

BRADLEYS LANE, HOVERINGHAM

PRELIMINARY ECOLOGICAL APRAISAL REPORT

JM ECOLOGY LIMITED

COMPANY NUMBER: 14370362

VAT NUMBER: 451433221

ADDRESS: STERLING HOUSE OUTRAMS WHARF, DERBY, DE21 5EL

WEBSITE: WWW.JMECOLOGY.CO.UK



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1. **BACKGROUND INFORMATION**

1.1 This Preliminary Ecological Appraisal (PEA) has been complete on behalf of Joanne Bradley for the Site; Land off Bradleys Lane, Hoveringham. It has been produced to inform the proposed development of the Site for restoration of the existing cottage building on-Site.

Site Details

1.2 The Site is located in Hoveringham, Nottinghamshire and comprises derelict semi-detached cottages and former residential garden. The Site supports modified grassland with bramble scrub and hedgerow. The Causeway Dyke is adjacent to the western boundary with residential properties to the east and south. The wider landscape supports lakes, the River Trent, sporadic residential settlements and agricultural land dissected by hedges, ditches, trees lines and roads.



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Purpose of This Report

1.3 This PEA provides baseline data and recommendations for mitigation, compensation and enhancements as appropriate as well as recommendations for any further surveys if necessary. It is produced with due consideration for best practice (CIEEM, 2017) and the British Standards Institution (BSI, 2013).



2. LEGISLATION

- 2.1 Legislation relevant to this assessment are as follows:
 - The Conservation of Habitats and Species Regulations 2019 (as amended);
 - The Wildlife and Countryside Act 1981 (as amended);
 - The Countryside and Rights of Way (CRoW) Act 2000;
 - The Environment Act 2021;
 - The Wild Mammals Act (1996);
 - The Protection of Badgers Act 1992
 - Hedgerow Regulations 1997.
 - Natural Environment and Rural Communities (NERC) Act 2006; and,
 - Hedgerow Regulations 1997.
- 2.2 The National Planning Policy Framework (NPPF, 2023) informs Local Planning Authorities planning policies and when reviewing planning applications affecting features of value to nature conservation. Sections relevant to biodiversity include:
 - Paragraph 180;
 - Paragraph 185; and,
 - Paragraph 186.
- 2.3 The NPPF is available at https://www.gov.uk/guidance/national-planning-policy-framework.
- 2.4 Local Policy relevant to the Sites authority area has also been reviewed as necessary.



3. METHODOLOGY

Zone of Influence

3.1 The defined Zone of Influence (ZOI) for any proposal is related to the significance of sites and species which may be present in the surrounding landscape. For this small scale scheme the following ZOI have been established for designations.

Table 3-1: Designated Sites and Zone of Influence

TYPE	DESIGNATION	ZOI FOR THIS SCHEME
International Sites (Statutory)	Special Protection Area (SPA) Special Area of Conservation (SAC), and Ramsar sites	5km
National Sites (Statutory)	Sites of Special Scientific Interest (SSSI) and Local/ National Nature Reserves (LNR/ NNR);	1km
Off-Site Priority Habitats	Habitats listed on the priority habitat inventory/ Under the NERC Act (2006)	Within 50m

Habitat Survey

- 3.2 Survey was undertaken in March 2024 by Joe McLaughlin BSc (hons) MCIEEM. Joe has over 11 years' experience in habitat and protected species scoping assessments, has **BSBI FISC Level 4 certification**¹ for botanical assessment and is appropriately qualified for the surveys based on the CIEEM competencies for carrying out such surveys (CIEEM, 2017). Joe is registered to use a level 2 personal bat licence (2016-26529-CLS-CLS) and great crested newt licence (2015-16947-CLS-CLS), acts as the named ecologist on numerous mitigation licences and is one of a small number of consultants nationwide registered under the Bat Mitigation Class Licence scheme (RC210); all of which further demonstrates his competence to lead this type of work.
- 3.3 The habitat survey was completed using UK Habitat Classification System V2.0 (UK HAB, 2023) with habitat mapping complete using the DEFRA Statutory Biodiversity Metric QGIS mapping tools.
- 3.4 Alongside the habitat survey the surveyor scoped for protected/notable species. Specific consideration was given to the following species: amphibians, including Great Crested Newts (GCN) *Triturus cristatus*; birds; bats; reptiles; badgers *Meles meles*, white-clawed crayfish *Austropotamobius pallipes*, otter *Lutra lutra*, water vole *Arvicola amphibius* and priority species, (e.g., hedgehog *Erinaceus europaeus*).

Desk Study

3.5 As part of a desk-based assessment data sources listed below were searched to gather ecological data of relevance to the project, including the identification of ecologically sensitive

¹ Botanical Society for Britain and Ireland. Field Identification Skills Certificate: Leve 4 (competent botanist). See BSBI skills pyramid for further details: https://bsbi.org/wp-content/uploads/dlm_uploads/Botanical_Skills_Pyramid.pdf



habitats such as vegetation corridors, woodlands, watercourses, standing water and statutory designated Sites.

- Ancient Woodland/Tree Inventory;
- Multi-Agency Geographic Information for the Countryside (MAGIC Maps);
- Ancient Woodland/Tree Inventory;
- Ordnance Survey 1:25,000 mapping;
- Aerial imagery (Google Earth Pro imagery dated 1999 2024); and,
- The Natural England Open Data Geoportal (Natural England Open Data Geoportal (arcgis.com)) were also accessed in respect of protected species.

Limitations

- 3.6 Habitat survey outside the growing season April-September can provide inadequate data for such an assessment. However, based on types of habitats found, this is not considered a major constraint with all habitats on-Site robustly assessable at any time of the year.
- 3.7 Despite efforts made during the field survey to provide a comprehensive account of the site, it is important to acknowledge that no investigation can guarantee complete characterisation and accurate prediction of the natural environment. Moreover, it is crucial to recognise that habitats are dynamic entities prone to changes, including the potential colonisation of species subsequent to the surveys complete as part of this report.
- 3.8 In line with standard guidance, the results and recommendations within this report are valid for up to two years from the date of survey, assuming there are no significant changes to the survey Site or its immediate surroundings. Updated survey work may be required to support any future planning applications outside of this time period.
- 3.9 Formal ecological data request to the local ecological record centre was not complete in support of this assessment owing to the extremely small scale of the proposal.



4. RESULTS

Designated Sites

- 4.1 No international statutory sites identified within 5km of the Site.
- 4.2 No national level statutory sites identified within 1km of the Site. The Site is not located within an impact risk zone for any statutory sites.
- 4.3 There are no off-Site priority habitats within 50m of the Site.
- 4.4 As no biodiversity designations have been identified within the schemes ZOI they will not be discussed further in this report.

Habitats

4.5 There are **no irreplaceable habitats** present on-Site. Baseline habitat plan and photographs are provided in appendices at the end of this report.

Modified Grassland

- 4.6 The Site was dominated by modified grassland (the former garden space of the cottages). The grassland comprised abundant perennial rye-grass *Lolium perenne* with occasional Yorkshire fog *Holcus lanatus*. Forbs comprised occasional common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, creeping thistle *Cirsium arvense*, pendulous sedge *Carex pendula*, herb robert *Geranium robertianum* and spear thistle *Cirsium vulgare*, *common* with rare dock *Rumex sp* and coltsfoot *Tussilago farfara*.
- 4.7 The grassland was damaged from vehicular access and storage with the sward height varying from 5-30cm. A maximum of 5 floral species was encountered within any of the 1m² areas checked.

Bramble Scrub

4.8 Areas of bramble *Rubus fruticosus agg.* scrub was present on-Site.

Tall Forbs

4.9 Small stand of common nettle was located to the west of B1. This also supported occasional pendulous sedge, garlic mustard *Alliaria petiolate* and establishing bramble.

Hedgerow

- 4.10 One hedgerow were present on-Site, as described below:
 - H1 was located along the western boundary, supported trees and was situated at the top of a ditch. This hedgerow comprised dominant hawthorn *Cratageus monogyna*, elder *Sambucus nigra* with bramble climbing and willow *Salix* sp., and ash *Fraxinus excelsior* trees. The hedgerow had sporadic ivy *Hedera helix* climbing. The hedgerow was also unmanaged measuring 4x2m with trees 10m-12m in height.



4.11 H1 was considered a priority habitat under the NERC Act (2006) as it comprised of at least 80% native woody species. H1 was not considered 'Important' under the Hedgerow Regulations (1997).

Individual Trees

4.12 A single medium sized ash tree was located in the northern section of the Site. The tree was 15m tall and 0.5m diameter at breast height.

Developed Land; Sealed Surface

4.13 Two buildings were located on-Site; B1 and B2. These are described in more detail below under the bat heading.

Artificial Unvegetated, Unsealed Surface

4.14 Gravel track formed the access in the southern section of the Site. Some emerging early colonising species were identified here (see forbs listed under the Modified Grassland heading), however coverage was limited/sporadic.

Off-Site Watercourse

- 4.15 The Causeway Dyke was located immediately west of the Site boundary. This habitat was off-Site and supported exposed earth banks with limited vegetation from the top of the bank to the strand line. The dyke supported running water and had apparent poor water quality with a foul smell and reasonably high turbidity. The channel comprised deep silt with little to no gravel or larger substate identified.
- 4.16 Based on a review of aerial maps, the Causeway Dyke is understood to be a tributary of the River Trent.

Target Notes

4.17 The Site supports several log/rubble piles (TN1). These are shown within the habitat plan at the end of this report.

Protected/Notable Species

Herptiles

- 4.18 As GCN are widely understood to be unlikely to traverse beyond 250m from any breeding pond (Franklin 1993, Oldham and Nicholson 1986, Jehle 2000, Jehle and Arntzen, 2000), and the scheme is extremely small scale, the zone of influence for GCN is considered to be 250m for this Site.
- 4.19 One large fishing lake is located 245m to the west however, this is stocked with fish and beyond the Causeway Dyke which is a running watercourse (part of the River Trent Catchment) and as such is considered a barrier to dispersal. As such the lake is discounted from further consideration. No other ponds identified within 250m. On that basis GCN do not present a risk to the development.



4.20 The Site supports habitats including scrub, hedgerows and rubble/log piles (TN1) with scope for common amphibians and reptiles such as common toad *Bufo bufo*, grass snake *Natrix Helvetica*, common lizard *Zootoca vivipara* and slow-work *Anguis fragilis* which are priority species under the NERC Act (2006)

Badger

- 4.21 No evidence of badgers such as hairs, latrines, footprints or setts were recorded during the survey on-Site or within 30m of the boundary; access permitting.
- 4.22 The Site did provide optimal foraging habitat and some scope for sett building in association with the banks of the Causeway Dyke. As such, it cannot be ruled out that badgers may pass through the Site.

Roosting Bats

- 4.23 B1 was a brick cottage which was in a serious state of disrepair. The building did not have a roof and walls were in various states of collapse. B1 had only a ground floor area as the first floor section was completely gone (B1 historically was a two storey property). As such the structure was considered to be poorly suited to roosting; particularly owing to the weather and light ingress/exposure the structure was subject to. However, the building did support some minor gaps in wall cavities and remnant chimneys which solitary bats could exploit. As such the structure was considered to have extremely low suitability to roosting bats.
- 4.24 B2 was a portacabin structure with sheet panel walls and a flat roof with windows and doors tightly finished. Internally the building had no loft void and was used for storage. B2 was considered to have negligible suitability to roosting and will not be discussed further in this report in this context.
- 4.25 No evidence of bats was found in association with B1 or B2.
- 4.26 None of the trees on-Site had bat roost suitability.

Foraging Bats

4.27 The peripheral habitat was considered to offer suitability for foraging and commuting bats due to the presence of scrub, hedgerows with trees and connectivity with the adjacent off-Site Causeway Dyke (which is considered a wildlife corridor). However, the rest of the Site is a historic residential property and is dominated by buildings and modified grassland which is of limited value to foraging. Furthermore, adjacent property to the east likely results in some artificial light spill towards the Site, which likely limits the Sites value to less common light averse species. As such a significant assemblage of foraging bats on-Site is considered unlikely.

Birds

4.28 The site provides opportunities for common species of birds. Given the small scale and dominance of modified grassland and residential context, it is considered extremely unlikely to support a significant bird assemblage. The hedgerows, B1, trees and scrub were considered to offer limited nesting opportunities for common species only.



White-clawed Crayfish, Otter and Water vole

- 4.29 During the survey the surveyor assessed the Causeway Dyke adjacent to the Site (access permitting) to scope for these species.
- 4.30 Given the apparent poor water quality and lack of diverse substrate associated with the off-Site Causeway Dyke, white-clawed crayfish are considered unlikely to be present and will not be discussed further.
- 4.31 Owing to the exposed earth banks and poor water quality, water vole are considered extremely unlikely to be present in associated with the off-Site Causeway Dyke. Furthermore, several rat droppings were identified at the bank top and this species is known to outcompete water vole easily. In consideration of these factors, water vole are considered likely absent from the Causeway Dyke (and the Site) and will not be discussed further in this report.
- 4.32 No evidence of otter holts or laying up sites were identified on-Site or in the stretch of the Causeway Dyke adjacent to the Site. Furthermore, given proximity of residential properties suitability to holts/ refuge is considered limited for otter. However, potential presence of commuting otter using the Causeway Dyke as a wildlife corridor between the River Trent and wider landscape cannot be entirely ruled out.

Invasive Species

4.33 No invasive species listed under Schedule 9 of the Wildlife and Countryside Act (1981) were identified on-Site. As such invasive species will not be discussed further in this report.

Other Species

4.34 The Site provided opportunities for hedgehog and their presence cannot be ruled out on-Site as this species is frequently encountered in rural and urban residential settings.



5. EVALUATION

5.1 This section identifies the potential effects on ecological receptors prior to mitigation/recommendations for any further work being made.

Habitats

- 5.2 H1 was considered a priority habitat under the NERC Act (2006). Additionally, the mature tree and the off-Site Causeway Dyke were considered notable feature of the Site/locality. All of these features are proposed for retention and avoidance which is considered advantageous. There is a limited risk of pollution to the Causeway Dyke during construction and as such, mitigation is provided in section 6 on a precautionary basis to adopt during construction to reduce this risk.
- 5.3 All other habitats on-Site are of little to no floristic value and are small in scale offering limited opportunities for faunal species. As such their losses are not considered a significant constraint to development.
- 5.4 All development is requirement to demonstrate a net gain for biodiversity in accordance with national planning policy objectives. As such enhancements are recommended in Section 6 to provide a net gain for biodiversity on-Site.

Species

Herptiles

- 5.5 The Site is dominated by modified grassland which is of limited value to these species. As such a significant assemblage of common herptiles is considered unlikely on-Site.
- 5.6 Whilst the Site is considered unlikely to support significant population of these species, there is a low risk of transient individuals traversing across the Site. As such mitigation is proposed in Section 6 to protect such individuals during construction.

Badger

5.7 It cannot be ruled out that badgers may periodically cross the Site and become injured in open excavations during the construction phase. Badgers are transient in nature and can excavate a new sett at any time. As such mitigation is provided in Section 6 for this species.

Roosting Bats

5.8 B1 has extremely low suitability to roosting, whilst a suite of nocturnal surveys is considered disproportionate, mitigation should be implemented during construction to manage risk of transient individual bats occupying the structure.

Foraging Bats

5.9 The Site was considered to provide opportunities for foraging and commuting bats. Whilst the Site is unlikely to support a population of light averse foraging bats, less light averse common and widespread species such as pipistrelles may routinely traverse across the Site using the peripheral vegetation along the western boundary as a commuting corridor. However, as this vegetation is proposed for retention a suite of activity surveys is considered disproportionate. Instead, a lighting strategy should be designed to limit light spill onto retained peripheral



vegetation, any newly installed bat mitigation features on-Site or towards off-Site habitats/features which could support roosts.

Birds

5.10 Nesting birds could become injured, and nests could be lost during the construction associated with B1, pruning of the hedgerow and any removal of bramble scrub within the Site. Prescriptions to manage this risk are therefore set out within Section 6.

Otter

5.11 Whilst otter holts/ resting sites are unlikely on-Site or within the adjacent Causeway Dyke, there remains a residual risk of otter commuting/foraging past the Site. As such there is a risk development of the Site could cause disturbances to this European Protected Species. As such mitigation is set out within Section 6 to manage this risk.

Other Species

5.12 Other species utilising the Site for foraging and commuting purposes may become trapped or injured in open excavations such as hedgehog. As such mitigation is provided in Section 6 to mitigate this risk.



6. RECOMMENDATIONS

Habitats

- 6.1 To reduce pollution risks beyond the Site boundary (particularly towards the Causeway Dyke) the Pollution Prevention Guidelines as listed below should be consulted to advise on pollution control practice's and to ensure construction works are undertaken responsibly:
 - PPG1: General Guide to the Prevention of Pollution;
 - PPG2: Above Ground Oil Storage Tanks;
 - PPG3: Use and Design of Oil Separators in Surface Water Drainage Systems;
 - PPG5: Works in, Near or Over Watercourses;
 - PPG6: Working at Construction and Demolition Sites; and,
 - PPG21: Pollution Incident Response Planning.
- 6.2 Any chemicals or environmentally hazardous material must be kept in dedicated stores, storage tanks will have appropriate bunding and the possibility of fuel spillages will be minimised through good site management.
- 6.3 As the hedgerow is considered a priority habitat, and the mature individual tree a notable feature they should be retained as part of the development (as is proposed). However, where proposals change and this cannot be achieved replanting of trees/ species rich native hedgerow with trees should be incorporated into the soft landscaping plans for the Site as compensation. Where losses to hedgerows/tree occur, replanting should take place at ratio of 3:1 in favour of replanting length/ tree numbers.
- 6.4 Hedgerows/trees proposed for retention should be protected during works in accordance with BS 5837: 2012.
- 6.5 Whilst the remaining on-Site habitats are of little floristic value and their losses are not considered a major constraint, to secure gains for biodiversity provision of the following should be considered as part of development:
 - Native tree planting;
 - Native species rich hedgerows or shrub planting (at least 30m long and seven woody species); and/or;
 - Native wildflower area (species rich grassland) in areas of open space (if any).
- 6.6 Additionally, habitat features to provide refuge opportunities for fauna should be included within the enhancement strategy for the Site as follows:
 - One bat box should be installed on a mature tree on-Site 3-5m high, ideally south facing, away from windows or doors of the adjacent properties. Boxes such as the improved crevice box ²are considered suitable for use on-Site;
 - Two general use bird boxes should be installed on mature trees on-Site 3-5m high, away from prevailing wind and away from windows or doors of the adjacent properties. Boxes such as *Woodstone Nest Box 32mm*³ are considered suitable for use on-Site; and,

² Available at: <u>Improved Crevice Bat Box | NHBS Practical Conservation Equipment</u>

³ Available at: Woodstone Nest Box - 32mm (wildcare.co.uk)



• A single hedgehog box should be installed on-Site within the base of H1. Box such as the HH7 Hogilo Hedgehog / Mammal House are considered suitable for the Site⁴.

Protected/Notable Fauna

Herptiles

- 6.7 If removal of scrub, hedgerow or rubble/log piles (TN1) is required, it should be cleared using a systematic approach sensitive to the risk of these species being present. Furthermore precautionary working measures should be adopted during construction to limit risks to common herptiles. This should be complete as follows:
 - Rubble/log pile dismantling and/or vegetation clearance of habitats listed above should only occur in temperatures above 9°C;
 - The vegetation should be reduced to 150mm using hand tools working from the south to the north, towards the off-Site dense vegetation proposed for retention. Once this initial step is complete the habitat should then be left overnight (allowing fauna to freely disperse as habitat becomes less favourable for refuge);
 - Rubble/log piles (TN1) should be dismantled by hand by a Suitably Qualified Ecologist (SQE);
 - The following day removal can commence at the contractors discretion;
 - Any stored materials/plant should be checked by hand before removal from Site;
 - Avoidance of creating rubble piles on-site during construction. If this happens an SQE should be contacted to assist with removal as per prescriptions detailed above;
 - Vegetation cleared should not be piled on-Site. It should instead be moved immediately from Site.
 - If faunal species found at any point works should stop and a professional ecologist should be contacted for advice (if one is not already on-Site). Contractors should not handle fauna if found:
 - Retained scrub or hedgerows should ideally be Heras fenced during construction to avoid accidental encroachment.
- 6.8 Other mitigation outlined below under the badger heading is also considered beneficial for these species.

Badger

- 6.9 In order to protect animals including badger during construction phase, good practice methods should be implemented throughout works. Those prescriptions should include:
 - Safe storage of chemicals;
 - Covering open excavations at the end of each working day or providing an escape route for them to utilise to avoid them becoming trapped;
 - Avoidance of creating rubble/earth/waste piles, which badger and other small fauna could utilise for refuge or sett excavation;

⁴ Available at Search (nhbs.com)



- Capping open pipe work and sensible storage of building materials within a designated compound/ storage area; and,
- Avoidance of nightwork.
- 6.10 If development does not commence within the next 12 months, a re-survey for badger is recommended for the Site.

Roosting Bats

- 6.11 Initial construction work on B1 should be complete following precautionary measures to mitigate the extremely limited risk of transient individual bats occupying the structures. This should include the following:
 - An appropriately licensed and SQE should be on-Site to inspect B1 for bats from ground level and via ladders as necessary looking for individual bats immediately prior to work starting on the structure. This should include use of torches and endoscope as necessary.
 If no bats are found the SQE will allow works to proceed with no further mitigation measures.
 - If bats or evidence of bats is found by the SQE (or by Site operatives at any point) work will need to stop, and bats left in situ. Works will then be stood down on the building until further survey and/or a mitigation licence application is submit to Natural England.

Foraging Bats

- 6.12 A lighting strategy sympathetic to nocturnal fauna is recommended ensuring no artificial light spill occurs towards peripheral hedges and trees, any newly installed bat features as part of the scheme, or off-Site Causeway Dyke, buildings trees or dense vegetation. Any new lighting associated with the development should follow best practice guidelines outlined in Bats and Artificial Lighting at Night (ILP, 2023).
- 6.13 Night work is not permitted during construction.

Birds

- 6.14 As all species receive legal protection during nesting, it is advised to start building works on B1 and conduct any hedge, scrub, or tree clearance/pruning outside of the breeding bird season of March to October (inclusive). Work outside of this period (between November and February inclusive) should still be preceded by a nesting bird check carried out by contractors, as some species can nest all year round.
- 6.15 If it is necessary to conduct vegetation pruning/clearance or to start construction on B1 within the nesting bird season, such work should be preceded by a nesting bird check conducted by a SQE. Where nests are encountered, a suitable standoff zone will be implemented, and all works in the area will cease until the chicks have fledged.

Otter

- 6.16 As potential for foraging/commuting otter cannot be ruled out in association with the Causeway Dyke, no night work is permitted during construction.
- 6.17 Furthermore, lighting strategy recommended above for foraging bats (which recommends avoiding illumination of the Causeway Dyke and H1) is considered important for otter as well.



6.18 If proposals change to include impacts to the Causeway Dyke or H1 which is adjacent to the Causeway Dyke and acts as a natural screen between the Site and the aquatic feature, reassessment for otter is likely to be necessary.

Other Species

- 6.19 If during construction a hedgehog is found it should be left in situ, and all works should cease within the vicinity of the area with either a professional ecologist or the Hedgehog Preservation Society contacted for further advice. In most cases the hedgehog can be moved by hand to a nearby off-Site place of safety. However, dependant on the time of year, i.e. if temperatures are low (below 10°C) and the hedgehog was found within the hedgehog hibernation season (from November to March) then it may be necessary to take the hedgehog to a wildlife sanctuary. Moving a pregnant hedgehog or hedgehog with young can also result in mortality; so moving hedgehogs should be considered the last resort and informed by a professional ecologist.
- 6.20 Please contact the British Hedgehog Preservation Society (Tel: 01584 890801) for advice.
- 6.21 Any fencing installed should avoid closed boarding at the base to allow hedgehog and small faunal dispersal between the Site and the wider environment. Alternatively, a hedgehog highway should be created across the Site and between the properties to allow hedgehog dispersal. This would include a single hole in each properties fence at one of the base boards 15x15cm in extent
- 6.22 Measures, as outlined above for herptiles/foraging bats/badgers will also reduce the risk to hedgehogs which is considered highly advantageous.



7. REFERENCES

- British Standards Institution (2013) BS 42020:2013 Biodiversity code of practice for planning and development. BSI Standards Ltd, London.
- Chartered Institute of Ecology and Environmental Management (2019) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. CIEEM, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017) Guidelines for Ecological Report Writing. CIEEM, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017) Guidelines for Preliminary Ecological Appraisal. CIEEM, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020) Guidelines for accessing, using and sharing biodiversity data in the UK. CIEEM, Winchester.
- Collins J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). Bat Conservation Trust, London.
- Eaton, M. A., Aebischer, N. J., Brown, A. F., Hearn, R. D., Lock, L., Musgrove, A. J., Noble, D. G., Stroud, D. A. and Gregory, R. D. (2021) Birds of Conservation Concern 5: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708–746.
- FRANKLIN, P.S. (1993). The migratory ecology and terrestrial habitat preferences of the great crested newt Triturus cristatus at Little Wittenham Nature Reserve. M.Phil Thesis. De Montfort University. Dept. Applied Biology and Biotechnology.
- Oldham, R.S. and Nicholson, M. (1986). Status and Ecology of the Warty Newt Triturus cristatus, Final Report. Leicester Polytechnic under contract to Nature Conservancy Council
- Jehle, R (2000) The Terrestrial Summer Habitat of Radio-Tracked Great Crested Newts (Triturus Cristatus) and Marbled Newts (Triturus Marmoratus). Herpetological Journal: 10(4): c137-142.
- Jehle R & JW Arntzen (2000) Post-breeding migrations of newts (Triturus cristatus and T. marmoratus) with contrasting ecological requirements. Journal of Zoology (London), 251, 297-306
- Institution of Lighting Professionals (2023) Bats and Artificial Lighting at Night Guidance Note 08/23. Bat Conservation Trust and Institution of Lighting Professionals (ILP), Warwickshire.
- Multi-Agency Geographic Information for the Countryside Website. Found at: http://www.magic.gov.uk/.
- Ministry of Housing, Communities and Local Government (2023) National Planning Policy Framework. ISBN: 978-1-4098-5302-2.
- Natural England, 2023. Biodiversity Metric 4.0. Accessed at: https://publications.naturalengland.org.uk/publication/6049804846366720
- Stace, C.S. (2019) New Flora of the British Isles, 4th edition. University Press, Cambridge.
- The Conservation of Habitats and Species Regulations 2017 (as amended). Found at: https://www.legislation.gov.uk/uksi/2017/1012/introduction.
- The Environment Act (2021). Accessed using the website: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted.
- The Hedgerow Regulations 1997 (England) Found at: https://www.legislation.gov.uk/uksi/1997/1160/contents/made.



- UK HAB, 2023. UK Habitat Classification Version V2.0
- Wildlife and Countryside Act 1981 (England and Wales) (Amendment) Regulations 2016. Found at: https://www.legislation.gov.uk/uksi/2016/127/contents.
- Wild Mammals (Protection) Act 1996 (England) Found at: https://www.legislation.gov.uk/ukpga/1996/3/contents.



APPENDICES



APPENDIX 1: Habitat Map





APPENDIX 2: Photographs

Photographs























JM Ecology 🗔