

**Construction Environmental Management Plan:
Biodiversity**

**Proposed Restoration of Herefordshire &
Gloucestershire Canal, Malswick, Newent,
Gloucestershire**



Helping to build a sustainable future

Prepared on behalf of the Herefordshire & Gloucestershire Canal Trust
April 2026

Version 1

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1. Introduction

1.1 Overview

Planning consent for restoration of a section of the former Herefordshire & Gloucestershire Canal is being sought from the Forest of Dean District Council (FoDDC), planning application reference P0865/24/FUL). The section to be restored is at Malswick, near Newent, in Gloucestershire, and comprises a modified grassland field (formerly pasture) and a cutting between linear sections of secondary woodland. The proposed restoration works are approximately on the original line of the canal, though the original canal infrastructure was largely obliterated by construction of the Ledbury and Gloucester Railway on the same alignment in the 1880's.

A Preliminary Ecological Appraisal (PEA) survey was undertaken in January and February 2024; this, and further surveys for bats and great crested newts (in May 2025) informed an Ecological Impact Assessment (EclA) which was also prepared in May 2025. A Biodiversity Net Gain (BNG) Design Stage Report for the proposals was also prepared in May 2025. Both these documents were prepared by Collins Environmental Consultancy Ltd. (CEC Ltd.) and submitted as part of the planning submission for the project.

Suggested conditions requested by the council's ecologist were shared with the applicant in a consultation response dated 8th July 2025. These include a suggested pre-commencement condition requiring the preparation of a Construction Environmental Management Plan: Biodiversity (CEMP:B). This document has been prepared in order to address the requirements identified in this suggested condition, which states:

The development hereby permitted shall not commence including any site clearance until a Construction Environmental Management Plan (CEMP: Biodiversity) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall be compliant with the British Standard on Biodiversity BS42020:2013. In discharging this condition, the Local Planning Authority expect to see details concerning pre-commencement checks for protected and notable species and appropriate working practices and safeguards for retained habitats and for wildlife that are to be employed whilst works are taking place on site. The agreed Construction Environmental Management Plan shall thereafter be implemented in full.

The British Standard referred to above provides a list of elements which should be included in such plans, as follows:

- a) Risk assessment of potentially damaging construction-type activities;
- b) Identification of "biodiversity protection zones" and areas where invasive species have been identified;
- c) Inclusion of or reference to details for implementation of method statements required to achieve specific biodiversity outcomes, and particularly mitigation measures;
- d) Identification of practical measures, both physical measures and sensitive working practices to avoid impacts during development, for protecting biodiversity through the control or regulation of construction-type activities;
- e) The location and timing of sensitive works to avoid harm to biodiversity features;
- f) The times during construction or development implementation when particular specialists need to be present on site to oversee works;

- g) Responsible persons and lines of communication;
- h) Defining and communicating the role and responsibilities on site of an ecological clerk of works (ECoW), or appointed ecologist(s) responsible for managing biodiversity issues on site, and times and activities during construction or development implementation when they need to be present to oversee works;
- i) Use of exclusion fences, protective barriers and warning signs.

The purpose of this CEMP:B is, therefore, to set out the measures by which effects on important ecological receptors during construction will be avoided, minimised or mitigated for, and to set out required actions in the event of unexpected ecological constraints being found. Once approved by FoDDC, this document will form the framework for ensuring that legislative compliance and commitments made at the planning application stage are achieved during construction works on site as part of the consented development.

1.2 Scope of the CEMP-B

The scope of this document is limited to *ecological* management requirements and actions, rather than broader environmental management requirements. As such, its scope may overlap with other documents prepared to inform the planning application and/or construction on the site. If there are conflicting requirements between documents, clarification needs to be sought at the earliest opportunity, and before the relevant works commence on site.

1.3 Relevant legislation

Relevant legislation for ecological management planning and activities on the site includes:

- The Wildlife & Countryside Act 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Protection of Badgers Act 1992 (as amended);
- The Environment Act 2021.

The Wildlife & Countryside Act, Conservation of Habitats and Species Regulations and Protection of Badgers Act together form the basis for protection for certain species of plants and animals, and for places of shelter used by those animals. The Environment Act mandates the principle of achieving Biodiversity Net Gain (BNG) through development projects.

Other legislative requirements will also apply during construction, but are outside the scope of this document. It is the contractor's responsibility to put in place systems to ensure that all legislative requirements are met during construction whether detailed below or not, including any recent changes since preparation of this CEMP:B. Whilst every effort has been taken in order to ensure the accuracy of the information below, CEC Ltd. will not be held responsible for omissions, errors or inaccuracies contained herein.

2. Key roles and responsibilities

The key roles relevant to this CEMP:B are:

- The Herefordshire & Gloucestershire Canal Trust, whose volunteers will be overseeing (and, in most cases, undertaking) the proposed works including implementation of the CEMP:B:

Herefordshire and Gloucestershire Canal Trust, c/o Griffiths Marshall, 4th Floor, Llanthony Warehouse, Gloucester GL1 2EH;

- The Ecological Clerk of Works (ECoW), who is responsible for designing ecological mitigation, overseeing its implementation and maintenance (where specified below), and undertaking monitoring of ecological mitigation features:

David Wells/Rebecca Collins of Collins Environmental Consultancy Ltd., enquiries@cec-ltd.org.uk, 01531 828199/ 07811307790.

If any of the above personnel change this CEMP:B will need to be updated and reissued.

3. Key Construction Activities and Programme

3.1 Overview of development

Pre-commencement of the development, the site consists of: an area of modified grassland (formerly pasture) to the west, adjoining the section of canal already undergoing restoration; mixed scrub on the cutting slope south of the proposed line of the canal, adjacent to the roadside hedge separating the B4215 from the site; other lowland mixed deciduous woodland on the cutting slope north of the proposed line of the canal; and an area on the floor of the cutting which, although occasionally mown, is best described as mixed scrub that has been mown. A separate area of modified grassland further to the west, adjacent to the Newent Town football club ground, is also included in the application, as construction of a winding hole (allowing boats to turn) is proposed. Details of these habitats are provided in the EclA report and BNG Design Stage Report.

The proposed works comprise restoration of the section of canal together with a towpath to one side, a swing bridge over the canal aligned on an existing public footpath and the winding hole at the western end of the section already being restored.

The EclA identified the following protected species constraints:

- Use of the site by small numbers of foraging lesser horseshoe bats, likely to be part of the populations protected by the Wye Valley and Forest of Dean Bat Sites SAC, though the proposals were considered likely to benefit this species in the long-term;
- Deciduous woodland Habitat of Principal Importance (HPI) at the eastern end of the site, though most of the habitat affected comprises scrub rather than established woodland;
- Potential for roosting bats in several trees on or close to the proposed route of the canal (though no roosts were identified during emergence surveys in May 2025);
- An outlying badger sett close to the proposed route of the canal;

- Seasonal presence of nesting birds;
- The potential for great crested newts to use terrestrial habitats on site, and potentially a wet ditch (though successful breeding on site is unlikely);
- Potential presence of reptiles (Species of Principal Importance (SPI) and partial legal protection) on site;
- Presence of common toad (SPI) on the site.

The EclA did not identify potential impacts on statutory or non-statutory designated sites for nature conservation, other HPI areas, dormice, otters, water voles etc. and did not identify the presence of invasive non-native plant species on the site.

3.2 Construction programme

The timetable of works is necessarily provisional until all pre-commencement conditions on the planning consent (including preparation of this document) have been met and accepted by FoDDC. At the time of writing, the anticipated programme is as follows:

Time period	Work element
April/May 2026	Site set-up
September/ November 2026	Vegetation clearance (scrub in cutting at eastern end)
May – August 2026	Pre-development ecological works (badgers, great crested newts)
August 2026 – September 2028	Construction
September – November 2026, 2027, 2028	Planting and habitat creation

4. Risk assessment of potentially damaging construction activities

The table below lists risks to ecological receptors that have been identified for the development, taking into account the programme and scope of works described above. Each risk is considered in the absence of mitigation, except where embedded mitigation is intrinsic to the proposals.

Note that if the proposed timings of works change, this will affect the ecological impacts (e.g. nesting birds will not be affected in September, but will be if works take place between March and August inclusive. If proposed timings change, this CEMP-B must be updated to reflect any changes to seasonal impacts.

Work element	Proposed timing	Ecological receptor	Impact in the absence of mitigation
Vegetation clearance	September/ November 2026	Deciduous woodland HPI	Permanent loss of area identified as deciduous woodland HPI, due to canal and towpath construction

		Roosting bats	Potential for loss of roost sites
		Badgers	Potential for damage to sett from vehicle/plant movements
		Nesting birds	Potential damage or loss of nests and harm to dependant young birds
		Great crested newts	Potential harm to great crested newts from vehicle/plant movements
		Reptiles/common toad	Potential harm to reptiles/toads from vehicle/plant movements
Construction	August 2026 – September 2028	Badger sett	Potential for disturbance to badgers in sett, if active. from nearby construction work
		Great crested newts	Potential harm to great crested newts from construction work
		Reptiles/common toad	Potential harm to reptiles/toads from construction work

5. Required measures to avoid and mitigate ecological impacts

5.1 Biodiversity Protection Zones

Biodiversity Protection Zones (BPZ) will be established during site set up and maintained throughout construction, in order to ensure important features are protected and retained. If construction access within a BPZ is necessary, the location and timing will be agreed in advance between the project manager and ECoW, in order to minimise damage. Ecological supervision of works within a BPZ may be required.

For this project, the areas to be protected by BPZs comprise the retained woodland areas on the roadside edge of the site (at the western end and eastern half of the main development footprint), and the retained woodland to the north of the development footprint at the eastern half of the site. Given the duration of proposed works, it is not considered appropriate to use temporary hi-visibility temporary fence supported on road pins; instead, these areas will be clearly identified using marker pegs.

The BPZs are to be established during the site set-up phase, and maintained until all groundworks/hard landscaping are completed.

Locations of BPZs are identified in Appendix I. Other areas outside the red line boundary are also ecologically sensitive, and no works must take place outside the red line boundary without prior notification of the ECoW to confirm whether additional ecological constraints, and mitigation requirements, apply in those areas.

5.2 Mitigation measures required

Method statements covering roosting bats, badgers, nesting birds, reptiles/toads are provided in Appendix II. Separate method statements are provided for relevant activities on site, rather than by species, in order that it is clear where, and when, method statement requirements need to be adhered to, and because some activities have potential to affect multiple protected species.

Mitigation measures required under licence for great crested newts will be provided in the method statement accompanying the licence, but an indication of likely requirements for this species is also included in Appendix II. For this species, the licence documents take precedence over this document, if there is any conflict between their requirements.

Details of landscaping/planting proposals and aftercare requirements to ensure that new planting establishes successfully, are described in the Landscape Strategy drawing and the Landscape and Ecological Management Plan.

5.3 Required timings of works

As described above, the timings of certain elements of the works affect the severity of impacts on ecological receptors. Deviations from these timings would, therefore, require a re-assessment of impacts and appropriate mitigation measures. Specific constraints affecting timings of works comprise:

- On a precautionary basis, felling or pruning of trees potentially suitable for roosting bats will not be carried out during the winter months (when bats are hibernating) or during the May – August breeding season;
- Mitigation measures to avoid impacts on badgers will comprise monitoring of the sett to identify a period when the sett is inactive, and therefore can be closed off without risk of harm to badgers. In the unlikely event that the sett remains in active use, closure of the sett under Natural England (NE) licence would be subject to seasonal constraints (July to November inclusive);
- Vegetation clearance will be carried out between mid-August and February inclusive to avoid impacts on nesting birds. Vegetation clearance during the spring/summer (March to August inclusive) would be likely to affect nesting birds and, as there is no licensing route for mitigating nesting bird constraints, vegetation clearance during that time of year would have to stop if active nests were found, until any dependent young birds had fledged and left the nests. If it is unavoidable that vegetation clearance is carried out between March and August inclusive, this must only take place under ecological supervision and following checks by the ECoW to identify any active birds' nests;
- Mitigation measures under licence for great crested newts will need to take place during the summer months, when great crested newts are active. Mitigation measures for reptiles and common toads will need to follow similar timings.

5.4 Ecological supervision

Certain activities on site require ecological supervision or pre-commencement checks by the ECoW. These include:

- Any works required within the BPZs;
- Pre-commencement inspections of trees for roosting bats;
- Pre-commencement monitoring and closure of the badger sett (assuming the sett is inactive);
- Supervision of mitigation works for great crested newts, as required under the terms of the licence;
- Any works required at sub-optimal periods in relation to seasonal constraints, as identified above.

5.5 Responsibilities of contractors in respect of protected species

If protected species are found or suspected to be present at any point prior to, or during, construction, works in that area must stop immediately and the ECoW must be informed.

No attempt must be made to handle or interfere with a bat in any way by any person, other than the ECoW, to avoid stressing or harming it. In the event of a bat being disturbed while the ECoW is not present the bat must not be picked up – if necessary, place a cardboard box or similar over the bat to protect it from harm. Certain species of bat are known to carry several forms of European Bat Lyssavirus (a rabies-like virus); however, bats are passive animals and most bats have teeth too small to break human skin. If the procedures above are followed personnel are at no risk. The ECoW will need to visit site and assess whether the works in that area can proceed without committing an offence. If offences are unavoidable a NE licence will be required, and works in that area must not be re-started until a licence is obtained.

In the event of a great crested newt being found during works while the ECoW is not present, it must be left in position and the ECoW informed. The ECoW will visit site and relocate the animal, provided this is compliant with the terms of the NE licence.

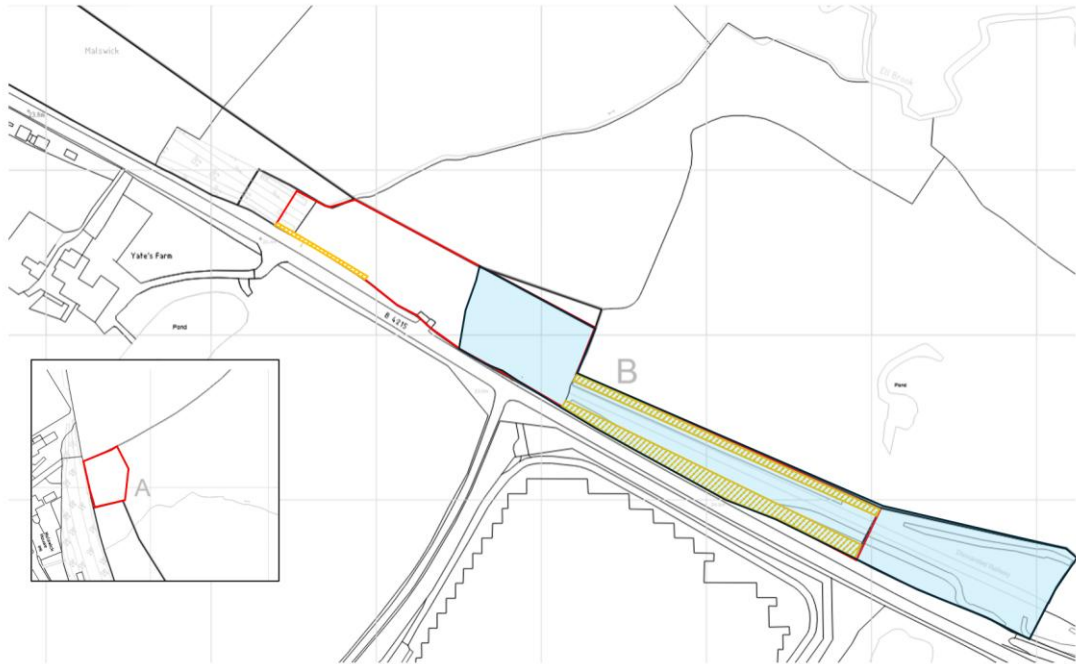
5.6 Accessibility of information in this CEMP-B

A copy of this CEMP-B will be kept on site throughout construction, in an accessible location.

Toolbox talks will be provided by the ECoW for those carrying out relevant activities, as detailed in method statements in Appendix II. The scope of each toolbox talk will include the ecological species and constraints, and required actions, detailed in the method statement, as well as general principles summarised on the sheet in Appendix III. This sheet is intended to be displayed in a suitable location on site.

Appendix I

Biodiversity Protection Zones



[Baseplan taken from AGS Development Consultants drawing 800/10, dated July 2024].

Key

- Red Line Boundary
- Biodiversity Protection Zones
- Areas within 250m of great crested newt ponds

Appendix II

Ecological Method Statements for Relevant Phases of Proposed Works for Canal Restoration, Malswick

A. Method Statement – Vegetation clearance

Roost sites for bats may be lost during tree felling and pruning, and if present, bats could be harmed. Badger setts may be damaged by vehicle movements during vegetation clearance, and if present badgers could be disturbed. Nesting birds may be harmed during vegetation clearance, if present at the time works take place. Great crested newts could also be harmed by vehicle movements, as could reptiles and/or common toads.

The following measures will be adopted to avoid impacts on these species:

- All those involved in vegetation clearance work will be provided with a tool-box talk, given by the ECoW, to ensure that they are aware of the ecological constraints on site;
- Felling or pruning of trees identified as suitable for use by roosting bats will be preceded by an inspection by the ECoW and/or tree felling/pruning will take place under supervision of the ECoW;
- **If roosting bats are found, works in that area will stop immediately, and advice will be sought from the ECoW prior to continuing;**
- Vegetation clearance will be carried out using hand tools (e.g. chainsaws, brushcutters) rather than wheeled or tracked vehicles. Where use of vehicles is necessary for removal of arisings, vehicles will work from areas of lower ecological value, i.e. former pasture, existing canal restoration workings, or the track in the cutting at the eastern part of the site, in order to minimise the risk of tracking over protected wildlife species such as great crested newts, reptiles and common toads;
- No vehicles will drive or track into or across the ditch in the cutting at the eastern end of the site when it is holding water;
- **If great crested newts are found, works in that area will stop immediately, and advice will be sought from the named ecologist or ECoW prior to continuing**
- Vegetation clearance will take place outside the bird nesting season (i.e., outside March to August inclusive) or, if it is unavoidable that vegetation clearance takes place during this period it will be preceded by an inspection (by the ECoW) to confirm the absence of active birds' nests. Inspections will take place no more than 48 hours prior to vegetation clearance during the bird breeding season (March to August inclusive). If active nests are present, vegetation clearance in that area will have to be postponed until dependent young birds have fledged;
- **If potentially active birds' nests are found, works in that area will stop immediately, and advice will be sought from the ECoW prior to continuing.**

B. Method Statement – Construction

Following vegetation clearance, ecological mitigation for badgers and great crested newts/reptiles/toads will be required prior to construction. Once these species have been excluded/translocated from the working area, vigilance will still be required in case of recolonisation. The following measures will be adopted to minimise impacts on these species:

- All those involved in site clearance work will be provided with a tool-box talk, given by the ECoW, to ensure that they are aware of the ecological constraints on site;
- Excavation of the canal channel or towpath in the cutting will be preceded by monitoring, by the ECoW, to confirm the status of the badger sett (and any new diggings potentially used by badgers). Under the Protection of Badgers Act 1992 a sett is defined as “*any structure or place which displays signs indicating current use by a badger*”. Guidance produced by NE¹ clarifies the meaning of ‘current use’, stating that signs indicating current use may remain several weeks after the last occupation of a sett by badgers. Monitoring will aim to identify a period of at least three weeks (21 days) during which there is no use by badgers. After this period, the sett can be covered with wire mesh (‘wired off’), as it will no longer constitute an active badger sett. Excavation works can then proceed without risk of harm to badgers.
- Once construction work in the vicinity of sett entrances is complete, wire mesh will be removed, so that the sett is available for use by badgers;
- Mitigation for great crested newts will take place under licence from NE. The licence method statement should be referred to for full details of mitigation measures for this species, but drift and/or exclusion fencing, combined with capture and relocation of any great crested newts found within the working area, is likely to be required. Fencing will need to stay in place throughout the construction period;
- Due to the proximity of the limit of earthworks to the badger sett, monitoring and closure of the sett will need to take place before installation of any great crested newt fencing along the cutting slope;
- Clearance of potential terrestrial refuges (e.g. logs, rubble piles within vegetated areas, other debris and brash) will be carried out by hand under the supervision of the ECoW during the active period for reptiles and amphibians (April to September inclusive);
- There must be no plant or vehicle movements across these areas until confirmed clear of protected species by the ECoW;
- Any reptiles or other amphibians caught during capture and relocation of great crested newts will also be relocated outside the development area;
- Any trenches left open overnight, in or adjacent to, grassland areas, including trenches for utilities installation, will be covered, or will have a ramp at 45° (plank or similar) left in the trench, to allow any wildlife which falls into the trench to escape. Trenches will be checked by the ECoW prior to backfilling;
- **If great crested newts are found at any point during the works following completion of the capture and relocation operation, all work in that area will stop immediately, and the ECoW will be informed. Works will not be able to re-**

¹ Natural England (2009) *Guidance on ‘current use’ in the definition of a badger sett.*

commence until the ECoW has relocated the newt in line with the terms of the licence;

- Any other notable or partially protected species (such as reptiles) found will also be moved by the ECoW, using appropriate equipment and biosecurity precautions, to one of the Biodiversity Protection Zones away from any working areas;

Appendix III

Summary Sheet for Display in Site Office

HEREFORD AND GLOUCESTER CANAL, MALSWICK Ecological Requirements Summary (see Construction Ecological Management Plan (CEMP-B) for details)

- **Ecological Site Induction required for all by Ecological Clerk of Works (ECoW);**
- **Maintain & respect Biodiversity Protection Zones (BPZs);**
- **Specific ecological avoidance/mitigation measures are required for the following activities on site:**
 - **Vegetation clearance;**
 - **Commencement of earthworks.**

Refer to specific method statements in the CEMP-B for required actions in these areas.

- **Works to exclude great crested newts from the working area will need to take place under Natural England licence – refer to the licence method statement and conditions for details of these requirements;**
- **Works within BPZs must only be undertaken with ECoW supervision;**
- **If anyone on site finds animals which are, or may be, legally protected works in that area must stop immediately and the ECoW must be informed. Additional mitigation measures and/or licences may be required before works can re-commence;**
- **Animals must only be handled by the ECoW, as some species may represent a health hazard to site staff if handled, and/or may be harmed if handled wrongly.**

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 is a member of their Professional Standards Preliminary Conduct Panel (and has been a member of several CIEEM committees including the Professional Standards Committee, Preliminary Investigations Panel,- 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 survey licences for bats (Level 2), dormice, barn owls and great crested newts and he also holds NRW and SNH bat licences (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 the Mammal Society's '*Hazel Dormouse Mitigation Handbook*' and '*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 (6160-09).

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.