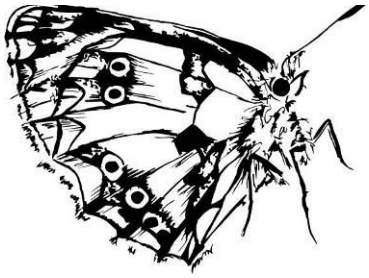
Collins Environmental Consultancy Ltd.

Preliminary Ecological Appraisal & Ecological Impact Assessment

Land to rear of 101 Reservoir Road, Gloucester



Helping to build a sustainable future

Prepared on behalf of Kathryn Slater, Eclipse Planning Services

October 2022

Version 1

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Contents

1. Executive Summary

Collins Environmental Consultancy Ltd. undertook a Preliminary Ecological Appraisal to identify potential ecological constraints and opportunities (protected areas or species, other areas or species of conservation concern, and invasive species) associated with development proposals on land to the rear of 101 Reservoir Road, Gloucester. Planning permission is being sought for the erection of five dwellings on the site.

An extended Phase 1 habitats survey of the site was undertaken on 26th September 2022. The survey was undertaken by an experienced surveyor.

The survey identified that the survey site largely comprised ruderal vegetation and bare ground, with a hedge along the eastern boundary of the site.

The proposed development has the potential to adversely affect nesting birds, reptiles and hedgehogs, if present at the time works take place, and also foraging bats. Avoidance and mitigation measures to address these impacts are proposed, comprising: timing of site clearance works to avoid the bird nesting season and the hibernation period for reptiles and hedgehogs; phased vegetation clearance by hand to minimise the risk of harm to reptiles and hedgehogs, and to displace these species into adjacent gardens before works commence; and provision of landscape planting as part of the completed development to create habitat areas for these species. The proposals are no likely to require a Natural England licence.

The proposed development has the potential to benefit nesting birds and roosting bats through provision of nesting and roosting features for these species in the proposed dwellings, and through use of native and/or insect attracting tree and shrub species in landscape planting on the site.

Assuming the effective implementation of avoidance and mitigation measures detailed in this report, it is considered that the proposed development is in line with national and local planning policy, and with legislative requirements relating to protected species and sites.

2. Introduction

2.1. Authorship

This report has been prepared by David Wells BSc (Hons) CEnv MCIEEM of Collins Environmental Consultancy Ltd (CEC Ltd.), and checked for quality assurance purposes by Rebecca Collins BSc (Hons) CEnv MCIEEM (see Appendix IV for staff profiles).

2.2. Instructions

In accordance with instructions received from Kathryn Slater of Eclipse Planning Services, CEC Ltd. undertook a Preliminary Ecological Appraisal (PEA) of land to the rear of 101 Reservoir Road Gloucester, on 26th September 2022.

2.3. Description of site

The survey site comprises a plot of land to the rear of 99 & 101 Reservoir Road, and accessed via a driveway between these properties. The site is situated in suburban Gloucester at post code GL4 6RY and Ordnance Survey (OS) Grid Reference SO839159.

The boundary of the survey site is shown on the figure in Appendix III.

2.4. Proposed development and purpose of report

The proposed development comprises construction of five dwellings on the site, with associated parking and gardens.

The purpose of this report is to identify potential ecological constraints and opportunities (protected areas or species, other areas or species of conservation concern, and invasive species) associated with proposed development on the site, and to describe suitable avoidance, mitigation or compensation measures to address any identified ecological constraints.

2.5. Information sources

The sources of information used in this report are described in the text and provided as footnotes when first listed. This report has been prepared with reference to BS42020 Biodiversity – A code of Practice for Planning and Development[1], the Chartered Institute of Ecology and Environmental Management's (CIEEM's) Guidelines for Ecological Report Writing[2], CIEEM's Guidelines for Preliminary Ecological Appraisal[3], and CIEEM's Guidelines for Ecological Impact Assessment[4].

All methods and techniques employed by CEC Ltd. comply with CIEEM's Code of Professional Conduct, all relevant legislation and best practice guidelines set out by Natural England (NE), Natural Resources Wales (NRW) and recognised specialist organisations, as detailed below.

[1] British Standards Institution (2013). *BS42020 Biodiversity – A code of practice for planning and development.*
[2] CIEEM (2017) *Guidelines for Ecological Report Writing,* 2nd edn.
[3] CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal*, 2nd edn.
[4] CIEEM (2022) *Guidelines for Ecological Impact Assessment in the UK and Ireland*. Version 1.2.

Whilst every effort has been taken in order to ensure the accuracy of the information contained in this report, CEC Ltd. will not be held responsible for omissions, errors or inaccuracies contained herein. This report is based on the information provided and ecological data available at the time of presentation.

3. Planning policy and legislation

3.1. National and Local Planning Policy

This report should be read in the context of aiding the applicant to comply with the National Planning Policy Framework (NPPF)[5] which sets out the obligations of Planning Authorities to aim to conserve and enhance biodiversity, by protecting and enhancing valued landscapes, geological conservation interests and soils, recognising the wider benefits of ecosystem services and minimising impacts on biodiversity and providing net gains in biodiversity where possible. The existing supplementary guidance in Government Circular ODPM 06/2005 on Biodiversity and Geological Conservation[6] remains valid. The requirement for public authorities to address biodiversity issues is also included within the Natural Environment and Rural Communities (NERC) Act[7], which states that '*every public authority…must, in exercising its functions have regard…to the purpose of conserving biodiversity*'.

Local Planning Authority (LPA) policies prepared by Gloucester City Council[8] include the following:

Policy SD9: Biodiversity and Geodiversity

1. The biodiversity and geological resource of the JCS area will be protected and enhanced in order to establish and reinforce ecological networks that are resilient to current and future pressures. Improved community access will be encouraged so far as is compatible with the conservation of special features and interests

2. This will be achieved by:

i. Ensuring that European Protected Species and National Protected Species are safeguarded in accordance with the law;

ii. Conserving and enhancing biodiversity and geodiversity on internationally, nationally and locally designated sites, and other assets of demonstrable value where these make a contribution to the wider network, thus ensuring that new development both within and surrounding such sites has no unacceptable adverse impacts;

iii. Encouraging new development to contribute positively to biodiversity and geodiversity whilst linking with wider networks of green infrastructure. For example, by incorporating habitat features into the design to assist in the creation and enhancement of wildlife corridors and ecological stepping stones between sites;

iv. Encouraging the creation, restoration and beneficial management of priority landscapes, priority habitats and populations of priority species. For example, by

[5] Ministry of Housing, Communities and Local Government (2021). *National Planning Policy Framework.*

[6] Department for Communities and Local Government (2005). *Government Circular 06/2005: Biodiversity and geological conservation*.

[7] The Natural Environment and Rural Communities Act (2006).

[8] Gloucester City Council (2017) Gloucester, Cheltenham and Tewkesbury Joint Core Strategy 2011 – 2031.

securing improvements to Strategic Nature Areas (as set out on the Gloucestershire Nature Map) and Nature Improvement Areas.

3. Any development that has the potential to have a likely significant effect on an international site will be subject to a Habitats Regulations Assessment

4. Within nationally designated sites, development will not be permitted unless it is necessary for appropriate on-site management measures, and proposals can demonstrate that there will be no adverse impacts on the notified special interest features of the site

5. Development within locally-designated sites will not be permitted where it would have an adverse impact on the registered interest features or criteria for which the site was listed, and harm cannot be avoided or satisfactorily mitigated

6. Harm to the biodiversity or geodiversity of an undesignated site or asset should be avoided where possible. Where there is a risk of harm as a consequence of development, this should be mitigated by integrating enhancements into the scheme that are appropriate to the location and satisfactory to the Local Planning Authority. If harm cannot be mitigated on-site then, exceptionally, compensatory enhancements off-site may be acceptable.

3.2. Relevant Legislation

Certain species of animals and plants are protected under the Conservation of Habitats and Species Regulations[9] and/or the Wildlife and Countryside Act[10]. These acts also provide the basis for designation within England and Wales of internationally and nationally important ecological sites, that is international Special Protection Areas (SPAs) for birds, international Special Areas of Conservation (SACs) for other species and habitats, and national Sites of Special Scientific Interest (SSSIs).

The Environment Act[11] introduced a mandatory requirement for developments to achieve a minimum 10% biodiversity gain, compared to the pre-commencement situation, which complements existing commitments to biodiversity net gain in the NPPF.

Species and Habitats of Principal Importance for conserving biodiversity (SPI & HPI respectively) are defined in England by the list created under the provisions of the NERC Act.

4. Methodology

4.1. Desk study

A biological record search was requested from Gloucestershire Centre for Environmental Records (GCER) for records of protected and notable species, statutory and non-statutory designated sites for nature conservation within 1km of the site. Desk study data was provided in October 2022. Records held are not an indication of local protected or notable species numbers, just of the level of recording effort; i.e., if it is not recorded it does not mean that it is not present.

[9] The Conservation of Habitats and Species Regulations 2017 (as amended).
[10] The Wildlife and Countryside Act 1981 (as amended).
[11] The Environment Act 2021.

The relevant OS Explorer Map[12] and online aerial photograph resources[13] were used to identify nearby water features and establish the location and surrounding habitats of the site. Online resources[14] were used to establish the location of nearby HPI areas.

4.2. Preliminary Ecological Appraisal

The PEA comprised a daytime inspection of the site, undertaken on 26th September 2022 by David Wells.

The survey aimed to identify any habitat areas of ecological importance, and to identify the presence or potential presence of protected and notable species, such as roosting, commuting and foraging bats, badger setts, nesting birds, amphibians (particularly great crested newts) and reptiles.

The potential presence of dormice, and of otters, water voles and other species associated with riverine habitats, was scoped out of the assessment due to the absence of suitable habitats for these species on or adjacent to the survey site.

Bats

Inspection of trees comprised a visual assessment using binoculars from ground level. The potential of the site to support important commuting routes or foraging areas was assessed. Inspection of the site followed published guidelines on bat surveys for professional ecologists.[15]

Badgers

The site was inspected for setts, day-nests, latrines and other evidence of badgers (such as feeding signs)[16]. Any setts identified are classified using the definitions provided in NE guidance.[17]

Nesting birds

The site was inspected for evidence of use by roosting or nesting birds. Presence or likely presence of SPI, Red or Amber list species[18] was noted.

Great crested newts

Terrestrial habitat on the site was assessed for its suitability for great crested newts in accordance with the guidance outlined online[19] and in the Herpetofauna Workers' Manual[20].

Reptiles

The site was assessed for its potential to support reptile species, following guidance outlined in the Herpetofauna Workers' Manual.

[12] Ordnance Survey (1998) Explorer179: Gloucester, Cheltenham and Stroud.
[13] Google Earth Pro, accessed October 2022.
[14] https://magic.defra.gov.uk/MagicMap.aspx, accessed October 2022.
[15] Collins, J. (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines.* Bat Conservation Trust.
[16] https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects
[17] Natural England (2011) *Badgers and Development: A Guide to Best Practice and Licensing.*
[18] RSPB *et al* (2021). *Birds of Conservation Concern 5.*
[19] https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects
[20] Gent A. & Gibson S. (2003). *Herpetofauna Workers' Manual*. JNCC.

4.3. Site survey constraints

All parts of the survey site were accessible for survey. No attempt was made to assess neighbouring private dwellings or gardens adjoining the site.

It is evident (from aerial photographs and piles of tree roots on site) that the site previously supported at least semi-mature woody vegetation. However, these were obviously cleared some time ago as vegetation had re-established on the majority of the site.

5. Results/Baseline Ecological Conditions

5.1. Description of the site

The site comprises a rectangular area of disturbed ground, the majority of which has been recolonised by ruderal vegetation. The access driveway onto the site, from Reservoir Road, is largely bare ground, as is the northern part of the site itself. No mature trees are present on site, though several are present in adjacent gardens. The majority of the site boundaries are marked by fences, though the eastern boundary of the site also supports a gappy hedge. An annotated site plan has been provided in Appendix III.

The site is bordered on all sides by the gardens of neighbouring dwellings. Robinswood Hill Country Park lies a short distance (approximately 140m) to the south and west of the survey site. Photographs of the survey site are provided in Appendix II.

5.2. Protected and notable habitats

Designated sites

GCER identified one nationally important designated site for nature conservation within 1km of the survey site: the Robinswood Hill Quarry SSSI, designated for its geological interest, lies approximately 1km south of the survey site. The nearest internationally important site for nature conservation is the Cotswolds Beechwoods SAC, which is approximately 4.6km east of the site at its closest point.

The site does not lie within a SSSI Impact Risk Zone for developments of this type, but does lie within an area where new residential accommodation may require a Habitats Regulations Assessment (HRA) to consider the likely impact of recreational disturbance on the Cotswold Beechwoods SAC.

One non-statutory Local Wildlife Site (LWS), a county-based designation, was identified within 1km of the survey site at Robinswood Hill Country Park, approximately 140m south and west of the survey site itself. The summit of Robinswood Hill is a Regionally Important Geological Site (RIGS), and lies approximately 965m south of the survey site.

Eight further unconfirmed LWS were identified within 1km of the survey site, the nearest of which is approximately 530m from the site.

Priority habitats

No priority habitats for nature conservation are present on or adjacent to the site. The nearest priority habitat areas identified online are within Robinswood Hill Country Park (approximately 140m to the south and west), which supports a mosaic of deciduous woodland, wood pasture and parkland, purple moor grass and rush pastures, and traditional orchard priority habitats.

5.3. Protected and notable species

Bats

The desk study revealed no records of bats from the survey site, though records of at least six species were identified within 1km of the survey site.

The site supported no buildings or mature trees suitable for use by roosting bats. There is potential for the site to be used by foraging bats, though the size of the site and the habitat present make it very unlikely to represent a critical foraging resource for bats. Given the built-up surroundings of the site, it is considered unlikely that it represents a significant resource for commuting bats.

Badgers

There is no obvious use of the site by badgers, although there are records of their presence within 1km of the survey site, including a record from Robinswood Gardens to the east of the site.

Nesting birds

The desk study revealed records of a number of notable birds (i.e., SPI, Red or Amber list species) within 1km of the survey site, including a number of species typically associated with dwellings such as swift, house martin, starling and house sparrow. The only records for the site itself or immediate surroundings are records of lesser black-backed gull and black headed gull (both Amber listed), recorded to the east of the site but presumably (given the large numbers recorded) flying above the area.

The hedge on the eastern boundary of the site represents potentially suitable habitat for nesting birds, as do brash piles within the site.

Great crested newts

The desk study revealed records of great crested newts within 1km of the survey site. Only one of these records was within 250m of the survey area; a record associated with the Robinswood Hill visitor centre (which is approximately 250m from the survey site).

Great crested newts can travel considerable distances from ponds in order to find suitable hibernation and terrestrial foraging sites, though research indicates that the majority of animals remain within 250m of their breeding ponds[21].

Terrestrial habitat was sub-optimal for great crested newts, with generally low ground cover by grassy vegetation even in the more vegetated parts of the site.

Reptiles

The desk study revealed records of slow-worm, common lizard and grass snake from within 1km of the survey site, but no records for the site or surroundings. The closest records of reptiles to the site are in Robinswood Hill Country Park.

Terrestrial habitat on the site was sub-optimal for reptiles, both due to the limited ground cover by grassy vegetation, and the past history of disturbance on the site. However, if adjoining gardens provide more suitable habitat for reptiles the potential for recolonisation of the site by these species cannot be ruled out.

[21] Cresswell, W. & Whitworth, R. (2004*) An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus*. English Nature Research Report 576.

Other notable species

There were a number of records of invasive non-native species (INNS) from within 1km of the survey site, but no records from on or adjacent to the site itself. -

Other notable species recorded within 1km include hedgehog (SPI), recorded on Reservoir Road close to the site, and a number of SPI invertebrate species, the majority of which are associated with Robinswood Hill and/or other sizable areas of habitat within the city.

6. Site Interpretation

The survey site is of relatively low ecological value, supporting no protected or notable habitat areas, but does have potential to support some species of significance due to their legal protection or conservation status, in particular foraging bats, nesting birds, reptiles and hedgehogs.

No designated sites or HPI would be affected by the proposed development, and the site does not affect habitats for which nearby LWS are designated. There were no features suitable for roosting bats, and no evidence of use by the site by badgers. Although great crested newts have been recorded approximately 250m from the site, their presence on the survey site is considered unlikely given the habitat present on site and the existing residential areas between the survey site and Robinswood Hill Country Park.

Nesting birds, if present, are legally protected while breeding and therefore represent an ecological constraint to the proposals. Reptiles, if present, are protected against intentional killing. Foraging areas used by bats, and hedgehogs, are not directly legally protected, but are species of conservation concern and therefore merit measures to avoid or minimise adverse impacts.

7. Ecological Constraints and Opportunities

7.1 Ecological constraints to proposed development

The identified ecological constraints to development on site comprise the potential presence of legally protected nesting birds and reptiles on the site, and the potential presence of foraging bats and hedgehogs, which are species of conservation concern.

Nesting birds would be affected by any further clearance of woody vegetation on the site, particularly on the eastern boundary of the site, and the brash piles within the site. Reptiles could potentially be present on any part of the site, but are more likely to be present around the site margins given the limited ground cover over much of the site. Hedgehogs are also more likely to shelter around the site margins and in brash piles. Foraging bats are likely to use all parts of the survey site.

Appropriate mitigation and enhancement, as outlined below, will alleviate potential loss of habitat while increasing and improving wildlife opportunities on the site in accordance with the guidance provided to Planning Authorities by the NPPF and local planning policies.

7.2. Recommendations for mitigation

Nesting birds

Any further clearance of woody vegetation, or disturbance/removal of brash piles, should take place outside the bird breeding season (that is, outside March to mid-August inclusive). If it is unavoidable that vegetation clearance takes place during this period, vegetation should only be cleared following an inspection, by a suitably qualified ecologist, to confirm the absence of active birds' nests.

It is recommended that landscape planting on the site is provided, where possible, in order to compensate for the loss of nesting bird habitat (such as the proposed replacement of the eastern boundary hedge with a fence).

Reptiles and hedgehogs

Clearance of the site, particularly the eastern boundary hedge and brash piles, must also be carried out with regard to the potential presence of hedgehogs and reptiles. Mechanical clearance of the site must, therefore, be preceded by phased hand strimming of vegetation, to displace any reptiles or hedgehogs present into neighbouring garden habitats.

Strimming should take place outside the winter hibernation period (November to March inclusive), initially with a cut to 150mm above ground level, followed on consecutive days by further cuts to 75mm and finally 30mm, with arisings removed between each cut. If at any point during these works reptiles or hedgehogs are observed, advice must be sought from a suitably qualified ecologist.

Due to the potential presence of nesting birds and because these species impose conflicting timing constraints on removal of vegetation and brash piles (i.e., outside both the hibernation period and bird breeding season), the most appropriate time of year to clear the site is September/October. However, once cleared as described above, the site could then be maintained as short vegetation by regular strimming in order to facilitate commencement of works at a different time of year.

Gaps 13cm by 13cm need to be left at the base of each fence (on the site boundary and between proposed dwellings) in order to facilitate continued movement around and across the site by hedgehogs, post-development.

Bats

No specific precautions for bats are recommended during site clearance operations, however, it is recommended that landscape planting as part of the proposals should include tree and shrub species that are native and/or of value for invertebrates, as these are more likely to provide insect food on which bats depend. All planting should be UK-sourced and ideally locally-sourced.

External lighting on the development should be designed to minimise light spill beyond the areas where it is required (this will also be a consideration for neighbouring properties around the site). Ideally, external lighting should be PIR controlled and set on a short time interval so that it is only operating when it is actually required for safety and security.

7.3. Recommendations for enhancements

In addition to the mitigation requirements identified above, it is recommended that the following enhancement measures are incorporated into the proposed development:

- Provision of additional areas of landscape planting where possible outside the curtilage of proposed dwellings, such as along the sides of the access driveway and along the eastern boundary of the site inside the fence line adjacent to the proposed visitor parking spaces and turning area;
- Landscape planting to use a high proportion of native tree and shrub species (which should be UK-sourced and ideally locally-sourced);
- Provision of integral nestboxes for birds and bats in the proposed dwellings. A minimum of two bat boxes (such as Schwegler 1FR bat tubes, Segovia Woodstone Built-in bat boxes, or Integrated Eco Crevice bat boxes), and a minimum of four bird boxes, comprising two sparrow terraces (such as Schwegler 1SP, Woodstone Sparrow Nest Box, or Nature Harmonie sparrow terraces) and two swift nest boxes (such as Schwegler 17, Woodstone Built-in Swift nest box or Cambridge Swift nest box system types) should be provided. Boxes must be positioned just below eaves level or on gable ends in locations where there is a clear flight path in front of the boxes, but not immediately above windows or doorways.

7.4. Site wildlife awareness

It is the responsibility of the developer and their contractors to maintain due care and attention throughout the development process in respect to protected species. The behaviour of wild animals is unpredictable and species that one would not anticipate to be on site may be discovered. If there is any doubt with regards to wildlife or protected species on the site, professional advice should be immediately sought.

8. Ecological Impact Assessment

The table below summarises the important ecological features on the site, predicted ecological impacts/effects in the absence of mitigation, and their level of significance, and predicted residual ecological impacts/effects taking into account the mitigation measures presented above.

Ecological feature	Importance of feature	Predicted impacts/ effects of the proposed development	Significance of impacts/ effects in the absence of mitigation	Summary mitigation proposals	Significance of residual effects after mitigation
Cotswold Beechwoods SAC and associated SSSIs	International	No direct impact, and likely impact through additional recreational use of the SAC from the proposed development	Not significant	N/a	N/a

		is likely to be below measurable levels.			
Robinswood Hill Quarry SSSI	National	None	N/a	N/a	N/a
Robinswood Hill Country Park LWS and associated priority habitats	County/ National	No direct impacts, potential for indirect impacts through recreational pressure, though the contribution made by the proposed development is likely to be below measurable levels	Not significant	N/a	N/a
Other confirmed and potential LWS within 1km	County	None	N/a	N/a	N/a
Foraging bats	Local	Loss of foraging habitat	Significant at a local level only	Provision of native and insect-supporting species in planting proposals	Not significant
Nesting birds	Local	Loss of nesting habitat, potential for loss of nests & dependant young	Significant at a local level only	Timing of works to avoid bird nesting season, provision of shrub planting	Not significant
Reptiles	Local	Potential for killing or	Significant at a local	Timing of works and phased	Not significant

		injury of reptiles	level only	clearance of habitat prior to commencement of works	
Hedgehogs	Local	Potential for killing or injury of hedgehogs	Significant at a local level only	Timing of works and phased clearance of habitat prior to commencement of works, creation of access points in new fences	Not significant

9. Conclusions

The Preliminary Ecological Appraisal identified no designated sites or important habitats for nature conservation on or adjacent to the proposed development site. The desk study revealed records of a number of protected and notable species, though the only protected and notable species which are considered likely to be affected by the proposed development are foraging bats, nesting birds (legally protected while breeding), reptiles (protected against killing) and hedgehogs (SPI).

Impacts on these species can be mitigated by timing site clearance works to avoid the most sensitive time periods (bird breeding season and hibernation period for reptiles and hedgehogs), by phased clearance of vegetation using hand tools prior to mechanical clearance, and by provision of native tree and shrub planting as part of the proposed development.

The proposed development provides opportunities for ecological enhancement, such as provision of additional native planting, bird and bat boxes built-in to the proposed dwellings, and gaps in fences allowing hedgehogs to move around and across the site once built.

Assuming the adequate implementation of mitigation measures detailed above, the proposed development is considered consistent with the principles relating to ecology set out in national and local planning guidance.

Appendix I

Summary of Species found During Survey Work at Land to rear of 101 Reservoir Road, Gloucester

Survey carried out by Collins Environmental Consultancy Ltd.
Ordnance Survey Grid Reference: SO839159

Date	Surveyors	Location	Species	Min. No.	Comment
26th September 2022	David Wells	Driveway margins	Ash *Fraxinus excelsior*		Seedlings
			Bramble *Rubus fruticosus* agg.		
			Bristly oxtongue *Picris echioides*		
			Broad-leaved dock *Rumex obtusifolius*		
			Butterfly bush *Buddleja davidii*		
			Common nettle *Urtica dioica*		
			Common orache *Atriplex patula*		
			Creeping bent *Agrostis stolonifera*		
			Creeping buttercup *Ranunculus repens*		
			Field horsetail *Equisetum arvense*		
			Green alkanet *Pentaglottis sempervirens*		
			Ivy *Hedera helix*		
			Nipplewort *Lapsana communis*		
			Pendulous sedge *Carex pendula*		
			Prickly lettuce *Lactuca serriola*		
			Teasel *Dispascus fullonum*		
			Yorkshire fog *Holcus lanatus*		
		Main part of site	Ash		sapling
			Bittersweet *Solanum dulcamara*		
			Black nightshade *Solanum nigrum*		
			Bramble		
			Broad-leaved dock		
			Bristly oxtongue		
			Bush vetch *Vicia sepium*		
			Canadian fleabane *Conyza canadensis*		
			Common bistort *Persicaria bistorta*		
			Common figwort *Scrophularia nodosa*		
			Common nettle		
			Common orache		
			Common ragwort *Senecio jacobaea*		

			Common toadflax *Linaria vulgaris*		
			Creeping buttercup		
			Creeping thistle *Cirsium arvense*		
			Dogwood *Cornus sanguinea*		suckers
			Dove's–foot crane's-bill *Geranium molle*		
			Garlic mustard *Alliaria petiolata*		
			Greater plantain *Plantago major*		
			Great willowherb *Epilobium hirsutum*		
			Ground ivy *Glechoma hederacea*		
			Hedge bindweed *Calystegia sepium*		
			Hedge woundwort *Stachys sylvatica*		
			Hoary willowherb *Epilobium parviflorum*		
			Ivy-leaved speedwell *Veronica hederifolia*		
			Nipplewort		
			Ox-eye daisy *Leucanthemum vulgare*		
			Pendulous sedge		
			Prickly lettuce		
			Prickly sow-thistle *Sonchus asper*		
			Rosebay willowherb *Chamaenerion angustifolium*		
			Smooth sow-thistle *Sonchus oleraceus*		
			Sun spurge *Euphorbia helioscopia*		
			Sweet bay *Laurus nobilis*		
			Umbrella sedge *Cyperus eragrostis*		
			White bryony *Bryonia dioica*		
			White dead-nettle *Lamium album*		
		Eastern boundary hedge	Ash		
			Bramble		
			Dogwood		
			Field maple *Acer campestre*		
			Plum species *Prunus* sp.		
			Sycamore *Acer pseudoplatanus*		

Appendix II

Photographs of Land to the rear of 101 Reservoir Road, Gloucester

Photo. 1: General view of site looking south east, with eastern boundary hedge on left hand side and brash pile in centre of site.

Photo. 2: Eastern boundary hedge.

Photo. 3: Example of ruderal sward in central part of site.

Appendix III

Site Plan of Land to Rear of 101 Reservoir Road, Gloucester

Not to scale

Key

Site boundary

Hard standing

Bare ground

Ruderal vegetation

Hedgerow

[Base plan copied from Osbornes Chartered Architects drawing 21-111-LOC1B, dated August 2021.]

Appendix IV

Staff Profiles

Rebecca Collins BSc (Hons) CEnv MCIEEM Managing Director

Rebecca has a degree from the University of Wales, College of Cardiff, where she read Zoology. She was the recipient of a Millennium Award for Conservation from Bristol Zoological Gardens for developing monitoring programmes for bats, and has been involved in bat and mammal conservation at local, regional and national level in voluntary and professional capacities since 1998. She has been an ecological consultant since 2001, providing surveys, impact assessment, mitigation design and implementation for bats and other protected species. Rebecca has held NE, NRW and SNH survey licences for bats (Level 2), dormice, great crested newts and barn owls. She has been the named ecologist on numerous development licences for bats in England and Wales, and is a Registered Consultant on NE's Bat Mitigation Class Licence. Rebecca is an accredited bat worker trainer for the BCT and NE and has delivered training courses for other organisations, including a module for an MSc in Biological Recording for Manchester Metropolitan University. Rebecca is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM) (and has been a member of several CIEEM committees including the Professional Standards Committee and Ecological Clerk of Works Working Group), and holds Chartered Environmental status as awarded by the Society for the Environment.

David Wells BSc (Hons) CEnv MCIEEM, Technical Director

David has a Biology degree from Southampton University and has been a professional ecologist since 1995, and a consultant since 2000. He is a specialist in protected species surveys, impact assessment and mitigation design, particularly for bats and dormice, and is an experienced Ecological Clerk of Works. Formerly a Technical Director at a large, well-respected ecological consultancy, he has extensive experience of bat surveys and mitigation design, training of other staff, production of ecology chapters for Environmental Statements, and production of Habitats Regulations Assessments. David holds NE & NRW survey licences for bats (Level 2), dormice, barn owls and great crested newts and he also holds an SNH bat licence (numbers available on request). He is the named ecologist on numerous development licences in England and Wales, mainly for bats and dormice, but also badgers. David is the author or co-author of several publications, including several articles in CIEEM's In Practice magazine and the Mammal Society's 'UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation'. He teaches courses on dormice and other mammals for the Mammal Society and has been an external tutor for Bristol University. David is a member of CIEEM and also holds Chartered Environmental status. He is currently on CIEEM's Professional Standards Committee, having previously served on the Membership Admissions Committee and Advisory Board. He also holds a City & Guilds Certificate in Confined Space Entry (6150-02).

CEC Ltd. has a number of associates for specialised surveys, and a team of sub-contractors, who work under the direct supervision of CEC Ltd.'s experienced ecologists, regardless of their level of experience.

CEC Ltd. staff and their sub-contractors undertake regular in-house and external training as part of their Continuing Professional Development, including Working at Heights and First Aid.