TRANSPORT

LCC07

Scheme Name:
North Hykeham Relief Road

Promoting Authority:
Lincolnshire County Council

Orders:
The Lincolnshire County Council (A1461 North Hykeham Relief Road) Compulsory Purchase Order 2024; and **The Lincolnshire County Council (A1461 North Hykeham Relief Road) (Classified Road) (Side Roads) Order 2024.**

Document Reference:
LCC 07

Subject:
Ecology

Author:
Elizabeth Seal MSc BSc Hons CEnv MCIEEM

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NORTH HYKEHAM RELIEF ROAD LINCOLNSHIRE COUNTY COUNCIL

ECOLOGY – PROOF OF EVIDENCE

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1. INTRODUCTION

1.1 Qualifications

1.1.1 My name is Elizabeth Seal and I hold a BSc Hon in Zoology (1998) from the University of Manchester and a MSc in Behavioural Ecology (2002) from Manchester Metropolitan University. I am a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and a Chartered Environmentalist.

1.2 Relevant Experience

1.2.1 Before joining the consultancy sector, I worked as a ranger for Milton Keynes Park Trust and as a field researcher for Oxford, Adelaide and Arizona universities. In 2004 I joined The Environment Partnership (TEP) Ltd and since 2008 have led the Ecology team (currently comprising over 40 ecologists), becoming a Director in 2017.

1.2.2 TEP is a business established in 1997 which employs ecologists, arboriculturists, planners, landscape architects, heritage consultants and other environmental professionals. TEP is regularly commissioned by public and private sector clients to provide professional advice on assessment of environmental effects, prepare detailed landscape and ecological designs and support implementation of developments. During my 20 years in consultancy, I have extensive experience in survey and mitigation for a range of protected species with a focus on UK mammals and amphibians. I have provided ecology advice on a large range of development projects in the UK including a variety of linear infrastructure developments. On National Grid's Hinkley Point C Connection NSIP I devised mitigation measures to avoid impacts on Annex II bat species

associated with the North Somerset and Mendip Bats Special Area of Conservation.

1.2.3 This evidence has been prepared in respect of the ecological implications arising from the promotion of the North Hykeham Relief Road, by the promoting authority. It is not presented in respect of the grant of planning permission, as that is not the purpose of the Inquiry, but rather it draws together relevant information in respect of the two orders, namely the CPO **[CD1.1]** and the SRO **[CD1.2]**. In terms of the CPO where land is to be acquired for a specific purpose the evidence will address that.

1.2.4 I confirm that this Proof of Evidence is true and has been prepared and is given in accordance with the guidance of the professional institution of which I am a member. I further confirm that the opinions expressed in my evidence are my true and professional views.

2. INVOLVEMENT WITH THE SCHEME AND CONTRIBUTION MADE

2.1 Scope of Involvement

2.1.1 TEP has provided ecology services for the Scheme since 2022 to inform the design and support the planning application including authoring the ecology chapter of the Environmental Statement (ES) **[CD7.1]** and during this time I was TEP Director with overall responsibility for the ecology team projects including the Scheme. Since 2024 I have been directly involved in the Scheme, primarily consultation in relation to satisfying planning conditions but also in respect of continuing Scheme design, for example in respect of the provision bat mitigation.

2.2 Contribution Made

2.2.1 I have reviewed all the documents relating to ecological matters connected with the case, including all the planning documentation and the ecology chapters of the Environmental statement and subsequent documents produced to satisfy ecology related planning conditions.

2.2.2 This Proof of Evidence sets out:

- A summary of the ecological survey work undertaken to support the Environmental Statement (ES) **[CD7.1]** for the Scheme, and subsequently to satisfy planning conditions and to ensure data remains current.
- A description of the baseline ecological conditions at the application site along with predicted changes in habitats and associated effects on species arising from the Scheme in relation to Important Ecological Features (IEF).

- An outline of mitigation proposals, demonstrating how the Scheme meets the mitigation hierarchy, wildlife legislation requirements, planning policy and biodiversity net gain.

3. RELEVANT LEGISLATION AND PLANNING POLICY

3.1 Legislation

3.1.1 The following pieces of legislation relating to nature conservation are relevant to the Scheme:

- The Environment Act 2021 **[CD2.23]**
- Schedule 7A of the Town and Country Planning Act 1990 on Biodiversity Gain in England (inserted by The Environment Act 2021) **[CD2.4]**
- The Biodiversity Gain (Town and Country Planning) (Consequential Amendments) Regulations 2024 **[CD2.24]**
- The Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019 **[CD2.25]**
- The Wildlife and Countryside Act (WCA) 1981 (as amended) **[CD2.26]**
- The Countryside and Rights of Way Act 1981 (as amended) (CROW 2000) **[CD2.27]**
- The Natural Environment and Rural Communities Act 2006 (NERC Act 2006) **[CD2.10]**
- The Hedgerows Regulations 1997 (as amended) **[CD2.21]**
- The Protection of Badgers Act 1992 **[CD2.11]**
- Invasive Alien Species (Enforcement and Permitting) Order 2019 **[CD2.28]**

3.2 Planning Policy

3.2.1 Planning Permission for the Scheme consented in May 2024 **[CD7.1]** and a Section 73 consent was given in January 2025 **[CD7.2]**. The planning policy that applied at the time consent was issued was followed as is the necessary

approach. This proof will consider matters as they apply at the time of the inquiry.

3.2.2 National Planning Policy Framework (NPPF) was last updated in December 2024 **[CD3.5].** Chapter 15: Conserving and enhancing the natural environment (paragraphs 187 to 201) states that planning policies and decisions should contribute to and enhance the natural and local environment. The NPPF emphasises the hierarchy of designations, and the use of the mitigation hierarchy in scheme assessment and design. NPPF encourages opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity.

3.2.3 National Planning Practice Guidance (NPPG) gives detailed guidance on the implementation of NPPF. Biodiversity Net Gain guidance was included in the May 2024 update **[CD6.56]** and Natural Environment guidance in the February 2025 update **[CD6.57]**. Within the latter and of most relevance to ecology, is the section on biodiversity, geodiversity and ecosystems.

3.2.4 Local planning policies of relevance to the Scheme are taken from the Central Lincolnshire Local Plan which was adopted in April 2023 **[CD4.1]**. Central Lincolnshire covers the combined area of the City of Lincoln, North Kesteven, and West Lindsey.

3.2.5 The policies in the Central Lincolnshire Local Plan of relevance to biodiversity are:

- Policy S59 – Green and Blue Infrastructure Network.

- Policy S60 – Protecting Biodiversity and Geodiversity.
- Policy S61 – Biodiversity Opportunity and Delivering Measurable Net Gains.

3.2.6 Policy S59 aims to safeguard green and blue infrastructure and to improve the quantity, quality and accessibility of the network. Where adverse impacts are unavoidable, development must include suitable mitigation measures. The policy sets out a number of opportunities that should be considered in the design of green infrastructure.

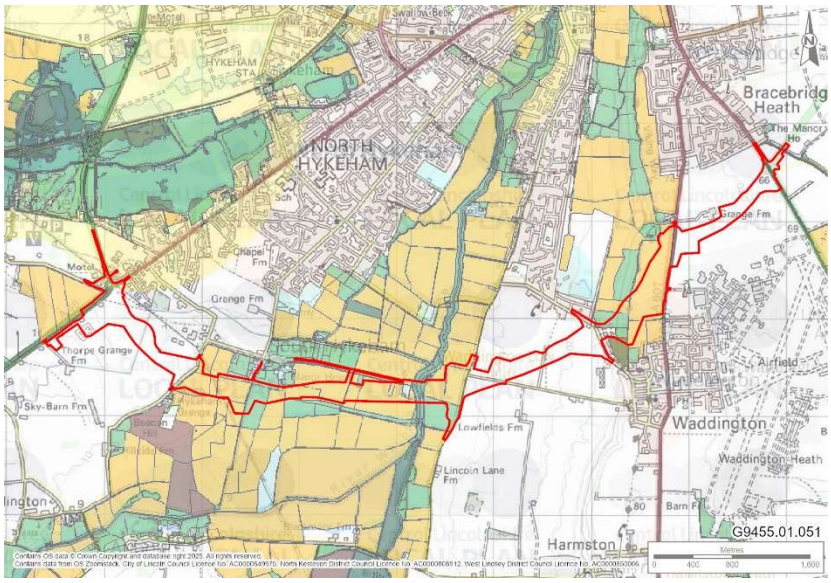
3.2.7 The NPPF Glossary describes green blue infrastructure as:

"A network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity."

3.2.8 Policy S60 sets out a number of principles to protect biodiversity with reference to designated sites, irreplaceable habitats and habitats and species of principal importance. The policy also has regard to the mitigation hierarchy when considering the application of impact avoidance, mitigation and compensation. Should significant impacts on biodiversity remain, planning permission will be refused.

3.2.9 Policy S61 reiterates the importance of the mitigation hierarchy and highlights its application to both construction phase and ongoing site management to retain, protect and enhance biodiversity features. Under this policy, developments in biodiversity opportunity areas (BOAs) should create new habitats and habitat links to minimise fragmentation and enhance existing nature networks. BOAs crossed by the Scheme are shown in Figure 1.

Figure 1: Biodiversity Opportunity Areas crossed by the Scheme



3.2.10 There are two broad areas crossed by the Proposed Scheme that contain BOAs. The first stretches from South Hykeham Road in the west to just beyond the River Witham in the east. The second narrower area runs from is from Station Road to the A607. The land is mainly 'Light Brown: opportunity for creation'. Although there are a few smaller areas that are 'Light Green: Ecological network – opportunity for management' and these include the River Witham corridor and the area of trees just north of Station Road. There is one area 'Dark Green: Ecological network – high quality' and this relates to the Recommended LWS Waddington Grassland (Viking Way) RLWS.

3.2.11 Policy S61 also sets out requirement for BNG in circumstances prior to mandatory BNG. It requires qualifying developments to deliver at least 10% gain, calculated using the biodiversity metric. It also requires ongoing management and monitoring of BNG habitats to be planned and funded for 30 years.

3.2.12 The Scheme design was developed to be in accordance with the requirements of national and local nature conservation planning policy.

3.3 Biodiversity Action Plans

3.3.1 The following local biodiversity action plan is relevant to the Scheme:

- The Lincolnshire Biodiversity Action Plan (LBAP) 3rd edition, 2011 (Greater Lincolnshire Nature Partnership (GLNP)) **[CD4.8]**.

4. ECOLOGICAL ASSESSMENTS UNDERTAKEN IN RESPECT OF THE SCHEME

4.1 The Proposed Scheme

4.1.1 Ecological considerations have informed the Scheme design, including incorporating of adapting features to reduce impact on barbastelle bats and amending working areas to prevent loss of trees or reduce impacts on badgers.

4.1.2 A full description of the Proposed Scheme is set out in Chapter 4 of the ES **[CD7.1].** In summary, the Proposed Scheme comprises the demolition of the six existing residential buildings on site, site clearance and the construction of approximately 8km of 70mph (120kph design speed) dual all-purpose two lane carriageway running to the south of the existing settlements of North and South Hykeham in an east/west direction between the A46 Hykeham Roundabout and the A15 Sleaford Road Roundabout at the west end of the Lincoln Eastern Bypass.

4.1.3 The Proposed Scheme passes mainly through flat mixed farmland of limited ecological value. The area to the west of the River Witham will be crossed generally at grade or on low embankment rising to cross the River on a combination of embankment and a bridge. Between Brant Road and Station Road the scheme will be constructed on embankment. Station Road will be realigned and cross the Proposed Scheme on a new bridge to ensure that connectivity is maintained, whilst allowing the Proposed Scheme to pass under Station Road in cutting. Beyond Station Road, the Proposed Scheme transitions into a major cutting to reach the top of the escarpment known locally as both the Lincoln Cliff and Lincoln Edge. Once the top of the escarpment is attained,

the remainder of the Proposed Scheme crosses the landscape generally at grade or on low embankments to tie in with the A15 Sleaford Road and the Lincoln Eastern Bypass.

4.1.4 Land use along the route of the Proposed Scheme is dominated by large expanses of arable land, bounded by ditches and hedgerows, with only small, localised areas of improved grassland to the south of South Hykeham which appear to be predominantly used for grazing horses. Areas of poor semi-improved grassland and woodland exist mainly where the topography of the ground makes arable farming impractical or where small remnants of land occur between large expanses of arable fields. To the south of the eastern end of the Proposed Scheme there is a large airfield which is part of RAF Waddington.

4.1.5 There are a number of watercourses across the study area including the River Witham. Unnamed drainage channels and the River Beck also dissect the centre of the study area draining into the River Witham.

4.1.6 The landscape crossed by the proposed scheme supports a number of notable ecological features which could be affected by the Proposed Scheme including birds, bats, badger, otter, brown hare, hedgehog, common toad, reptiles, woodland, trees, hedgerows, ponds and watercourses.

4.1.7 The Proposed Scheme includes the following key features from west to east:

- A46 Hykeham Roundabout – an increase in size and number of circulatory lanes, additional arm required for the Proposed Scheme and signalisation of the roundabout, together with associated NMU facilities (i.e. a combined footway/cycleway);

- South Hykeham Road Roundabout and associated crossing facility to the north of the roundabout;
- South Hykeham Road to Wath Lane NMU facility to the south of the Proposed Scheme;
- South Hykeham Bat Bridge;
- Wath Lane NMU crossing and accommodation bridge;
- River Witham Bridge;
- Brant Road Roundabout, associated crossing facility to the north of the roundabout and realignment of Somerton Gate Lane;
- Somerton Gate Lane Bat Culvert;
- Station Road Bridge;
- Realigned Viking Way Public Right of Way (PRoW);
- Grantham Road Roundabout and associated crossing facility to the north of the roundabout;
- Modification of the existing signalised junction at A607 Grantham Road and High Dyke to incorporate a pedestrian crossing facility;
- A15 Sleaford Roundabout, associated crossing facility to the north of the roundabout and additional arm;
- Dualling of a 190m section of the Lincoln Eastern Bypass;
- Lighting of junction areas;
- Drainage attenuation ponds;
- Wildlife ponds, mitigation and enhancement features;
- Noise bunds and barriers and low noise surfacing on high speed sections of the Proposed Scheme; and
- Landscape planting.

4.1.8 An indicative route of the road was identified in 2006 and was safeguarded in Central Lincolnshire 2017 Local Plan and is now safeguarded in Central Lincolnshire 2023 Local Plan **[CD4.1]** which was dealt with similarly in the Central Lincolnshire 2023 Local Plan.

4.1.9 Although some aspects of the Proposed Scheme for which planning permission was sought had inherent advantages for ecology (i.e. the River Witham Bridge avoiding impacts on riverine features given the set back of the bridge abutments from the river edge and the absence of built form within the river itself), additional measures have been incorporated into the scheme to avoid or mitigate ecological impacts. Primarily these comprise the South Hykeham Bat Bridge and the Somerton Gate Lane Bat Culvert both of which were adopted to prevent fragmentation of Barbastelle bat commuting routes. Landscaping proposals were also made part of the scheme and although the drivers for landscaping were not purely ecological, creating or enhancing habitats will mitigate impacts arising from loss of habitats and will also result in measurable net gain in biodiversity. Further details on permanent and construction phase ecological mitigation are provided later in my proof.

4.2 Surveys and Data Gathering

4.2.1 To inform the Scheme design and assess how it could impact ecology in the context of the legislation and policy framework detailed earlier, a comprehensive suite of surveys has been undertaken to identify Important Ecological Features (IEF) that have the potential to be affected by the Scheme. An overview of these surveys including surveys undertaken post submission to update surveys and inform planning conditions is presented in Table 4.1. The

survey results are included in the suite of planning documents submitted to pre and post permission being granted with the exception of the 2024 bat roost surveys.

Table 4.1 – Ecological surveys undertaken for the Scheme

Ecological Feature	Survey Type	Date of Survey
Various	Data search for designated sites and protected species	2022
Habitats	Phase 1 habitat survey & condition assessment	September to October 2022 and January to April 2023
	Hedgerow Regulations Assessment	April 2023
	Invasive Non-Native Species	During habitat survey
Trees	Arboricultural survey	2022 and 2023
Amphibians	eDNA presence / absence for GCN and common toad	June 2022, May 2023 and April 2024
Reptiles	Presence / likely absence	September 2024
Birds	Wintering	Oct 2022 to April 2023
	Breeding	March to July 2023
	Hobby vantage point	June 2023
	Barn Owl dusk vantage point	June 2023
	Quail breeding survey	–2025 In progress
Bats	Roosts (building and trees)	May to September 2023 and May to September 2024
	Activity	Autumn 2022 to Summer 2023
Badger	Sett classification	September/October 2022
	Sett classification & bait marking	September/October 2024
Water vole and Otter	Presence / likely absence	September 2022 / June 2023 and April / September 2024

4.3 Constraints

4.3.1 The timing of access to some parcels of land resulted in habitat survey in January and February 2023, but the nature of the habitats was such that this was determined to pose no significant constraint to survey. Where constraints were experienced, these were overcome by using a variety of survey methods and/or updated surveys, which were taken into consideration prior to planning permission being granted. Any other constraints to surveys were limited to

small physical or visual constraints arising from site conditions and are also not considered significant to affect the robustness of the baseline.

4.4 Ecological Impact Assessment

4.4.1 The biodiversity chapter of the ES in support of the Scheme (Chapter 9, **[CD7.1]** and Regulation 25 Response **[CD7.2]**) was undertaken in accordance with CIEEM Guidelines for Ecological Impact Assessment **[CD6.32],** and within the context of relevant planning policy, guidance and legislation previously summarised. The change to the planning policy since planning permission was granted has not affected the position.

4.4.2 In addition to the surveys and overarching Ecological Impact Assessment presented within the ecology chapter of the ES **[CD7.1]**, a Biodiversity Net Gain assessment (BNG) was carried out using Biodiversity Metric 3.1 **[CD8.84]**. The current version of the BNG is the one included in the additional environmental information submission in March 2024 **[CD7.1]**.

4.4.3 Following submission of the ES and granting of planning, additional documents have been submitted to satisfy ecology related planning conditions and where relevant, include the results of updated or additional surveys described previously in Table 4.1. Additional surveys required for planning conditions are primarily to inform detailed construction phase mitigation requirements and not related to scheme design. This are provided of Planning Application PL/0087/23 **[CD7.1].**

- Condition 3 CEMP in particular appendix J on biodiversity and the invasive non-native species strategy.
- Condition 9 regarding hedgerows.

- Condition 10 regarding arboricultural method statement.
- Condition 14 regarding biodiversity net gain.
- Condition 15 regarding badgers.
- Condition 17 regarding bird hazard management plan.
- Condition 19 regarding amphibians.
- Condition 20 regarding reptiles.
- Condition 21 regarding water vole and otter.
- Condition 22 regarding hedgehog, brown hare and harvest mouse.

4.5 Baseline Conditions

4.5.1 England has a comprehensive network of protected wildlife sites, these designations are either statutorily or non-statutorily protected and have a hierarchy of importance.

4.5.2 There are no internationally important designated wildlife sites within 10km of the Scheme, and none within 30km with bats as qualifying features. No impacts on internationally important wildlife sites are predicted to arise from the Scheme.

4.5.3 There is one nationally important designated site within 5km of the Scheme, Swanholmes Lake SSSI 4.4km north of the Scheme. It supports a range of habitats, invertebrates, amphibians and reptiles and a review of the Impact Risk Zone criteria indicates the Scheme is unlikely to impact the SSSI.

4.5.4 There is one statutory wildlife site of local significance within 2km of the Scheme, Whisby Nature LNR, 1km northwest of the Scheme. The LNR comprises

standing water, woodland and dense scrub habitats. No impacts on the LNR are predicted to arise from the Scheme.

4.5.5 There are 19 non-statutory Local Wildlife Sites (LWS) or Recommended LWSs of local/county importance within 2km of the Scheme however the majority are 1km or greater away from the Scheme and/or not hydrologically linked and therefore unlikely to be impacted. Five LWSs are potentially within influence of the Scheme, these are Witham Corridor South of Bracebridge LWS which passes through the Scheme, Waddington Grassland (Viking Way) LWS and Bloxholm Lane LWS are both adjacent to the Scheme, North Hykeham Hayfield LWS is 300m north of the Scheme and Brant Washlands LWS which is 1.5km south but hydrologically linked by the River Witham.

4.5.6 The habitats within the Scheme predominately comprise arable land intersected by drains and hedgerows with scattered patches of other habitats. Table 4.2 summarises the habitats present, identifies if they include examples of S41 priority habitats and lists associated Lincolnshire Biodiversity Action Plan (LBAP) categories. There are no irreplaceable habitats present:

Table 4.2 – Habitats present within the Scheme

Habitat	S41 Priority Habitat	Lincolnshire BAP
Semi-natural mixed woodland	Y	Lowland mixed deciduous woodland
Plantation mixed woodland		
Scattered broad-leaved trees		
Dense/continuous scrub		

Habitat	S41 Priority Habitat	Lincolnshire BAP
Improved grassland		Grazing marsh Lowland meadows
Poor semi-improved grassland		
Modified neutral grassland		
Tall ruderal		
Running water	Y	Rivers, canals and drains
Standing water	Y	Ponds, lakes and reservoirs
Dry ditch		
Native species-rich hedge with trees	Y	Hedgerows and hedgerow trees
Native species-rich hedge	Y	
Species-poor intact hedge with trees	Y	
Species-poor intact hedge	Y	
Species-poor defunct hedge	Y	
Arable		Arable field margins
Amenity grassland		
Ephemeral/short perennial		
Introduced shrub		
Bare ground, hard standing and buildings		

4.5.7 There are no trees within a Conservation Area; no ancient woodland; no trees within a Community Forest; and no Habitats of Principal Importance including Deciduous Woodland, Traditional Orchard or Wood Pasture and Parkland.

4.5.8 No protected plants were recorded within the Scheme but four invasive non native plant species (INNS) were found, they were Japanese knotweed, common montbretia, cotoneaster and yellow archangel.

4.5.9 The following protected species and/or species of principal importance are likely to use habitats within the Scheme:

- Common toad.
- Grass snake (low population at one location).
- Six buildings to be demolished with bat roost suitability ranging from Low to High of which one has a confirmed Soprano pipistrelle and Common pipistrelle bat roosts (single bats seen entering or exiting up to 5 roost access points on the residential property 46 Station Road)
- Eighteen trees with moderate or high bat roost suitability and four trees with low suitability but no roosting identified.
- Bat[1] commuting and foraging (low numbers of at least seven species including the Annex II species barbastelle bats).
- Badger (including setts within and adjacent to the Scheme).
- Otter (no holts identified but one laying-up area adjacent to the Scheme).
- A range of bird species[2] identified during the breeding bird survey including 38 species of conservation significance.

[1] Bats are listed on the Lincolnshire Biodiversity Action Plan (LBAP) **[CD7.1]**

[2] Urban birds are listed on the Lincolnshire Biodiversity Action Plan (LBAP) **[CD7.1]**

- A range of wintering farmland birds[3] including skylark but no notable use by wintering waterfowl or waders species.
- Brown hare (potential, assumed present).
- Hedgehog (potential, assumed present).
- Harvest mouse (possibly present).

[3] Farmland birds are listed on the Lincolnshire Biodiversity Action Plan (LBAP) **[CD7.1]**

5. CHANGES IN THE ECOLOGICAL BASELINE SINCE PLANNING PERMISSION

5.1.1 The summary description of the current baseline incorporates the findings of any new or updated surveys since the additional environmental information was submitted. The findings have been included in submissions to satisfy planning conditions. None of the findings change the overall conclusions of the biodiversity chapter of the ES **[CD7.1]**. A summary of the survey findings are provided in the following paragraphs.

5.1.2 Water samples can be collected and analysed in a laboratory to determine whether great crested newts (GCN) or other target species use or have recently used a pond, these are called environmental DNA (eDNA) surveys. Updated eDNA surveys confirmed that GCN are unlikely to be present.

5.1.3 eDNA survey for common toad at the pond identified for removal, confirmed likely absence of this species.

5.1.4 Updated badger surveys in autumn 2024 identified that sett E previously identified as an active main sett was now inactive. Additionally, an outlier sett (sett G) was in the process of being expanded and although currently not confirmed as a main sett, it has the potential to become one. Two new setts were identified, sett H an active outlier with two entrances and sett I a discussed outlier with one entrance. Setts G, H and I will be retrained. All other setts remained as previously categorised both in sett type and active status.

5.1.5 Updated bat surveys of building and trees in 2024 confirmed roosting habitat remained as previously categorised both in roost potential and for confirmed roosts in type and species. With the exception that common pipistrelle are now also using 46 Station Road.

5.1.6 Updated water vole surveys, confirmed likely absence of these species.

5.1.7 Updated otter confirmed otter active within the Scheme but no holts within or adjacent to the Scheme.

5.1.8 Reptile surveys in September 2024 confirmed likely absence of reptiles from all but one survey location. A single juvenile grass snake was recorded on one occasion adjacent to the River Witham.

5.1.9 Quail surveys are currently in progress (as required by Condition 16 of the planning permission **[CD7.1]**). The survey method entails completing six survey visits between mid-May to the end of July with visits approximately 2 weeks apart. At the time of writing this proof two surveys have been completed and no quail had been recorded.

6. SCHEME IMPACTS AND MITIGATION

6.1.1 This section of my proof summarises the effects likely to arise on IEFs as a result of the Scheme and the associated mitigation planned to avoid or reduce negative effects.

6.1.2 Many of the impacts identified as likely to arise from the Scheme relate to construction phase activities. These impacts are largely mitigated by specifying wildlife friendly working methods (which are controlled by the CEMP (Planning Condition 3, **[CD8.82]**) and habitat enhancement and creation (which is secured by the landscape plans **[CD7.1]** and LEMP **[CD8.83]**). Other planning conditions of relevance for securing biodiversity mitigation (in addition to those listed in Section 4.4 of my proof) include:

- Condition 33 Lighting risk assessment and detailed scheme of lighting.
- Condition 28 Ecologist supervision of tree removal/building demolition where there is bat roost potential.
- Condition 29 South Hykeham bat bridge and Somerton Gate Lane bat culvert
- Condition 30 Bat and bird box scheme

6.1.3 The landscaping scheme will provide benefits to many of the species present across the Scheme, these are largely universal benefits to wildlife, providing habitats for shelter, connectivity and foraging. I will only make further reference to the landscaping where it is designed to provide a specific mitigating purpose for an IEF over and above the general benefits, such as important commuting routes for barbastelle bats.

6.2 Designations

6.2.1 The scheme will have no impacts on International or National designated sites.

6.2.2 There is potential for impacts on Local Wildlife Sites where they are within, adjacent to or hydrologically linked to the Scheme:

- River Witham, Bracebridge to South Hykeham LWS passes through the Scheme.
- Witham Corridor, South of Bracebridge Recommended LWS 1.7km north but hydrologically linked as part of the River Witham.
- Brant Washlands LWS, south of the Scheme but hydrologically linked by the River Witham.
- Waddington Grassland (Viking Way) Recommended LWS partly within the Scheme.
- Bloxholm Lane LWS partly within the Scheme.

6.2.3 Sensitive working methods set out in the CEMP **[CD8.82]** to prevent encroachment of traffic on retained habitats and prevention of pollution of terrestrial and aquatic habitats, and avoiding the spread of invasive non native plant species (INNS) address how impacts will be mitigated for the majority of potential impacts on LWSs and RLWSs adjacent to or hydrologically linked to the Proposed Scheme.

6.2.4 River Witham, Bracebridge to South Hykeham LWS is crossed by the Proposed Scheme, but the River Witham Bridge will carry the road over the LWS without any loss of habitat and will maintain a green corridor either side of the River Witham. As such, the banks will avoided but wildflower enriched grassland will be created adjacent to the banks.

6.2.5 The northern edge of Waddington Grassland (Viking) RLWS falls within the Proposed Scheme. This is a proposed LWS on the basis of calcareous grassland, scrub, fen and standing water habitats. However, field survey of the area that falls within the application boundary showed that the habitats were semi-improved neutral grassland and poor semi-improved grassland. Landscaping at this location comprises wildflower enriched grassland, wet grassland, native hedgerow with native trees, woodland planting and woodland edge planting (both native). Offsite habitats within the RLWS will be protected through the general measures in the CEMP as discussed above.

6.2.6 The northern edge of Bloxholm Lane LWS falls within the very far east edge of the application boundary, however, this only includes the small section of the LWS that crosses the existing A15 and no additional impacts are anticipated within the Scheme boundaries with no landscaping proposed. Offsite habitats within the LWS will be protected through the general measures in the CEMP **[CD8.82]** as discussed above.

6.3 Habitats and Biodiversity Opportunity Areas (BOAs)

6.3.1 Arborists worked with the project team to reduce impacts on trees primarily through changes to working areas. This is an iterative process and the final position of retained trees and protection measure is detailed in the arboricultural method statement. Replacement tree planting will compensate for tree losses.

6.3.2 The scheme would result in the loss of sections of priority habitat hedgerows including those qualifying as Important, the loss of semi-natural mixed woodland priority habitat and one pond (potential to be HPI). There will also be

impacts to lower quality, non-conservation priority habitats including arable land and a range of agricultural grasslands and ditches. These losses would be mitigated and compensated through the provision of onsite BNG habitats managed for 30 years in line with the Landscape and Ecological Management Plan (LEMP) **[CD8.83]**.

6.3.3 The headline results of the March 2024 BNG assessment **[CD8.84]** state the following on-site net gains:

- Area habitats+42.26% which equates to 216.97 Biodiversity Units (BU)
- Hedgerow/linear habitats +16.90% which equates to a net gain of 32.61 BU
- River habitats +17.94% which equates to a net gain of 8.40 BU.

6.3.4 The development exceeds the local policy and statutory BNG requirements in that it would provide significantly greater than 10% gain in Biodiversity Units across all three types of habitat category. No irreplaceable habitats are lost and the trading rules of the metric are met.

6.3.5 The Proposed Scheme crosses areas identified as Biodiversity Opportunity Areas. The BOA categories that intersect the scheme are mainly 'Light Brown: opportunity for creation' and the landscaping proposals meet the aspirations of policy s61 creating new wildflower enriched grassland, wet grassland, native hedgerow and native tree planting including woodland.

6.3.6 There are a few smaller areas that are 'Light Green: Ecological network – opportunity for management' and these include the River Witham corridor and the area of trees just north of Station Road. The landscaping proposals meet the aspirations of policy s61 creating new wildflower enriched grassland, wet

grassland, native hedgerow and native tree planting including woodland and managing those habitats for 30 years under the BNG commitment.

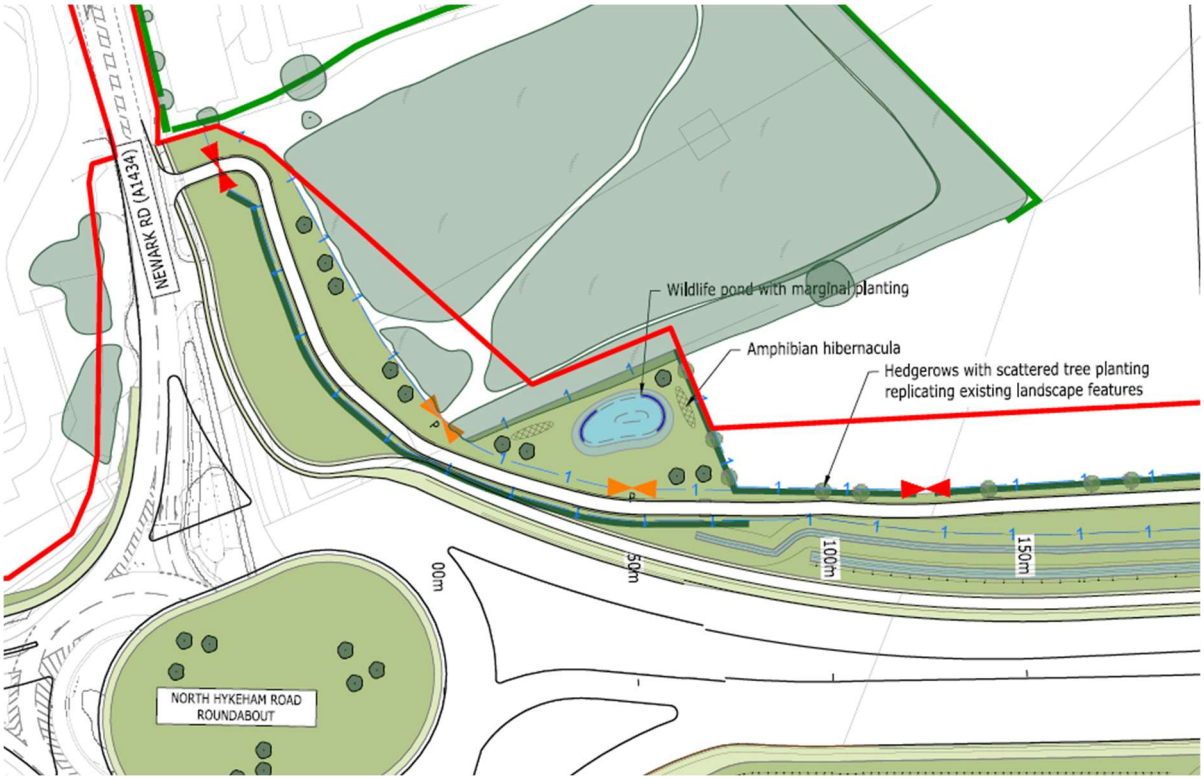
6.3.7 There is one area 'Dark Green: Ecological network – high quality' and this relates to the Recommended LWS Waddington Grassland (Viking Way) RLWS. Impacts and mitigation for this location have already been discussed under the designation.

6.4 Species

Amphibians

6.4.1 No great crested newts are present, and common toad is absent from the pond identified as being lost to the Scheme. Toad are present in the wider area and sensitive working methods set out in the CEMP **[CD8.82]** and the document to satisfy condition 19 address how impacts will be mitigated. In the far west of the Scheme, in the vicinity of the existing pond that will be lost, a new wildlife pond will be created alongside two amphibian hibernacula and wildflower and hedgerow planting to provide a mix of habitat features to support amphibians see Figure 2.

Figure 2: Wildlife pond and amphibian hibernacula



Reptiles

6.4.2 Much of the site provides at best low quality habitat for reptiles, grass snake was the only species recorded during survey and this was found in only in 1 location. Sensitive working methods set out in the CEMP **[CD8.82]** and the document to satisfy condition 20 address how impacts will be mitigated. There are no provisions for permanent mitigation measures for reptiles.

Bats

6.4.3 Soprano pipistrelle and Common pipistrelle bats have been recorded roosting in residential property 46 Station Road and will require construction phase sensitive demolition under the licence. Replacement roost habitat must also be incorporated into the Scheme to meet protected species licensing requirements.

This would be bat boxes installed on nearby retained trees, the details to be included in the Natural England mitigation licence application.

6.4.4 Eighteen trees identified as having moderate or high roost suitability and four trees with low suitability require felling. Sensitive working methods are set out in the CEMP **[CD8.82]** and the document to satisfy condition 28. Replacement roost habitat must also be incorporated into the Scheme to meet mitigation guidance and planning condition 30.

6.4.5 Barbastelle bats have been recorded commuting across the Scheme. To avoid negative effects on this rare and protected species of bat, commuting routes across the new road will be maintained via the location specific provision of a new bridge (Figure 3), to encourage bats to fly over the new road, the adaption of a new drainage culvert (Figure 4) to encourage bats to fly beneath the road and large trees (hop-overs) to encourage bats crossing the new road to fly at a height reduces collision risk with vehicles (Figure 5). Alongside these three measures, linear landscaping and woodland planting provides a important role, linking retained habitats to new crossing features as well as generally maintaining connectivity and providing foraging habitat.

Figure 3: South Hykeham Bat Bridge

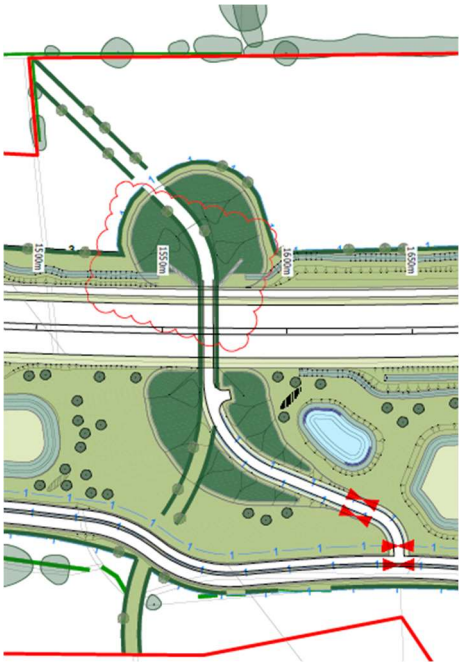


Figure 4: Somerton Gate Lane Bat Culvert

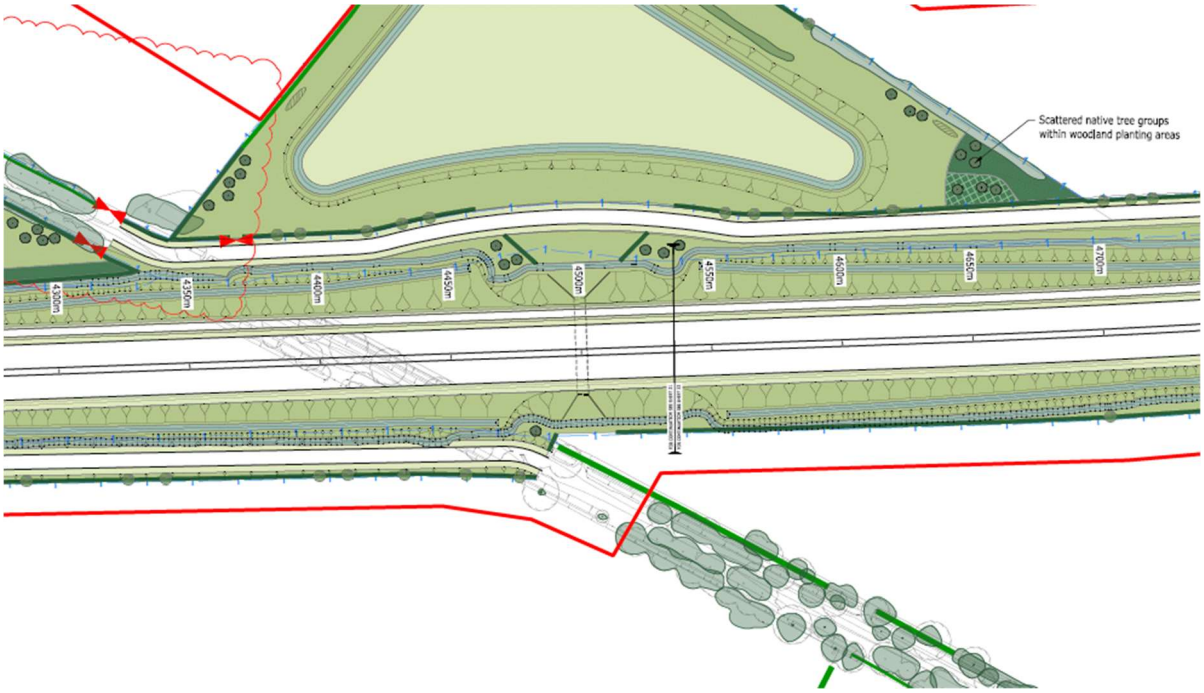
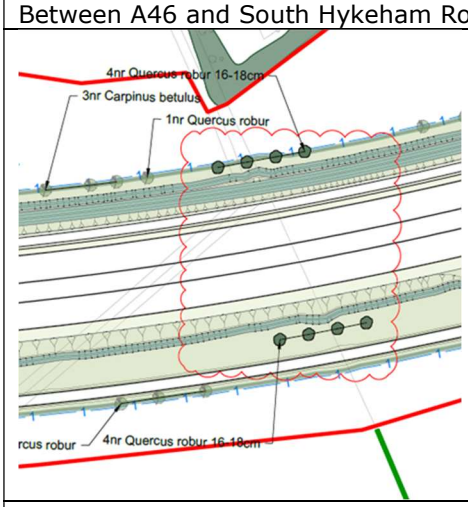
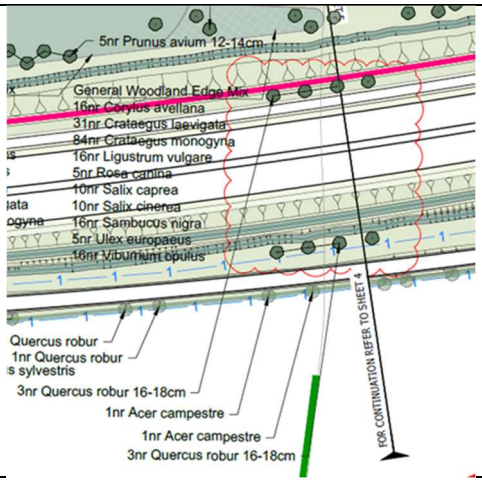


Figure 5: The six locations of bat hop-overs

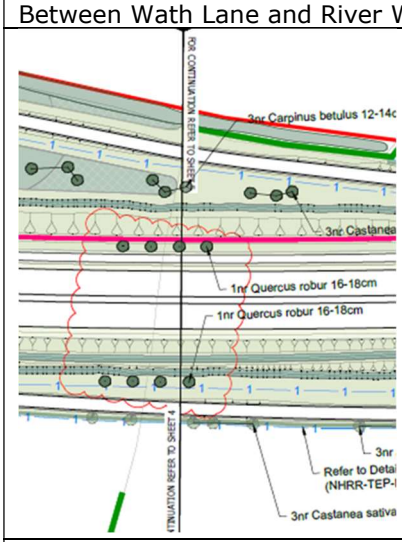
Between A46 and South Hykeham Road:



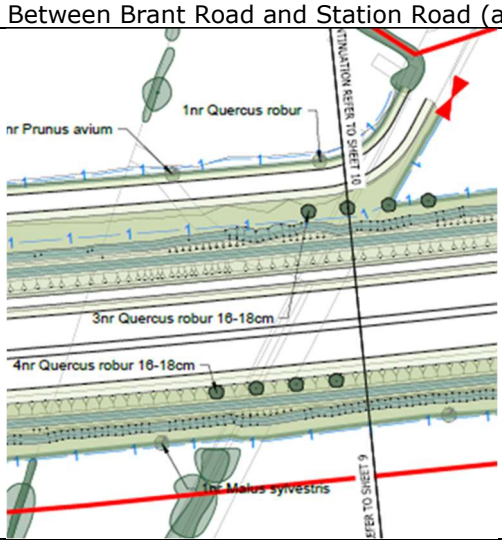
Between Wath Lane and River Witham (a):



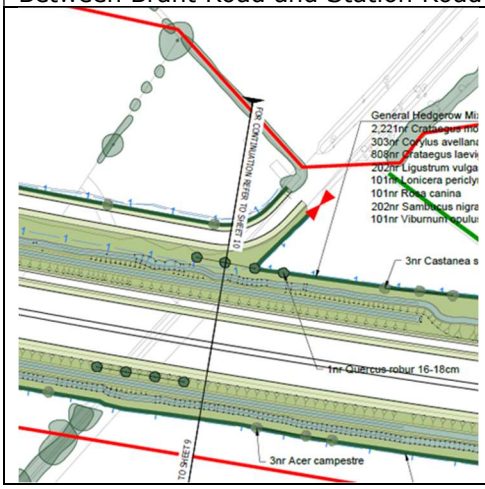
Between Wath Lane and River Witham (b):



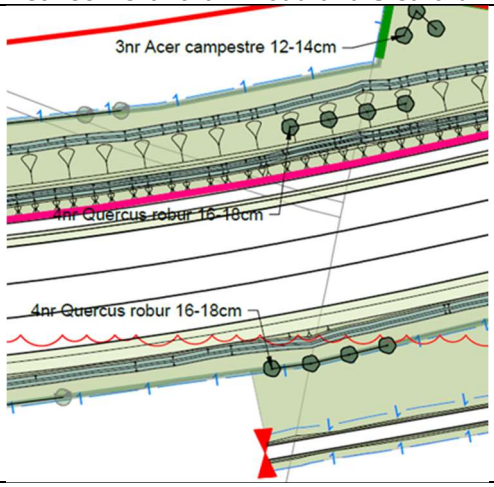
Between Brant Road and Station Road (a):



Between Brant Road and Station Road (b):



Between Grantham Road and Sleaford Road:



6.4.6 The design of the road crossing of the River Witham also prevents fragmentation of bat habitat creating a wide corridor including terrestrial habitat that bats can use to navigate under the road.

Badger

6.4.7 There are a number of badger setts within and adjacent to the Scheme. Currently one active sett (Sett D, an outlier) requires closing, this will be done under licence and no replacement habitat is required. Sensitive working methods set out in the CEMP **[CD8.82]** and the document to satisfy condition 15 address how impacts will be mitigated. The only permanent mitigation measures that are likely to be required for badger relate to badger fencing for protection of the road embankment and to divert badgers from crossing the road. These would fall within highways land with details being provided later as required.

Otter

6.4.8 No otter holts have been identified, but otter are present in the general area. Sensitive working methods set out in the CEMP/document **[CD8.82]** to satisfy condition 21 address how impacts will be mitigated. The design of the road crossing of the River Witham prevents fragmentation of otter habitat creating a wide corridor including terrestrial habitat that otters can use to navigate under the road when the river is in spate. There are no provisions for permanent mitigation measures specifically designed for otter.

Birds

6.4.9 The Scheme supports a range of farmland birds during the breeding season, and there is potential for impacts on nesting birds. Sensitive working methods set out in the CEMP **[CD8.82]** address how construction phase impacts will be mitigated. Loss of bird nesting habitat while new planting establishes will be mitigated through the provision of replacement nesting habitat and secured via condition 30.

6.4.10 A six visit quail survey will be completed as required by condition 16. Should quail be identified breeding within the site, mitigation measures will be detailed in a method statement for agreement with the planning authority and securing via condition 16. Potential impacts are related to construction phase activities. Mitigation is likely to be avoiding clearing sensitive habitats during the breeding season and maintaining working areas in a condition that dissuades quail from nesting.

Brown hare

6.4.11 Brown hare is assumed within the Scheme and sensitive working methods set out in the CEMP and the document to satisfy condition 22 address how impacts will be mitigated. There are no provisions for permanent mitigation measures specifically designed for brown hare.

Hedgehog

6.4.12 Hedgehog is assumed within the Scheme and sensitive working methods set out in the CEMP **[CD8.82]** and the document to satisfy condition

22 address how impacts will be mitigated. There are no provisions for permanent mitigation measures specifically designed for hedgehog.

Harvest mouse

6.4.13 Harvest mouse is recorded in the wider area and could be present within the Scheme and sensitive working methods set out in the CEMP and the document to satisfy condition 22 address how potential impacts will be mitigated. There are no provisions for permanent mitigation measures specifically designed for harvest mouse although the range of habitats included within the landscaping (such as hedgerows and woodland adjacent to farmland) could be utilised by this species if they moved into the area.

7. SPECIFIC LOCATIONS WHERE EOLOGCIAL MITIGATION IS REQUIRED

7.1 Introduction

7.1.1 There is a general requirement during the construction phase for location specific sensitive working methods but in relation to permanent habitats or features provided as ecological mitigation the following paragraphs provide a summary.

7.2 Designations

7.2.1 In the Central Lincolnshire Local Plan **[CD4.1]** Policy S60 – Protecting Biodiversity and Geodiversity is the main driver for protection local wildlife sites.

7.2.2 River Witham, Bracebridge to South Hykeham LWS is crossed by the Proposed Scheme, but the River Witham Bridge will carry the road over the LWS and wildflower enriched grassland will be created adjacent to the River Witham.

7.2.3 The northern edge of Waddington Grassland (Viking) Recommended LWS falls within the Proposed Scheme but this area does not contain the habitats for which the LWS is proposed. Landscaping at this location comprises wildflower enriched grassland, wet grassland, native hedgerow with native trees, native woodland planting and native woodland edge planting. This increases the biodiversity value of the habitats currently present.

7.3 Habitats including BNG and BOA

7.3.1 Natural Environment and Rural Communities Act 2006 (NERC Act 2006) **[CD2.10]** is the main driver for mitigation relating to habitats of principal importance. Schedule 7A of the Town and Country Planning Act 1990 **[CD2.4]** on Biodiversity Gain in England (inserted by The Environment Act 2021)

[CD2.23] is the main driver for habitat mitigation, requiring a minimum of 10% gain in biodiversity (as determined by use of the statutory biodiversity metric).

7.3.2 In addition, policies in the Central Lincolnshire Local Plan **[CD4.1]** of relevance to biodiversity are:

- Policy S59 – Green and Blue Infrastructure Network.
- Policy S60 – Protecting Biodiversity and Geodiversity.
- Policy S61 – Biodiversity Opportunity and Delivering Measurable Net Gains.

7.3.3 The landscaping proposals are designed to meet both landscape and visual requirements whilst also achieving 10% gain. The preference is for BNG habitats to be within the same local authority or character area where the losses occur. Whilst in most instances for this scheme the specific location of habitats is not driven by ecology consideration, the overall design seeks to maintain habitat network links in line with local policy and to provide connective habitats for species including bats. Although not exclusively, they also include habitat creation and habitat management within Biodiversity Opportunity Areas.

7.3.4 Some woodland types are Lincolnshire BAP habitats and can be habitats of principal importance. The woodland near Station Road will be compensated through new woodland planting across the scheme. Locating mitigation habitat close to the lost habitat is a positive step to mitigating local impacts and woodland planting has been included in the vicinity of Station Road. This habitat is included within the Dark Green: Ecological network – high quality BOA near Station Road.

7.3.5 Ponds are Lincolnshire BAP habitats and can be habitats of principal importance. Loss of one pond in the far west of the Scheme, will be mitigated via provision of a new wildlife pond. Marginal pond planting, the creation of two amphibian hibernacula and wildflower and hedgerow planting associated with this new pond will provide a mix of habitat features with the potential to support amphibians and improve the biodiversity value of the pond. Locating mitigation habitat close to the lost habitat is a positive step to mitigating local impacts.

Native hedgerows are Lincolnshire BAP habitats and habitats of principal importance. Loss of priority hedges is mitigated by replacement hedge planting across the scheme. A total of 9,880m hedgerows will be lost, but 20,340m of native species rich hedgerows will be planted resulting in an overall 10,460m increase of hedgerows.

7.3.6 Provision of wildflower enriched native grasslands in place of grassland habitats which are primarily poor semi-improved grassland represents an increase in botanical quality albeit there is a reduction in habitat area to allow the road construction. This habitat is included within the Dark Green: Ecological network – high quality BOA near Station Road and the Light Green: Ecological network – opportunity for management BOAs including near the River Witham.

7.3.7 The Scheme's landscaping proposals are not purely driven by visual and ecological considerations, they have also considered potential bird hazard risks to RAF Waddington. Broadly this has resulted in certain plants and trees being excluded from new habitats close to the RAF site, to reduce the risk of collision

risk bird species being encouraged into these areas (Bird Hazard Management Plan **[CD8.87]**).

7.4 Bats

7.4.1 The Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019 **[CD2.25]** and associated Natural England licensing is the main driver for the mitigation approach to bats.

7.4.2 Soprano pipistrelle and common pipistrelle roosts in residential property 46 Station Road will be mitigated by installation of four bat boxes which will be located on retained trees within the vicinity of the roost (in line with Bat mitigation guidance 2023). Although not the main driver, bats will also benefit from the new landscaping around Station Road.

7.4.3 Eighteen trees identified as having moderate or high roost suitability and four with low suitability require felling. Loss of potential tree roosting habitat will be mitigated through the provision of bat boxes located on retained trees within the west of the Scheme. The precise location to be confirmed under condition 30.

7.4.4 Barbastelle bat is an Annex II species and unlike some other species of bat is notably rare within the UK. Preventing this species from accessing its normal range of habitats for foraging or for moving between roosts can result in degradation of populations. Furthermore, deaths can occur through bats collisions with vehicles using the new road. Commuting across the new road will be maintained via the provision of features to allow and encourage safe crossing of the new road, thus ensuring fragmentation impacts are mitigated and the

population is able to access important habitat and undertake migration to either side of the road.

7.4.5 The location of these measures (detailed in Section 6 of my proof) is driven by the results of bat activity surveys which identified linear features used by Barbastelle bats to ensure important commuting routes would be maintained. The mitigation concentrates greatest efforts at locations where activity was highest. At these points a bat bridge (South Hykeham Bat Bridge) was incorporated into the Scheme and a drainage culvert was redesigned to accommodate bats commuting through it (Somerton Gate Lane Bat Culvert). Along other commuting routes where activity was lower, the inclusion of four large trees (16-18cm extra heavy standards >4m height when planted) within the landscaping scheme at six locations is intended to encourage bats to increase the height of their flight while crossing the road (referred to as hop-over points) to reduce the risk of collision with vehicles. Supporting these crossing features is the landscaping proposals which provides linear planting that connect the retained hedgerows either side of the new road to the crossing features.

7.5 Badger

7.5.1 The protection of Badgers Act 1992 **[CD2.11]** and associated Natural England licensing is the main driver for the mitigation approach to badger. No replacement setts are required. Landscaping proposals will benefit badger providing foraging resources and discouraging road crossings but the only likely badger-specific permanent mitigation will be fencing to protect the new road and discourage road crossing. Specifically, fencing above and below ground in

the vicinity of Sett G may be required as this is where active and expanding setts are closest to the new road. The measures include protecting the road and protecting badgers.

7.5.2 Building the new road will create some permanent sloped embankments and this may locally enhance conditions for sett building in the future. Therefore, additional measures will be considered in areas closest to known setts to manage the risk of sett expansion undermining the new road. Monitoring by the ECoW during the construction phase to identify if any new badger sett entrances are dug, will be undertaken across the scheme to inform decisions on adding protective measures for the road.

7.5.3 Measures to protect the road would likely be 12G Weldmesh fencing installed into the ground to a depth of 3 metres below ground level. The length of the fencing would be a minimum of 30 metres but could extend further, to achieve the aim of prevent badgers from tunnelling and undermining the road post development.

7.5.4 Measures to protect badgers would be fencing, installed both above and below ground to discourage badgers from climbing over or digging under the fence line to cross the new road at the point closest to Sett G. This in conjunction with the linear landscaping should encourage east/west movements and reduce the risk of road collisions.

8. SUMMARY AND CONCLUSION

8.1.1 My name is Elizabeth Seal and I hold a BSc Hon in Zoology and a MSc in Behavioural Ecology. I am a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and a Chartered Environmentalist.

8.1.2 I have over 20 years' experience working as an ecologist in consultancy with extensive experience in survey and mitigation for protected species. I have provided ecology advice on a large range of development projects in the UK including linear infrastructure developments. On National Grid's Hinkley Point C Connection NSIP I devised mitigation measures to avoid impacts on Annex II bat species.

8.1.3 Planning permission has been granted for North Hykeham Relief Road (hereafter referred to as the Scheme) **[CD7.1]**. The planning application contained all relevant details including a comprehensive Environmental Statement (ES) **[CD7.1]**.

8.1.4 The surveys to describe baseline conditions and identify important ecological features adhered to relevant guidance. The approach to the Ecological Impact Assessment (EcIA) in the ecology chapter of the ES **[CD7.1]** was in line with CIEEM guidance and the Biodiversity Net Gain Assessment **[CD6.56]**followed the published guidance and used metric 3.1.

8.1.5 There are no internationally, nationally or locally important statutorily protected wildlife designations within influencing distance of the Scheme. There are five county valued non-statutorily protected local wildlife sites (LWS) with the potential to be impacted by the Scheme.

8.1.6 Four S41 priority habitats are present within the Scheme:

- Semi-natural mixed woodland
- Running water
- Standing water
- Native hedges

8.1.7 Protected species and/or species of principal importance likely to use habitats within the Scheme are:

- Common toad.
- Grass snake (low population at one location).
- Six buildings to be demolished with bat roost suitability ranging from Low to High of which one has a confirmed Soprano pipistrelle and Common pipistrelle bat roosts (single bats seen entering or exiting up to 5 roost access points on the residential property 46 Station Road)
- Eighteen trees with moderate or high bat roost suitability and four trees with low suitability but no roosting identified.
- Bat commuting and foraging (low numbers of at least seven species including the Annex II species barbastelle bats).
- Badger (including setts within and adjacent to the Scheme).
- Otter (no holts identified but one laying-up area adjacent to the Scheme).
- A range of bird species identified during the breeding bird survey including 38 species of conservation significance.
- A range of wintering farmland birds including skylark but no notable use by wintering waterfowl or waders species.
- Brown hare (potential, assumed present).

- Hedgehog (potential, assumed present).
- Harvest mouse (possibly present).

8.1.8 Most impacts identified as likely to arise from the Scheme relate to construction phase activities. These are largely mitigated by specifying wildlife friendly working methods (controlled by the CEMP **[CD8.82]**) and habitat enhancement and creation (secured by the landscape plans and the LEMP **[CD8.83]**). Planning conditions **[CD7.1]** of relevance for securing biodiversity mitigation include:

- Condition 3 CEMP in particular appendix J on biodiversity and the invasive non-native species strategy.
- Condition 9 regarding hedgerows.
- Condition 10 regarding arboricultural method statement.
- Condition 14 regarding biodiversity net gain.
- Condition 15 regarding badgers.
- Condition 17 regarding bird hazard management plan.
- Condition 19 regarding amphibians.
- Condition 20 regarding reptiles.
- Condition 21 regarding water vole and otter.
- Condition 22 regarding hedgehog, brown hare and harvest mouse.
- Condition 33 Lighting risk assessment and detailed scheme of lighting.
- Condition 28 Ecologist supervision of tree removal/building demolition where there is bat roost potential.
- Condition 29 South Hykeham bat bridge and Somerton Gate Lane bat culvert
- Condition 30 Bat and bird box scheme

8.1.9 Arborists worked with the project team to reduce impacts on trees primarily through changes to working areas. The landscaping scheme will include replacement tree planting and provide benefits to many of the species present across the Scheme, these are largely universal benefits to wildlife, providing habitats for shelter, connectivity and foraging.

8.1.10 Sensitive working methods set out in the CEMP **[CD8.82]** to prevent encroachment of traffic on retained habitats and prevention of pollution of terrestrial and aquatic habitats, and avoiding the spread of invasive non native plant species address how impacts will be mitigated for the majority of potential impacts on LWSs adjacent to or hydrologically linked to the Proposed Scheme.

8.1.11 River Witham, Bracebridge to South Hykeham LWS is crossed by the Proposed Scheme, but the River Witham Bridge will carry the road over the LWS without any loss of habitat.

8.1.12 The northern edge of Waddington Grassland (Viking) RLWS falls within the Proposed Scheme. This is a proposed LWS on the basis of calcareous grassland, scrub, fen and standing water habitats. However, field survey of the area that falls within the application boundary showed that these habitats were not present. Landscaping at this location comprises wildflower enriched grassland, wet grassland, native hedgerow with native trees, woodland planting and woodland edge planting.

8.1.13 The northern edge of Bloxholm Lane LWS falls within the very far east edge of the application boundary, however, this only includes the small

section of the LWS that crosses the existing A15 and no impacts are anticipated within the Scheme boundaries.

8.1.14 The scheme would result in the loss of sections of priority habitat hedgerows including those qualifying as Important, the loss of semi-natural mixed woodland priority habitat and one pond. There will also be impacts to lower quality, non-conservation priority habitats. All these losses would be mitigated and compensated through the provision of onsite BNG habitats managed for 30 years in line with the LEMP **[CD8.83]**. The headline results of the BNG assessment **[CD8.84]** state the following on-site net gains:

- Area habitats increase of 42.26%
- Hedgerow/linear habitats increase of 16.90%
- River habitats increase of 17.94%

8.1.15 The development exceeds the local policy and statutory BNG requirements **[CD6.56]**, providing significantly greater than 10% gain in Biodiversity Units. No irreplaceable habitats are lost, the trading rules of the metric are met, a replacement wildlife pond will be created and a net gain of 1.46km of hedgerows will result from the landscaping. The proposals accord with Central Lincolnshire Local Plan policies S59 (Green and Blue Infrastructure Network), S60 (Protecting Biodiversity and Geodiversity) and S61(Biodiversity Opportunity and Delivering Measurable Net Gains).

8.1.16 The majority of species-specific mitigation is in the form of wildlife-friendly construction-phase mitigation to avoid impacts secured by the CEMP **[CD8.82]**. This adheres to the mitigation hierarchy of avoid, mitigate then compensate. In addition, the scheme has been designed to mitigate the species

impacts of fragmentation and loss of habitats through landscaping proposals that provide corridors and links and increase the quality of habitats. Additional species-specific measures are also provided within the Scheme.

8.1.17 Soprano pipistrelle and common pipistrelle roosts in residential property 46 Station Road will be mitigated under licence by installation of four bat boxes on retained trees within the vicinity of the roost

8.1.18 Twenty two trees identified as having roost suitability require felling. Loss of potential roosting habitat will be mitigated through the provision of bat boxes located on retained trees. The precise location to be confirmed under condition 30.

8.1.19 Barbastelle bat is an Annex II species and is notably rare within the UK. Preventing this species from accessing its normal range of habitats for foraging or for moving between roosts can result in degradation of populations. Furthermore, deaths can occur through bats collisions with vehicles using the new road. Barbastelle bats have been recorded in the landscape and commuting across the Scheme will be maintained via the provision of features to allow and encourage safe crossing of the new road, thus ensuring fragmentation impacts are mitigated and the population is able to access important habitat and undertake migration to either side of the road. The location of these measures is driven by the results of bat activity surveys which identified linear features used by Barbastelle bats and the mitigation concentrates greatest efforts at locations where activity was highest as follows:

- A bat bridge (South Hykeham Bat Bridge) was incorporated into the Scheme

- A drainage culvert was redesigned to accommodate bats commuting through it (Somerton Gate Lane Bat Culvert).
- The inclusion of four large trees within the landscaping scheme at six locations to encourage bats to increase the height of their flight while crossing the road.

8.1.20 Supporting these crossing features is the landscaping proposals which provides linear planting and woodland planting that connect the retained hedgerows either side of the new road to the crossing features.

8.1.21 No main badger setts will be lost and closure of outlier badger setts will be carried out under licence from natural England as required.

8.1.22 The grant of planning permission was accompanied by a number of conditions relating to ecology, at the time of writing, pre-commencement conditions have in the main, been satisfied. Quail surveys for Condition 16 are in progress (the survey method requires six visits are completed during the period mid-May to July). No quail have been recorded, but should this change, a method statement will be produced detailing construction-phase mitigation to discharge this condition.

8.1.23 The Lincolnshire County Council is content with the ecological evidence base and the ecology conclusions of the EIA and the ecological mitigation, compensation and enhancement measures set out in the planning application and the documents submitted to satisfy conditions. Neither Natural England nor the Lincolnshire County Council's nature conservation advisers have objected to the proposal. Insofar as bat or badger licences may be required for

the development, there is no reason to believe that Natural England might refuse such licences as favourable conservation status can be secured and necessary mitigation delivered respectively.