

Appendix EP4 of the Proof of Evidence of Esme Portsmouth

(Ecology Proof of Evidence prepared by Professor Max Wade)

Leicestershire County Council (A511 Growth Corridor) (Side Roads) Order 2023

Leicestershire County Council (A511 Growth Corridor) Compulsory Purchase Order 2023

PINS Ref: NATTRAN/EM/HAO/299

Proof of Evidence of Max Wade

Ecology

dated 20 May 2024

Contents

1	Introduction	3
2	Scope of Evidence	4
3	Ecology Evidence	6
4	Conclusion	13
5	Statement of Truth and Declaration	14

1 Introduction

1.1 Qualifications and Experience

1.2 I, Professor Max Wade, am a Technical Director (Ecology) at AECOM. I have been in this role since 2014. In my role I am part of the team undertaking the ecology assessment. I have extensive experience in ecology and biodiversity appraisals for a wide range of developments including highway schemes.

1.3 I have previously worked as the lead ecology consultant for a number of major highway projects including:

1.3.1 the A428 Black Cat to Caxton Gibbet;

1.3.2 A4130 improvement (Milton Gate to Collett roundabout) A4197 Didcot to Culham Link Road and A415 Clifton Hampden Bypass Compulsory Purchase Order;

1.3.3 A12 Margaretting Bypass (Junctions 13 and 15) (Ecological Appraisal); and

1.3.4 A629 Phase 2 Halifax (Biosecurity and Invasive Non-native Species Management Plan).

1.4 This proof of evidence is made to inform the Leicestershire County Council (A511 Growth Corridor) (Side Roads) Order 2023 (the **SRO**) and the Leicestershire County Council (A511 Growth Corridor) Compulsory Purchase Order 2023 (the **CPO**) (together, the **Orders**) in connection with the Leicestershire County Council A511 Growth Corridor (also referred to in this Proof of Evidence as the **Scheme**).

1.5 The facts and matters set out in this proof of evidence are within my own knowledge. The facts set out below are true to the best of my knowledge and belief. Where reference is made to facts which are outside my knowledge, I set out the source of my information and I believe such information to be true.

1.6 I have been assisted by other professional advisors and officers of Leicestershire County Council (the **Council**) with the preparation of this proof of evidence, some of whom will also provide evidence to the inquiry.

1.7 Involvement with the Scheme

1.8 My role in the Scheme at AECOM began in April 2024, with the AECOM Ecology Team being involved prior to that date, and has involved reviewing:

(a) the ecological appraisal of the proposed Bardon Link Road and the wider Scheme;

(b) the biodiversity assessment of the proposed Bardon Link Road; and

(c) the need for ecology mitigation and the scope for biodiversity enhancement.

2 Scope of Evidence

2.1 My evidence focuses on those ecology and biodiversity matters relevant to the proposed Bardon Link Road, which is a part of the wider Scheme. The works on the other eight Projects forming the Scheme (described in detail in the Proof of Evidence of Ann Carruthers) have a *de minimis* affect with respect to ecology and biodiversity. This is because these Projects relate to highways works within or adjacent to existing highway boundaries, and in the case of construction compounds on agricultural land which has a low biodiversity value. All such works must be carried out in accordance with legislation (which I discuss below). Therefore, these Projects do not warrant further assessment, nor was any required through the planning process by virtue of those Projects being undertaken in accordance with permitted development rights.

2.2 My evidence aims to:

2.2.1 show how ecology matters influenced the Bardon Link Road design demonstrating particular aspects including reduced land take, environmental advantage, adequacy and integration with landscape measures and drainage attenuation;

2.2.2 explain how the impacts of the proposed Bardon Link Road on ecology issues were assessed and justify that i) the Scheme is positive from an ecology and biodiversity perspective and ii) there is no land being acquired solely for ecology and biodiversity enhancement reasons;

2.2.3 demonstrate how development of the proposed Bardon Link Road has been influenced by ecology and biodiversity matters with reference to the ecology reports from the planning stage;

2.2.4 set out the positive case for the proposed Bardon Link Road; and

2.2.5 note that this position was unchallenged by the relevant bodies.

2.3 I set out the following in my evidence:

2.3.1 AECOM's appraisal of the proposed Bardon Link Road and the biodiversity gain in particular;

2.3.2 the evidence on ecology based on the Preliminary Ecological Appraisal. January 2021 Revised April 2022 (Document P13 in the List of Documents) (**PEA**) and the assessment of biodiversity; and

2.3.3 other reporting on the ecology of the wider Scheme.

2.4 In my professional opinion this ecology and biodiversity evidence is not a factor in relation to:

2.4.1 OBJ 1 - WM Morrisons;

2.4.2 OBJ 2 - Mr and Mrs Measures;

2.4.3 OBJ 3 - Network Rail Infrastructure Limited;

2.4.4 OBJ 4 - North-West Leicestershire District Council;

2.4.5 OBJ 5 - Wilson Enterprises Limited;

2.4.6 OBJ 6 - Cadent Gas Limited; and

2.4.7 OBJ 7 - Ms Connors.

2.5 This is because the nature, scale and extent of elements within the Scheme and changes concerning Objections 1-7 are not related to land required for biodiversity mitigation and, or enhancement and are entirely highway related.

3 Ecology Evidence

3.1 Relevant legislation and policy

3.1.1 Biodiversity legislation

3.1.2 The legislation listed below was considered when planning and undertaking the PEA using the methods referred in the reports in Table 1 (below), and when identifying potential constraints and making recommendations for further surveys, design options and mitigation:

- (a) Countryside and Rights of Way Act 2000;
- (b) Wildlife and Countryside Act 1981 (as amended);
- (c) Wild Mammals (Protection) Act 1996;
- (d) Natural Environment and Rural Communities Act 2006; and
- (e) The Conservation of Habitats & Species Regulations 2017 (as amended).

3.1.3 Further information on the requirements of the above legislation is provided in the PEA (Document P13 in the List of Documents).

3.1.4 Planning Policy

3.1.5 Planning policy at the local level is provided by the North West Leicestershire District Council Local Plan (Document LP3 in the List of Documents)) adopted in November 2017 (North West Leicestershire District Council, 2017). The Local Plan is supplemented by the Leicester, Leicestershire and Rutland Biodiversity Action Plan 2016 – 2026 (LLRBAP) (Document LP13 in the List of Documents) published in December 2016 (Leicestershire and Rutland Wildlife Trust, 2016). These documents were considered when assessing potential ecological constraints and opportunities identified by the desk study and field surveys; and, when assessing requirements for further survey, design options and ecological mitigation. The policy relevant to ecology and nature conservation in the Local Plan is Policy En1 – Nature Conservation. The LLRBAP, supported by Local Plan, details species and habitats that are targeted for nature conservation within the Leicester, Leicestershire and Rutland area and will be discussed where applicable in this evidence.

3.1.6 The National Planning Policy Framework (NPPF) (Document NP5 in the List of Documents) was originally published on 27th March 2012 and detailed the Government's planning policies for England and how these are expected to be applied. The NPPF, revised most recently in December 2023. The NPPF:

- (a) states the commitment of the UK Government to minimising impacts on biodiversity and providing net gains in biodiversity, contributing to the Government's commitment to halt the overall decline in biodiversity;
- (b) specifies the obligations that Local Authorities and the UK Government have regarding statutory designated sites and protected species under

UK and international legislation and how this is to be delivered in the planning system;

- (c) makes clear that pursuing sustainable development includes seeking opportunities to achieve net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution.

3.1.7 Further information on the relevant parts of the NPPF is provided in the PEA (Document P13 in the List of Documents).

3.2 **Biodiversity Net Gain (BNG)**

3.3 For a development to achieve a net gain in biodiversity, it is important that the principles of the mitigation hierarchy are followed. This process involves first trying to avoid adverse impacts on biodiversity before finding ways to minimise or mitigate effects and as a last resort compensating for any residual impacts. There are four sequential steps that must be taken throughout the lifecycle of a project in accordance with the requirements of British Standard 42020:2013 Biodiversity (Document NP18 in the List of Documents):

3.3.1 Avoidance - actions taken to avoid causing impacts to the environment prior to beginning development (for example, moving the development to a different location);

3.3.2 Minimisation - measures taken to reduce the duration, intensity, extent and/or likelihood of the unavoidable environmental impacts caused by development (for example, adapting the development design to minimise impacts);

3.3.3 Restoration or rehabilitation - actions taken to repair environmental degradation or damage following unavoidable impacts caused by development; and

3.3.4 Offsets - Measures taken to compensate for any adverse environmental impacts caused by development which cannot be avoided, minimised and/or restored (e.g. including habitat creation to offset losses).

3.4 The biodiversity metric provided by Defra measures overall biodiversity value based on habitat type, area, condition and distinctiveness.

3.5 **Preliminary Ecological Appraisal (PEA)**

3.6 The proposed Bardon Link Road was initially assessed through a PEA undertaken in 2020 (and updated in 2022) for the proposed the Scheme. The PEA:

3.6.1 evaluated the ecological condition of the habitats present within the Scheme;

3.6.2 informed the extent of any ecological mitigation measures;

3.6.3 determined measures to ensure the Scheme achieves biodiversity net gain; and

3.6.4 identified the need for further surveys of specific biodiversity features all of which covered the Orders (see Table 1 below).

3.7 It was concluded that Great Crested Newt was absent from the proposed Bardon Link Road based on eDNA survey results and that, although mammals other than those in Table 1 (below) including Hedgehogs, Rabbits and Bank and Field Voles, may be impacted by the proposed Bardon Link Road, the implementation of precautionary working methods would avoid any adverse impact. The reports referenced in Table 1 include recommendations for mitigation and for species enhancement, the latter being in addition to the assessment of BNG (see below).

Table 1. Summary of biodiversity assessments of the Scheme including the Orders

Survey	Survey date	Main results	Reference
Preliminary Ecological Appraisal	December 2020 and May 2021	<p>The Scheme has potential to support a range of protected and, or notable species including Badgers, bats, riparian mammals, other mammals, birds, reptiles and Great Crested Newt.</p> <p>Two candidate Local Wildlife Sites (cLWS) sit wholly or partially within the Scheme: Coalville Wet Woodland cLWS supports the priority habitat “wet woodland”, and Coalville Grasslands and Scrub cLWS. Both sites may be impacted by the proposed Bardon Link Road.</p> <p>Avoidance of damage plus appropriate mitigation will achieve a minimal impact on both sites.</p>	AECOM. Bardon Link Road A511: Preliminary Ecological appraisal. January 2021. Revised April 2022. (Document P13 in the List of Documents)
Badger	February and March 2021	Present in the proposed Bardon Link Road with a main sett more than 100 m from the boundary. Construction works may require the temporary closure of four active setts and the permanent closure of a single sett under a Natural England Badger class licence to interfere with setts.	AECOM. A511 Bardon Link Road: Protected Species Report – Badgers. December 2021. (Confidential document to avoid disturbance to areas of known Badger activity)
Bats	May – August 2021	Roosting bats are likely to be absent from buildings as no bats were observed emerging or re-entering the buildings surveyed and no other evidence of bats was recorded.	AECOM. A511 Bardon Link Road: Protected Species Report - Bat Survey Report (Structures and Buildings). March 2022 (Document P9 in the List of Documents).

		The value of the proposed Bardon Link Road for foraging and commuting bats is assessed as Local value.	AECOM. A511 Bardon Link Road: Protected Species Report - Bat preliminary roost assessment. December 2021. Revised April 2022 (Document P10 in the List of Documents).
Riparian mammals	April and August 2021	Likely absent and no construction or operational related impacts on otter or water vole are anticipated as a result of the proposed Bardon Link Road.	AECOM. A511 Bardon Link Road: Protected Species Report – Riparian mammals. March 2022 (Document P12 in the List of Documents).
Reptiles	March – June 2021	A low population size on the basis of three Grass Snake. Appropriate mitigation will ensure no injury or death to reptiles.	AECOM. A511 Bardon Link Road: Protected Species Report - Reptiles. April 2022. (Document P11 in the List of Documents).
Aquatic ecology	January 2021	The aquatic habitats were assessed of low value.	AECOM. A511 Bardon Link Road: Preliminary April 2021 (Document P14 in the List of Documents).

- 3.8 The surveys summarised in Table 1 were undertaken successfully. These informed the hierarchy of avoiding negative impacts to biodiversity features through input to the design including the Orders, incorporating appropriate mitigation into the design which included the Orders and seeking to achieve an enhancement of the biodiversity. In order to demonstrate the latter, a biodiversity assessment was undertaken for the Scheme (Biodiversity Net Gain Report. June 2023 (Document P29 in the List of Documents)), a summary of which is presented in Table 2. Appendix A and Appendix B of the Biodiversity Net Gain Report provide maps of Baseline Biodiversity Net Gain and Post-development Biodiversity Net Gain. The outcome of the biodiversity assessment demonstrates a small net gain as a result of the Scheme. Management of the biodiversity net gain for a minimum of 30 years is secured by Condition 15 of the S73 Bardon Link Road Planning Permission.

Table 2. Summary of results of biodiversity assessment (Biodiversity Net Gain Report. June 2023),

Total net unit changes (including all on-site and off-site habitat retention, creation and enhancement)	Habitat units	2 units
	Hedgerow units	3 units
	River units	<1 units
	Habitat units	3%

Total on-site net percentage change plus off-site surplus (including all on-site and off-site habitat retention, creation and enhancement)	Hedgerow units	87%
	River units	1%

3.9 Whilst it has not been necessary to acquire land through the Orders specifically for the purpose of providing biodiversity gain, there are BNG features on land being acquired e.g. Plots 14, 23, 24, 26 and 33. These enhancement opportunities include integrating biodiversity features into the design of drainage attenuation and the landscaping of the proposed Bardon Link Road, all of which will be defined and detailed in an Ecology and Landscape Habitat Management Plan which is required to be submitted and approved by the Council as planning authority pursuant to Condition 12 of the S73 Bardon Link Road Planning Permission.

3.10 **Summary of Effects of the Bardon Link Road on Ecology**

3.11 The PEA and the surveys recommended as a result of the PEA all followed recognised methods and guidelines and were carried out by suitably qualified ecologists. Further details of the methods used for the PEA and surveys are provided in the references as listed in Table 1 above.

3.12 The scoping, methods and results of these surveys have been endorsed by the likes of the Development Control and Regulatory Board and the ecological advice provided to the Board.

3.13 During construction, ecology and biodiversity is at risk from potentially adverse effects. These risks will be minimised by standard protection measures through a Construction Environmental Management Plan (required pursuant to Condition 20 of the S73 Bardon Link Road Planning Permission) and other mitigation measures as detailed in the references listed in Table 1. In some cases, for example compound areas, construction effects will be both reversible and of short duration and the effect on their biodiversity will be negligible.

3.14 It follows that the changes concerning Objections 1-7 are not related to land required for interventions to achieve mitigation and, or enhancement for biodiversity. Neither do they, of themselves, create or give rise to the need for significant needs for biodiversity mitigation.

3.15 **Measures for Biodiversity Mitigation and Enhancement**

3.16 Relevant ecological receptors that may represent constraints to the Development, or that provide opportunities to deliver ecological enhancement in accordance with planning policy, were identified in the reports listed in Table 1 above.

3.17 Pursuant to the NPPF and local planning policy (paragraph 3.3 above), the Bardon Link Road was designed to:

- 3.17.1 follow the mitigation hierarchy where there was potential for impacts on relevant ecological receptors; and

3.17.2 give consideration of the scope for enhancement representing biodiversity gain over and above that achieved through mitigation and compensation.

3.18 The reports referenced in Table 1 above include recommendations for mitigation and for species enhancement, some of the latter being in addition to the assessment of biodiversity gain. Possession of certain plots will facilitate mitigation for Badgers and bats. In the case of Badgers, should a licence be required from Natural England to close any setts, this will support the licence application (AECOM. A511 Bardon Link Road: Protected Species Report – Badgers. December 2021 (Confidential document to avoid disturbance to areas of known Badger activity)).

3.19 The biodiversity mitigation and enhancement are primarily provided by new wet woodland, lowland broadleaved woodland and improvements to existing grassland, the woodland being part of the landscaping. The latter also contributes hedgerows and scrub to improve and enhance green infrastructure corridors along the road. This is summarised in Table 3 on a plot-by-plot basis.

Table 3. Summary of mitigation and enhancement for Plots 012 to 038 on the CPO Map (Document OD2 on the List of Documents)

Plot number	Mitigation	Enhancement including biodiversity net gain (BNG)
012, 013 and 015-017	<p>None needed – residential properties.</p> <p>Possession of these plots will facilitate pre-demolition surveys to re-confirm absence of bat roosts (see AECOM. A511 Bardon Link Road: Protected Species Report - Bat preliminary roost assessment. December 2021. Revised April 2022).</p>	No scope.
014, 021- 024 and 027-031	<p>Post use for compound, improving the poor neutral grassland to moderate neutral grassland to compensate loss of grassland.</p> <p>Post use for compound, creation of three copses of moderate broadleaved woodland in part mitigation for loss of lowland mixed deciduous woodland in Plots 032, 034 and 035.</p>	Post use for compound, creation of three copses of moderate broadleaved woodland plus additional tree planting.

018, 019 and 020	None needed – bare ground or hard standing. Please refer to the Proof of Evidence of Ann Carruthers and Ben McGrath for the up to date position on Plots 18, 19 and 20.	No scope.
025 and 026	Improving the poor neutral grassland and poor ruderal to moderate neutral grassland to mitigate loss of grassland. Creation of moderate wet woodland to compensate impact on the cLWS. Mitigating for the loss of a length of watercourse by enhancing the northern section and the creation of a new length of ditch.	Creation of moderate wet woodland to enhance Coalville Wet Woodland cLWS. Creation of a copse of moderate broadleaved woodland plus additional tree planting.
032, 034, 035 and 036	Loss of good lowland mixed deciduous woodland mitigated in Plots 014, 021- 024 and 027-031. Possession of these plots will facilitate closure of Badger setts (see AECOM. A511 Bardon Link Road: Protected Species Report – Badgers. December 2021. (Confidential document)).	No scope.
033	None needed.	Creation of a strip of moderate broadleaved woodland.
037	Creation of the drainage attenuation in this plot enables an improvement to the grassland mitigating for the loss of the existing poor grassland.	Creation of the drainage attenuation enables an improvement to the grassland contributing to a gain in biodiversity.
038	Replacement of the poor neutral grassland which will be lost with equivalent grassland.	No scope.

3.20 In my opinion the biodiversity measures are proportionate to a Scheme of this type and represent the minimum required to achieve adequate biodiversity mitigation and enhancement.

4 Conclusion

- 4.1 Taking into account the location, nature, and design of the overall proposals (Table 3 and Appendices A and B of the Biodiversity Net Gain Report), the biodiversity mitigation and enhancement is proportionate and necessary for a scheme of this scale.
- 4.2 As is explained above, I have been working on the Scheme since April 2024. My role has involved:
- 4.2.1 reviewing the ecological appraisal of the proposed Bardon Link Road and the wider A511 Growth Corridor;
 - 4.2.2 engaging in the biodiversity assessment of the proposed Bardon Link Road; and
 - 4.2.3 reviewing the need for ecology mitigation and the scope for biodiversity enhancement.
- 4.3 I have had a particular focus on ensuring the biodiversity measures are fully integrated into the proposed Bardon Link Road.
- 4.4 Based on location, nature and design of the overall proposals, in support of each specific Order as well as the overall Scheme, including the planning permission, I conclude that the biodiversity mitigation and enhancement achieved as a consequential benefit of landscaping and attenuation for the Scheme as a whole and in relation to the Bardon Link Road as it passes through Plots 12-38, is appropriate to achieve the necessary biodiversity mitigation and to ensure that there will be a small net gain in the biodiversity of the proposed Bardon Link Road.
- 4.5 This has been achieved without specific requirement of additional land purely for biodiversity mitigation and enhancement, and to the extent that land with multiple purposes is also adopted for biodiversity mitigation and enhancement, it is proportionate to the overall aims and design of the proposed Bardon Link Road, and in my opinion is not excessive or unjustifiable.

5 Statement of Truth and Declaration

5.1 Statement of Truth

5.1.1 I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

5.2 Declaration

5.2.1 I confirm that my report has drawn attention to all material facts which are relevant and have affected my professional opinion.

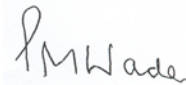
5.2.2 I confirm that I understand and have complied with my duty to the inquiry as an expert witness which overrides any duty to those instructing or paying me, that I have given my evidence impartially and objectively, and that I will continue to comply with that duty as required.

5.2.3 I confirm that I am not instructed under any conditional or other success based fee arrangement.

5.2.4 I confirm that I have no conflicts of interest.

5.2.5 I confirm that I am aware of and have complied with the requirements of the rules, protocols and directions of the inquiry.

Signed:



Dated: 20th May 2024

Professor Max Wade