Addendum to
Ecological Impact Assessment

of

Coventry Stadium
Binley Woods
Warwickshire

for

Brandon Estates Limited

(21.10.2021)

2020-01(08)

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PROTECTED SPECIES

This report contains sensitive information relating to protected species. The information contained herein should not be disseminated without the prior advice of Ecolocation.

Survey date: 4th October 2021

Report Version	Date	Author:	Quality check by:	Approved by:
Original	21/10/2021	Jo White BSc (Hons) MCIEEM, CEnv Senior Ecologist	George Burton, MCIAT., CEnv., ACIEEM. Director	George Burton, MCIAT., CEnv., ACIEEM. Director
Rev A	20/12/2021	Jo White BSc (Hons) MCIEEM, CEnv Senior Ecologist	George Burton, MCIAT., CEnv., ACIEEM. Director	George Burton, MCIAT., CEnv., ACIEEM. Director

This report has been prepared in accordance with the CIEEM Guidelines for Ecological Report Writing Second Edition (2017) and is compliant with the CIEEM Code of Professional Conduct.

Summary

- This is an addendum to the Ecological Impact Assessment Report, Ecolocation (Revision A 5/07/2021), Bat Transect Report Rev A (05 07 2021) and the Bat Assessment Report (update 02 07 2021).
- It responds to matters raised in a letter by the Warwickshire County Council ecologist, dated 27th August 2021 (see Appendix 1).
- A repeat site visit was undertaken by suitably qualified and experienced, bat and great created newt licensed, ecologist George Burton on the 4th October 2021, during which an assessment of trees on the site in terms of their potential to support roosting bats, and an assessment of the ponds on or immediately adjacent to the site was made
- The information from this recent survey visit is presented in this Addendum.
- Further measures to protect the woodland edge of the New close and Birchley local wildlife site (LWS) from light pollution from the sports pitch are proposed. These require the sports pitch to be moved further east away from the LWS to provide a wider tranche of land which can be planted up as a buffer to the LWS and the inclusion within the lighting strategy of a horizontal illuminance contour plan to enable the containment of light to be clearly demonstrated.
- Three of the ponds were found to be dry. Habitat suitability Index calculations identified the ponds as being of of poor or below average suitability for great crested newts and the likelihood of the species being present on the site was assessed as negligible.
- The avoidance, mitigation and compensation set out in the submitted ecological reports and this Addendum will all be included in the Construction environmental management plan (CEMP) and the Landscape and ecological management plan (LEMP) It is anticipated that the CEMP and LEMP will be secured by planning condition as will the designed lighting strategy.

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1 Introduction

1.1 Instruction

An Ecological Impact Assessment Report (EcIA), Ecolocation (Revision A 05/07/2021), was submitted to Rugby Borough Council in support of Planning Application R18/0186. Further to that report, Ben Wood, Ecologist at Warwickshire County Council, provided comments on the EcIA in a letter dated 27th August 2021.

Ecolocation were commissioned by Brandon Estates Limited to provide a response to those comments and to provide additional information where required. This Addendum to the EcIA report addresses the comments made by Ben Wood in the order in which they have been written. Sections from the letter are reproduced verbatim, and a copy of the letter is presented in Appendix 1

1.1.1 Site location

The Site (grid reference SP 40713 77299) was located some 4.5km to the east of the City of Coventry. It was set in an agricultural landscape with urban and residential areas in close proximity to the Site.

1.1.2 Proposed Plans

Drawing number 27510-001, Illustrative Landscape Masterplan, Rev J, 14. 12 2021.

Drawing No BL_L_SK-003 3G Sports pitch and car park landscape concept

2 Bats

> *"No mention was made in the Ecological Impact Assessment (EcIA) or the Bat Roost Assessment about the suitability of the trees within the site for roosting bats. Presumably an assessment would have been made as part of the EcIA/Roost Assessment. Confirmation of this and recommendations for mitigation/precautionary working measures for removal of trees will be required prior to determination."*

The EcIA contained general references to the suitability of trees for bats, however, following a repeat site visit undertaken by George Burton on the 04/10/2021 during which a preliminary ground level roost assessment of trees was undertaken; four groups of trees with features which are suitable for roosting bats were identified. The locations of these trees are indicated in red on Figure1 below.

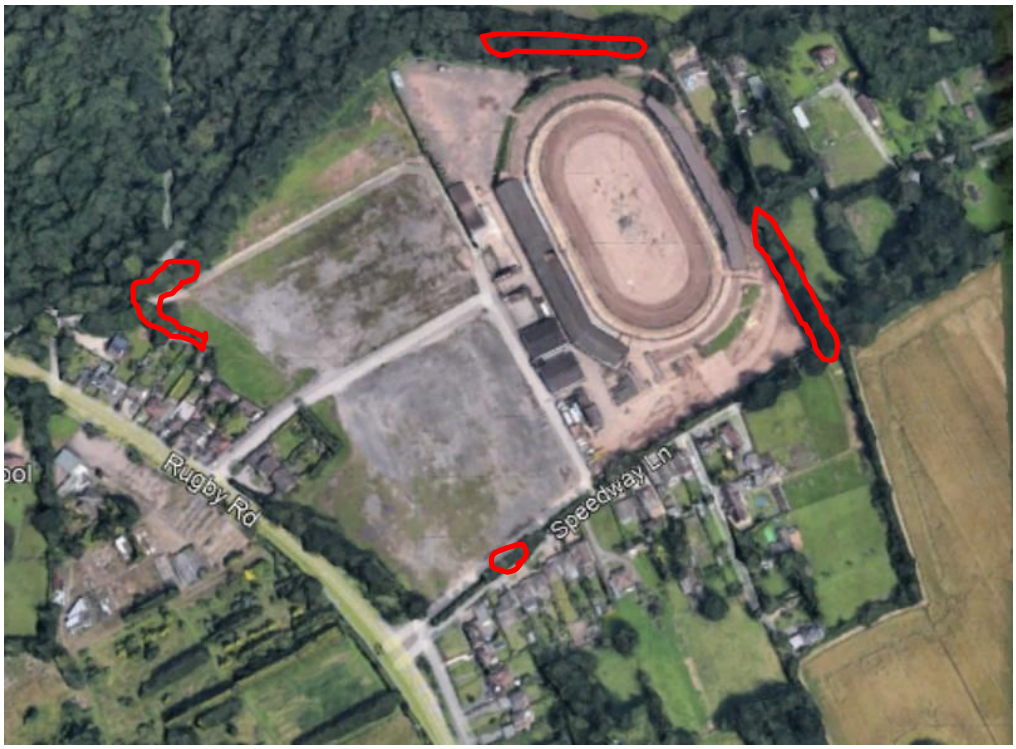

Figure 1: Locations of blocks of trees with the potential to support bat roosts.

Trees with bat potential will be identified on the Construction Environmental Management Plan (CEMP) and will be retained and protected wherever feasible. In addition to the tree root protection areas a minimum fenced, protection zone of 10m will maintained during the construction period. Should it be necessary to remove any of the trees identified as having bat potential then further survey work in accordance with best practice as set out in "Bat Survey for Professional Ecologists, 3rd Edition, Bat Conservation Trust will be undertaken. This would comprise an inspection of the potential roost features by means of tree climbing or the use of cherry pickers. The timing of the inspection may need to be adjusted to take account of nesting birds.

Figure 2 : trees with bat potential in west corner of site

> "*The EcIA recommends that a sensitive lighting strategy is implemented to avoid impacting on bat foraging behaviour, and that lighting should in particular be directed away from ecologically valuable features such as the retained boundary woodland. The proposed layout retains the trees at the northern edge of the site bordering onto New Close and Birchley Wood LWS and includes additional planting along this boundary. However, I am concerned about the proposed siting of the sports pitch which appears to be 10-15 metres from the existing tree line and will result on light spill directly onto the trees which will have a a detrimental impact on the ancient woodland. As it stands there is no room for additional tree planting to screen these effects and consideration should firstly be given to moving the pitch away from the woodland edge to reduce this effect*."

The sensitivity of maintaining dark corridors on sites for bats and other mammals is well understood. Lighting both during and post construction will be designed to avoid spillage onto these boundary features. The design has been modified to take account of the importance of the woodland corridors and the pitch has been redesigned 10m to the south east on its north west to south east axis (Refer to Illustrative Master Plan Drawing no 001 Rev J 14.12.2021 and 3G Sports pitch and Landscape Concept Drawing BL_L_SK -003). This additional space created to the north-west will be densely planted using fast-growing native trees and shrubs of a mixed but overall height not less than 4m, achieved with bare root trees, 12/14 heavy standards (subject to detailed landscape design, by others). This would increase the depth of buffer between the sports pitch and woodland edge of New Close and Birchley LWS woodland. A section through this planting is shown on the 3G Sports pitch and Landscape Concept Drawing BL_L_SK -003 which shows the linkage between the existing woodland and the proposed screen planting with a central footpath edged by shrubs to provide biodiversity enhancement, improved bat foraging and buffering thereof

Levels of illuminance radiating outside of the sports pitch and towards the woodland will be set in the lighting strategy, and the lighting designed by otthers in accordance with the guidance set out by the Bat Conservation Trust and the Institution of Lighting Professionals.

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In order to demonstrate that these levels will be achieved a horizontal illuminance contour plan will be prepared by a suitably qualified and competent lighting professional. The site, a former speedway stadium, was previously lit during the hours of darkness, to levels that generated light and noise pollution which would have adversely affected the dark corridors to the north a belt of woodland adjacent to the LWS and lines of trees to the east. With the proposals outlined above there is an opportunity to generate an environmental benefit in terms of significantly less light spillage and noise during evenings when bats would be at their most active.

3 Amphibians

"The EcIA includes an investigation of three ponds on and adjacent to the site for their potential to support great crested newts. The Habitat Suitability Index assessment found all three ponds to be 'below average' suitability for GCN, but no further investigation has been made. Pond 4 in particular is adjacent to the site and if it were used by GCN for breeding the ephemeral, tall ruderal and scrub habitats around the stands could represent core terrestrial habitat. Pond 1 was dry at the time of survey but I would expect ponds 2 and 4 at least to be subject to presence/absence surveys using either eDNA or a combination of methods in order to confidently conclude that GCN are absent from the site."

A repeat site visit to assess the current status of the ponds, identified in the original undertaken on the 4th October 2021. The locations of the ponds are indicated in blue on figure 2.

Figure 3 : Location of Ponds.

On the 4th October 2021 repeat surveys of the four ponds identified in the EcIA was undertaken. Ponds1, 2 and 3 were dry although the presence of marginal vegetation (rushes) in pond 2 suggested it may hold water at times when there is high rainfall. Pond 4 is now extant. Ponds 1 and 2 could combine into one during periods of high water. However; it is possible that with climate change ponds 1 and 3 may remain dry for much of the year.

Repeat Habitat Suitability Index calculations have been undertaken for ponds 2, 3 and 4

The Habitat Suitability Index (HSI) for great crested newts was developed by Oldham *et al.* in 2000 as a measure of habitat suitability in order to estimate presence/absence. A waterbody is assessed based on a geometric mean of ten features, each given a score relating to the current condition of the pond's characteristics and surroundings. Where the overall result is closer to 0 this indicates a more unsuitable habitat and a score closer to 1 represents more optimal habitats.

HSI can be useful in:

- Evaluating the general suitability of a sample of ponds for great crested newt;
- Comparing general suitability of ponds across different areas; and
- Evaluating the suitability of receptor ponds in a proposed mitigation scheme.

HSI is limited by being insufficiently precise to allow one to draw conclusions that a pond with a high score will support Great Crested Newts nor that a pond with a low score will not do so. The results do not allow conclusions on newt populations to be reached. Therefore, an HSI assessment is not a substitute for further great crested newt surveys.

Figure 4 : Pond 2 with central rush bed

Table 1: HSI calculation for pond 2

Pond 2		
Factor	**Result**	**Suitability Index**
SI 1- Location	A	1
SI 2- Pond area	40m^2	0.1
SI 3-Pond drying	Annually	0.1
SI 4-Water quality	Poor	0.33
SI 5-Shade	100%	0.20
SI 6-Fowl	Absent	1
SI 7-Fish	Absent	1
SI 8-Ponds	7	1
SI 9-Terrestrial	Moderate	0.67
SI 10-Macrophytes	0%	0.3
SI1 x SI2 x SI3 x SI4 x SI5 x SI6 x SI7 x SI8 x SI9 x SI10 (1x0.1x0.1x0.33x0.20x1x1x1x0.67x0.3) $^{1/10}$ = 0.15 equates to **"poor"** habitat suitability for great crested newts		

Figure 5 : Pond 3 viewed from public access to south-east

Table 2: HSI calculation for pond 3

Pond 3		
Factor	**Factor**	**Factor**
SI 1- Location	A	1
SI 2- Pond area	900m²	0.98
SI 3-Pond drying	Annually	0.1
SI 4-Water quality	Poor	0.33
SI 5-Shade	100%	0.2
SI 6-Fowl	absent	1
SI 7-Fish	absent	1
SI 8-Ponds	7	1
SI 9-Terrestrial	Moderate	0.67
SI 10-Macrophytes	0%	0.3
SI1 x SI2 x SI3 x SI4 x SI5 x SI6 x SI7 x SI8 x SI9 x SI10 $(1x0.98x0.1x0.33x0.2x1x1x1x0.67x0.3)^{1/10} = 0.13$ equates to **"poor"** habitat suitability for great crested newts		

Figure 6 : Pond 4

Table 5: HSI calculation for pond 4

Pond 4		
Factor	**Factor**	**Factor**
SI 1- Location	A	1
SI 2- Pond area	30 m²	0.1
SI 3-Pond drying	Never	0.9
SI 4-Water quality	Poor	0.33
SI 5-Shade	100 %	0.2
SI 6-Fowl	Absent	1
SI 7-Fish	Absent	1
SI 8-Ponds	7	1
SI 9-Terrestrial	Poor	0.33
SI 10-Macrophytes	0 %	0.3
SI1 x SI2 x SI3 x SI4 x SI5 x SI6 x SI7 x SI8 x SI9 x SI10 $(1x0.1x0.9x0.33x0.2x1x1x0.85x0.33x0.3)^{1/10}=0.59$ equates to "**below average**" habitat suitability for Great Crested Newts		

This result indicates all three ponds that have held water at any time between 2014 & 2021 are unlikely to offer suitable conditions for great crested newts. The other, pond 1, appears to be a higher-level part of pond 2 that could flood in extreme conditions, likely to occur in the winter months, if at all.

It should be noted that in producing revised HSI calculations reasonable assumptions have been made as to the pond area when holding water.

Two ponds are assessed as "average" and pond 4 is assessed as "below average". Whilst it is possible that more habitat tolerant and common species of amphibian including common toads and common frogs could use ponds 2, 3 & 4 on the occasions when they hold water, it is extremely unlikely that the habitat is suitable for great crested newts as there was extensive shading limiting displaying options for males, no evidence of macrophytes for egg deposition and no evidence that the dry ponds hold water in October 2021 and it is clear that ponsds 1-3 do

In April 2014, Ecolocation observed water-holding ponds 2 (rush bed present in October 2021 was central to it in 2014) with no macrophytes, 3 was covered in duckweed [whereas in October 2021 no evidence of duckweed (even dried to the ground)] was observed and 4 was present but pond 1 was dry.

A further Ecolocation survey in April 2017 observed a similar situation to 2014 in respect of ponds and it is possible that pond area peaks as ground water levels rise through winter to fall again in spring, resulting in the dry state found autumn.

The two great crested newt records returned in the 1km radius data search were both in locations west of the A428 and, with no obvious culverts or similar linkages beneath the road, this feature is a significant barrier to amphibian movement. The lack of great crested newt records to the east of the A428 in combination with the Habitat Suitability Index calculation results fully supports the opinion that more detailed assessment of the ponds is not necessary, nor in some cases possible, and that the risk of great crested newts being affected by the development is negligible.

4 General

The re-development of this provides amble opportunities to provide biodiversity gain. The existing habitats on the site, predominantly buildings; hard standing; bare ground and species-poor semi-improved grassland are all habitats with negligible to low ecological value. The avoidance, mitigation and compensation set out in the Bat roost assessment and roost characterisation surveys report; the Reptile presence/ absence report (revision B); the EcIA report (revision A) and this Addendum will all be included in the Construction environmental management plan (CEMP) and the Landscape and ecological management plan (LEMP) It is anticipated that the CEMP and LEMP will be secured by planning condition as will the designed lighting strategy.

5 References

ARG UK, 2010. ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Amphibians and Reptile Groups of the United Kingdom.

Bat Conservation Trust and Institution of Lighting Professionals . Guidance Note 08/18 Bats and artificial lighting in the UK.

BSI,2013. Biodiversity- Code of Practice for Planning and Development. BS 42020:2013.

BSI, 2012. Trees in Relation to Construction. BS 5837:2012.

CIEEM, 2017. Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester, [2nd edition].

Circular 06/2005 Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System

Institute of Environmental Assessment, 1995. Guidelines for Baseline Ecological Assessment. London: E & FN Spon.

JNCC, 2004. Bat Workers Manual. 3rd edition.

JNCC,1993. Handbook for Phase 1 Habitat Survey: A technique for environmental audit. Peterborough: Joint Nature Conservation Committee.

National Planning Policy Framework, February 2019.

Warwickshire Biological Records Centre

Appendix 1 – Letter from Ecologist, Warwickshire County Council, 27.08.2021

Warwickshire County Council

Communities

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Erica Buchanan
Planning Services
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CV21 2RR

Friday, 27 August 2021

Application reference number: R18/0186
Application type: Major Application
Location: COVENTRY STADIUM, RUGBY ROAD, COVENTRY, CV8 3GJ
Proposal description: Demolition of existing buildings and outline planning application (with matters of access, layout, scale, and appearance included) for residential development of up to 137 dwellings (Use Class C3) including means of access into the site from the Rugby Road, provision of open space and associated infrastructure and provision of sports pitch, erection of pavilion and formation of associated car park (details to be confirmed) (amended Plans).

Thank you for your consultation on the above application. My comments are based on the following documents:

- Ecological Impact Assessment, Ecolocation (Revision A 05/07/2021)
- Bat Roost Assessment and Roost Characterisation Surveys, Ecolocation (02/07/2021) and
- Reptile Assessment: Presence/Absence surveys, Ecolocation (Revision B 05/07/2021) and my comments are as follows:

Bats
The Bat Roost Assessment includes an updated inspection of the buildings and activity surveys which confirmed the presence of roosting bats in buildings B4, B5 and B8. Mitigation has been set out in the report which includes timing restrictions, supervision of destructive works to the roost features and long-term provision of bat roost boxes within the new scheme. The precautionary working measures for bats should be included, along with mitigation and precautionary working measures for other species, in a **Construction Environmental Management Plan (CEMP).** A **Combined Ecological and Landscape Scheme** should be produced to show the location of bat boxes, alongside other biodiversity enhancements as described below.

No mention was made in the Ecological Impact Assessment (EcIA) or the Bat Roost Assessment about the suitability of the trees within the site for roosting bats. Presumably an assessment would have been made as part of the EcIA/Roost Assessment. Confirmation of this and recommendations for mitigation/precautionary working measures for removal of trees will be required prior to determination.

The EcIA recommends that a sensitive lighting strategy is implemented to avoid impacting on bat foraging behaviour, and that lighting should in particular be directed away from ecologically valuable features such as the retained boundary woodland. The proposed layout retains the trees at the northern edge of the site bordering onto New Close and Birchley Wood LWS and includes additional planting along this boundary. However, I am concerned about the proposed siting of the sports pitch which appears to be 10-15 metres from the existing tree line and will result on light spill directly onto the trees which will have a a detrimental impact on the ancient woodland. As it stands there is no room for additional tree planting to screen this effects and consideration should firstly be given to **moving the pitch away from the woodland edge** to reduce this effect.

A condition for a **bat sensitive lighting scheme** should also be attached to any permission granted.

Amphibians
The EcIA includes an investigation of the three ponds on and adjacent to the site for their potential to support great crested newts. The Habitat Suitability Index assessment found all three ponds to be 'below average' suitability for GCN, but no further investigation has been made. Pond 4 in particular is adjacent to the site and if it were used by GCN for breeding the ephemeral, tall ruderal and scrub habitats around the stands could represent core terrestrial habitat. Pond 1 was dry at the time of survey but I would expect ponds 2 and 4 at least to be subject to **presence/absence surveys** using either eDNA or a combination of methods in order to confidently conclude that GCN are absent from the site.

Reptiles
The presence/absence survey report consisted of six visits in suitable conditions in September 2020. No reptiles were found during these visits. These surveys were an update of the previous reptile surveys carried out in 2014 and which concluded that a breeding population of grass snakes was present. The report makes recommendations for reasonable avoidance measures to avoid causing harm to reptiles within the site. These measures should be included within the **CEMP**.

Biodiversity
The EcIA makes recommendations for including habitat creation within the landscape scheme to compensate for loss of habitats on site and ensure a net biodiversity gain. In order for this to be measurable a **Biodiversity Impact Assessment** must also be produced based on the existing habitats and proposed on-site habitat enhancements, using either the current version of the DEFRA biodiversity metric or the version currently adopted in Warwickshire, Coventry and Solihull.

The on-site habitat creation and enhancement proposed in the BIA should be secured through a condition for a **Landscape and Ecological Management Plan (LEMP)**.

Other species
The EcIA makes recommendations for mitigation measures for habitats, the adjacent Local Wildlife Site, nesting birds, badgers, reptiles and amphibians and other species. These measures should be set out in the CEMP, designed to be read and followed by workers on site.

Habitat creation and enhancement features for bats, nesting birds and other species as recommended in the report should be detailed in a **Combined Ecological and Landscaping Scheme.**

RECOMMENDATIONS

Pre-determination:
Updated EcIA to include Preliminary Bat Roost Assessment of all trees on site, Biodiversity Impact Assessment and pond surveys for great crested newts.
Consideration to relocating the sports pitch OR lighting scheme to show how lighting will be designed to avoid impacting the Ancient Woodland Local Wildlife Site.

Following receipt and approval of the above information the following documents may be secured by conditions, for which I will provide wording:

- **Construction Environmental Management Plan**
- **Combined Ecological and Landscape Scheme**
- **Lighting Scheme**
- **Landscape and Ecological Management Plan**

I will provide further advice upon receipt of the above.

Yours sincerely,

Ben Wood
Ecologist