building which would normally be occupied provides suitable roosting habitat for bats. Parts of the interior have been stripped, and others are damaged. There are holes in the roof throughout the building providing access to the cavity roof (Fig 12, Fig 13), providing a suitable roosting feature for crevice and void dwelling bat species.

**Fig 11****Fig 12****Fig 13**

There are bricks missing around the chimney (Fig 14), providing a suitable roosting location for void dwelling bat species. There is also missing mortar between exposed bricks internally (Fig 15), providing a suitable roosting feature for crevice dwelling bat species. The walls are heavily damaged in places (Fig 16), providing access to the cavity wall which is a suitable roosting feature for both crevice and void dwelling bat species.

**Fig 14****Fig 15****Fig 16**

There are gaps around the doors internally (Fig 17), providing a suitable roosting feature for crevice dwelling bat species. A small void was visible but inaccessible from the ground floor (Fig 18) with a hole in the site, which could provide a suitable roosting feature for void dwelling bat species. Light ingress could be seen through the wall within the southwestern extension (Fig 19), providing a potential point of access to the interior.

**Fig 17****Fig 18****Fig 19****B1 – Loft Void**

A separate loft void is present within B1 (Fig 20), though the hatches are left open and the roof of the floor below is heavily damaged (Fig 21) providing free access between the void and the rest of the house interior. The loft is fully boarded and is lined with timber. There are gaps between the timber beams (Fig 22) exposing the slate tiles below. This provides a suitable roosting feature for crevice dwelling bat species and a potential point of access to the loft void.

**Fig 20****Fig 21****Fig 22**

There are large gaps above the brick and mortar at the southern gable end (Fig 23), providing a suitable roosting feature for crevice dwelling bat species and a potential point of access to the loft void. Light ingress could be seen

	throughout the full length of the ridge (Fig 24) and from roof tiles at the northern end (Fig 25), providing a potential point of access to the interior.    Fig 23 Fig 24 Fig 25 High levels of light within the loft void resulting in this area being unsuitable for void dwelling bat species, however, access points within the loft void provide access to the rest of the house where other suitable roosting features are present. No bats or evidence of bats was identified in the interior of B1, however, due to some areas being inaccessible for health and safety reasons and others having high levels of debris from construction and damaged sections of the wall and roof, evidence may have been missed.
B1 – suitability assessment	B1 has been assessed as having high habitat value for roosting bats. There are a number of suitable roosting features externally for crevice dwelling bat species including missing mortar, gaps around door and window frames, lifted lead flashing, lifted and missing roof tiles and gaps at the eaves. Internal access was noted at the ridge, beneath roof tiles and in areas of damaged wall, with additional features internally for both crevice and void dwelling bat species including missing mortar, access to the chimney and access to the cavity wall and roof. While the local foraging and commuting value is not optimal, the nearby river could provide a suitable commuting route to and from site, connecting to other suitable habitat nearby. The buildings is therefore assessed as having high habitat value.

Trees	No roosting features were present in trees on site. There were no crevices, cavities, lifted bark, knot holes or any other features considered suitable for roosting bats.
<i>Foreseen Impacts</i>	The proposed development includes the renovation of and extension to B1. Any bat roosts internally B1 will be destroyed, and external bat roosts may also be destroyed or damaged during works. This could also result in death or injury of bats. Bats are very unlikely to be roosting within trees on site due to a lack of roosting features and the majority of trees are expected to be retained, therefore, there are not anticipated to be any impacts on roosting bats within trees as a result of the proposed works.
<i>Recommendations</i>	Three bat emergence/re-entry surveys are required on B1 during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building. These survey visits should be completed during the optimal survey period mid-May to August inclusive. The survey visits should be at least three weeks apart. Sub-optimal: early May and September. Would require greater justification of timing e.g., weather conditions, known local bat activity. Two surveyors with infrared cameras are required to provide full coverage of the building's elevations to look for emerging/re-entering bats. If any bat roosts are confirmed from this survey schedule, a bat licence would be required to complete the renovations and extension to the building as it would involve the destruction of roosts. This is applied for with the help of a class 2 licensed bat ecologist after planning permission is granted, but before commencement of works. <u>Biodiversity Enhancement Opportunities:</u> Enhancements are dependent on the outcome of further surveys
Birds	
<i>Summary of Survey Findings</i>	No evidence of nesting birds was found on site during the surveys; however, birds could use the buildings, scattered trees and hedgerow for nesting. No habitat for schedule 1 birds was observed.
<i>Foreseen Impacts</i>	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.

<i>Recommendations</i>	Any building or vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation and buildings should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. <u>Biodiversity Enhancement Opportunities:</u> The installation of two integrated swift bricks (e.g Istock Swift Eco Habitat or similar alternative brand) at the site will provide additional nesting habitat for birds in line with the measures outlines in the British Standard “Integral next boxes. Selection and installation for new developments. Specification” (BS 42021:2023) Swift bricks should be integrated into the fabric of the building during construction. Boxes should be positioned close together (0.6-1.0m between bricks) as swifts prefer to nest gregariously. The boxes should be places at least 5m above ground level under the eaves of a building, on a north or east elevation, where they will be sheltered from prevailing wind, rain and strong sunlight. To be suitable for swifts, the bricks require an open aspect with no trees or large shrubs potentially obstructing the birds flight path up to 5m from the brick. Swift bricks are a “universal nest brick” for small bird species, including red-listed species such as common swift, house sparrow, house martin and starling.
Reptiles	
<i>Summary of Survey Findings</i>	No ESPLs for reptiles were returned within 2km of the site. Rubble piles and mounds within the western garden could provide limited suitable habitat for reptiles, however, the site dominated by bare ground with the scattered ruderals providing very minimal cover for reptiles commuting to the site. In addition, the local area provides very limited habitat, with only residential gardens nearby and a substantial road network between the site and any suitable habitat. Reptiles are therefore considered likely to be absent from site year-round.

<i>Foreseen Impacts</i>	While unlikely, individuals may still be present on site during works. These could be injured or killed without mitigation.
<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to reptiles, further surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: • Site clearance will be undertaken outside of the reptile hibernation season (November to February) insofar as is possible. • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any reptiles to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter reptiles from the working area. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent reptiles from utilising these areas. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist. <u>Biodiversity Enhancement Opportunities:</u> The following habitat creation and enhancement opportunities could be incorporated into the proposed development: ▪ Native wildflowers could be planted within the bare ground along the southeastern site boundary to improve biodiversity on site and provide additional foraging opportunities for reptiles. ▪ Native shrubs could be planted within designated flower beds on site to provide shelter for commuting reptiles.
Amphibians	
<i>Summary of Survey Findings</i>	One ESPLs for great crested newts was identified within 2km of the site; EPSM2010-1708 located ~1.95km south of site permitting the destruction of a resting place.

	There are no ponds on site and no ponds within 500m of site. The river present is not suitable for amphibians due to the fast pace of the flowing water. Amphibians require suitable aquatic habitat in which to breed. With no ponds on-site or within 500m of site, protected amphibians are likely to be absent from the interior of the survey site year-round. In addition, the habitat on site and within the local area are dominated by private gardens, many of which are heavily managed. The residential nature of the local area results in a network of roads, reducing the suitability for commuting amphibians locally. No suitable terrestrial habitat is connected to site, therefore, other common amphibians are also considered likely to be absent from site year round
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	No further surveys are required.
Badger	
<i>Summary of Survey Findings</i>	No evidence of badgers was found on site or suspected within 30m of the survey boundary. The local area consists predominantly of residential dwellings and small residential gardens which are not suitable for sett excavation, therefore, it is unlikely that badgers will be within close proximity of the site and are likely to be absent from site year round.
<i>Foreseen Impacts</i>	None foreseen
<i>Recommendations</i>	No further surveys are required.
Riparian animals	
<i>Summary of Survey Findings</i>	There are no watercourses on or connected to the site.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.
<i>Recommendations</i>	No further surveys are required.
Hazel dormouse	
<i>Summary of Survey Findings</i>	There are no dormouse European Protected Species License (EPSL) within 4km.

	The hedgerow present on site is defunct and is disconnected from any other hedgerow or treeline outside of the site boundaries. In addition, there is no deciduous woodland within close proximity to or connected in any way to site. Hazel dormice are therefore expected to be absent from site year round.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	No further surveys are required.
Other e.g. hedgehog, rabbit, hare	
<i>Summary of Survey Findings</i>	The apple and plum trees on site onsite provide foraging opportunities, with the defunct hedgerow and ruderals providing minimal shelter for commuting hedgehogs. While there is no woodland habitat nearby, urban hedgehogs may still be present within the local area.
<i>Foreseen Impacts</i>	Ruderals on site will be removed as part of the proposed works, and construction activities could result in the death or injury of hedgehogs, if present.
<i>Recommendations</i>	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use, particularly the boundary hedgerow. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. <u>Biodiversity Enhancement Opportunities:</u> The following habitat creation and enhancement opportunities could be incorporated into the proposed development to provide additional foraging and commuting habitat for hedgehogs: ▪ Native wildflowers could be planted within the bare ground along the southeastern site boundary ▪ Additional native hedgerow could be planted along site boundaries ▪ Native shrubs could be planted within designated flower beds on site

Appendix 1: Habitat Map



Appendix 2: PRA Plan

Appendix 3: Location Map



Appendix 4: Proposed Plan



Appendix 5: Photos



Picture 1: Hedgerow to the northeast of site.



Picture 2: Vegetated garden, bare ground, scattered trees and hard standing to the east of site.



Picture 3: Vegetated garden and shingle to the east of B1.



Picture 4: Partially removed hardstanding to the west of B1



Picture 5: Shingle, hard standing and scattered trees to the west of B1



Picture 6: Developed land, bare ground with ruderal and scattered trees to the west of site



Picture 7: Bare ground, scattered trees and rubble pile to the west of site



Picture 8: Defunct hedgerow to the west of site.

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Version control			
Status	Issue	Name	Date
Draft	0.1	Ashleigh Domblides BA (Hons) – Graduate Ecologist	29/04/2025
Proof	0.2	Elen Griffin BSc (Hons), MRSB, Consultant Ecologist	30/04/2025
Draft	0.3	Ashleigh Domblides BA (Hons) – Graduate Ecologist	30/04/2025
Proof	0.4	Mel Reid BSc (Hons) MRes AMRSB, Principal Ecologist	05/05/2025
Final	1.0	Ashleigh Domblides BA (Hons) – Graduate Ecologist	05/05/2025