

Ecology Solutions Limited
Farncombe House
Farncombe Estate
Broadway
Worcestershire
WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
www.ecologysolutions.co.uk



8372: Land East of Albion Road and North of Copper Lane, Marden

TECHNICAL NOTE: Updated Surveys and Biodiversity Net Gain Assessment

1. Introduction

- 1.1. Ecology Solutions was commissioned by B.Yond Homes to undertake a suite of updated faunal surveys and an updated Biodiversity Net Gain Assessment in support of a Planning Appeal that has been made against the decision of Maidstone Borough Council to refuse the planning application 23/504068/OUT.
- 1.2. This document details the results from breeding bird, reptile and Great Crested Newt surveys undertaken in 2024.
- 1.3. The summarised results of an updated Biodiversity Net Gain Assessment are also included, calculated using the DEFRA Biodiversity Metric 4.0.

2. Experience

- 2.1. I joined Ecology Solutions as a Director on 8th April 2024. I previously worked as Director of Ecology at ACD Environmental Ltd, a multi-disciplinary consultancy. I was employed at ACD Environmental for 13 years. I have 18 years' experience in ecological consultancy. I hold Natural England class licences for bats (all species), hazel dormice *Muscardinus avellanarius*, great crested newt *Triturus cristatus*, and barn owl *Tyto alba*. I am a Registered Consultant on the Badger *Meles meles* Class Licence and the Bat Mitigation Class Licence.
- 2.2. I am qualified to act under the Otter *Lutra lutra* Class licence. I have designed mitigation projects and acted as Named Ecologist for high conservation value bat roosts. I have co-authored a research article on badgers published by

Cambridge University Press and Oryx (International Journal of Nature Conservation).

- 2.3. I have co-authored an article on improving artificial badger sett mitigation for CIEEM's December 2024 In Practice publication.
- 2.4. I have acted as an Expert Witness at Public Inquiry and have attended planning appeal hearings. I am a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

3. Updated Surveys

Breeding Bird Surveys

- 3.1. Breeding bird surveys were commissioned and carried out on 4th April 2024, 22nd April 2024, 8th May 2024, 5th June 2024, 18th June 2024, and 27th June 2024 by experienced Senior Field Ecologists Alex Hogg and Gavin O'Seachnasaigh.
- 3.2. On the breeding bird survey carried out on 4th April 2024 (Plan ECO1), the following species were recorded within the Application Site:
 - Blackbird *Turdus merula* (green listed)
 - Blue tit *Cyanistes caeruleus* (green listed)
 - Chaffinch *Fringilla coelebs* (green listed)
 - Chiffchaff *Phylloscopus collybita* (green listed)
 - Dunnock *Prunella modularis* (amber listed)
 - Goldfinch *Carduelis carduelis* (green listed)
 - Great tit *Parus major* (green listed)
 - Green Woodpecker *Picus viridus* (green listed)
 - Lesser black backed gull *Larus fuscus* (not assessed)
 - Magpie *Pica pica* (green listed)
 - Moorhen *Gallinula chloropus* (not assessed)
 - Reed bunting *Emberiza schoeniclus*
 - Robin *Erithacus rubecula* (green listed)
 - Rook *Corvus frugilegus* (not assessed)
 - Song thrush *Turdus philomelos* (amber listed)
 - Wood pigeon *Columba palumbus* (amber listed)
 - Wren *Troglodytes troglodytes* (amber listed)
- 3.3. On the breeding bird survey carried out on 22nd April 2024 (Plan ECO2), the following species were recorded within the Application Site:

- Blackbird
- Blackcap *Sylvia atricapilla* (green listed)
- Blue tit
- Canada goose *Branta canadensis* (not assessed)
- Chaffinch
- Chiffchaff
- Dunnock
- Goldfinch
- Mallard *Anas platyrhynchos* (not assessed)
- Moorhen
- Robin
- Wood pigeon
- Wren
- Yellowhammer *Emberiza citronella* (red listed)

3.4. On the breeding bird survey carried out on 8th May 2024 (Plan ECO3), the following species were recorded within the Application Site:

- Blackbird
- Blue tit
- Carrion crow *Corvus corone* (green listed)
- Chiffchaff
- Collared dove *Streptopelia decaocto* (green listed)
- Goldfinch
- House sparrow *Passer domesticus* (red listed)
- Jackdaw *Coloeus monedula* (green listed)
- Jay *Garrulus glandarius* (green listed)
- Lesser black backed gull
- Magpie
- Mallard
- Moorhen
- Red kite *Milvus milvus* (green listed)
- Robin
- Rook
- Starling *Sturnus vulgaris* (red listed)
- Swallow *Hirundo rustica* (green listed)
- Whitethroat *Curruca communis* (amber listed)
- Wren
- Yellowhammer

3.5. On the breeding bird survey carried out on 5th June 2024 (Plan ECO4), the following species were recorded within the Application Site:

- Blackbird
- Blackcap
- Blue tit
- Chaffinch
- Chiffchaff
- Collared dove
- Eurasian coot *Fulica atra* (green listed)
- Dunnock
- Goldfinch
- Lesser black backed gull
- Magpie
- Robin
- Starling
- Turtle dove *Streptopelia turtur* (red listed)
- Wood pigeon
- Wren

3.6. On the breeding bird survey carried out on 18th June 2024 (Plan ECO5), the following species were recorded within the Application Site:

- Blackbird
- Blue tit
- Carrion crow
- Chiffchaff
- Goldfinch
- Greenfinch
- Magpie
- Robin
- Wood pigeon
- Wren

3.7. On the breeding bird survey carried out on 27th June 2024 (Plan ECO6), the following species were recorded within the Application Site:

- Blackbird
- Blackcap
- Blue tit
- Chaffinch
- Chiffchaff
- Collared dove
- Garden warbler *Sylvia borin* (green listed)
- Goldfinch
- Great tit

- Green woodpecker
 - House sparrow
 - Jackdaw
 - Long-tailed tit *Aegithalos caudatus* (green listed)
 - Magpie
 - Moorhen
 - Pheasant *Phasianus colchicus* (not assessed)
 - Robin
 - Skylark *Alauda arvensis* (red listed)
 - Song thrush
 - Starling
 - Swallow
 - Wheatear *Oenanthe oenanthe* (amber listed)
 - Wood pigeon
 - Yellowhammer
- 3.8. With regards to skylark (a ground nesting bird), a single singing skylark was recorded on the survey of 27th June, along the southeast boundary. Based on the survey results, the site is not of any significant value to nesting skylarks. With regards to yellowhammer, the recordings were individual singing males along the south-east and south-west boundaries of the site.
- 3.9. In summary, a small number of ground nesting birds (including skylark and yellowhammer) were recorded during the breeding bird surveys. Whilst the site supports some bird interest (including red and amber listed species), particularly the grassland and scrub habitats, the proposed scheme includes significant green infrastructure and a range of ecologically valuable habitats including wildflower grassland, SuDS, and native scrub.
- 3.10. On the survey of 5th June 2024, one turtle dove was recorded on site along the eastern boundary, which subsequently moved to an adjacent hedge off site, where it spent the vast majority of the survey calling. It was not considered to be nesting on site.

Turtle Dove Mitigation

- 3.11. The perceived lack of adequate mitigation for Turtle Doves was raised as one of the reasons for the ecology reason for refusal.
- 3.12. To address the concerns and support the planning appeal, additional scrub planting, and cat-proof fencing, have subsequently been incorporated into the scheme design (Plan ECO7), which have been accepted by Kent Wildlife Trust.

- 3.13. Additional habitat creation for Turtle Dove also includes the bolstering of hedgerow H5 along Copper Lane, which is currently tall and narrow and not optimal habitat for Turtle Dove (which prefer denser/wider hedgerows). It is important to highlight that the proposed scheme includes restoration/enhancement of the on-site ponds, and creation of SuDS, which will provide sources of drinking water for Turtle Dove (and other wildlife).
- 3.14. Notwithstanding the above, given the lack of turtle dove nesting activity recorded during the breeding bird surveys, and quantum of habitat creation, no additional mitigation is required. The mitigation is considered to be proportionate to the proposed scheme.
- 3.15. Additional habitat management details for Turtle Dove can be found within the updated OLEMP.

Great Crested Newt Surveys

- 3.16. There are 5 ponds within the Appeal Site. A full suite of updated aquatic surveys was carried out on ponds P1-4 in 2024 with negative results returned for Great Crested Newt.
- 3.17. P1-4 were subjected to eDNA surveys in 2019, 2021, and 2023, of which the results were negative for Great Crested Newt. An aquatic survey of P5 in 2021 and 2022 did not record any Great Crested Newts. An eDNA survey of P5 in 2023 did not record any Great Crested Newts.

GCN Licensing

- 3.18. It is considered that a licence could be obtained if required, but is not considered strictly necessary, based on the absence of great crested newts within onsite ponds, regular management of the majority of grassland, and very low numbers of great crested newts within small numbers of offsite ponds.
- 3.19. If required, District Level Licensing (DLL) could be used to mitigate against the impacts on Great Crested Newt within the site. The site is located within the amber impact risk zone for Great Crested Newt habitat suitability.

Reptile Surveys

- 3.20. Updated reptile surveys were carried out in April, May, June, and September 2024. Results were similar to those conducted in 2021, with Grass Snake, Common Lizard, and Slow Worm being recorded. Slow worm numbers were higher in 2024 (peak count 20 adults) compared to the 2021 results.

Table 2: Summary of 2024 reptile survey results.

Survey	Date	Cloud cover (%)	Temp ©	Common Lizard	Slow Worm	Grass Snake	Total no. of Reptiles
1	18.04.24	30	14	0	14	1	15
2	23.04.24	95	12	1	3	0	4
3	07.05.24	0	17	0	15	2	17
4	14.05.24	100	14	0	3	1	4
5	05.06.24	75	14	1	20	0	21
6	19.06.24	5	17	0	1	0	1
7	19.09.24	75	17	1	8	0	9

- 3.21. Although the site supports 3 species of reptiles, given the significant provision of green infrastructure, no significant impacts on reptiles are anticipated. A comprehensive mitigation strategy can be produced as a suitably worded condition.
- 3.22. Additional habitat management details for reptiles can be found within the updated OLEMP.

Badgers

- 3.23. The Officers Delegated Report stated that KCC EAS required clarification on badger mitigation.
- 3.24. The proposed scheme will result in the loss of the onsite badger sett. The badger sett will be closed under the Badger Class Licence, which will be registered/licenced by Natural England.
- 3.25. The appellant has committed to the creation of an artificial sett, which will be located in the southern part of the Site. The sett will be of a high-quality design, at least 100m² in area, with at least six entrances.
- 3.26. The sett will be created to the following specification:
- At least six nesting chambers made from hardwood plywood, comprising two different sizes, 100cm x 100cm and 100cm x 60cm.
 - Tunnels will be constructed from 300mm diameter plastic drainage pipe.
 - The bottom of the pipes will be cut out to create earth floors.
 - The sett's internal architecture will include a range of undulations/levels to improve airflow/circulation.
 - Sand will be imported to make the sett more attractive to badgers.

- Post and rail fencing will be installed around the sett
 - Thorny scrub will be planted around the sett.
- 3.27. Given that the artificial badger sett will be located within the south of the site, which includes attenuation basins, the sett will be designed and positioned in collaboration with the drainage engineer, to ensure that it is not vulnerable to flooding. Subject to detailed design, this may include mounding, and importation of sand to aid drainage. Based on professional experience, locating artificial badger setts in close proximity to attenuation basins is perfectly feasible (and successful), provided the above factors are taken into account.
- 3.28. The proposed scheme includes new orchard planting and creation of significant areas of hedgerows, which will provide food sources for badgers. Connectivity to offsite habitats will be maintained.
- 3.29. My professional opinion is that the proposed scheme will not generate significant impacts to badgers.

4. Updated Biodiversity Net Gain Assessment

- 1.1. An initial Biodiversity Net Gain Assessment was produced by Ecology Solutions in August 2023 using the provided Colour Site Layout Plan (Appendix 1).
- 1.2. An updated Biodiversity Net Gain Assessment was undertaken using the DEFRA Biodiversity Metric 4.0 to account for the additional scrub planting and removal of trees TG3007, T3027 and T3028.
- 1.3. The additional scrub planting comprises an area of 0.206ha which was previously proposed as other neutral grassland. The proposed tree removal comprises a singular small sized tree (moderate condition), and two medium sized trees (poor and moderate condition.)
- 1.4. All other areas/lengths and conditions for habitat-based and hedgerow units remain the same as those detailed within the Biodiversity Net Gain Assessment dated August 2023. Baseline and created habitats can be seen in Plans BNG1 and BNG2.
- 1.5. A summary of the habitat and hedgerow units for the updated assessment can be seen in Table 2 below.

Table 2: Summary of updated Biodiversity Net Gain Assessment results

		Defra BNG Metric Calculations	
		Area	Linear
Development Site Baseline Results	Units	13.58	6.41
Development Site Post-Development Results	Units	17.10	10.22
	Unit Change	3.52	3.81
	% Change	25.91%	59.36%

- 1.6. The results of the BNG analysis confirm that the proposed development can deliver a net gain in habitat units of 25.91%, and a net gain in hedgerow units of 59.36%. The DEFRA Biodiversity 4.0 sheets can be seen in Appendix 2.
- 1.7. Although the planning application was submitted prior to mandatory BNG, the proposed development's calculated BNG is more than both the standard mandatory required (10%) and Maidstone Borough's requirement (20%).

I trust the above information is clear and comprehensive.

Daniel Wood MCIEEM, Director.

Daniel Wood

Ecology Solutions
October 2024