

Proof of Evidence

Dr. M. Cowley MCIEEM CEnv

**Land at Lynchmead Farm, Ebdon Road, Wick St Lawrence,
Weston-super-Mare**

PINS Ref: APP/U1105/W/19/3221978

LPA Ref: 18/1094/MOUT

Mead Realisations Ltd

April 2023

Report reference	Report Status	Date	Prepared by
230424_P886_PoE_Final1	Final	25 April 2023	Dr. M. Cowley BA (Hons) MSc PhD MCIEEM CEnv



EAD Ecology
 3 Colleton Crescent
 Exeter
 EX2 4DG
 Tel: 01392 260420

Email: info@eadecology.co.uk
www.eadecology.co.uk

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

This report has been prepared for the exclusive use of the client and unless otherwise agreed in writing by EAD Ecology, no other party may use, make use of or rely on the contents of the report. No liability is accepted by EAD Ecology for any use of this report, other than for the purposes for which it was originally prepared and provided.

EAD Ecology has exercised due care in preparing this report. It has not, unless specifically stated, independently verified information provided by others. No other warranty, express or implied, is made in relation to the content of this report and EAD Ecology assumes no liability for any loss resulting from errors, omissions or misrepresentation made by others.

Any recommendation, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that EAD Ecology performed the work.

Nothing in this report constitutes legal opinion. If legal opinion is required the advice of a qualified legal professional should be secured.

© Copyright EAD Ecology 2023

Contents

1	Summary	1
2	Personal Statement	2
2.1	Introduction.....	2
2.2	Experience and qualifications.....	2
3	Scope of Evidence	3
3.1	Reasons for refusal.....	3
4	Evidence	4
4.1	Lighting Impact Assessment	4
4.2	Bat baseline for the site and assessment of impacts on bats	4
4.3	North Somerset and Mendip Bat Special Area of Conservation (SAC)	5
4.4	Planning responses.....	5
4.5	Public and third-party responses	6
5	Conclusion	7
6	Bibliography	8

1 Summary

- 1.1.1 My name is Dr. Matthew Cowley B.A. (Hons.), M.Sc., Ph. D., C. Env., M.C.I.E.E.M. I am presenting ecological evidence at this inquiry on behalf of Mead Realisations Ltd.
- 1.1.2 I am an ecologist with 24 years professional experience. I am a Director of EAD Ecology Ltd, an ecological consultancy based in Exeter. I have a Bachelor of Arts degree in Geography, a Master of Science degree in Ecology, and a Ph.D. from the Department of Biodiversity and Conservation, University of Leeds. I am a Chartered Environmentalist and a Full Member of the Chartered Institute of Ecology and Environmental Management.
- 1.1.3 I have prepared this Proof of Evidence on behalf of Mead Realisations Ltd. It concerns the third reason for refusal given by North Somerset Council in relation to the outline application for residential development at land at Lynchmead Farm (hereafter the 'appeal site'); this concerns the potential impact of artificial lighting associated with the development on bats, which are European Protected Species. My evidence is made with reference to a lighting impact assessment for the development (hereafter 'lighting assessment'); baseline bat survey information for the appeal site; and, adopted planning guidance concerning North Somerset and Mendip Bats Special Area of Conservation (SAC).
- 1.1.4 My opinion is that development of the site could avoid adverse impacts to bats through implementation of an appropriate lighting strategy, which could be secured via condition. During the construction period, controls on lighting could be stipulated in a Construction Environmental Management Plan (CEMP). During operation, the lighting assessment demonstrates the feasibility of retaining a network of unlit green corridors ('dark zones') through and around the site. The retention of these 'dark zones' would ensure that bat species that are sensitive to artificial lighting could continue to travel through and forage within the site post-development. As such, assuming controls on lighting are secured through condition, no likely adverse effect on the favourable conservation status of the bat species that use the site are predicted.
- 1.1.5 Given the distance of the appeal site from the nearest bat roosts within North Somerset and Mendip Bat SAC and its location outside of the SAC's Bat Consultation Zone, my opinion is that it is unlikely the appeal site is of significant value to the core designated greater horseshoe bat population of the SAC. While controls on artificial lighting secured through condition are not proposed as mitigation in relation to the SAC, they would ensure that if bats associated with the SAC use the site, there would be no significant effect on their ability to pass through the site. Accordingly, my opinion is that there would be no likely significant effect on the North Somerset and Mendip Bats SAC, as a result of the proposed development. These conclusions can be reached beyond reasonable scientific doubt, applying the precautionary principle.
- 1.1.6 Overall, it is my opinion that the Planning Inspectorate, if it was to allow this appeal, could do so in accordance with its legal duties under the Conservation of Habitats and Species Regulations 2017.

2 Personal Statement

2.1 *Introduction*

2.1.1 My name is Dr. Matthew Cowley B.A. (Hons.), M.Sc., Ph. D., C. Env., M.C.I.E.E.M. My business address is Armada House, Odhams Wharf, Topsham, Exeter, EX3 0PB. I am presenting ecological evidence at this inquiry on behalf of Mead Realisation Ltd for its proposed development at Land at Lynchmead Farm, Edbon Road, Weston-super-Mare (hereafter referred to as the 'appeal site').

2.2 *Experience and qualifications*

2.2.1 I am an ecologist with 24 years professional experience. I am a Director of EAD Ecology, an ecological consultancy based in Exeter. I have a Bachelor of Arts degree in Geography, a Master of Science degree in Ecology, and a Ph.D. from the Department of Biodiversity and Conservation, University of Leeds. I am a Chartered Environmentalist and a Full Member of the Chartered Institute of Ecology and Environmental Management.

2.2.2 My professional experience includes undertaking and managing numerous ecological impact assessments, including major housing and commercial development projects. I have presented expert evidence at Public Inquiries and Planning Hearings and fulfilled the role of Expert Witness for a case heard in the High Court and Appeal Court concerning the Habitat Regulations. My publications include a best practice guide on ecological management and assessment published by the Institute of Environmental Assessment and first author scientific papers in peer reviewed journals including 'Proceedings of the Royal Society', 'Journal of Applied Ecology' and 'Journal of Animal Ecology'.

2.2.3 I have worked on many previous residential developments in Somerset where impacts/potential impacts to horseshoe bats associated with North Somerset and Mendip Bat SAC were assessed and I have liaised extensively with local authority and Natural England officers on the associated issues. I was involved in the evolution of the planning guidance for North Somerset and Mendip Bat SAC; my contribution is acknowledged in the adopted (2018) guidance and 2019 updates.

2.2.4 I have been involved in the project since the outset.

3 Scope of Evidence

3.1 *Reasons for refusal*

3.1.1 The reason for refusal of the application is as follows:

3.1.2 *The application has failed to demonstrate that the impacts of artificial lighting during construction and occupation of the proposed development, which has a clear potential to cause unacceptable harm to European Protected Species (Bats) which use the site, can be mitigated. This is contrary to policy CS4 of the North Somerset Core Strategy, policy DM8 of the North Somerset Sites and Policies Plan Part 1, and paragraphs 174,179 and 180 of the National Planning Policy Framework.*

3.1.3 To address the reason for refusal, my proof assesses whether the impact of artificial lighting during construction and occupation of the development can be mitigated. No other ecological issues concerning the outline application are in dispute (CD 8.1). The assessment is made with reference to:

- Lighting Impact Assessment for the development (CD 8.2);
- Baseline bat survey information and assessment of the impact of the proposals on bats (CD 1.10, 2.19, 2.23 and 2.26);
- Planning guidance concerning North Somerset and Mendip Bats Special Area of Conservation (SAC) (CD 8.38); and
- Draft Habitat Regulation Assessment (HRA) prepared by North Somerset Council in May 2022 (CD 2.27).

3.1.4 I have also considered public and third-party consultation responses.

4 Evidence

4.1 **Lighting Impact Assessment**

- 4.1.1 A Lighting Impact Assessment (CD 8.2) (hereafter 'Lighting Assessment') of the outline development proposals has been prepared by a suitably qualified Lighting Designer and Chartered Electrical Engineer. This demonstrates that with implementation of mitigation measures, light spill from combined internal and external lighting, calculated at the edge of proposed 'dark zones' (as per the Ecological Parameter Plan; CD 2.19 Appendix 3), is predicted to be less than 0.5 lux both horizontally at ground level, and vertically on up to 2m in height, as per the specified parameters. The Lighting Assessment therefore concludes *'the lighting impacts from the proposals with the proposed mitigation applied are not predicted to be significant'*.
- 4.1.2 Section 2.2 of the Lighting Assessment confirms that the conclusions are based on a 'worst case' scenario, with outputs calculated with all the luminaires switched on, and with no internal obstructions modelled, such as curtains or blinds. The calculations are also based on the luminaires at full output, with a maintenance factor of 1. Thus, I consider the conclusions of the Lighting Assessment to be robust and to reflect the precautionary principle.
- 4.1.3 Whilst the application is outline and the development has not yet been subject to detailed design, for modelling of light-spill, the Lighting Assessment assumed there would be low-level bollard lighting in courtyard areas, front and rear lights to new dwellings and no adoptable street lighting. I am aware of other comparable residential developments that applied a similar approach, including there being no adoptable street lighting, for example: Land at Broom Park Dartington (Reserved Matters Application Ref: 4442/21/ARM) (80 homes); Land at Sawmill Fields, Dartington; Reserved Matters Application Ref: 4443/21/ARM (40 homes) (both approved by South Hams District Council in April 2022).
- 4.1.4 Overall, it is my opinion that the Lighting Assessment demonstrates that it would be feasible for a network of 'dark zones' to be retained within the site during its operation, and that these could be secured via condition. The Lighting Assessment therefore addresses the only outstanding concern raised by Natural England in their planning response dated 9 June 2022 (CD 8.58). Based on the conclusions of the draft HRA prepared by North Somerset Council in May 2022 (CD 2.27) and submitted to Natural England for approval, North Somerset Council (as Competent Authority) were already satisfied on this issue in May 2022. The Lighting Assessment re-confirms their existing conclusions.
- 4.1.5 With regard to the potential for light spill during the construction period affecting 'dark zones', it is my opinion is that this could be avoided via a planning condition that specified controls on construction lighting. The controls on construction lighting could be specified in a Construction Environmental Management Plan (CEMP) or similar, for approval by North Somerset Council prior to commencement. Measures could include a stipulation that there would be no lighting left on during the night over the construction period and that any essential security lighting would be positioned at low-height and motion activated on short-timers and away from the proposed 'dark zones'.

4.2 **Bat baseline for the site and assessment of impacts on bats**

Baseline information concerning the habitats will the appeal site and their usage by bats is contained in the Ecological Impact Assessment (EclA) submitted with the outline application

(CD1.10) (hereafter '2020 EclA') and Technical Notes prepared in March 2021 (CD 2.26; hereafter 'March 2021 Technical Note') and October 2021 (CD2.19; hereafter 'October 2021 Technical Note'). The baseline bat information was derived from bat activity surveys carried out by EAD Ecology over a seven-month period, including manual transect surveys and use of static bat detecting equipment. An update habitat survey was undertaken in April 2023 by EAD Ecology and no significant changes to the habitats on the site since the surveys undertaken prior to the planning application were identified.

- 4.2.1 The conclusion of the 2020 EclA was that significant adverse impacts on bats using the site could be avoided through implementation of a suitable lighting strategy secured via condition, including controls on lighting during construction and operation. My opinion is that this conclusion is still valid.

4.3 North Somerset and Mendip Bat Special Area of Conservation (SAC)

- 4.3.1 Details concerning North Somerset and Mendip Bat SAC (hereafter 'the SAC') are contained in the 2020 EclA (CD 1.1) and North Somerset Council's Draft HRA (May 2022) (CD 2.27). Qualifying features of the SAC include its population of lesser horseshoe and greater horseshoe bats, which roost within the SAC.
- 4.3.2 The appeal site is approximately 5.7km away from the nearest section of the SAC. In North Somerset Council's adopted Development Guidance concerning the SAC (CD 8.38, plan 1 page 21), a 'Bat Consultation Zone' is identified around the SAC. This Bat Consultation Zone represents areas outside of the SAC considered likely to be important for the bats that roost within the SAC for feeding and commuting. Zone A is the most sensitive zone closest to the SAC, Zone C is the least sensitive zone, furthest from the SAC and Zone B is the intermediate zone. The appeal site is outside of the Bat Consultation Zone and is c. 1.6km away from the nearest section of Zone C (the least sensitive zone). The Bat Conservation Trust (BCT) in its Good Practice Guidelines for Bat Survey (BCT 2016) defines the extent of Core Sustenance Zones (CSZ) around roosting sites for greater horseshoe bats as 3km.
- 4.3.3 Given the distance of the appeal site from the nearest bat roosts within the SAC and its location outside of the Bat Consultation Zone, my opinion is that it is unlikely the appeal site is of significant value to the core designated greater horseshoe population of the SAC. While the measures set out in the Lighting Assessment were not proposed as mitigation in relation to the SAC, they would ensure that if bats associated with the SAC used the site, there would be no significant effect on their ability to pass through the site. Accordingly, my opinion is as per the 2020 EclA (CD 1.10) and March 2021 (CD 2.26) and October 2021 (CD 2.19) Technical Notes; namely, that the proposed development would have no likely significant effect on the North Somerset and Mendip Bat SAC either alone or in-combination.

4.4 Planning responses

- 4.4.1 Following the outline planning application, there were planning responses from North Somerset Council concerning ecology and a meeting was held on 16 September 2021 (involving EAD Ecology, Kate Jeffreys (North Somerset Council Natural Environment Officer) and Mead Realisations Ltd). The March 2021 (CD 2.26) and October 2021 (CD 2.19) Technical Notes prepared by EAD Ecology were in response to comments made at the meeting and/or in the planning responses. A further Technical Note was prepared by EAD Ecology in November 2021 (CD 2.23) to accompany a Lighting Assessment prepared by Hydrock in March 2022 (CD 2.22). This concluded that the Lighting

Assessment demonstrated that the impact of artificial lighting could be appropriately mitigated and therefore dealt with via a suitable condition.

- 4.4.2 In response to the Council's comments on the application, the March 2021 Technical Note (CD 2.26, Appendix 1) included an Ecological Parameters Plan showing the location of a central 'dark corridor' within the site. Following the meeting on 16 September 2022, the extent of the 'dark corridor' was extended to form a more extensive network of corridors, including boundary habitats; these were shown on the Ecological Parameters Plan in the October 2021 Technical Note (CD 2.19, Appendix 3).
- 4.4.3 As per the conclusions the 2020 EclA, my opinion is that assuming appropriate controls on construction and operation lighting that could be secured via condition, there would be no likely adverse effect on the favourable conservation status of the bat using the site.

4.5 Public and third-party responses

- 4.5.1 I have reviewed public and third-party consultation responses to the application. Many responses raise general concerns on ecology, such as: loss of wildlife; impacts on local ecology; loss of habitat for Priority Species; and, displacement of animals. With regard to these concerns, my opinion is that these are covered in the 2020 EclA (CD 1.10) and March and October 2021 Technical Notes (CD 2.26 and CD 2.19 respectively), which include a detailed assessment of the impact of the proposals on ecology and the measures to avoid, mitigate or compensate significant adverse impacts to habitats and to legally protected or Priority Species.
- 4.5.2 It should also be noted that a Biodiversity Net Gain assessment of the outline development proposals was completed in 2021 (CD 2.26). This demonstrated that the development could deliver 'Biodiversity Net Gain' with the opportunity to deliver greater than 10% gains in respect of both area-based habitats (33.32% gain) and hedgerows (51.87% gain). The results confirm the opportunity for development of the site to deliver net gains in biodiversity.

5 Conclusion

- 5.1.1 My opinion is that development of the site could avoid adverse impacts to bats through implementation of an appropriate lighting strategy, which could be secured via condition. During construction, controls on lighting could be included in a Construction Environmental Management Plan (CEMP) or similar. During operation, the lighting assessment demonstrates the feasibility of retaining a network of unlit green corridors ('dark zones') through and around the site. The retention of these 'dark zones' would ensure that bat species that are sensitive to artificial lighting could continue to travel through and forage within the site post-development. As such, assuming controls on lighting are secured through condition, no likely adverse effect on the favourable conservation status of the bat species that use the site are predicted.
- 5.1.2 Given the distance of the appeal site from the nearest bat roosts within North Somerset and Mendip Bat SAC and its location outside of the SAC's Bat Consultation Zone, my opinion is that it is unlikely the appeal site is of significant value to the core designated greater horseshoe bat population of the SAC. While controls on artificial lighting secured through condition are not proposed as mitigation in relation to the SAC, they would also ensure that if bats associated with the SAC use the site, there would be no significant effect on their ability to pass through the site. Accordingly, my opinion is that there would be no likely significant effect on the North Somerset and Mendip Bats SAC, as a result of the proposed development. These conclusions can be reached beyond reasonable scientific doubt, applying the precautionary principle.
- 5.1.3 Overall, it is my opinion that the Planning Inspectorate, if it was to allow this appeal, could do so in accordance with its legal duties under the Conservation of Habitats and Species Regulations 2017.

6 Bibliography

Bat Conservation Trust 2016. Bat Surveys for Professional Ecologists. Good Practice Guidelines (3rd Edition).

Somerset County Council, 2018. North Somerset and Mendips Bat SAC: Guidance for Development. Supplementary Planning Document (Adopted January 2018). Somerset Ecology Services.



3 Colleton Crescent Exeter EX2 4DG
t: 01392 260420 e: info@eadecology.co.uk
www.eadecology.co.uk