



Norwich Western Link

Environmental Statement - Chapter 11: Bats

Appendix 11.8: Bats In- Combination Assessment

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Glossary of Abbreviations and Defined Terms

Term	Definition
CSZ	<p>A Core Sustainance Zone (CSZ) is the area surrounding a bat roost within which habitat availability and quality will have a significant influence of the resilience and conservation status of the colony using the roost.</p> <p>CSZ are a BCT concept, based on an extensive literature review, and are described in the BCT good practise guidelines (Collins, 2023).</p>
DCO	<p>A Development Consent Order (DCO) is a form of permission for developments which are considered to be Nationally Significant Infrastructure Projects (NSIP). DCOs were introduced through the Planning Act (2008) in order to create a single process to gain all necessary consents and powers to allow a proposed scheme to proceed.</p>
DMRB	<p>The Design Manual for Roads and Bridges (DMRB) details the current design standards and advice relating to the design, assessment and operation of motorways and all-purpose trunk roads and bridges in the UK (Standards for Highways, 2020)</p>
EIA	<p>An Environmental Impact Assessment (EIA) is a process for identifying and assessing the potential impacts of a proposed project or development. The requirement for an EIA is set out in the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Where an EIA is required, an Environmental Statement must be produced assessing the likely significant effects arising from the proposed scheme.</p>



Term	Definition
ES	An Environmental Statement summarises the findings of the Environmental Impact Assessment (EIA) process. The ES produced for the Proposed Scheme details the likely significant effects arising from the Proposed Scheme.
FCS	Favourable Conservation Status (FCS) describes the situation in which a habitat or species is thriving throughout its natural range and is expected to continue to thrive in the future. At a local level, this is best viewed as the contribution to wider FCS for the species concerned (Natural England, 2021).
In-Combination Effect	The combined effects of a number of different projects in the vicinity of the Proposed Scheme (in combination with the Proposed Scheme) on bats
PBRA	A Preliminary Bat Roost Assessment is an initial survey of a tree or building which comprises an external (and where possible internal) inspection in order to record potential roost features as well as any evidence of roosting bats. This will enable the tree or building to be categorised as negligible, low, moderate, or high based on best practice guidance (Collins, 2016). This assessment will be undertaken from ground level using binoculars and a torch.
PEA	A Preliminary Ecological Appraisal forms the first stage of an ecological assessment of a Site. A PEA generally consists of an ecological desk study, a habitat survey (Phase 1 or UK Habitat Classification) and an assessment of the suitability of the Site to support protected species.



Term	Definition
Red Line Boundary	The Red Line Boundary incorporates the Site Boundary, the Essential Environmental Mitigation, and No Work Zones not within the Site Boundary, as shown on the 'Red Line Boundary Plan' (Document reference: 2.02.00).
Site Boundary	The areas within which all construction and operational activities for the Proposed Scheme will take place, including areas for temporary use during construction and No Work Zones within this boundary, but not including Essential Environmental Mitigation.



1 In-Combination Effects

1.1.0 This appendix relates to the In-Combination effects regarding bats only, due to a difference in approach to other topics. Please see **Chapter 20: Cumulative Assessment** (Document Reference: 3.20.00) for all other topics.

1.1 In-combination Effects Assessment Methodology

1.1.1 The approach to the assessment of In-Combination Effects considers the combined impacts on bats from one or more of applicable developments.

1.1.2 For the purposes of the assessment, applicable developments are defined in line with DMRB LA 104 guidance from section 2, which requires the assessment of In-Combination effects on:

- *“Roads projects which have been confirmed for delivery over a similar timeframe;*
- *other development projects with valid planning permissions or consent orders, and for which Environmental Impact Assessment (EIA) is a requirement; and*
- *proposals in adopted development plans with a clear identified programme for delivery.”*

1.1.3 For robustness, and to adhere to best practice for Effect Interaction assessment, the following guidance laid out in section 1.3.1 of the DMRB LA 104 Welsh Guidance Appendix has also been adhered to:

- *“the likely effect of areas of land in adopted development plans highlighted for development.”*

1.1.4 Further to the above assessment, an additional search was undertaken to identify development that falls below the Design Manual for Roads and Bridges (DRMB) guidance, however, could still result in a significant cumulative impact on bats. This included:



- Buildings that were identified for demolition or refurbishments, including barn conversions.

In-combination Effects Study Area

1.1.1 Through analysis of the extant and emerging planning policy from the sources detailed below, committed developments (and other proposed developments for which planning applications have been submitted and which may have common sensitive receptor categories and phases) within 6 kilometres of the Site Boundary have been identified.

- Broadland District Council Planning Portal, Site Allocation Development Plan, and Neighbourhood Allocation Plan;
- South Norfolk District Council Planning Portal, Site Allocation Development Plan, and Neighbourhood Allocation Plan;
- Breckland District Council Planning Portal, Site Allocation Development Plan, and Neighbourhood Allocation Plan;
- National Infrastructure Planning Portal; and
- The emerging Greater Norwich Local Plan.

1.1.2 Where large schemes such as Development Consent Order's (DCO) were identified outside this study area but still within relative proximity, professional judgement was used in relation to their inclusion as part of the assessment.

In-combination Effects Study Area

1.1.3 The Study Area for desk study data for each bat species was between 2 kilometres and 6 kilometres of the Site Boundary, based on the Core Sustainance Zone (CSZ) for that species using CSZ provided within Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023). Details of the Study Area of for each bat species recorded within the Site Boundary is provided in Table 1-1.



Table 1-1 Study Area per Species

Species	Study Area
Common pipistrelle	2km
Brown long-eared bat, soprano pipistrelle, Nathusius' pipistrelle, and Leisler's bat	3km
<i>Myotis</i> sp, noctule and serotine	4km
Barbastelle	6km

1.1.4 The stages undertaken as part of this approach are set out below.

Stage 1 – Identification and Evaluation of Projects for Consideration

1.1.5 In order to identify potential committed developments that could give rise to In-Combination effects with the Proposed Scheme on bats, a high-level review of planning applications submitted to Broadland District, South Norfolk, and Breckland Councils within the last 3 years within a 6-kilometre radius of the Site Boundary has been undertaken.

1.1.6 Applicable projects for consideration of In-Combination effects have been determined using the following criteria:

- Projects that are under construction;
- Consented application(s) not yet implemented; and
- Submitted application(s) not yet determined but which may be determined prior to the determination of the Proposed Scheme.

1.1.7 An overview of the planned developments and supporting environmental information was then gathered. Where such information was not available within the documents supporting each planning application, this was highlighted with a high-level appraisal using publicly available sources undertaken to inform the assessment of In-Combination effects.

1.1.8 Each of the identified planned developments was then evaluated to determine whether the following criteria were met:



- Is there potential for a concurrent demolition, construction, or operational phase with the Proposed Scheme? and
- Is there potential that the Proposed Scheme shares common sensitive receptor (bats) with the project(s)?

1.1.9 The committed developments which met the above criteria were then evaluated to inform the selection of schemes for consideration. The selection criteria were:

- Application status and programme for delivery;
- Applications of a relevant scale for which DMRB states EIA is a requirement, although professional judgement has been used where applications were not subject to EIA, but which may result in cumulative environmental impact. Applications for other development of 10 or more homes; industrial, commercial, or retail based applications over 500m² have also been considered as part of this stage; and
- Common sensitive receptors categories – only those applications with identifiable bat impacts were taken forward.

1.1.10 The assessment of In-Combination effects has been based on the residual effects identified in the **Chapter 11: bats** (Document Reference: 3.11.00), as well as available environmental information for the applicable developments to identify common sensitive receptors categories (bats) within the Study Areas.



- 1.1.11 In addition, several DCO committed developments have been identified and included for consideration. The Vattenfall Norfolk Boreas Project was precautionarily included within the dataset despite being 6.3 kilometres from the Proposed Scheme, due to its size. Furthermore, the Equinor Sheringham Shoal & Dudgeon Extension Project has been included on a precautionary basis due to its size and proximity, despite it not yet having received full planning approval.
- 1.1.12 Any relevant allocations detailed within the extant local adopted site allocation development plans and neighbourhood allocation plans published on Broadland, South Norfolk, and Breckland District Council websites were included for consideration. The emerging planning policy detailed in the Greater Norwich Local Plan was also reviewed, and any qualifying allocations detailed that were within a 6-kilometre radius of the Proposed Scheme were also added to the committed development short-list.
- 1.1.13 A **Sustainable Transport Strategy (STS)** (Document Reference: 4.02.00) has been prepared that encompasses the proposals for Non-Motorised User (NMU) provision and the proposed treatment for existing side roads that cross the Proposed Scheme alignment within the Redline Boundary. This will be delivered as part of the main construction phase for the Proposed Scheme.
- 1.1.14 Additional enhancement measures are proposed to improve walking, cycling and public transport use to the west of Norwich, which the Proposed Scheme will seek to facilitate. This encompasses the Cycle-Friendly Routes and Bus Improvement Measures within the public highway, which are outside of the Red Line Boundary and could be carried out by the Local Highway Authority. These STS schemes outside the Red Line Boundary have been assessed as a separate scheme and assessed cumulatively in this Appendix as committed development S15 Sustainable Transport Scheme Element and illustrated on **Figure 11.28 (Appendix 11.10)** (Document Reference: 3.11.10)).



1.1.15 **Appendix 11.8a In-Combination Assessment of Committed**

Developments Long list (Document Reference: 3.11.08a) contains the long-list of planning applications, DCOs, allocations and the STS scheme, which have potential to have concurrent demolition, construction, or operational phases with that of the Proposed Scheme. These planning applications could therefore contribute towards cumulative impacts upon bats. **Appendix 11.8a (Document Reference: 3.11.08a)** includes descriptions of the developments within 6 kilometres of the Proposed Scheme and their status as of the 24 April 2023. This list was reviewed to identify whether each development was predicted to have a direct or indirect impacts on bats.

1.1.16 Where a direct or indirect impact on bats were identified, and it is possible that there would be a cumulative effect with the Proposed Scheme, these developments were taken forward into the short-list in **Table 2-1**. The short-list includes:

- committed developments short-listed within **Chapter 20: Cumulative Assessment** (Document Reference: 3.20.00);
- committed developments which were identified as resulting in loss of confirmed roosts; and / or
- committed developments that may result in the loss of roosting, foraging, and commuting resource at a scale with potential to contribute towards cumulative effects. This was based on the DRMB criteria detailed in **paragraph 1.2.11**, of developments of 10 or more homes; industrial, commercial, or retail based applications over 500 metres.

1.1.17 The locations of all developments on the short-list are shown on **Figure 11.28**.



Stage 2 – Identification of Receptor

1.1.18 Committed developments were further reviewed to understand, using publicly available sources of information, the effects upon bats predicted to occur as a result of the developments individually. Where impacts were predicted, developments were taken forward to Stage 3.

Stage 3 – Assessment of In-Combination effects

1.1.19 Once the committed developments were identified, screened, and identified to impact bats, consideration was given to the potential for cumulative impacts beyond those assessed for the Proposed Scheme individually. Consideration was given to the temporal and geographical extent of effects from each scheme, and the potential for these to span aspects of the Proposed Scheme.

1.1.20 The qualitative evaluation considered the following:

- Combined magnitude of change;
- Sensitivity/value/importance of the common receptor category/receiving environment to change; or/and
- Duration and reversibility of effect.

1.1.21 Through a combination of the qualitative evaluation and mitigation presented in **Chapter 11: Bats** (Document Reference: 3.11.00), conclusions were drawn as to the likelihood for significant In-Combination environmental effects.

2 Assessment Limitations and Assumptions

2.1 Limitations and Assumptions

2.1.1 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:



- The cumulative effect assessment is based on publicly available information only. The assessment of In-Combination effects has been based on the interpretation and assessment of data provided by third parties available in the public domain and no survey work to supplement information of committed or other relevant developments has been undertaken. Committed development S14 was raised through landowner discussions as an exception and was covered on a precautionary basis;
 - The list of committed developments as set out in **Table 1-1** was finalised on the 24th of April 2023 to allow for assessment within the ES, and an updated completed in March 2024. Any planning applications, status updates or additional information published since this date have not been included within the assessment.; and
 - Where the listed committed developments were not subject to formal EIA, in most instances information is lacking on the likelihood of reported significant effects. Professional judgement and a review of the environmental information submitted with the relevant application has been undertaken to identify potential for In-Combination effects.

Table 2-1 In-Combination Assessment of Committed Development short list

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S1	20201769	Retention of 42m x 42m concrete hardstanding, building and bagging machinery; proposed increase of existing hardstanding area for bark processing/storage and erection of storage building	1.7km	Full Approval 08/01/2021	609150	315276	<p>No bat surveys were undertaken for the committed development to inform the planning application.</p> <p>As part of the committed development, woodland management activities are being consented which comprise of 0.57ha of deforestation, and 3.66ha of thinning. This woodland falls within the foraging zone of the Royal Norwich Golf Course and Roarr! Dinosaur Park barbastelle colonies. No details are available on the condition of woodland being subject to clearance or thinning.</p> <p>Due to the minor nature of the committed development, related to ongoing management actives, and that bats were scoped out of the assessment for the committed development, it is considered unlikely that significant Cumulative Effects on bats will occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S2	20211831	Change of use of existing land to a campsite with associated toilet and shower block and reception/office space	0.9km	Full Approval 14/12/2021	614953	314234	<p>A Preliminary Ecological Appraisal (PEA) was undertaken of the Site in April 2021. No specific bat surveys were undertaken for the committed development to inform the planning application. However, the PEA does note that records of soprano pipistrelle were recorded in the tree canopy, assumed to be a record of foraging, or commuting bats. Vegetation clearance occurred on the site in 'early 2021', removing overgrown vegetation to create camping pitches under committed development.</p> <p>Due to the committed development only relating to change of use with no habitat clearance works being undertaken, and that bats were scoped out of the assessment for the committed development, it is considered unlikely that significant Cumulative Effects on bats would occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S3	20172148	Residential Development of up to 93 Dwellings with Associated Access, Parking & Open Space (Outline)	0.9km	Outline Approval 28/09/2018	615325	314396	<p>Bat surveys were undertaken for the committed development, which included Preliminary Bat Roost Appraisals (PBRA) in 2017 and bat activity surveys in 2018. The PEA for the committed development undertaken in 2017 identified areas of grassland and arable land that will be lost as being low value foraging and commuting habitat.</p> <p>No trees with suitability for roosting bats were being identified as being directly impacted by the committed development. Woodlands and hedgerows that border the site are being retained in the proposals.</p> <p>The bat activity surveys identified very low levels of bat activity within the arable and grassland habitats being lost. Higher levels of activity, which included occasional records of barbastelles passes, were recorded within the retained woodland. Mitigation measures, such as sensitive lighting, have been recommended to reduce impacts to bats within the retained woodland.</p> <p>Given that the committed development includes standard mitigation to avoid effects upon bat species using the retained high value foraging and commuting habitat, and that roost resource will not be affected, it is not likely to contribute towards significant cumulative effects.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S4	20201332	Earth Bund directly north of the Northern Distributor Road (A1270), land that lies between the Fakenham Road and Fir Covert Road junctions.	0.8km	Full Approval 07/09/2020	615546	316118	<p>No ecology surveys, including bat surveys, were undertaken for the committed development.</p> <p>The committed development is in relation to the creation of an earth bund on the verge of the A1270, in an area of arable land and grassland road verge. The bund top will be higher than the Northern Distributor Road (A1270) to provide a visual screen between the road and nearby property. It is to be seeded with grass with some further planting.</p> <p>Due to the minor nature of the committed development, and no suitable bat roosting, foraging, or commuting features are being impacted, it is unlikely that significant Cumulative Effects on bats will occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S5	20171782	<p>Hybrid planning application (part outline, part detailed), made up of 1. An application for outline planning permission for the erection of a Class A1 retail unit; a Class A3/A4 public house/restaurant; Class A3/A5 fast food restaurant; and a Class A1/A3/B1 lifestyle leisure unit. 2. An application for full planning permission for the construction of a supermarket (Class A1), together with associated access, car parking and landscaping. The supermarket will comprise a total of 2,206 square metres, gross external footprint, and will be served by a total of 129 car parking spaces (of which 7 would be disabled spaces, and 8 parent and child spaces).</p>	0.9km	Approval 12/02/2018	615728	315228	<p>Bat surveys undertaken for the committed development comprised of activity surveys undertaken in 2013 and 2017, which recorded low levels of activity. No barbastelles were recorded during the surveys, which comprised two dusk transect surveys. Areas of habitat which are being cleared include arable and grassland, with the adjacent woodland being retained and not directly affected by the development. Post construction, the committed development will include new boundary hedgerow planting.</p> <p>Given that the committed development includes standard mitigation to avoid effects upon bat species using the retained high value foraging and commuting habitat used by widespread and common species of bats, and that roost resource will not be affected, it is not likely to contribute towards significant cumulative effects.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S6	DCO 20211535	Proposed dual carriageway A47 North Tuddenham to Easton. Also PINS application (row 568) - Dualling of the single carriageway section of the A47 between Norwich and Dereham, linking together two existing sections of dual carriageway. The scheme will provide a new route to the south of Hockering and to the north of Honningham and include new junctions with locations yet to be determined.	0km	Granted subject to appeal	Not applicable	Not applicable	<p>The A47 meets the southern boundary of the Proposed Scheme, where it is intended to provide a new route north between the A47 and A1067. The mainline A47 dualling construction works and Wood Lane junction are expected to be largely completed before the Proposed Scheme commences construction, however there is the potential for overlap during the construction period.</p> <p>Due to the scale, nature, and distance of the committed development from the Proposed Scheme, there is potential for cumulative effects. This is considered in more detail in Section 12 of Chapter 11: Bats (document reference: 3.11.00).</p>
S7	DCO	Hornsea Project Three Offshore Wind Farm	0km	Granted 31/12/20	Not applicable	Not applicable	<p>The on-shore cable corridor for the committed development crosses the Proposed Scheme between Ringland Lane and Weston Road.</p> <p>During construction, there would be some overlap of construction activities with this development.</p> <p>Due to the spatial and temporal overlap, this is committed development is considered in more detail in Section 12 of Chapter 11: Bats(document reference: 3.11.00).</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S8	20190021	Part Change of Use from C3 to D2 for the Use of the Site as a Wedding Venue for up to 20 Weddings per Year & Use of Buildings and Marquee in Association with Wedding Venue (Retrospective)	0.8km	Approved 21/03/19	612994	314662	<p>No bat surveys were undertaken for the committed development</p> <p>The committed development relates to the change of use, allowing for use for up to 20 events per year contained to the existing property. This development is already open and operational – known locally as The Keeper and the Dell – Unique Norfolk Outdoor Wedding & Wakes Venue.</p> <p>As there are no direct impacts to the woodland, and no likely indirect effects, and it is already part of the baseline environment, it is considered unlikely that significant Cumulative Effects on bats would occur.</p>
S9	2022/0509	Ground mounted solar photovoltaic (PV) farm with battery storage; along with continued agricultural use, ancillary infrastructure and security fencing, landscaping provision, ecological enhancements and associated works including underground cabling.	1.6km	Approval with Conditions 30/06/2022	609476	309832	<p>No bat surveys were undertaken for the committed development. A PEA was undertaken in 2021, which identified areas of arable land and grassland will be lost, existing hedgerows and trees, some of which were identified to have bat roost potential, are to be retained and protected.</p> <p>Due to the distance from the committed development to the Proposed Scheme, no removal of roosting resource, and no high-quality foraging habitat being lost, it is considered unlikely that significant Cumulative Effects on bats would occur.</p> <p>As the committed development is retaining most habitats present, additional habitats including lowland meadows along with new hedges within the site may increase local invertebrate abundance, benefiting some bats.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S10	DCO	Norfolk Boreas Offshore Wind Farm - onshore cable route.	6.3km	Granted	Not applicable	Not applicable	<p>The on-shore cable corridor for the committed development is located 6.3km from the Proposed Scheme. The committed development consists of the installation of cables, which will cross through hedgerows outside of the 6km Study Area for The Proposed Scheme.</p> <p>Where hedgerows are being crossed for duct installation (two-year cable pull phase), the gap created will not exceed 16.5m. Where the hedgerow gaps are required beyond this phase, any gaps will be minimised as far as possible and will be no wider than 6m. Areas of woodland will be avoided where possible and where unavoidable will be crossed through trenchless crossing techniques. Where removed temporarily, hedgerows will be reinstated as soon as possible within the first planting season post works being completed.</p> <p>Due to the distance of the committed development outside of the 6km Study Area, and the temporary and short-term nature of the development, it is unlikely that significant Cumulative Effects on bats would occur.</p>
S11	DCO	Equinor Sheringham Shoal & Dudgeon Wind Farm Extension Project.	0km	Not yet Approved	Not applicable	Not applicable	<p>The on-shore cable corridor for committed development crosses the Proposed Scheme between Ringland Lane and Weston Road.</p> <p>During construction, there would be some overlap of construction activities with this development.</p> <p>Due to the spatial and temporal overlap, this is committed development is considered in more detail in Section 12 of Chapter 11: Bats (document reference: 3.11.00).</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S12	GNLP0337R 20202233	Allocation: This is a strategic-scale site well-related to the existing edge of Thorpe Marriott with no major constraints to make the site unsuitable for development. The site will need to be master planned to provide a local centre, community and recreation facilities including a school and medical care facility. Highway improvements will be needed including provision of roundabout access at Fir Covert Road, priority access at Reepham Road and traffic signals at the A1067 Fakenham Road/Fir Covert Road.	1.3km	Allocation detailed in the Greater Norwich Local Plan	615968	315466	<p>A PEA of the committed development site was undertaken in 2018, which identified poor semi-improved grassland, scrub, hedgerows and scattered mature trees present which provide suitable foraging and roosting habitat for bats. Bat surveys were undertaken for the committed development, which comprised transects and automated static detector surveys in 2019.</p> <p>During both the transects and automated static detector surveys, low numbers of common and widespread species of bats commuting and / or foraging were recorded, with no records of barbastelle during either the transects or automated static detector surveys.</p> <p>Due to the small amount of bat foraging habitat being removed, and low levels of activity from common and widespread species of bats recorded, it is unlikely that significant Cumulative Effects on bats would occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S13	GNLP0159R	<p>Allocation: This site off Beech Avenue is allocated with access via the adjacent site with planning permission (20191065) under the same land ownership. The total area allocated reflects the mature trees on site as well as other buildings shown on the site map below.</p>	1.1km	Allocation detailed in the Greater Norwich Local Plan	615139	314276	<p>A PEA of the committed development site was undertaken in 2020, which identified a grassland paddock with buildings present. Mature woodland is present to the north and west of the committed development, and Plantation on Ancient Woodland Sites (PAWS) is present immediately to the south.</p> <p>An external and internal PBRA of the buildings was undertaken, which identified what was considered to be a historic bat roost (small number of aged droppings and feeding remain, assumed to be when from stable was open, however access was recorded to be no longer possible into the building). As access into the stables was no longer possible, the building, the PEA concludes to have negligible roost potential. All other buildings were considered to have negligible roost potential.</p> <p>Bat activity data from the immediately adjacent development (S3) was reviewed as part of the PEA. This woodland is being retained, and mitigation measures, such as sensitive lighting, have been recommended to reduce impacts to bats within the retained woodland. This is a requirement of the allocation within the GNLP.</p> <p>Given that the committed development includes standard mitigation to avoid effects upon bat species , and there being no removal of roosting resource or high-quality foraging habitat being lost, it is considered unlikely that significant Cumulative Effects on bats would occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S14	Wensum Valley Hotel, Golf and Country Club – New/Relocated Reservoir	Excavation of soils to construct an irrigation reservoir.	1.0km	Decided	615320	314395	<p>The committed development will result in the loss of an area of species-poor grassland. No suitable roosting features were present that are to be impacted. Existing connectivity feature (tree lines) will be retained and not severed as part of the committed development.</p> <p>This committed development does not affect roosting resource, and no severance of habitats will occur as existing features (tree lines) are not being impacted, and there would be negligible impact upon foraging resource. For these reasons, it is considered unlikely that significant Cumulative Effects on bats would occur.</p>
S15	Complementary Sustainable Transport Measures (described in the Sustainable Transport Strategy (Document Reference 4.02.00))	Cycle-Friendly Routes and Bus Improvement Measures within the highway boundary.	0m	Potential Application	612493	315136	<p>The works for the committed development would occur within the existing hardstanding areas of the highway's boundary.</p> <p>Where any works are occurring outside of existing hardstanding, this is in areas of the highways verge which is predominately grassland.</p> <p>This committed development does not affect roosting resource, works occurring along existing roads would not contribute towards severance of habitats, and there would be negligible impact upon foraging resource. For these reasons, it is considered unlikely that significant Cumulative Effects on bats would occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S36	20201592	Conversion of barns to 5 dwellings with associated landscaping and parking	3.5km	Full Approval 05-03-2021	612224	320524	<p>Bat surveys for the committed development comprised PBRA and dusk emergence and dawn re-entry surveys. The committed development would result in the destruction of a common pipistrelle and brown long-eared maternity roost, and a barbastelle and soprano pipistrelle day roost. Mitigation in the form of a bat loft and bat boxes were created to maintain the favourable local conservation status of these species.</p> <p>No cumulative impacts as a result of roost loss, and reduction in roosting resource, are anticipated since both the committed development and the Proposed Scheme will be mitigated under the terms of the Natural England EPSML, which will require suitable roosting compensation to ensure the FCS of the bat species are maintained.</p>
S37	20201450	Conversion & Extension of a Redundant Agricultural Building to form a Single Dwelling (Listed Building)	0.5km	Listed Building Approval 23-09-2020	610124	314455	<p>Bat surveys for the committed development comprised PBRA, and dusk emergence and dawn re-entry surveys in 2020. The committed development will result in the loss of one common pipistrelle day roost and one soprano pipistrelle day roost.</p> <p>Compensation in the form of a bat boxes will be installed to maintain the favourable local conservation status of this species.</p> <p>No cumulative impacts as a result of roost loss, and reduction in roosting resource, are anticipated since both the committed development and the Proposed Scheme will be mitigated under the terms of the Natural England EPSML, which will require suitable roosting compensation to ensure the FCS of the bat species are maintained.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S42	20200376	Conversion of Existing Redundant Farm Buildings to Four Residential Dwellings. Altered Access and Parking Arrangements for No.1 and 2 Dairy Farm Cottages and Unit 6 Dairy Farm Barns including the Erection of Cartshed Garages.	1.3km	Full Approval 22-05-2020	610637	317037	<p>Bat surveys for the committed development comprised PBRA and dusk emergence and dawn re-entry surveys in 2016. The committed development will result in the loss of three common pipistrelle day roosts, three brown long-eared bat day roost and one common pipistrelle roost. A brown long-eared maternity roost was identified during surveys that will be retained with mitigation measures implemented during construction and operation to reduce impacts on this roost.</p> <p>Mitigation in the form of a bat boxes will be installed to maintain the favourable local conservation status of these species.</p> <p>No cumulative impacts as a result of roost loss, and reduction in roosting resource, are anticipated since both the committed development and the Proposed Scheme will be mitigated under the terms of the Natural England EPSML, which will require suitable roosting compensation to ensure the FCS of the bat species are maintained.</p>
S103	20190999	Erection of 304 Dwellings, together with Associated Public Open Space, Landscaping, Internal Roads, Drainage, and Infrastructure Works	4.3km	Full Approval 12-05-2020	618840	317400	<p>Bat surveys for the committed development comprised PBRA and habitat suitability surveys. Due to the small area of woodland being cleared, no activity surveys were undertaken.</p> <p>Mitigation measures to reduce impacts on bats that may be using the immediately adjacent areas of retained woodland for commuting and / or foraging have been included, such as a sensitive lighting strategy.</p> <p>Due to the small area of suitable bat foraging habitat cleared, it is unlikely that significant Cumulative Effects on bats will occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S126	3PL/2020/0462/F	Erection of 50 Residential Dwellings With Associated Infrastructure.	5.3km	Permission 30-07-21	604456	311267	<p>Bat surveys for the committed development comprised PBRA and habitat suitability surveys. Areas of arable land and grassland will be cleared. The committed developments site has hedgerows and a ditch along the boundary, which are being retained. No activity surveys were undertaken, as the committed development identified the habitats being loss as low value for foraging bats.</p> <p>Mitigation measures to reduce impacts on bats that may be using the immediately adjacent areas of retained hedgerows and ditch for commuting and / or foraging have been included, such as a sensitive lighting strategy.</p> <p>Due to the small area of suitable bat foraging habitat cleared, it is unlikely that significant Cumulative Effects on bats will occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S144	3PL/2017/1574/O	<p>Application for outline planning permission for the development of up to 28 dwellings with associated works including vehicular and pedestrian access, pedestrian links, infrastructure, and landscaping. All matters reserved except access.</p> <p>Amended site plan showing full details of three access points from Heath Road.</p>	1.9km	Permission 24-09-19	607840	313605	<p>A PEA was undertaken for the committed development in 2019, which did not identify any features suitable for roosting bats that will be impacted by the development.</p> <p>Grassland habitats being directly impacts by the committed development were identified as being of low value for foraging bats and no bat activity surveys were undertaken. Mature hedgerows border the committed development, which has been assumed to support commuting and foraging bats. Mitigation measures to reduce potential impacts on bats, including a sensitive lighting strategy, has been specified for the committed development.</p> <p>As there is no removal of roosting resource and no high quality foraging habitat being lost as a result of the committed development, and that mitigation will reduce the potential for minor impacts upon commuting bats, it is unlikely that significant Cumulative Effects on bats would occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S145	3PL/2016/1262/O	Outline for Residential Development of up to 12 dwellings.	2.1km	Permission 17-09-19	607776	313415	<p>A PEA was undertaken for the committed development in 2016, which identified habitats on site consisting of grassland with areas of scrub and species-poor hedge bordering the site.</p> <p>Grassland habitats being directly impacts by the committed development were identified as being of low value for foraging bats. Due to this, no activity surveys were undertaken. Hedgerows border the committed development, which has been assumed to support commuting and foraging bats. Due to this, mitigation measure to reduce impacts on bats, including a sensitive lighting strategy, has been specified for the committed development.</p> <p>Due to no removal of roosting resource and no high quality foraging habitat being lost, it is unlikely that significant Cumulative Effects on bats would occur.</p>
S170	2018/1550	Residential development for 10 dwellings - access, appearance, scale, landscaping, and layout	5.8km	Approval with Conditions Fri 20 Sep 2019	615689	308375	<p>A PEA of the Site was undertaken in 2015, which identified habitats on site to be an arable field, bordered by hedgerows, and a small section of wooded scrub. No suitable features for supporting roosting bats (trees or structures) were present within the committed development site.</p> <p>Hedgerows were present and identified as likely to support commuting bats. No activity surveys were completed as they will be retained as part of the development.</p> <p>Due to the distance of the committed development from the Proposed Scheme, and absence of impacts upon features of value to bats, it is unlikely that significant Cumulative Effects on bats would occur.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S185	2019/2546	Erection of 16.no residential units, comprising 6x 3 bedroom and 10 x 2 bedroom units with off-road parking.	2.1km	Approval with Conditions Fri 23 Oct 2020	615256	312339	<p>A PEA of the Site was undertaken in 2019, which identified the committed development site as being highly disturbed, with ephemeral/short perennial and tall ruderal habitats present. Young trees were also present on the site boundary, which were identified as having negligible potential for use by roosting bats.</p> <p>Habitats present on the site, which included a seasonally wet ditch, were assessed in the PEA as being of low suitability for foraging bats. No further bat surveys were considered necessary to inform the committed development.</p> <p>Due to the absence of impacts upon features of value to bats, it is unlikely that significant Cumulative Effects on bats would occur.</p>
S218	GNLP0608R	Allocation: Identified as a housing allocation, providing for approximately 20 new homes in the cluster.	2.8km	Allocation detailed in the Greater Norwich Local Plan	609998	318412	<p>Scoped out due to insufficient information available in the public domain. It was not considered that a robust and proportionate environmental assessment could be carried out.</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S219	20220034	Hybrid application - Part full and part outline for the change of use of a former Deer Park to provide an extension to the Roarr Dinosaur Attraction comprising three phases of development, including a volcano feature, rides, food and beverage facilities, toilet block, entrance feature, extension to overflow carpark, ecological enhancement, and landscaping	1.7km	Approval with conditions 27 April 2023	610470	317467	<p>The ES for the committed development concluded a residual minor impact for barbastelle, as a result of noise and lighting disturbance during construction. This impact would be on the Roarr! Dinosaur Park Colony. A residual negligible impact was concluded for bats (excluding barbastelle) for their roosts, foraging areas and commuting routes during construction.</p> <p>During operation, the committed development concluded a minor residual impact for barbastelle, as a result of disturbance from light and noise. A minor residual impact was concluded for bats (excluding barbastelle) for their roosts, foraging areas and commuting routes due to disturbance from noise and lighting during construction.</p> <p>Due to the impacts on barbastelle colonies, this committed development is considered in more detail in Section 12 of Chapter 11: Bats (document reference: 3.11.00).</p>

ID	Application Name and Reference	Applicant for 'other development' and brief description	Distance from project (km)	Status	Easting	Northing	Assessment
S220	2023/1705	Outline planning permission for 7 detached dwellings and a terrace of 3no. dwellings, including new access road, landscaping and any associates works.	3.5km	Pending Decision	617688	313500	<p>A PEA of the Site was undertaken in 2023, which identified habitats on site to be an arable field, bordered by established species poor roadside hedges. No suitable features for supporting roosting bats (trees or structures) were present within the committed development site.</p> <p>Hedgerows were present and identified as likely to support commuting bats. No activity surveys were completed due to the small size of the development, and the hedgerow towards the back of development will be retained as part of the development.</p> <p>Due to the distance of the committed development from the Proposed Scheme, and absence of impacts upon features of value to bats, it is unlikely that significant Cumulative Effects on bats would occur.</p>
S221	2023/2575	Installation of pre-construction field drainage to support the operation of the Hornsea Project Three onshore export cable route (EIA Development) (S7)	0km	Pending Consideration	612225	314262	<p>The committed development is associated with the installation of pre-construction drainage within one area of the Hornsea Onshore Cable Corridor.</p> <p>Surveys for roosting bats and activity surveys were undertaken as part of the EIA applications (S7). No suitable features for roosting bats will be lost as part of the pre-construction drainage work, and no hedgerows will be directly or indirectly impacted by the committed development.</p> <p>Due to the small working area and absence of impacts upon features of value to bats, it is unlikely that significant Cumulative Effects on bats would occur.</p>



3 References

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.

Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6. [Natural England \(2021\) Favourable Conservation Status Definitions - Natural England Technical Information Note \(TIN180\)](#).

Standards For Highways. (2020). *LA 115 - Habitats Regulations assessment*.

Retrieved from Standards For Highways: [LA 115 - Habitats Regulations assessment](#)