



Greater Cambridge Partnership

CAMBOURNE TO CAMBRIDGE

Ecological Survey Validity Report 2024





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1 Introduction

1.1 SCHEME DESCRIPTION

- 1.1.1. The Cambourne to Cambridge (CtoC) Scheme is a new 13.6km public transport route proposed to connect Cambourne to Cambridge. A service road and maintenance track, to be used as an active travel path, will run alongside the segregated sections of busway. The CtoC Scheme will use hybrid vehicles (and in due course, electric vehicles), providing a service of around 10 buses per hour each way. The Scotland Farm travel hub (a park and ride facility) will be situated along the route, just north of the A428, approximately 5km west of Cambridge.
- 1.1.2. WSP provided a first issue of an Ecological Impact Assessment (EcIA) in February 2022 and provided a revised report in July 2023. The EcIA baseline was informed by surveys that were undertaken by WSP and Cambridge Ecology Limited between 2018 and 2022. The EcIA informs the biodiversity chapter of the Environmental Statement.
- 1.1.3. The Chartered Institute of Ecology and Environmental Management (CIEEM) advice note on the Lifespan of Ecological Reports and Surveys, describes the timeframes that ecological survey data is considered valid. In line with this advice note, the ecology survey data used to inform the EcIA for CtoC has been assessed against this general advice to identify whether the survey data and subsequent recommendations in the EcIA remain valid and whether survey need to be repeated to inform the impact assessments or subsequent detailed design and detailed mitigation strategies.
- 1.1.4. For the purpose of this Technical Note it is assumed that the following key dates apply:
- Transport and Works Act order application – Q3/Q4 2024.
 - Public Enquiry – Q2/Q3 2025.
 - Detailed Design – 2025.
 - Construction 2026.

1.2 ECOLOGICAL BACKGROUND

- 1.2.1. Extensive ecology site surveys and assessment were undertaken by WSP between 2020 and 2022 to inform the EcIA, the methodology and results of these surveys are contained within the following technical appendices to the Environmental Statement:
- Appendix 5.1 Aquatic;
 - Appendix 5.2 Badger;
 - Appendix 5.3 Barn owl;
 - Appendix 5.4 Botanical;
 - Appendix 5.5 Bat activity;
 - Appendix 5.6 Bat roost;
 - Appendix 5.8 Breeding bird;
 - Appendix 5.9 Great crested newt;
 - Appendix 5.10 Hedgerow;
 - Appendix 5.12 Otter and water vole;
 - Appendix 5.13 Reptile;
 - Appendix 5.14 Terrestrial invertebrates; and
 - Appendix 5.15 Wintering bird.

1.2.2. Surveys were also undertaken for the Scheme between 2018 and 2021 by Mott MacDonald, Thomson Environmental Consultants and Cambridge Ecology were also used to inform the EclA. The results of these surveys are included in the following reports:

- Cambridge Ecology. (2017). Cambourne to Cambridge Better Public Transport: Protected Species Constraints Survey 2017 FINAL REPORT. Cambridge;
- Cambridge Ecology. (2017). Cambourne to Cambridge Better Public Transport: Great Crested Newt eDNA Survey;
- Cambridge Ecology. (2018). Badger Survey Report;
- Cambridge Ecology. (2018). Botany Survey Report;
- Cambridge Ecology. (2018). eDNA Great Crested Newt Report (and associated updated report);
- Cambridge Ecology. (2018). Great Crested Newt Survey Report;
- Cambridge Ecology. (2018). Invertebrate Survey Report;
- Cambridge Ecology. (2018). Phase 1 Habitat Survey Report;
- Cambridge Ecology. (2018). Cambourne to Cambridge Better Public Transport: Reptile Survey Report;
- Cambridge Ecology. (2019). Barn Owl Survey Report;
- Cambridge Ecology. (2019). Brown Hare Survey Report;
- Cambridge Ecology. (2019). Winter Bird Survey Report;
- Cambridge Ecology. (2019). Cambourne to Cambridge Better Public Transport: Great Crested Newt eDNA Survey Report;
- Cambridge Ecology. (2020). Stage 2 Bat Activity Survey Report 2020 final. Document reference: P0608-R-019d;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Phase 1 Habitat Survey, Hedgerow and Invertebrate Assessment. Document reference: P0879-R-003a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Stage 1 Bat Inspection Survey 2021. Document reference: P0879-R-001a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Breeding Bird Survey 2021. Document reference: P0879-R-005a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Great Crested Newt eDNA Survey, 2021 Update. Document reference: P0879-R-002a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Phase 2 Vegetation (NVC) Survey of Semi-natural Woodland, Un-improved Grassland and Arable Field Margins 2021. Document reference: P0879-R-008a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Reptile Survey 2021. Document reference: P0879-R-004a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Stage 2 Bat Activity 2021. Document reference: P0879-R-007a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Water Vole and Eurasian Otter Presence Absence Survey 2021. Document reference: P0879-R-006a;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: White Clawed Crayfish Presence Absence Survey 2021. Document reference: P0879-R-011a (Draft);
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Phase 1 Habitat Survey Appendix 5: Hedgerow Assessment 2021;
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Phase 1 Habitat Survey Appendix 4: Invertebrate Habitat Assessment 2021;

- The Greater Cambridgeshire Partnership. (2020). Barn Owl Survey and Mitigation Considerations, Cambourne to Cambridge (C2C) and Cambridge South East Transport (CSET) Phase 2;
- Thomson Environmental Consultants. (2015). Bourn Airfield, Cambridge, Cambridgeshire. Interim Breeding Bird Survey BCOU109 / 008 / 001;
- Thomson Environmental Consultants. (2018). Bourn Airfield. ES Volume 3: Ecology Survey Technical Reports BCOU110/001 10.1; and
- Thomson Environmental Consultants. (2021). C2C Bat Activity Survey Summary.

1.3 VALIDITY ASSESSMENT METHOD

1.3.1. The ecology survey data was assessed against the below criteria, from the CIEEM advice note on survey lifespan:

- Whether the Site supports, or may support, a mobile species which could have moved on to the Site or changed its distribution within the Site and surrounding area.
- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management.
- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.

1.3.2. As an extension to the above the data was assessed against the below criteria:

- Whether the original surveys were constrained in any way (in terms of access, timings, weather conditions, equipment used, number of surveyors, surveyor expertise).
- Whether additional surveys are likely to provide information that is material to the consent decision, the design of mitigation measures, or the impact assessment of the Scheme.

1.3.3. To identify whether there had been any significant changes in habitat which could affect the validity of the survey data in line with the CIEEM advice note, a suitably experienced ecologist undertook a site visit, to key areas within the scheme to identify any habitat changes which could change the baseline conditions. The areas that were visited are highlighted in Annex A Figure 1. The selection of these key areas was based on areas of the scheme which had previous access constraints or previous negative survey results for a protected species, but with habitat present that could be changeable. For example, grasslands that were previously intensively managed or ponds that were previously dry during past surveys that could now be managed less intensively or are seasonally wet.

2 Validity assessment

- 2.1.1. The habitats within CtoC were dominated by arable cropland, and there had been no change in these areas since the 2022 surveys. Arable crops can support ground nesting birds, but there had been no change in their potential to support nesting birds since the 2022 surveys.
- 2.1.2. There were also areas of grassland, including arable field margins, and grass fields. Based on the results of the site verification visit it did not appear that there had been changes of management to these habitats, and they had not changed significantly since the 2022 surveys. Grassland habitats can support reptiles and amphibians as well as ground nesting birds and provide suitable sett building habitat for badgers. There was however considered no significant change to the potential presence and significance of these species and species groups, as a result of a change in grassland habitat.
- 2.1.3. There are areas of woodland and scrub within the scheme. Based on the results of the site verification visit it did not appear that there had been changes of management to these habitats, and they had not changed significantly since the 2022 surveys. Woodland and scrub can support nesting birds, invertebrates, reptiles and amphibians and provide suitable sett building habitat for badgers. There was however considered no significant change to the potential presence and significance of these species and species groups, as a result of a change in woodland or scrub habitat.
- 2.1.4. There are numerous hedgerows across the scheme, which could support nesting birds. Based on the results of the site verification visit it did not appear that there had been changes of management to these habitats, and they had not changed significantly, or their potential to support nesting birds, since the 2022 surveys.
- 2.1.5. There were numerous water courses and large Sustainable Urban Drainage System (SUDS) ponds across the scheme in 2022 which provided suitable habitat for water vole and otter, aquatic macro-invertebrates and fish. The SUDS ponds were no longer within the scheme boundary in 2024. A number of watercourses will also no longer be impacted. The Bin Brook and Callow Brook which were the two watercourses with flowing water, which provided optimal habitat for a number of protected species, remained wet, with similar bankside vegetation. Additionally, other ditches which were previously dry, and considered suboptimal for species such as water vole, remained dry, and had not changed significantly since the 2022 surveys. There was considered no significant change to the potential presence and significance of water vole and otter, aquatic macro-invertebrates or fish as a result of changes to the watercourses within the Scheme.
- 2.1.6. There are a number of ponds across the scheme, which had potential to support amphibians including great crested newts (GCN). Cambridge Ecology undertook eDNA surveys in 2021, and all ponds had negative results. WSP undertook eDNA surveys in 2022 as a gap filling exercise, of all ponds not surveyed by Cambridge Ecology in 2021, where access was possible and the pond was wet. These results were all negative for GCN. There were three ponds within the scheme that were wet during the site verification visit and had been previously dry in 2022. Additionally, there was a pond that had not been surveyed in 2022 as a result of access constraints. During the site verification visit this pond was confirmed to be wet in 2024. Therefore, there was potential that GCN could be present within these ponds, and in suitable terrestrial habitat such as grassland and scrub, within 250m of these ponds. Risks to GCN were not identified in the EcIA, due to the negative eDNA results for the ponds surveyed in 2021 and 2022.

- 2.1.7. Coton Orchard is an area of intensive orchard for fruit trees, with some very mature orchard trees, and some areas that were classified as traditional orchard. This habitat was particularly valuable for invertebrates and breeding birds and has been designated as a County Wildlife Site (CWS) since the 2022 surveys, due to its status as an orchard. THE CWS citation also includes supporting information on invertebrate and bird communities considered to be present (using a mixture of CtoC and unverified data).
- 2.1.8. The Orchard habitat has not changed significantly since 2022, and its potential to support important assemblages of invertebrates has also therefore not changed, since the invertebrate surveys that were carried out here in 2022. Due to access constraints, no breeding bird surveys were carried out in Coton Orchard in 2022, and therefore breeding bird surveys are required in the orchard in order to ensure that risks to this group are adequately captured in the EcIA.
- 2.1.9. **Table TR5-16-2-1** summarises the results of the survey validity assessment for each group of surveys

Table TR5-16-2-1 – Validity assessment results

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
Habitat Surveys	<p>Cambridge Ecology undertook the following surveys in 2021:</p> <ul style="list-style-type: none"> Phase 1 Habitat surveys; Hedgerow surveys; and <p>Phase 2 Vegetation (NVC) Survey of Semi-natural Woodland, Un-improved Grassland and Arable Field Margins WSP undertook the following surveys in order to gap fill areas not surveyed by Cambridge Ecology:</p> <ul style="list-style-type: none"> NVC surveys in 2022; and UKHab survey of Coton Orchard in 2021. 	18 months to three years- in line with CIEEM advice note on the validity of ecological survey information.	Based on the site validity check there had been no significant changes to habitats reported within the 2021 to 2022 reports.	<p>Although the 18-month validity window has been surpassed for this survey type, in line with the results of the site validity check, it is considered that the baseline for habitats contained within the EcIA will not have changed, and therefore repeated habitat surveys are not required.</p> <p>The EcIA identified potential permanent adverse effects on habitats. Based on the results of the site validity check, this assessment is considered to remain accurate.</p>
Aquatic Ecology	<p>Cambridge Ecology undertook white-clawed crayfish surveys of the Bin Brook in 2021.</p> <p>WSP undertook aquatic ecology surveys in 2022, which comprised:</p> <ul style="list-style-type: none"> Aquatic ecology scoping assessment; 	18 months to three years - in line with CIEEM advice note on the validity of ecological survey information.	No significant changes to aquatic habitats were identified within the Scheme.	Although the 18 month validity window has been surpassed for this survey type, in line with the results of the site validity check, it is considered that the baseline for aquatic ecological features contained within the EcIA will not have changed, and therefore repeating aquatic ecology surveys have not been recommended.

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
	<ul style="list-style-type: none"> Aquatic macroinvertebrate surveys; and White-clawed crayfish habitat assessment. 			
Badger	WSP undertook badger surveys up to 250m from the Scheme where access was granted in February to July 2022.	Badgers are a mobile species, and so CIEEM recommend repeating surveys after 18 months.	No additional badger setts were identified on Site; however, the site visit did not include an in depth badger survey of the entire scheme.	<p>Although the 18 month validity window has been surpassed for this survey type it is considered unlikely that this will affect the potential impacts and mitigation proposals identified in the EclA.</p> <p>The mobile nature of badgers means there could be new setts within the scheme, however the EclA already recognise potentially permanent adverse effects on individual badger setts, and mitigation for badgers and their setts will be secured via a CEMP and Natural England mitigation licence. The EclA concluded that there would be no significant effects to badgers once mitigation has been implemented. The assessment within the EclA is considered to remain valid.</p> <p>Therefore, no further badger surveys are required at this stage.</p> <p>Pre-construction badger surveys will however be required as part of the</p>

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
				mitigation requirements for the scheme. These surveys should be secured by planning condition.
Barn owl	WSP undertook barn owl surveys in March to August 2022.	CIEEM recommend repeating surveys after 18 months due to the fact that trees could increase in suitability for barn owl, allowing barn owl to roost in trees that were not previously available.	<p>A full barn owl scoping survey for potential nesting and roosting habitat was not undertaken as part of the site validity check.</p> <p>There was limited presence of barn owl foraging habitat within the scheme, and this had not changed from the 2022 surveys.</p>	<p>Surveys for Barn Owl will be over two years old by the time of submission. On site conditions are likely to have remained unaltered in the intervening period and the data is considered robust to inform the submission.</p> <p>No nest sites are located within the scheme or immediate surrounding area, however updated surveys to inform mitigation proposals should be considered with regards to their protected status at detailed design stage.</p>
Breeding birds	<p>Cambridge Ecology undertook breeding bird surveys in 2021.</p> <p>WSP undertook additional breeding bird surveys in 2022 as a gap filling exercise.</p> <p>Due to access constraints in 2021 and 2022 breeding bird surveys were not undertaken in Coton Orchard.</p>	18 months to three years - in line with CIEEM advice note on the validity of ecological survey information.	No significant changes to habitats were identified during the site validity check, from the habitats present that were surveyed in 2022.	<p>Due to access constraints at Coton Orchard, during the historic surveys, and the recent designation of the site as a CWS, further surveys have been undertaken to ensure that potential impacts and effects identified within the EclA remain accurate. The results of these surveys and assessment will be included within a breeding bird report for the 2024 survey area.</p> <p>The habitat and its suitability for breeding birds across the rest of the scheme has not changed since 2022 and as such, it is considered that the impacts and effects identified within the</p>

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
				EclA remain accurate and the baseline information remains valid.
Wintering birds	WSP undertook wintering bird surveys in 2022.	18 months to three years - in line with CIEEM advice note on the validity of ecological survey information.	No significant changes to habitats since the 2022 surveys were identified during the site validity check.	<p>Based on the fact that the habitats have not changed within the scheme, it is not considered likely that there have been significant changes to the distribution of wintering birds throughout the scheme and surrounding area. Therefore, the baseline, mitigation and conclusions within the EclA remain valid.</p> <p>No further surveys for wintering birds have been recommended.</p>
Roosting bats	WSP undertook surveys for roosting bats throughout the scheme in winter and summer in 2022.	18 months to three years - in line with CIEEM advice note on the validity of ecological survey information.	A full ground level tree assessment for potential roost features for bats was not undertaken as part of the site validity check.	<p>The survey data is less than three years old and surveys included a comprehensive assessment for roosting bats during the hibernation period and active season (including maternity period). It is considered unlikely that the roost suitability of trees within the scheme will have changed significantly in the interim to alter the baseline assessment within the EclA.</p> <p>However, to ensure legal compliance and to ensure that the design of mitigation measures detailed within the EclA are based upon survey data from the most recent survey season, it is proposed that updated roost surveys are undertaken at detailed design stage and pre-construction where required. These measures are in line with the proposed</p>

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
				mitigation/additional survey measures outline within the EclA.
Foraging and commuting bats	<p>Cambridge Ecology undertook static bat detector surveys in 2020 and 2021.</p> <p>Thomson Environmental Consultants undertook bat activity transect surveys and crossing point surveys in 2021.</p> <p>WSP undertook a gap filling exercise for static bat detector surveys and suite of bat crossing point surveys across all linear habitat features in 2022.</p>	18 months to three years - in line with CIEEM advice note on the validity of ecological survey information.	The site validity check did not identify any significant changes in potential habitat for foraging and commuting bats.	<p>The bat activity surveys cover a three-year period, with the most recent update surveys completed during 2022 across all crossing features within the scheme. The crossing features recorded within the Proposed Scheme have been subject to a number of years survey, and it is considered that the assessment within the EclA remain valid and any additional survey would not alter the mitigation and compensation design. Therefore, it is considered that the survey data will be valid for submission.</p> <p>Therefore, no further surveys are recommended for foraging and commuting bats to inform the EclA.</p>
Otter	Otter surveys were undertaken by WSP in 2022.	18 months to three years - in line with CIEEM advice note on the validity of ecological survey information.	<p>The Bin Brook was the only water course on CtoC that was identified to be suitable for otter holt building. This habitat has not changed in suitability since 2022.</p> <p>No conclusive evidence of otter was identified during the surveys.</p>	<p>Otters are a mobile species, and there is potential that they could be present in water courses on the scheme.</p> <p>Given the potential for holt building with the Bin Brook – surveys at detailed design stage and pre-construction should be undertaken to ensure impacts upon otter are mitigated appropriately during construction of the scheme. These surveys can be combined with water vole surveys (see below).The EclA identified the potential for temporary adverse impact to otter</p>

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
				foraging and commuting along the Bin Brook , which would be mitigated for with measures secured in the CEMP. Therefore, the recommendations made within the EcIA remain valid.
Water vole	Water vole surveys were undertaken by WSP in 2022.	18 months to three years - in line with CIEEM advice note on the validity of ecological survey information.	<p>Ditches identified as optimal habitat in 2022 were not assessed for validity, as this would not result in a change of the conclusions in the EcIA. These ditches are illustrated in Annex B Figure 2.</p> <p>Where access allowed, the suboptimal ditches were visited during the 2024 validity check which confirmed that the habitat had not changed in suitability for water vole and remained sub-optimal. These ditches are illustrated in Annex B Figure 2. The ditches that were sub-optimal in 2022 but had access limitations in 2024 are also illustrated in These ditches are illustrated in Annex B Figure 2.</p> <p>The validity of data on the ditches that will no longer be</p>	<p>Water voles are a mobile species, the population density and distribution could have changed within the optimal ditches since they were surveyed in 2022. This is however considered unlikely to have changed significantly enough to change the conclusions within the EcIA which identified a potential permanent adverse impact to water voles on a local scale.</p> <p>Additionally, due to the mobile nature of the species, there is potential that a small number of individuals could have populated the sub-optimal ditches since the 2022 surveys. However, due to the quality of habitat within these ditches, there is considered negligible potential that there would be a large enough new population to change the conclusions within the EcIA.</p> <p>Although the water vole data is considered valid to inform the EcIA, repeat surveys will be needed to inform mitigation and licensing for this species.</p> <p>These surveys will also inform the full licence application to be made prior to</p>

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
			impacted was not assessed in this note. Neither was the validity of data for the ditch that had habitat that was unsuitable in 2022 with little opportunity for change due to having concrete enforcement. These ditches are also illustrated in Annex B Figure 2.	construction. It is known that water vole are present withing Bin Brook and Callow Brook and that these watercourses are likely to be impacted by the scheme.
Reptiles	Cambridge Ecology undertook reptile surveys in April, May and June 2021. In 2022 WSP undertook reptile surveys, as a gap filling exercise to the Cambridge Ecology 2021 Survey.	Three years - in line with CIEEM advice note on the validity of ecological survey information.	The Site validity check identified that none of the habitats on site had changed significantly since 2022 to increase suitability for reptiles.	Considering the low number of reptiles identified in the Cambridge Ecology surveys, and the absence of reptiles in the 2022 surveys it is considered unlikely that a high number of reptiles are on site, and risks to individual reptiles on site could be mitigated through measures secured within the CEMP, as identified in the EcIA. The EcIA identified a permanent adverse impact to reptiles at a local scale, with no significant effects. Based on the results of this validity exercise, these conclusions remain valid, and surveys do not need to be repeated.
Amphibians	Cambridge Ecology undertook a series of GCN eDNA surveys in the survey seasons between 2017 and 2021.	CIEEM guidance would recommend surveys are repeated after three years, however this	There were two ponds which were not surveyed in 2022 as they were dry, and so GCN were assumed absent. During the 2024 site validity	In accordance with CIEEM and Natural England, the eDNA surveys that were carried out in 2021 by Cambridge Ecology and in 2022 by WSP are still considered valid.

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
	In 2022 WSP undertook GCN eDNA surveys of all ponds not surveyed in 2021 by Cambridge Ecology that were within 250m of the scheme and not separated by a major barrier.	is generalised across many survey types. Natural England guidance ¹ suggests that GCN survey data remains valid for four survey seasons depending on the likely impacts.	check, these ponds were wet. In addition, there were two ponds that were not accessible in the 2022 surveys and so did not receive eDNA, these were visited during the site validity check and were confirmed to be present and suitable for GCN. These are illustrated in Annex A Figure 1. All ponds that did receive GCN eDNA surveys in 2021 and 2022 had negative results indicating likely absence of GCN. These were not visited during the validity site check.	However, in order to determine presence or likely absence of GCN on the scheme it is recommended that the four ponds not surveyed in 2022 (due to access constraints and being dry) receive eDNA surveys in 2024 to ensure that the EclA remains valid for this species. If the repeat eDNA surveys confirm likely absence of GCN within these ponds the conclusion within the EclA that GCN were likely absent from the scheme, and the subsequent lack of assessment for effects to this species remains valid. Without the additional survey data, or if any of the ponds come back with positive results, the EclA may need to be updated to include an assessment of potential impacts and effects on GCN.
Invertebrates	Cambridge Ecology undertook invertebrate surveys in 2018. Cambridge ecology then undertook	Three years - in line with CIEEM advice note on the validity	The site validity check confirmed that there were no habitats on site that had changed significantly to	The EclA identified potential permanent adverse impacts to invertebrates on a local scale, with no significant effects. This assessment remains valid based on

¹ Natural England, 2022, [Great crested newts: advice for making planning decisions](https://www.gov.uk/government/publications/great-crested-newts-advice-for-making-planning-decisions) - GOV.UK (www.gov.uk)

Ecological Feature/ Survey Type	Existing Survey Data	Typical Validity Time	Results of Site Validity Check	Evaluation and recommendations
	<p>an assessment for potential changes in habitat for invertebrates in 2021.</p> <p>WSP undertook terrestrial invertebrate surveys in 2022. These were focused on Coton Orchard, which was identified as a habitat of particular interest to invertebrates.</p>	of ecological survey information.	increase suitability for invertebrates, since the 2022 surveys.	the results of the validity check and no repeat invertebrate surveys are recommended.

Annex A

FIGURE 1 VALIDITY SITE CHECK ACCESS MAP





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- Legend
- Construction Boundary
 - Site verification access
 - Land assessed during site verification visit
 - GCN ponds accessed during site verification visit
 - Included in validity check due to being dry during 2022 surveys
 - Included in validity due to lack of access in 2022

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Drawing Status

Final

Job Title

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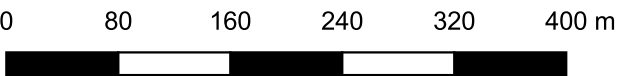
Drawing Title

2024 Site Validity Check

Scale at A1

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Stage 1 Check	Stage 2 Check	Originated	Date
MP	IE	JF	18/07/2024



Drawing Number

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Legend

- Construction Boundary
- Site verification access
- Land assessed during site verification visit
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2024 Site Validity Check

Scale at A1

1:10,000

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		Originated	JF
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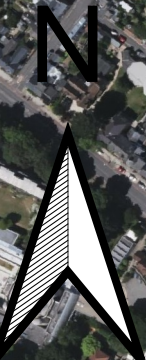
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Legend

- Construction Boundary
- Site verification access
- Land assessed during site verification visit
- GCN ponds accessed during site verification visit
- Included in validity check due to being dry during 2022 surveys
- Included in validity due to lack of access in 2022

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Job Title

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Drawing Title

2024 Site Validity Check

Scale at A1

1:4,000

Drawn	UKJIF001		
Stage 1 Check	MP	Stage 2 Check	IE
Originated	JF	Date	18/07/2024

0 60 120 180 240 300 m

wsp

Drawing Number

70086660

Annex B

FIGURE 2 WATER VOLE AND OTTER DITCHES FROM THE 2022 SURVEY SCOPE



Path: \\uk.vspgroup.com\central\data\Projects\70086660 - C2C TWAO Stage\03 WIP\Ecology\07 GIS & Mapping\OGIS Project\Survey validity note 2024\C2C Access Map.qgz



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

Legend

- Construction Boundary
- Water vole ditches from 2022 surveys
 - Sub-optimal no access in 2024- partially viewed where it met footpath under hedge, but heavily restricted view
 - Sub-optimal no access in 2024- partially viewed over gate, but heavily restricted view
 - Sub-optimal- included in 2024 validity check
 - Optimal with evidence of water vole in 2022 surveys
 - Not suitable- concrete channel in 2022, unlikely to become suitable
 - Ditches in the 2022 survey scope that will no longer to be impacted - not included in validity check

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Drawing Status

Final

Job Title

CtoC

Drawing Title

2024 Site Validity Check
Water Vole Ditches

Scale at A1

1:10,000

Drawn	UKJIF001		
Stage 1 Check	MP	Stage 2 Check	IE
		Originated	JF
		Date	18/07/2024

0 100 200 300 400 500 m

wsp

Drawing Number

70086660

Path: \\uk.vspgroup.com\central\data\Projects\70086660 - C2C TWAO Stage\03 WIP\Ecology\07 GIS & Mapping\OGIS Project\Survey validity note 2024\C2C Access Map.qgz



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Legend

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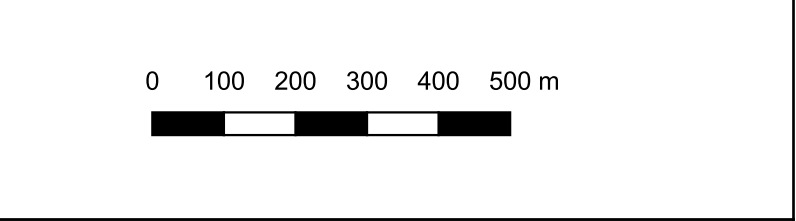
Drawing Status
Final

Job Title
CtoC

Drawing Title
**2024 Site Validity Check
Water Vole Ditches**

Scale at A1
1:10,562.91197

Drawn	UKJIF001		
Stage 1 Check	Stage 2 Check	Originated	Date
MP	IE	JF	18/07/2024



Drawing Number
70086660



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