Proof of Evidence – Biodiversity (Mr Guy Stone)

(Inquiries Procedure (England & Wales) Rules 2004)

January 2022

NRE12.2

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Acronyms and Abbreviations

Acronym/Abbreviations	Description
BNG	Biodiversity Net Gain
CCoC	Cambridgeshire County Council
CIEEM	The Chartered Institute of Ecology and Environmental Management
CPASI	Cambridgeshire and Peterborough additional species of interest
CPS	Cambridgeshire Priority Species
CSET	Cambridge South East Transport
CWS	County Wildlife Site
EIA	Environmental Impact Assessment
EPA	Environmental Protection Act
EPS	European Protected Species
ES	Environmental Statement
GCSP	Greater Cambridge Shared Planning
HoPIE	Habitat of Principal Importance in England
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
NERC Act	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
NVC	National Vegetation Classification
SAC	Special Areas of Conservation
SoPIE	Species of Principal Importance in England
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
TWAO	Transport and Works Act Order
WCA	Wildlife and Countryside Act 1981, as amended

1 Introduction

1.1.1.1 My name is Guy Stone. I am an Associate Technical Director – Ecology at Arcadis. I have been retained by Network Rail to provide specialist advice on Biodiversity matters pertaining to the Cambridge South Infrastructure Enhancements ("**CSIE**") Project ("the **CSIE Project**"). I have been an ecological consultant for 23 years. My experience has included the assessment of impacts on biodiversity resulting from linear infrastructure schemes including those for rail and road from the start of my career.

1.1.1.2 I am a full member of the Chartered Institute of Ecology and Environmental Management and a Chartered Environmentalist. I hold an MSc in Environmental Impact Assessment and a BSc in Botany.

1.1.1.3 My involvement in the CSIE Project began in January 2019 when Arcadis was awarded the contract to deliver the Environmental Impact Assessment to support the Transport and Works Act Order application ("the **TWAO application**"; "the **proposed Order**"). My role on the project was to undertake technical review of all Biodiversity reports completed as part of this commission. In this regard, I have completed technical reviews of the Biodiversity chapter of the Scoping Report and Environmental Statement (including the Biodiversity Appendices to this document) (**NR16**). I am also leading the ongoing biodiversity net gain ("**BNG**") calculations to support the detailed design for the proposed scheme.

1.1.1.4 As a technical reviewer for the CSIE Project I have a good understanding of the Biodiversity work that has been carried out and I have made a comprehensive site visit to the location of the CSIE Project.

1.1.1.5 I will provide evidence on all biodiversity matters including:

- A summary of ecological work carried out to date, the identified potential impacts and effects of the CSIE Project on biodiversity assets, the mitigation proposed, and any residual effects anticipated. These are summarised from the various biodiversity reports that have been produce as part of the TWAO application and are presented in **Section 4 and 5** of my evidence
- Responses to objections that refer to biodiversity. These are presented in **Section 6** of my evidence.
- My conclusions as to the significance of the main residual effects on biodiversity and the implications for the CSIE Project.

1.1.1.6 My evidence will cover the issues identified at point 3(i), point 4, and relevant aspects of point 7, in the Secretary of State's Statement of Matters dated 27 October 2021.

1.1.1.7 My evidence will be broken down into the following sections:

a) Section 1: Introduction
b) Section 2: CSIE Project Overview
c) Section 3: Summary of Proof
d) Section 4: Legislative and Policy Context
e) Section 5: Works Undertaken to Date
f) Section 6: Effects of the CSIE Project Upon Biodiversity
g) Section 7: Response to Objections
h) Section 8: Conclusions
i) Section 9: Declaration

2 CSIE Project Overview

2.1 Summary

2.1.1.1 The CSIE project will provide a new railway station and associated infrastructure approximately 3.5km south of the city of Cambridge. It is comprised of three main components:

- A new connection between existing lines at Hills Road (to improve the southern access to Cambridge Station);
- A new Cambridge South station; and
- Junction improvements at Shepreth Branch junction

2.1.1.2 The station development includes four platforms, forecourts, new access paths for pedestrians and cyclists and parking.

2.2 Aspects Relevant to Biodiversity

2.2.1.1 Developments have the potential to result in a loss of biodiversity, either as a result of loss of habitat or impact on protected species or areas designated for nature conservation.

2.2.1.2 The key questions for the Project relating to biodiversity are therefore:

a) Will the CSIE project result in a loss of biodiversity value (either temporary or permanent)?
b) Does the CSIE Project have the potential to impact any protected species, either during its construction or operation phase?
c) Does the CSIE Project have the potential to impact any statutory or non-statutory designated sites?
d) Are any of these impacts significant at a local or national level?

2.2.1.3 Construction activities which have the potential to impact on biodiversity may include:

a) Vegetation clearance of the development footprint and works areas
b) Earth works and movement
c) Demolition works associated with track improvements
d) Rail improvement works and additional track and signalling works
e) Construction of the proposed station and associated infrastructure, access routes and compound areas
f) Creation of amenity areas and soft landscaping
g) Changes in lighting, noise, vibration and air or water quality

2.2.1.4 Operational activities which have the potential to impact on Biodiversity may include:

a) Activities associated with the operation and management of the new station and associated infrastructure and drainage
b) Direct or indirect impacts from the presence of new infrastructure and changes in the operation of the railway including lighting, noise, vibration, visual or air quality effects
c) Increased public access or recreational pressure
d) Activities associated with the management of newly created areas

3 Legislative and Policy Context

3.1.1.1 In this section of my evidence, I will outline the legislation and policy context that the biodiversity assessment has been carried out within.

3.2 Relevant legislation

3.2.1 Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

3.2.1.1 This Directive (abbreviated to "**The Habitats Directive**") (**B30**) is a European Council Directive adopted in 1992. Annex IV of the Directive lists the European Protected Species ("**EPS**") that member states should legislate to protect, Annex II lists those species for which provision within Special Areas of Conservation ("**SAC**") needs to be accommodated. The provisions of the Habitats Directive are transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (as amended) ("the **Habitats Regulations**").

3.2.2 Conservation of Wild Birds (2009/147/EC)

3.2.2.1 This Directive (abbreviated to "**The Birds Directive**") (**B31**) provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. Annex I of the Birds Directive lists the species and sub-species which are particularly threatened and for which member states must designate Special Protection Areas ("**SPAs**") for their survival.

3.2.2.2 The provisions of the Birds Directive are transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended) (**B32**).

3.2.3 Conservation of Habitats and Species Regulations 2017 (as amended by EU exit regulations 2019)

3.2.3.1 The Habitats Regulations provide for the designation of SPAs and SACs as part of the national site network of protected areas across the UK (**B33**). The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, so as to ensure their continued application following the UK's exit from the EU. The Habitats Regulations also provide protection for EPS from deliberate capture, killing or disturbance and make it an offence to destroy or damage the resting site or breeding site of an EPS. Those EPS which may be relevant to the CSIE Project include dormouse (*Muscardinus avellanarius)*, great crested newt (*Triturus cristatus)* and all horseshoe bat *(rhinolophidae)* and typical bat (*vespertilionidae)* species.

3.2.4 Wildlife and Countryside Act 1981, as amended (WCA)

3.2.4.1 The Wildlife and Countryside Act 1981 ("the **WCA**") (**B32**) provides for the designation of Sites of Special Scientific Interest ("**SSSIs**"), which are selected as the best national examples of habitat types, sites with notable species, and sites of geological importance (the latter of which are beyond the scope of this evidence).

3.2.4.2 Full protection is given under section 9 of the WCA to certain animals listed in Schedule 5, including those that may be relevant to the CSIE Project including dormouse and all bat species. Partial protection is also given under section 9 to certain other species, including reptiles.

3.2.4.3 All wild birds, their nests and eggs are fully protected under section 1 of the Act. In addition, Schedule 1 species such as the barn owl (*Tyto alba)* have additional protection, making it an offence to intentionally or recklessly disturb Schedule 1 birds.

3.2.4.4 Schedule 9 of the Act provides a list of non-native invasive species. It is an offence, under section 14 of the Act to release or allow to escape into, or to plant or otherwise cause to grow in the wild any plant which is included in Part II of Schedule 9, such as Japanese Knotweed (*Fallopia japonica*).

3.2.5 Natural Environment and Rural Communities (NERC) Act 2006

3.2.5.1 The Natural Environment and Rural Communities Act 2006 ("the **NERC Act**") (**B34**), section 40, requires that any public body or statutory undertaker in England and Wales must have regard to the purpose of conservation of biological diversity in the exercise of their functions. The intention is to help ensure that biodiversity becomes an integral consideration in the development of policies, and that decisions of public bodies work with the grain of nature and not against it. Section 40 of the NERC Act specifies the requirements for conserving biodiversity and section 41 requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. This list was developed in consultation with Natural England and consists of 56 Habitats of Principal Importance and 943 Species of Principal Importance. The Habitats and Species of Principal Importance that are relevant to the CSIE Project, include, but are not limited to; broadleaved woodland, corn bunting (*Emberiza calandra*), song thrush (*Turdus philomelos*), great crested newt, otter (*Lutra lutra*), water vole (*Arvicola amphibius*), common lizard (*Zootoca vivipara*) and grass snake (*Natrix helvetica*).

3.2.6 Environment Protection Act 1990 (as amended)

3.2.6.1 The Environmental Protection Act 1990 ("the **EPA**") (**B35**) imposes a duty of care with regard to the control of waste disposal in section 34. The EPA makes it an offence to consign or dispose of invasive plant material (as listed under Schedule 9 of the WCA) in a way that contravenes the Waste (Circular Economy) (Amendment) Regulations 2020 (**B36**). If invasive plants are located within the Site Boundary, this legislation will need to be considered. Giant Hogweed (*Heracleum mantegazzianum*) (listed in Schedule 9 of the WCA) was recorded adjacent to the proposed scheme boundary at Long Road Guided Busway bridge. There is the potential for this species to spread into the site.

3.2.7 Hedgerows Regulation 1997

3.2.7.1 The Hedgerows Regulations 1997 (**B37**) are intended to protect important countryside hedgerows from destruction or damage. "Important" hedgerows are those that meet a number of criteria as defined under Schedule 1 to the Hedgerows Regulations.

3.2.8 The Protection of Badgers Act 1992

3.2.8.1 The Protection of Badgers Act 1992 (**B38**) makes it an offence to kill, injure or take a badger in section 1. It also offers protection to badger setts, making it illegal to intentionally damage, destroy, obstruct access to or allow a dog to enter a sett, or to disturb a badger while it is in the sett.

3.2.9 The Environment Act 2021

3.2.9.1 The Environment Act 2021 ("the **2021 Act**"), Part 6, ss. 98-101 and Schedule 14 govern BNG in planning (**B39**). Their effect is to insert a new Schedule 7A into the Town and Country Planning Act 1990 ("the **1990 Act**").

3.2.9.2 Schedule 7A provides a deemed condition for "every planning permission granted for the development of land" that there be a gain of at least 10% in biodiversity in comparison with the pre-development biodiversity value (Schedule 7A, paragraphs 2(2) and (4); paragraph 13) ("the **BNG Condition**"). By paragraph 12(3) of that Schedule, this also applies to planning permission that is deemed to be granted, such as that under s. 90(2A) of the 1990 Act (for orders under the Transport and Works Act 1992).

3.2.9.3 Part 6 of will come into force on a date specified by the Secretary of State (s. 147(3)(s)). It is not yet in force. DEFRA in its consultation response stated that the Government will make provision in the 2021 Act "to set a transition period of two years" (with a footnote stating that this is 2 years from the Bill receiving royal assent). There is therefore currently no legal requirement under the Environmental Act 2021 to provide for a 10% increase in BNG.

3.3 Policy

3.3.1 National Planning Policy Framework (NPPF) 2021

3.3.1.1 The National Planning Policy Framework ("the **NPPF**") (**D1**) sets out how the planning system should protect and enhance nature conservation interest.

3.3.1.2 Section 15 of the NPPF is concerned with conserving and enhancing the natural environment and states that the planning system should achieve this by *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'* (§174(d)).

3.3.1.3 When determining planning applications, it states that local planning authorities should aim to conserve and enhance biodiversity and to refuse planning permission '*if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for*' with regard to any protection afforded to sites, habitats and species (§180(a)). The CSIE Project will conserve and enhance biodiversity value through the identification and mitigation of significant ecological impacts.

3.3.2 Cambridge Local Plan

3.3.2.1 The Cambridge Local Plan (**D6**) ("the **CLP**") has two policies related to biodiversity that are relevant to the CSIE Project. These are Policy 69 'Protection of sites of biodiversity and geodiversity importance' and Policy 70 'Protection of priority species'.

3.3.2.2 Policy 69 states, relevantly:

> 'In determining any planning application affecting a site of biodiversity or geodiversity importance, development will be permitted if it will not have an adverse impact on, or lead to the loss of, part or all of a site identified on the Policies Map. Regard must be had to the international, national and local

status and designation of the site and the nature and quality of the site's intrinsic features, including its rarity.

Where development is permitted, proposals must include measures:

a. To minimise harm;
b. To secure achievable mitigation and/or compensatory measures; and
c. Where possible enhance the nature conservation value of the site affected through habitat creation, linkage and management.'

3.3.2.3 Policy 70 states:

'Development will be permitted which:

a. Protects priority species and habitats; and
b. Enhances habitats and populations of priority species

Proposals that harm or disturb populations and habitats should:

c. Minimise any ecological harm; and
d. Secure achievable mitigation and/or compensatory measures, resulting in either no net loss or a net gain of priority habitat and local populations of priority species.

Where development is proposed within or adjoining a site hosting priority species and habitats, or which will otherwise affect a national priority species or a species listed in the national and Cambridgeshire-specific biodiversity action plans (BAPs), an assessment of the following will be required:

e. Current status of the species population
f. The species' use of the site and other adjacent habitats;
g. The impact of the proposed development on legally protected species, national and Cambridgeshire-specific BAP species and their habitats; and
h. Details of measures to fully protect the species and habitats identified.

If significant harm to the population or conservation status of a protected species, priority species or priority habitat resulting from a development cannot be avoided, adequately mitigated or, as a last resort, compensated for, then planning permission will be refused.'

3.3.2.4 The policies will ensure that development will only be supported where it can be adequately demonstrated that proposals will not have an adverse effect on biodiversity; and that, where required, suitable mitigation measures are acceptable and deliverable.

3.3.3 South Cambridgeshire Local Plan

3.3.3.1 The South Cambridgeshire Local Plan (**D8**) ("the **SCLP**") has two policies related to biodiversity that are relevant to the CSIE Project. These are Policy NH/4; 'Biodiversity' and Policy NH/5: Sites of biodiversity or geological importance'.

3.3.3.2 Policy NH/4 states:

'1. Development proposals where the primary objective is to conserve or enhance biodiversity will be permitted.

2. New development must aim to maintain, enhance, restore or add to biodiversity.

3. If significant harm to the population or conservation status of a Protected Species, Priority Species or Priority Habitat resulting from a development cannot be avoided (through locating

on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission will be refused.

4. Where there are grounds to believe that a proposal may affect a Protected Species, Priority Species or Priority Habitat, applicants will be expected to provide an adequate level of survey information and site assessment to establish the extent of a potential impact.
5. Previously developed land (brownfield sites) will not be considered to be devoid of biodiversity.
6. Planning permission will be refused for development resulting in the loss, deterioration or fragmentation of irreplaceable habitats, such as ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.
7. Climate change poses a serious threat to biodiversity and initiatives to reduce its impact need to be considered.*'*

3.3.3.3 A footnote to that policy explains that for the purposes of paragraph 3 of that policy, "Priority Species and Habitats are those that are identified within a Biodiversity Action Plan (BAP) and / or the Natural Environment and Rural Communities Act, 2006, Section 41"

3.3.3.4 Policy NH/5 states:

*'*1. Proposed development likely to have an adverse effect on land within or adjoining a Site of Biodiversity or Geological Importance, as shown on the Policies Map (either individually or in combination with other developments), will not normally be permitted. Exceptions will only be made where the benefits of the development clearly outweigh any adverse impact.
2. In determining any planning application affecting Sites of Biodiversity or Geological Importance the Council will ensure that the intrinsic natural features of particular interest are safeguarded or enhanced having regard to:
    a. The international, national or local status and designation of the site;
    b. The nature and quality of the site's features, including its rarity value;
    c. The extent of any adverse impacts on the notified features;
    d. The likely effectiveness of any proposed mitigation with respect to the protection of the features of interest;
    e. The need for compensatory measures in order to re-create on or off the site features or habitats that would be lost to development.
3. Where appropriate the Council will ensure the effective management of designated sites through the imposition of planning conditions or Section 106 agreements as appropriate'*.*

3.3.4 Cambridgeshire and Peterborough Biodiversity Group

3.3.4.1 The Cambridgeshire and Peterborough Biodiversity Group combines a range of bodies including statutory and non-statutory government organisations and non-government organisations. This group sets out Cambridgeshire Priority Species for conservation ("**CPS**")as well as Cambridgeshire and Peterborough additional species of interest ("**CPASI**") (**D50)**. The priority species which are be relevant to the CSIE Project include several bird and bat species, great crested newt, otter, water vole and reptiles such as grass snake and common lizard. Several bird, terrestrial invertebrate and plant species are listed as CPASI.

3.4 Guidance

3.4.1.1 The Chartered Institute of Ecology and Environmental Management ("**CIEEM**") Guidelines for ecological impact assessment in the UK and Ireland: terrestrial, freshwater, coastal and marine, 2018 (D51) were followed as core guidance for the biodiversity assessment within the Environmental Statement (ES, NR16) assessment.

3.4.1.2 Natural England Biodiversity Metric 2.0 (JP029) (**D52**) has been applied as the tool to measure and record biodiversity value and assess losses and gains. Biodiversity Net Gain – Principles and Guidance for UK Construction and Developments versions of 2016 and 2019 (**D53** and **D54**), has been followed for practical advice to achieve net gain in the UK's land and freshwater environment.

3.4.1.3 Network Rail's Biodiversity Action Plan (**D74**) has been considered. This sets Network Rail's vision of a lineside managed sustainably for safety, performance, the environment, customers and neighbours and outlines ambitions for biodiversity assets, and intensions to protect, manage and enhance their condition over the next 15 years.

3.4.1.4 Network Rail's Environmental Sustainability Strategy (**D55**) has been considered. This outlines plans to create a cleaner, greener railway over the next 30 years including improved biodiversity of plants and wildlife.

3.4.1.5 Habitat and species-specific guidance documents that have been used as part of the TWAO assessment are listed in Table 1 below

Table 1: Habitat and species-specific guidance

Survey	Guidance
Plants and Habitats	Handbook for Phase 1 habitat survey (**D56**) Hedgerows Regulations Guidelines (**B37**) National Vegetation Classification: Users' handbook (**D83**) Natural England Biodiversity Metric 2.0 (**D52**)
Great Crested Newt	Habitat Suitability Index for Great Crested Newt (Available upon request eDNA Sampling Guidance (Available upon request) Great Crested Newt Conservation Handbook (**D84**) Great Created Newt Mitigation Guidelines (**D85**) Chartered Institute of Ecology and Environmental Management's (CIEEM) Technical Guidance document Competencies for Species Survey: Great Crested Newt (**D86**)
Reptiles	Herpetofauna workers' manual. (**D87**) Froglife Advice Sheet 10 (**D88**)
Breeding and Wintering Birds	Bird Monitoring Methods: A Manual of Techniques for UK Key Species (**D76**)
Barn Owl	Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment (**D89**)
Bats	Bat surveys for professional ecologists: Good practice guidelines (**D90**) Core Sustenance Zones: Determining zone size (**D91**)
Otter and Water Vole	Water Vole Conservation Handbook (**D92**) The Water Vole Mitigation Handbook (**D93**) CIEEM Competencies for Species Survey: Water Vole (**D94**) CIEEM competencies for Species: Eurasian Otter (**D95**)
Badger	Harris, Cresswell and Jefferies (1989) (Available upon request)

4 Work Undertaken to Date

4.1.1.1 A comprehensive suite of biodiversity assessments and surveys have been carried out as part of the TWAO application for the CSIE Project. These include desk-based assessments, multiple Phase 1 habitat surveys, protected species surveys (including great crested newt, bats, birds and reptiles) and multiple BNG assessments.

4.2 Preliminary Ecological Appraisal

4.2.1.1 A Preliminary Ecological Appraisal for the CSIE Project was completed in July 2019 (Appendix 8.2 of the ES, **NR16**). This included a desk-based assessment and an extended Phase 1 habitat survey.

4.2.1.2 The desk-based assessment identified 11 statutory designated sites and 24 non-statutory designated sites within the search area. This included Hobson's Brook (located within the site, south of Addenbrooke's Road); and Triangle North of Long Road (located outside the deemed planning permission boundary but within the TWAO limits).

4.2.1.3 Both of these sites were considered to not be significantly affected by the CSIE Project; vegetation clearance surrounding Hobson's Brook will be kept to a minimum, and standard control measures used to ensure that neither site will be significantly affected.

4.2.1.4 Nine-Wells Local Nature Reserve ("**LNR**") was also identified. Habitat links from the proposed scheme area to the LNR include hedgerows and Hobson's Conduit.

4.2.1.5 The Phase 1 habitat survey identified the Habitat of Principal Importance ("**HoPIE**") broad-leaved semi-natural woodland on site. It also identified the sites suitability to support the following protected species:

a) Fish
b) Great crested newt
c) Reptiles
d) Birds
e) Bats
f) Water vole
g) Otter
h) Badger
i) Other mammals

4.2.1.6 Additionally, it laid out recommendations for mitigation and enhancement on site where necessary.

4.3 Further Surveys

4.3.1.1 As a result of these findings the following further protected species surveys were undertaken on site to determine the presence/absence of species, as well as the potential population size and use of the site by these species.

a) Great crested newt
b) Reptile
c) Birds (wintering and breeding bird surveys)
d) Bats (surveys for bat foraging and roosting)

e) Badger
f) Otter and water vole

4.3.1.2 The findings of these surveys were presented as appendices in the Environmental Statement (Appendices 8.3 – 8.8, **NR16**), and their results influenced the findings of this document.

4.3.1.3 These surveys identified the following protected species constraints

a) There was a small population of great crested newt on site
b) There was a low population size of common lizard on site
c) The site supported 19 protected or notable species of bird during the breeding season, including corn bunting
d) The site supported 25 species protected or notable species of bird during the wintering season
e) A range of bat species, including barbastelle, foraged on site and a commuting route was identified from the woodland in the north, along the railway under the Long Road Railway Bridge and heading south towards the woodland east of the railway line. A pipistrelle roost was discovered within Long Road Guided Busway Bridge, beyond the proposed scheme boundary.
f) Although no evidence of otter was found, it is still thought likely that this species was utilising the site.
g) Low populations of water vole were confirmed to be using waterbodies on site.

4.4 Biodiversity Net Gain Assessments

4.4.1.1 A BNG assessment of the CSIE Project has been carried out using Natural England metric 2.0 (**D52**). Several iterations of the calculation have been produced, updated due to changes to the site boundary, landscaping plans and plans for the construction phase of the project.

4.4.1.2 Prior to the publication of the ES the development was set to produce a decrease of 12.04 biodiversity units from the baseline which was 244.28 area-based habitat units. This represents a 4.93% decrease in BNG for area-based habitat units.

4.4.1.3 Since this estimation and subsequent to the submission of the ES, further calculations have been undertaken, as the design has been updated. The further calculations show estimates for an 18.64 decrease in habitat units (7.57% decrease) with spoil being stored offsite. This is outlined in 158454-ARC-ZZ-ZZZ-REP-ENV-000008 - Technical Note – Biodiversity Net Gain Assessment updated TWAO boundary (Appendix A).

4.4.1.4 The CSIE Project is committed to achieving 10% BNG. In order to secure 10%, a combination of the following options were explored, with onsite habitat creation prioritised:

- Habitat creation and enhancement onsite;
- The purchasing of additional land to provide space to build new habitat;
- Purchasing biodiversity units from 3rd party organisations; or
- Working with 3rd parties such as local authorities, trusts, etc. to deliver biodiversity units on their land.

4.4.1.5 Subsequent to the submission of the ES, Network Rail have liaised with Cambridgeshire County Council with a view to providing offsite habitat creation at Lower Valley Farm, Fulbourn as it will not be possible to achieve 10% BNG through onsite habitat creation alone. This liaison has been undertaken by Network Rail and is addressed further in the Proof of Evidence of Mr Pearson (NRE9.2).

4.5 NR16 Environmental Statement

4.5.1.1 An ES was produced for the CSIE Project and was issued in June 2021. This assessed the overall impact of the scheme on biodiversity, as well as the residual effect on individual ecological receptors after the implementation of mitigation. Table 8-15 in the ES (**NR16**) outlines the potential effect, necessary mitigation and residual effect significance of each impact to each receptor identified.

4.5.1.2 The ES identifies all potential ecological receptors of site or greater importance for biodiversity, which have the potential to be affected by the CSIE development. Mitigation is suggested for offsetting effect on these receptors, allowing any residual effects to be identified once mitigation has been completed.

4.5.1.3 An assessment of the cumulative effects of other nearby developments on ecological receptors, stakeholder input and mitigation has also been included within the ES.

4.5.1.4 The ES adequately covers potential effects relating to biodiversity using appropriately qualified ecologists, industry standard, survey and assessment guidance and adheres to local and national legislation and policy requirements.

4.6 Additional Work Undertaken Subsequent to the Submission of the ES

4.6.1.1 Since the submission of the Environmental Statement (**NR16**) in June 2021, work has continued on the CSIE Project. This has included aspects relevant to biodiversity. In this section of my evidence, I will outline any work carried out regarding biodiversity since the Environmental Statement was issued.

4.6.2 Updated Phase 1 Surveys

4.6.2.1 Since the initial Phase 1 habitat survey of the site in May 2019, two further Phase 1 surveys have been completed. This is to ensure that the habitat information data for the site is up to date and accurate.

4.6.2.2 The first update was to inform the ES and was completed in October 2020. The most recent Phase 1 survey update was completed in July 2021.

4.6.3 Biodiversity Net Gain Assessments

4.6.3.1 As described in section 4.3 of this document, the Natural England Biodiversity metric 2.0 (**D52**) has been run for a number of different scenarios, most recently in November 2021. This was undertaken due to changes in the construction plan and design, subsequent updates of the landscape design, as well as updated baseline habitat information from the final Phase 1 survey. This calculation has been kept up to date to allow its utilisation decision making regarding mitigation, enhancement and habitat creation. As noted previously, the latest version of this Assessment is supplied as Appendix A.

4.7 Engagement with Stakeholders

4.7.1.1 Table 2 provides a summary of consultation with stakeholders with during the Environmental Statement production and how the views expressed were addressed.

Table 2: Summary of consultations during the ES production

Consultee/Contact/Date	Summary of Consultee Issue	How Addressed?
Natural England / Julie Lunt (Operations Delivery) / 26th June 2020	Natural England has advised that it is not a priority for them to comment on the detail of this EIA. They expect the final ES to include all necessary information as outlined in Part 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017.	All necessary information as outlined in the Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006 as amended has been included within the ES (**NR16**).
Environment Agency / Neville Benn (Senior Planning Advisor / 3rd March 2020	No comments in relation to biodiversity.	N/A
Cambridgeshire County Council (CCoC) / Deborah Ahmad (Ecology Officer / 11th September 2020	Request for ecological work to include relevant associated infrastructure enhancements.	Relevant infrastructure enhancements associated with the proposed Development were covered in the section 8.4 of the ES (**NR16**).
	Requested for the avoidance of important flora present within Triangle North of Long Road County Wildlife Site (CWS) and for opportunities to enhance this site to be exploited.	No direct impacts are proposed within the Triangle North of Long Road CWS. A full assessment of any indirect effects has been provided in section 8.5 of the ES (**NR16**).
	Asked for avoidance of impacts on the important ecological features of Hobson's Park, appropriate mitigation and compensation for residual impacts. Proposed infrastructure and increased visitor pressure on the park should be taken into account.	A full impact assessment, including increased visitor pressure, has been undertaken for Hobson's Park and appropriate mitigation and compensation for residual impacts has been provided in section 8.4 and 8.5 of the ES (**NR16**).
	Requested appropriate habitat and National Vegetation Classification (NVC) surveys are undertaken. Requested impacts on priority habitats are avoided or adequately mitigated. Highlighted concern over loss of Open Mosaic Habitats on Previously Developed Land and requested creation of these habitats where possible.	The area of Open Mosaic habitat is within the Triangle North of Long Road. This area is outside the site boundary and as such, no impacts are anticipated.
	Requested the use of clear span bridges over watercourses rather than culverts to preserve their integrity as wildlife corridors.	This has been noted and considered within the design and assessment in section 8.4 of the ES (**NR16**).

Consultee/Contact/Date	Summary of Consultee Issue	How Addressed?
	Requested that plants are assessed in their own right, particularly notable/important plants translocated from the Cambridge Guided Busway development (e.g. Dittander *Lepidium latifolium*, Wild Liquorice *Astragalus glycyphyllos* and Twiggy Mullein *Verbascum virgatum*).	Notable and/or protected plant species are fully assessed within section 8.3 to 8.5 of the ES (**NR16**).
	Stated that great crested newt may not have yet colonised the balancing ponds and therefore there should be contingency within the design of the proposed development to resurvey these ponds for this species.	Pre-construction surveys of ponds and appropriate licencing has been recommended in the assessment in section 8.4 of the ES (**NR16**).
	Highlighted the value of the rail corridor as a commuting and foraging route for bats and requested detailed assessment is undertaken and opportunities to strengthen the habitat connectivity for bats are explored.	This has been noted and considered within the assessment in section 8.3 and 8.4 of the ES (**NR16**).
	Requested consideration is given to impact on priority species and Cambridgeshire and Peterborough Additional Species of Interest.	Both priority species and additional species of interest have been considered within the assessment in section 8.3 to 8.5 of the ES (**NR16**).
	Requested the biodiversity impact assessment demonstrates the 10 principles of BNG set out in CIEEM's 2016 & 2019 guidance documents. Requested biodiversity enhancement aims to deliver local / strategic priorities. Stated that a target of 20% BNG was appropriate. This target will be further discussed with Greater Cambridge Shared Planning (GCSP) and the CCoC.	CIEEM's 2016 & 2019 guidance documents have been used to inform this document. The proposed Development aims to deliver a minimum of 10% net gain using the Natural England Metric 2.0 calculation tool. As the site cannot be expanded further, other options including purchasing additional land, purchasing biodiversity units and working with 3rd parties are currently being explored to ensure BNG. BNG is discussed between paragraphs 8.5.113 to 8.5.117 of the ES (**NR16**).

Consultee/Contact/Date	Summary of Consultee Issue	How Addressed?
	Expressed concern that Network Rail are using their in-house model for biodiversity metrics rather than the Natural England metric 2.0 model or a Warwickshire model that has been locally adapted for Cambridgeshire. Requested the workings of the metric must be transparent and deviations from the Natural England metric 2.0 / Warwickshire model for Cambridgeshire must be justified, particularly the "time taken to reach target condition".	Natural England metric 2.0 model BNG Calculator has been used for the ecological impact assessment. BNG is discussed in paragraphs 8.5.113 to 8.5.117 of the ES (**NR16**).
CCoC / Deborah Ahmad (Ecology Officer / 8th October 2020	Concern over proposed alterations to Hobson's Park and potential for significant ecological impacts. Request for minimising impacts and adequate compensation to be provided.	Full impact assessment of Hobson's Park has been undertaken in section 8.4 and 8.5 of the ES (**NR16**).
	Raised the location of Triangle North of Long Road County Wildlife Site, Drawing 158454-ARC-00-TL-DRG-LEP-200005 revision P06 had been plotted incorrectly. Emphasised that any work within this site should be raised with CCoC and the Wildlife Trust for Bedfordshire, Cambridgeshire and Peterborough.	The triangle North of Long Road CWS boundary has been corrected on subsequent drawings. Need for liaison noted.
	Asked for invertebrate surveys to be undertaken in areas of Open mosaic habitat, early developing / ephemeral habitats and more established grassland.	Invertebrate surveys were not undertaken as the habitats onsite were not established enough to warrant survey. A desk assessment of invertebrates is provided in section 8.3 of the ES (**NR16**).
	Comment raised that insufficient area within the Site Boundary is available to deliver measurable BNG. Suggested that the Site Boundary is expanded to enable the expansion of Hobson's Park and Nine Wells Local Nature Reserve (LNR) or widen the wildlife corridor along the Hobson's Brook, linking with other habitats of biodiversity value.	The proposed development aims to deliver a minimum of 10% net gain using the Natural England Metric 2.0 calculation tool. As the site cannot be expanded further, other options including purchasing additional land, purchasing biodiversity units and working with 3rd parties are currently being explored to ensure BNG. BNG is discussed between paragraphs 8.5.113 to 8.5.117 of the ES (**NR16**).
GCSP / Guy Belcher (Biodiversity Officer) / 19th June 2020	Clarification that the (Arcadis) survey record for marsh warbler *Acrocephalus palustris* is an error.	Survey record corrected to reed warbler *Acrocephalus scirpaceus* in all reports.

Consultee/Contact/Date	Summary of Consultee Issue	How Addressed?
	City Council are looking for measurable net gain, as per the NPPF. There is no set target for net gain; larger developments are looking at minimum of 10% (as recommended in draft Environment Bill). Given that the station is proposed on land already marked for biodiversity mitigation, discussion to be had on whether this should be increased; cumulative effect on net gain needs to be investigated (Cambridge South East Transport (CSET) proposing development around Nine Wells LNR, there is therefore a potential opportunity to look at a combined offer for off-site mitigation).	The proposed development aims to deliver a minimum of 10% net gain using the Natural England Metric 2.0 calculation tool. As the site cannot be expanded further, other options including purchasing additional land, purchasing biodiversity units and working with 3rd parties are currently being explored to ensure BNG. BNG is discussed between paragraphs 8.5.113 to 8.5.117 of the ES (**NR16**).
	Stated Hobson's Conduit Trust are proposing their vision for enlarging Nine Wells LNR.	This has been noted.
	Asked if any work has been undertaken to understand anticipated footfall with Hobson's Park. Council have been informed pedestrian flows are part of the Transport Assessment, which links to other assessments – ecology impacts, socio-economics and health.	The implications of increased activity in Hobson's Park have been assessed in section 8.4 and 8.5 of the ES (**NR16**).
	Requested for the assessment to consider impacts during construction on local species, ways to protect species during construction and restoration schemes post-construction as quickly as possible. Council have been informed protection and mitigation may be tied into offsetting and opportunities would be explored to use areas south around Hobson's Brook for mitigation and offsetting, close to habitats that could be lost so species can move into new habitats nearby.	A full assessment of construction impacts has been made and are detailed in full in Section 8.5 of the ES (**NR16**).
South Cambridgeshire District Council (SCDC) / Daniel Weaver (Senior Ecologist) / 9th September 2020	Stated that there are records of water vole, reptiles, and invasive species in Hobson's Brook so these need to be assessed. Granham's Farm has records of bats and great crested newts so in terms of protected species there would need to be proper assessments prior to any permission being given.	A full assessment of all species likely to present within the Site Boundary are detailed in full in Section 8.5 of the ES (**NR16**).

Consultee/Contact/Date	Summary of Consultee Issue	How Addressed?
Royal Society for the Protection of Birds / Daniel Pullen / 9th June 2020	Unlikely to engage with the proposed development formally as this seems unlikely to affect any nationally/internationally designated sites or priority species.	N/A
The Wildlife Trust BCN / Martin Baker / 11th September 2020	Expectation to adequately cover protected species and designated nature conservation sites.	A full assessment of all designed sites and protected species likely to be present are detailed in full in Section 8.5 of the ES (**NR16**).
	Concern over adequate coverage of the impacts arising from the loss, damage and disturbance to the new natural greenspaces provided at Hobson's Park and need for significant compensatory measures.	A full assessment of all impacts to Hobson's Park has been undertaken in section 8.4 and 8.5 of the ES (**NR16**).
	Commented that no details are provided for the bespoke Network Rail method of assessing BNG that we would use, so cannot determine if it appropriately or adequately reflects recent improvements to methods being tested through the Defra / Natural England Biodiversity Metric 2.0.	Natural England metric 2.0 model BNG Calculator has been used for the ecological impact assessment. BNG is discussed in paragraphs 8.5.113 to 8.5.117 of the ES (**NR16**).

4.7.2 Further Engagement

4.7.2.1 Since the submission of the ES in June 2021, there has been further liaison between Network Rail and Cambridgeshire County Council regarding the possibility for the use of land at Lower Valley Farm, Fulbourn for offsite habitat creation. As noted above, further detail on this liaison is given in the Proof of Evidence of Mr Pearson (**NRE9.2**).

5 Effects of the CSIE Project Upon Biodiversity

5.1.1.1 In this section of my evidence, I set out evidence relating to the main ecological asset which has the potential to experience significant effects from the CSIE Project, as identified by the ES. This is the loss of woodland habitat associated with the development

5.1.1.2 In addition, I cover several ecological receptors which are not thought to be significantly affected by the CSIE Project, but which have been raised in objections and comments as areas of interest.

5.2 Findings of the Environmental Statement

5.2.1.1 The ES identified one receptor which has the potential to be impacted on any significant level by the CSIE Project. This was the loss of woodland habitat associated with the development, which was considered to be significant at a local level.

5.2.1.2 The Phase 1 survey identified broadleaved and mixed plantation woodland on site, as well as a small area of semi-natural woodland. Broadleaved semi-natural woodland is a HoPIE under the NERC Act and is a Local Biodiversity Action Plan ("**LBAP**") priority habitat for Cambridgeshire and Peterborough.

5.2.1.3 Under the updated (post ES) scheme design, the area of semi-natural woodland is retained within the post-development habitats. There is a loss of 1.21ha of plantation woodland due to the CSIE Project. The post development habitats include 1.56ha of woodland habitat within the scheme, this includes both habitat, which is temporarily lost and then reinstated, and areas of new planting.

5.2.1.4 A further 5.42ha (or 13.93 units) of woodland will be planted offsite. This additional planting, with habitat creation for other habitats, will ensure 10% BNG is achieved.

5.2.1.5 Although this is an increase in overall area of woodland habitat, it will be expected that newly planted semi-natural woodland will take in excess of 32 years to become sufficiently established and mature to offset the predicted losses. Overall, a minor adverse level of impact on the county-level important woodland resource will persist for the short and medium-term (up to 30 years). This will result in residual negative effects that will be Significant at a Local level. This long-term effect will be slight beneficial, with the maturing of the woodland planting.

5.3 Other Ecological Receptors

5.3.1.1 Although not identified as being significantly affected in the ES, objections and concerns have been raised regarding the ecological receptors covered below.

5.3.2 Nine Wells LNR

5.3.2.1 Nine Wells LNR is located 90m East of the site. It is currently designated for its habitat value, although in the past was designated as an SSSI for its freshwater invertebrate interest. Following a drought in 1976 these species were lost to the site. However, there are now plans to improve conditions in the LNR and possibly reintroduce some of these rare invertebrates. It is currently being managed with a view to ensuring greater resilience to drought (via a groundwater recharge scheme).

5.3.2.2 It was also noted, during stakeholder engagement conducted for the ES, that the Hobson's Conduit Trust are proposing their vision for enlarging Nine Wells LNR.

5.3.2.3 This site is hydrologically linked to the CSIE Project as it is the source of Hobsons Conduit, which flows from Nine Wells LNR, under the railway to the south of Addenbrooke's Road and joins Hobson's Brook. Hobson's Brook flows through the Site Boundary south to north and under the existing railway near Shepreth Junction.

5.3.2.4 However, the watercourse originating at Nine Wells LNR is upstream of the site and therefore no impacts on groundwater feeding Hobson's Conduit are anticipated. The LNR is also 90m beyond the site boundary, meaning construction of the CSIE Project will not encroach on the site. The designation of LNR encourages appropriate public use and therefore increased disturbance from footfall is not anticipated from the current level.

5.3.2.5 The Environment Agency, submitted an objection on the grounds of hydrology (OBJ 5 - Environment Agency), however, this has since been withdrawn upon the receipt of resubmitted modelling information (OBJ 5 – W Environment Agency).

5.3.2.6 Therefore, no effects on this local nature reserve are anticipated from the CSIE Project.

5.3.2.7 It is also worth noting that Natural England have stated in their response to the Environmental Impact Assessment Scoping consultation (**NR7**):

'The scheme appears unlikely to pose a risk to any statutorily designated sites for nature conservation. We welcome the proposed approach to minimising impacts to the natural environment including locally designated sites such as Nine Wells Local Nature Reserve and Hobson's Park, watercourses and hydrology'

5.3.3 Corn Bunting

5.3.3.1 During breeding bird surveys undertaken in 2020, corn bunting were identified to hold territories within the site. There were estimated to be 10 territories within the survey area, which we estimated represented 20% of the breeding pairs throughout the county (although it is noted that this species is significantly under recorded in Cambridgeshire, leading to inflation of this estimate, as I explain below). This population was assessed as being important at the county level and it is acknowledged that without mitigation, a loss or disturbance of this population will be likely to adversely affect the conservation status and distribution of this species at the County scale.

5.3.3.2 Corn bunting are a Species of Principal Importance in England ("**SoPIE**"), and a CPS, meaning that they are a priority species for conservation within the England and Cambridgeshire. They also appear on the RSPBs red list of birds of conservation concern. They are a farmland bird which nest on the ground in cereal fields, set-aside, grass field margins or unimproved grassland. They eat seeds and insects and spiders which they forage from farmland.

5.3.3.3 For the purposes of this inquiry, we have revisited this 20% estimate based on new data which was not available at the time the ES was issued. The population percentage estimate was based on data from the 2017 Cambridgeshire Bird Report (**D58**), we now have access to the 2018 Cambridgeshire Bird Report (**D59**) and 2019 Cambridgeshire Bird Report (**D77**).

5.3.3.4 Table 3 presents the findings of all three reports and the corresponding estimates of percentage of county breeding pairs on site.

Table 3: Findings of Cambridgeshire Bird Reports in relation to corn bunting

Report	Total records	Number of territories recorded across Cambridgeshire	Comment on data	% estimate of county territories within site
2017	601	51	Significantly under recorded	20%
2018	408	151	Significantly under recorded	6.6%
2019	468	131	N/A	7.6%

5.3.3.5 The data presented in these reports indicates that the percentage of the county's breeding pairs represented by the 10 territories estimated on site may be smaller than initially thought. These reports also indicate that the number of territories are significantly under recorded in the county as a whole across at least two of the three reported years. Consequently, it is unlikely that 20% of the county's corn bunting territories are present on site. It is more likely that this population represents fewer than this given the significant under recording of these species within the county. Furthermore, even at 20% no likely significant residual effects were predicted due to the habitat creation measures to be implemented.

5.3.3.6 In addition, although some areas of arable and grassland habitat will be lost during the construction phase of the project, the majority of this land will be reinstated as cropland during the operational phase, meaning that this nesting and foraging habitat will only temporarily be lost for this species.

5.3.3.7 Much of the area adjoining the site was itself a construction site in 2017, with the 'Great Kneighton' development west of the site in Trumpington and the Cambridge Biomedical Campus east of the site taking place. Both these species are now present within Hobson's Park between these developments; this is a testament to the abilities of corn bunting and skylark to establish territories following disturbance.

5.3.3.8 Mitigation during construction will be secured through the approval of the Ecological Management Plan which will include the provision of providing favourable weed rich habitats, nesting cover and song posts within the limits of the order land. Network Rail have committed to ensuring retained and new habitats are managed to ensure a good condition is achieved, with regard to Natural England's The Mosaic Approach: Managing Habitats for Species (2013) (Appendix B).

5.3.3.9 The area of Hobson's Park will be reduced during construction and this may lead to more concentrated recreational use. Impacts on ground nesting birds will be reduced during construction through the use of appropriate signage. This will aim to keep people and dogs out of nesting habitat and monitoring of corn bunting and skylark along with noise monitoring will enable reactive decisions to be made on site. New habitat for Corn Buntings will be created along the edge of the proposed exchange land and during construction the provision of posts along the haul road on the field boundary could be considered in more detail.

5.3.3.10 I also note that during the stakeholder engagement for the ES, the Royal Society for the Protection of Birds indicated that they were unlikely to engage with the proposed development formally as the CSIE Project seems unlikely to affect any nationally/internationally designated sites or priority species.

5.3.4 Biodiversity Net Gain

5.3.4.1 The Natural England Biodiversity Metric 2.0 (**D52**) is a method of quantifying the effect that a development will have on habitats on a site. The calculation takes into account the type, size and quality of habitats on site both before the development (the baseline) and after the construction is complete (post-development). At the time of the publication of the ES version 2.0 was in use. Subsequent to this version 3.0 has been published; however, it is intended to continue applying version 2.0 to the CSIE Project to ensure consistency of results.

5.3.4.2 Network Rail have committed to achieving a 10% net gain with the CSIE Project.

5.3.4.3 The Metric has been calculated several times for this site, due to changes in landscape plans for post development, changes to the proposed site boundary and updates to the initial habitat survey to establish baseline habitats.

5.3.4.4 Two versions of the most recent set of calculations have been produced (Appendix A), this was due to two storage options for spoil storage, off site or within Hobson's Park in the site, leading to an area of grassland being temporarily lost and then reinstated.

5.3.4.5 Both options indicate that there will be a loss in overall habitat units due to the development, Network Rail have committed to storing spoil offsite.

5.3.4.6 Habitat creation, including tree and scrub planting, will be undertaken on a like-for-like basis or habitats of higher quality. In areas where grassland will be created, the species mix will be herb-rich and focussed on locally prevalent plant species that will benefit local invertebrate populations.

5.3.4.7 Although the iterative design has led to an increased site boundary that now extends beyond that used for construction to provide a greater area to enhance and create new habitats within the site, additional Biodiversity Units ("**BUs**") are needed offsite to meet 10% BNG.

5.3.4.8 Current calculations indicate that 43.27 (spoil stored offsite) BUs are required to achieve 10% BNG. Liaison between Network Rail and Cambridgeshire County Council has commenced regarding the use of land at Lower Valley Farm, Fulbourn for offsite habitat creation. This habitat will take the form of 8 ponds, with the remaining habitat being 50% grassland, 40% scrub or woodland. This will provide the necessary units needed to meet the 10% net gain target.

6 Response to Objections

6.1.1.1 In this section of my evidence, I respond to those objectors who have raised issues relating to biodiversity in their objections to CSIE. Six of the objections made reference to biodiversity. The objections that mentioned biodiversity were:

a) Objection 03 Astra Zeneca UK Limited and Medimmune Limited
b) Objection 07 Trumpington Residents Association
c) Objection 09 Medical Research Council
d) Objection 20 Dave Jackson
e) Objection 23 Cambridge City Council ("**CCiC**")
f) Objection 24 South Cambridgeshire District Council ("**SCDC**")

6.2 OBJ 03 and E2 – Astra Zeneca UK Limited and Medimmune Limited

6.2.1.1 AstraZeneca Ltd have raised objections relating to planning policy and the discharge of planning conditions they are bound by according to the CBC Outline Planning Permission (**"OPP"**) (06/0796/OUT). Those relevant to biodiversity are:

- The discharge of OPP Conditions 42 and 45. This included landscape tree planting along the western boundary of their development.
- The discharge of OPP Condition 7 which required a minimum of two strategic gaps of at least 25m in width within the biomedical and biotech research and development area The OPP condition states the gaps "shall not be occupied by any buildings".

6.2.1.2 The location of the proposed station buildings has resulted in a reduced area; therefore, these conditions cannot be discharged in the manner originally intended by Astra Zeneca. This is detailed in my colleague John Pearson's proof (**NRE9.2**).

6.2.1.3 Network Rail propose to amend Article 35 of the proposed TWAO to include additional paragraphs which deal with the consequential impacts of the proposed TWAO on the AstraZeneca planning permission as detailed further in my colleague John Pearson's proof (**NRE9.2**).

6.2.1.4 In order to ensure that the intention of the planning conditions on the AstraZeneca scheme are delivered and maintain the cumulative effects on biodiversity as Not Significant (as per Sections 8.5.140 to 8.5.143 of the ES (**NR16**)), Network Rail propose include additional planting within the CSIE Project. Consultation between the Greater Cambridge Shared Planning team and the CSIE Landscape Architect and Ecologist has been undertaken to determine an acceptable solution in the specified area. To replace the AstraZeneca western boundary planting additional trees and ecological features such as bat and bird boxes which were proposed along AstraZeneca boundary are to be included within the CSIE Project limits on the western side of the railway as part of the proposed landscape scheme. Network Rail have committed to increase biodiversity by 10%, consistently with what will be required by the proposed planning condition on BNG and the Environment Act 2021 (**B39**) in the future.

6.2.1.5 To mitigate the potential effect on the strategic gap Network Rail propose to instal a living green fence on the boundary between AstraZeneca and Network Rail. Details of the updated Design Principles for the CSIE project and discharge of the proposed planning condition are given in my colleague John Pearson's proof (**NRE9.2**).

6.2.1.6 The replacement trees and living green fence will ensure the required habitat mitigation has been met and the cumulative effects of the CSIE Project and the CBC development will remain Not Significant.

6.3 OBJ/07 Trumpington Residents Association

6.3.1 Nine Wells Local Nature Reserve

6.3.1.1 In their objection, the Trumpington Residents Association object to the effects on Nine Wells LNR during the construction of the station and state that "it would definitely not be the case that the setting of the nature reserve, its listed monument and the scheduled (site of White Hill Farm) monument are preserved".

6.3.1.2 Furthermore, they have highlighted that "The Reserve is a fragile environment surrounded by potential risks".

6.3.1.3 Their objection centres on the station's main construction compound (CC1) being located a minimum of 30 metres from the LNR, with National Cycle Network Route 11 temporarily diverted around the perimeter of the compound during construction of the station. Subsequent to their objection, Trumpington Residents Association have acknowledged that the main construction compound is 75 metres from the LNR rather than 30 metres.

6.3.1.4 As their objection references the 'setting' of the LNR, listed monument and the scheduled monument and refers to the Design & Access Statement for the scheme, it is assumed that the focus of the objection relates to effects associated with Landscape and Cultural Heritage and I defer to these disciplines to discuss the 'setting' of the site, in particular the discussion in the evidence of my colleague John Pearson (**NRE9.2**) and Jenny Wylie (**NRE7.2**).

6.3.1.5 Whilst it is not a formal requirement that LNRs are open to the public, UK Government guidance states that local authorities should aim to make at least parts of them publicly accessible (**D79**). Therefore, there is a presumption of public use of the site. The LNR is served by a number of pathways, open to the general public. Disturbance from footfall, including dogwalkers, around the reserve is already established.

6.3.1.6 In relation to Biodiversity, the recognised biodiversity value of the LNR relates to the value of its habitats including the quality of its groundwater fed springs. These springs are fragile environments susceptible in particular to contamination; however, these springs arise on raised ground above (upstream) the location of the main construction compound and there are no impact pathways for surface water runoff / polluted material to enter the springs. The CSIE Project will be subject to a Code of Construction Practice, removing any risk of potential contamination of the groundwater source to the LNR and no adverse residual effect. The Code of Construction Practice Part B will detail how protected sites and habitats will be protected, this is explained in the Code of Construction Practice Part A (Appendix 2.4 of NR16).

6.3.2 Proposed Electricity Sub-Station and Rail Systems Enclosure

6.3.2.1 Trumpington Residents Association have also raised concerns at to the location of the proposed electricity sub-station and rail systems enclosure. They state that "The area is populated by hares which, as explained in our earlier comments, is a rapidly diminishing species due primarily to intensive agricultural methods".

6.3.2.2 Network Rail are unable to relocate the electricity sub-station and rail systems enclosure/ compound, and I refer to the evidence of John Pearson in that regard (**NRE9.2**). The compound is required to be close to the railway and there is no suitable alternative location which does not comprise part of the green belt or areas which form part of committed development including the proposed Addenbrooke's Hospital and CBC expansion. There is also no additional land provided within the proposed TWAO for an alternative location.

6.3.2.3 Species rich neutral grassland will be created and trees and scrub planted in the area surrounding the electricity sub-station and rail systems enclosure and within the adjacent exchange land as part of the biodiversity mitigation for the proposed scheme. These habitats will provide foraging and cover for brown hare. The resident brown hares will use the undeveloped parts of his area and the adjoining exchange land for cover to retreat to during both construction and operation of the scheme and no residual effects will be apparent on this species.

6.3.3 Birds in Hobson's Park

6.3.3.1 Trumpington Residents Association also raise concerns about the effects on birds Hobson's Park. They state: "It is important to note that Hobson's Park with its bird reserve and essential link in the Vicar's Brook/Hobson's Brook "wildlife corridor", was created in mitigation of the substantial land taken out of the Green Belt in the 2006 Local Plan to provide for growth in the substantial Clay Farm, Glebe Farm and Bell School/Ninewells developments – matched elsewhere in the Cambridge Southern Fringe by the Trumpington Meadows Country Park relating to the Trumpington Meadows development. Consequently, there is very strong feeling amongst residents against diminution of that mitigation – either temporary or permanent - to meet the Cambridge Biomedical Campus's growth needs."

6.3.3.2 Since the objection was received the size of the compound on the western side within Hobson's Park has reduced significantly as outlined in my colleague Andrew Barnes' proof (**NRE1.2**).

6.3.3.3 The effects of the project to the biodiversity within Hobson's Park are discussed in my response to OBJ 20 Dave Jackson. The effects of the project upon birds within Hobson's Park, in regard to Corn Bunting and Skylark, are discussed in my response to OBJ 23 Cambridge City Council.

6.3.4 Light Pollution

6.3.4.1 In addition, the Trumpington Residents association is concerned about increased light pollution as a result of the shared cycle/pedestrian path in Hobson's Park. They state: "as the proposed path would be lit as well as the existing guided busway path, it would unnecessarily increase light pollution in a biodiversity sensitive location when a more environmentally sustainable solution is to expand the existing busway path thus allowing use of its existing lighting".

6.3.4.2 As stated in John Pearson's Proof (NRE9.2), lighting for the project will seek to ensure that upwards or intrusive light spillage, impact to local residential amenity, landscape character and biodiversity will be minimised. A lighting strategy will be designed and implemented to reduce the impact of light pollution from the development on the surrounding areas and Hobson's Park.

6.3.5 Loss of Trees in Hobson's Park

6.3.5.1 Trumping resident association also ask that the project "reduce the extent now proposed of mature trees and shrubs having to be removed, including trees planted by pupils of Fawcett School nine years ago."

6.3.5.2 As mentioned above since the objection was received the size of the compound on the western side within Hobson's Park has reduced significantly as outlined in my colleague Andrew Barnes' proof (**NRE1.2**).

6.3.5.3 Ongoing redesign is also being undertaken to reduce the number of trees required to be removed due to construction, which will form part of the agreed planning conditions and will be subject to an Arboricultural Impact Assessment and Arboricultural Method Statement to ensure the implementation of mitigation.

6.3.5.4 Of the trees planted by Fawcett School, only a portion of these are proposed to be removed and in addition to compensatory planting, the feasibility of translocation of trees to be removed for construction purposes in Hobson's Park will be undertaken as referenced in Construction Approach and Mitigation of Construction Effects – Site wide measures, number 8 (**NR16**).

6.4 OBJ/09 Medical Research Council

6.4.1 Impact on Biodiversity

6.4.1.1 The Medical Research Council have raised concerns regarding the removal of an established green area. They state "This will have an impact on biodiversity on the site and wider area. A full biodiversity survey will be required to establish the existing flora and fauna to consider impact and mitigation of the scheme."

6.4.1.2 The biodiversity value of the application area, which includes the established green area mentioned by the Medical Research Council, has been established through the statutory processes required to support TWAO. An EIA has been undertaken following industry standards. This outlines the impacts on biodiversity and mitigation required. The ES identified one receptor which has the potential to be impacted on any significant level by the CSIE Project. This was the loss of woodland habitat associated with the development, which was considered to be significant at a local level. Further detailed mitigation based on that outlined in the Environmental Statement will be provided as the proposed scheme progresses through the next stages. Pre-construction surveys would be undertaken in the usual way to ensure robust baselines were available to support detailed design of protected species mitigation strategies, including licensable species such as badgers, and avoid the spread of

invasive non-native species. This is stated in the Code of Construction Practice Part A (Appendix 2.4 of NR16).

6.5 OBJ/20 Dave Jackson

6.5.1 Impact on Hobson's Park

6.5.1.1 Dave Jackson has objected to the size of the works compound on the Western side of the track. They state:

> "This would cause damage to the biodiversity of Hobson's park…damaging one part of the park and the wider ecosystem of the green wedge has a detrimental effect on the rest of it, indeed on the biodiversity of the whole of Southern Cambridge….it is the biomedical campus that will gain most from this station it seems fitting that it should be used for as much of the temporary compound space as possible."

6.5.1.2 Since the objection was received the size of the compound on the western side has reduced significantly as outlined in my colleague Andrew Barnes' proof (**NRE1.2**).

6.5.1.3 The habitats within Hobson's Park have been established within the past 10 years for recreation and as a nature reserve for the adjacent Great Kneighton development in the Trumpington area. Aerial imagery shows a complete change in land use between 2008 and 2015 from arable farmed land to the newly sown and planted habitats of Hobson's Park. This is shown in Image 1 and Image 2 below.

Image 1. Extent of active development surrounding Hobson's Park in 2008

Image 2. Extent of active development surrounding Hobson's Park in 2015

6.5.1.4 These habitats have been created recently over a short timescale and it will be possible to re-instate any that are removed for temporary works to the same quality within the same timescale. Furthermore, Network Rail have entered into negotiations with Cambridgeshire County Council to ensure offsite habitat creation is delivered at Lower Valley Farm, Fulford. This is within South Cambridgeshire and therefore will be adding to the biodiversity to the region as a net gain from the proposed scheme rather than a loss.

6.6 OBJ/23 Cambridge City Council

6.6.1 Corn Bunting and Skylark

6.6.1.1 CCiC have questioned if due weighting has been given to the potential impact on the breeding population of corn bunting. The breeding bird surveys undertaken for the Environmental Statement identified an estimated 10 territories on site. In accordance with the 2017 Cambridgeshire Bird Report (**D58**) (the most up to date reference material at the time of the ES), this represented up to 20% of the territories present within the county. Subsequent to the publication of the ES the 2018 (**D59**) and 2019 (**D77**) Cambridgeshire Bird Report have become available which indicate a lower percentage of the county population being present.

6.6.1.2 CCiC's initial objection focuses on the importance of a potentially significant population of breeding corn bunting being present. Concerns highlighted are:

- The location of the territories along the line of the rail track and construction route.
- Displacement of territories for one or more breeding seasons during construction, which may become permanent loss from the area.

- Song posts and arable weed marginal habitat will not be available during construction.

6.6.1.3 Regarding CCiC's concern on population size, as noted in section 6 above, the 2017 and 2018 Cambridgeshire Bird Reports note that corn bunting is significantly under recorded in Cambridgeshire, therefore the territories within the site will be below 20%, 6.6% and 7.6% proportions (as estimated from the 2017, 2018 and 2019 Cambridgeshire Bird Reports data) of the total corn bunting territories present in the county. Therefore, although breeding corn bunting are present within the site, the population is likely to be lower as a percentage of the county's breeding population than indicated by the data.

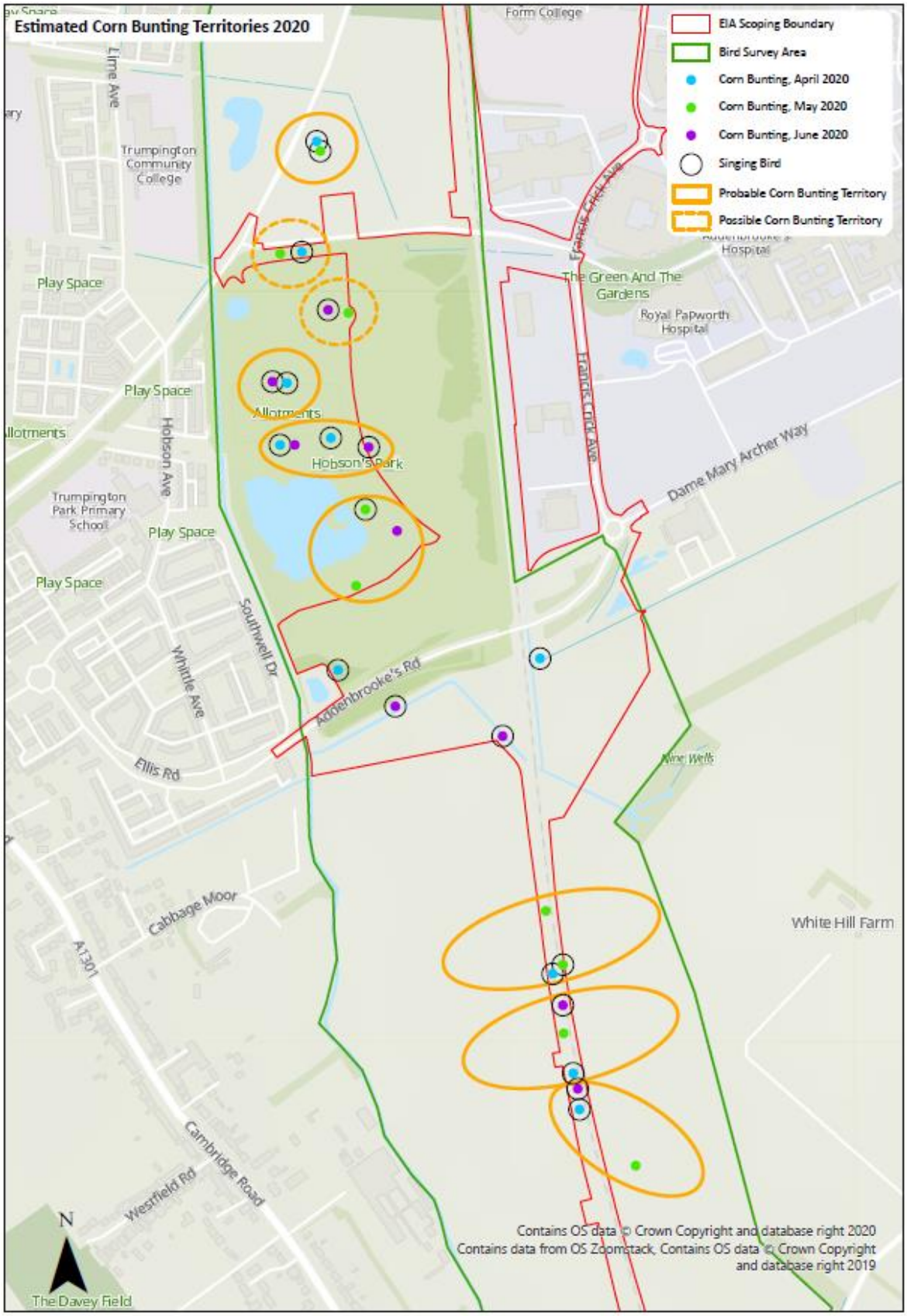
6.6.1.4 Additional surveys for breeding birds were undertaken in 2020 with reference to Common Bird Census methodology, adapted for breeding birds as described in Bird Survey Guidelines (**D80**). To provide clarification on the number of corn bunting territories within the site, I have combined the data from all three breeding bird survey visits undertaken in 2020 to establish which results indicate potential territories. Drawing 1 below illustrates this. Determination of which records make up a territory is based on the proximity of records (i.e. clusters) when combined for the three survey visits and song records in an area on more than one occasion. This reveals:

- 4 probable territories (and possibly 2 more outside of the redline boundary of the scheme) within Hobson's Park.
- 3 territories within the arable fields bordering the south of the proposed scheme.

6.6.1.5 The three territories within the arable fields are assumed due to the suitability of this habitat for nesting and the only high point for singing in this area being the existing overhead wires along the rail corridor. These three territories may therefore be some distance from the proposed scheme.

6.6.1.6 Overall, this updated analysis has revealed an estimated 7 territories (with potentially 2 further territories in Hobson's Park). This broadly confirms the estimated number of territories quoted in the Environmental Statement (10 territories compared to the 9 territories revealed by the further analysis).

Drawing 1. Estimated Corn Bunting Territories 2020



6.6.1.7 CCiC have highlighted that the ES data shows corn buntings to be concentrated along the rail track. Correspondence with the surveyor has provided the detail that corn buntings were recorded singing from the overhead wires along the rail corridor. This is typical corn bunting behaviour (**D76**), whereby a high perch is chosen to sing from. It does not necessarily indicate that breeding territories are located immediately adjacent to the rail corridor. In this instance the overhead wires were the highest perches for singing in the landscape and therefore are likely to be selected by corn buntings in the area.

6.6.1.8 The potential permanent displacement of corn buntings due to disturbance has also been highlighted by CCiC. In response to this, the highest number of corn bunting territories were recorded in the recently created habitats of Hobson's Park. This area has been established within the past 10 years for recreation and as a nature reserve for the adjacent 'Great Kneighton' development in the Trumpington area. Therefore, corn buntings have successfully colonised newly created habitats within a short period of time despite extensive construction taking place immediately to the west (Trumpington) and the east (the Astra Zeneca development), and the construction of Addenbrooke's Road and the Guided Busway routes across the park in 2008. Such construction will have created the types and scale of disturbance similar to those likely from the proposed scheme. The recolonisation of the area by corn bunting is testament to their resilience in this location. Images 3 to 8 below illustrate the extensive areas of active development surrounding the park that have taken place since 2005.

Image 3. Extent of active development surrounding Hobson's Park in 2005

Image 4. Extent of active development surrounding Hobson's Park in 2007

Image 5. Extent of active development surrounding Hobson's Park in 2008

Image 6. Extent of active development surrounding Hobson's Park in 2015

Image 7. Extent of active development surrounding Hobson's Park in 2017

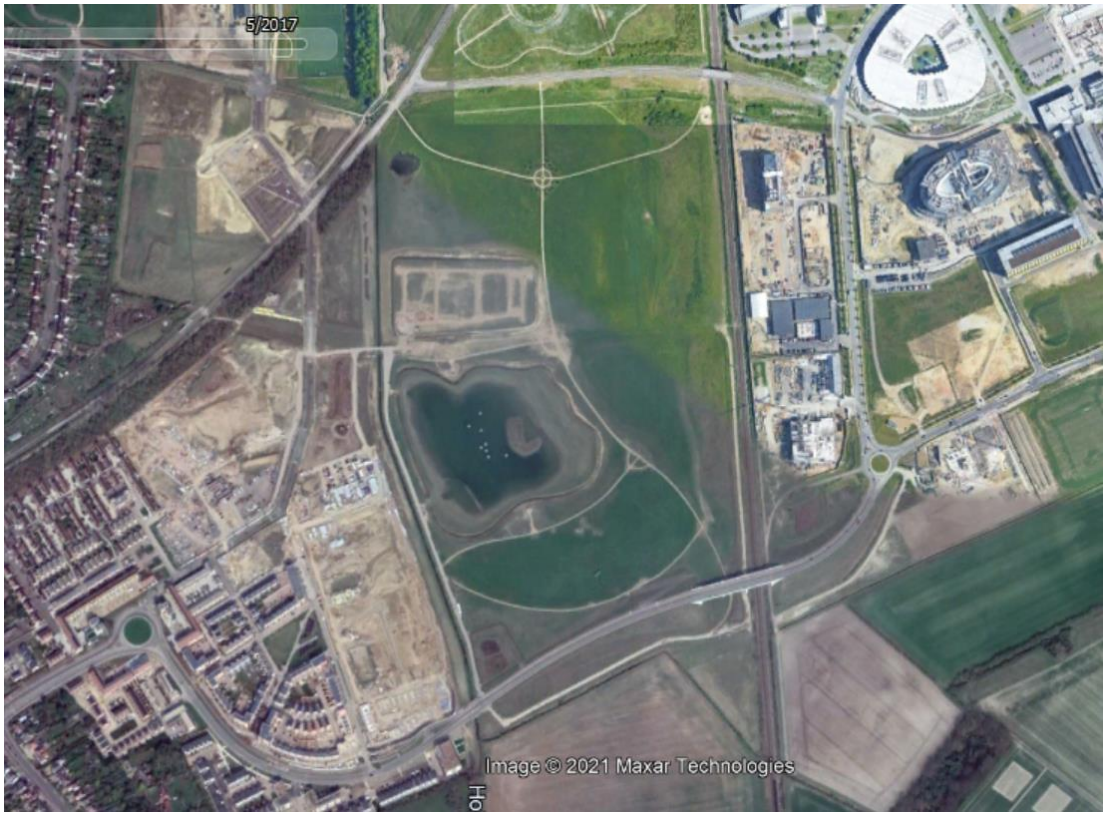


Image 8. Extent of active development surrounding Hobson's Park in 2021

6.6.1.9 There is a national decline in corn bunting numbers (**D76**), which should be taken into consideration and used as valuable context for future monitoring specific to this site.

6.6.1.10 CCiC have commented that corn bunting song posts and arable weed marginal habitat will not be available during construction. It is likely that increased noise and vehicle movement along and bordering the rail corridor will disturb corn buntings using the rail fence as a singing perch during the breeding season, although to some extent there has been a habituation to disturbance that already occurs through regular rail traffic, cyclists, pedestrians and their dogs.

6.6.1.11 Research (**D81**) indicates that meadow birds, including skylark, had shown a reduction in the number of territories where noise levels were from 42dB to 49dB. The noise level used was the equivalent noise level throughout a full day-night period, the LAeq,24h. Chapter 5 of the ES (**NR16**) shows that the baseline level of noise (LAeq) already exceeds this at points around Hobson's Park (NML4L (57.6-61.9dBA), NML5S (49.9dBA), NML6L (54.3-58.9dBA), NML8S (61dBA)) and adjacent to the rail line at Great Shelford (NML9L (46.0-52.4dBA), NML10L (50.0-55.5dBA), NML11L (55.4-63.4dBA)). This could indicate habituation to increased baseline noise (notably skylark, there is no data for corn bunting).

6.6.1.12 Construction noise has been modelled and the construction programme will be carefully planned to avoid the noisiest activities from March to September (inclusive). Adverse noise levels would be

controlled by the implementation of a noise monitoring regime as described in Chapter 5 of the ES. Noise for construction events will be modelled which will allow for specific measures to be implemented in relation to nest locations. Ongoing monitoring to locate corn bunting and skylark territories and to monitor their behaviour during construction will be undertaken weekly during construction to allow for specific measures to reduce disturbance to this species in sensitive locations. This will follow the approach for corn bunting survey detailed in Bird Monitoring Methods: A Manual of Techniques for UK Key Species (**D76**). To mitigate for any increase in disturbance during construction and temporary loss of overhead cables, song perches will be provided within the exchange land area south of Addenbrooke's Road and on the opposite side of the rail corridor in the vicinity of the main Construction Compound (CC1).

6.6.1.13 I do not accept the claim that there will be a loss of weedy marginal habitat during construction. Ground disturbance from vehicle movement, establishment of compounds and clearance for the scheme will more likely cause an increase in weedy habitats in the short term. It will be possible to extend the longevity of these habitats through repeat ground disturbance (e.g. through the use of a rotavator) during the autumn in selected locations. These will include parts of the exchange land area south of Addenbrooke's Road and on the opposite side of the rail corridor in the vicinity of the main Construction Compound (CC1). The public will be excluded from the exchange land until construction has been completed. There will be vehicular movement within the exchange land during construction however this will be along haul routes; however, ground nesting birds are likely to become habituated to the predictable nature and location of this activity.

6.6.1.14 CCiC have also raised concerns for both corn bunting and skylark nesting within Hobson's Park. This relates to:

- The loss of a significant area of the park during construction used for recreation, specifically dog walking (as off leash dogs present a significant threat to ground nesting birds).
- The resulting desire lines that emerge from the restricted area available for recreation during construction causing increased recreational pressure.

6.6.1.15 The extent of temporary and permanent land take in Hobson's Park has recently been significantly reduced (as described in the evidence of, amongst others, Mr Barnes (**NRE1.2)**); therefore the area available for use by ground nesting birds has increased.

6.6.1.16 Hobson's Park and the surrounding footpaths are already in use for recreational purposes, including dog walking, including off leash as shown in Image 7 below.

Image 7. Off lead dogs in Hobson's Park[1]

6.6.1.17 The negative impact of off leash dogs on ground nesting bird populations is well known. For example, in 2005 English Nature published a research study detailing the impact of dogs on nature conservation (Appendix C), which found that "Dogs consistently flushed ground-nesting birds off their nests earlier and for longer than recreational disturbance." and also noted that "Dogs, especially those off a lead, stimulate a greater behavioural response than walkers, and for some species, also than joggers."

6.6.1.18 Impacts on ground nesting birds from off-leash dogs are therefore likely to already occur; it is the magnitude of this impact which may change through the more restricted space available for recreational purposes within Hobson's Park during construction. Permanent signage will be put up to keep dogs on leads from March to September and to keep out of the longer grass areas that are suitable for ground nesting birds. Where monitoring reveals nests during construction, buffer zones of up to 20 metres will be established and temporary fencing put in place around these zones to exclude people and dogs until the nests are no longer active. The potential for policing the area to ensure dogs are kept on leads and out of nesting areas will be discussed with CCiC; further measures such as the issue of fines will be considered. Solid temporary fencing is proposed around the working area within Hobson's Park during construction and will be extended along the rail corridor through the arable land. This will reduce the level of noise spilling into the retained areas of the park and elsewhere and will also disrupt visual disturbance to birds.

6.6.1.19 Furthermore, ecological monitoring will be undertaken through the bird breeding season to establish breeding territories of sensitive species (corn bunting and skylark) and ensure management in relation to reducing impacts can therefore be reactive. Working methods and timing of noisy works will aim to reduce noise disturbance where territories are located, whilst those territories are active. This will be detailed in the Code of Construction Practice Part B when produced.

6.6.2 Compliance with CLP Policy and NPPF

6.6.2.1 CCiC has stated the proposal scheme has not currently demonstrated compliance with CLP 2018 policies 69 and 70 (**D6**), and National Planning Policy Framework (NPPF) 2021 paragraph 174 (**D1**). CLP policy 69 relates to the protection of sites of biodiversity and geodiversity importance. It specifies that "development will be permitted if it will not have an adverse impact on, or lead to the loss of, part

1 Image sourced from internet unable to identify source material.

or all of a site identified on the Policies Map".

6.6.2.2 Hobson's Brook (Mid and South) City Wildlife Site ("**CiWS**") and Triangle North of Long Road County Wildlife Site ("**CWS**") are partially within the site and the only sites shown on the CLP Policies Map within or bordering the proposed scheme. Long Road Plantation CiWS lies adjacent to the site boundary. As stated in the Environmental Statement, residual effects on designated sites are considered Not Significant at any level for both construction and operational phases. A 5m wide clear span bridge will be constructed over Hobson's Brook (Mid and South) CiWS resulting in some habitat loss to bankside vegetation. The Code of Construction Practice Part B will detail how protected sites and habitats will be protected, this is explained in the Code of Construction Practice Part A (Appendix 2.4 of NR16Bespoke construction method statements will be provided and followed to minimise disturbance on the CiWS. Vegetation loss will be temporary as vegetation will be allowed to recolonise; furthermore, enhancement measures for biodiversity are proposed within the CiWS. These will be detailed though a 30-year Ecological Management Plan provided at the detailed design stage as a commitment of Network Rail. Network Rail have already committed to the management of retained and new habitats to good condition, based on Natural England's The Mosaic Approach: Managing Habitats for Species (2013) (Appendix B).

6.6.2.3 CLP policy 70 relates to the protection of priority species and habitats. Further detail is provided in this Proof of Evidence for mitigation regarding corn bunting and skylark. These are both SoPIE and CPS. The Environmental Statement states that residual effects on species are considered Not Significant at any level for both construction and operational phases. With regards to HoPIE, Significant residual effects on woodland are expected at a Local level. The proposed scheme will achieve 10% BNG. This will include extensive tree and woodland planting in accordance with the Natural England 2.0 Biodiversity Metric (**D52**). This metric requires the removal of woodland to be mitigated for with the creation of the same habitat type of a greater area and better condition. Therefore, in the long term with the maturing of planted woodland, a slight beneficial effect will be realised. Residual effects on other HoPIE relevant to the site are considered Not Significant due to their relatively recent establishment and therefore shorter timescale to recreate to their current value.

6.6.2.4 NPPF 2021 paragraph 174 states, relevantly, that

> Planning policies and decisions should contribute to and enhance the natural and local environment by:
>
> a) protecting and enhancing valued […] sites of biodiversity […] value […] (in a manner commensurate with their statutory status or identified quality in the development plan);
>
> […]
>
> d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; and
>
> […]

6.6.2.5 This will be achieved by the proposed scheme. As stated in the ES (**NR16**), residual effects on designated sites are considered Not Significant at any level for both construction and operational phases. A combination of onsite and offsite habitat creation measures will ensure that a minimum of 10% BNG will be achieved in relation to the scheme.

6.6.2.6 Specifically in relation to SoPI (priority) species (including corn bunting and skylark), NPPF 2021 paragraph 179(b) states “plans should:… promote the…protection and recovery of priority species.

6.6.2.7 Measures are in place to minimise disturbance to corn bunting and skylark, provide replacement habitat features during construction and through long term habitat creation as part of the BNG measures, provide substantially more grassland habitat for nesting.

6.6.3 Impacts from Haul Route and Main Compound

6.6.3.1 CCiC has stated

> “The impact of the physical presence of the main compound and haul road might be temporary, but the establishment of the landscape proposals and regaining of the biodiversity value will take years”.

6.6.3.2 This is true for the loss of mature trees and acknowledged as such in the Environmental Statement (**NR16**). With regards to the habitats within Hobson’s Park, these have been created within the past 10 years and are replaceable in the short to medium term. CCiC go on to state “There will be significant impact on nesting birds, the grassland plant composition and a loss of establishing tree cover on the bunds”.

6.6.3.3 As stated in the Environmental Statement, residual effects on nesting birds are considered Not Significant at any level for both construction and operational phases due to the mitigating measures in place. Further measures will be implemented with regards to corn bunting and skylark. The grassland plant composition within Hobson’s Park has developed from a sown mix within the past 10 years and those areas lost can be re-established with an appropriate mix to the geographic location and soil conditions.

6.6.4 Biodiversity Net Gain

6.6.4.1 CCiC has stated

> "Network Rail has committed to achieve a 10% net gain in biodiversity. However, in light of the Council’s declared biodiversity emergency, we encourage the applicant to aspire to a higher minimum 20% net gain target for this significant project”.

6.6.4.2 The BNG Condition in Schedule 7A of the Environment Act 2021 (**B39**) provides that for “every planning permission granted for the development of land” that there be a gain of at least 10% (see above, section 3.2.9) Schedule 7A is not yet in force. As a result, the proposed scheme will not be deemed to be subject to the BNG Condition; however, Network Rail have previously agreed with CCiC to a 10% BNG for the scheme.

6.6.4.3 The CCiC statement of case (**E10**) suggests that the proposal should seek to achieve 20% BNG. Although not referenced by CCiC, this would be in accordance with CCiC’s emerging Biodiversity Strategy 2021 – 2030 (Appendix D). The targets set in this strategy are aspirational and do not form part of the adopted development plan but, do form a material consideration in terms of what CCiC consider as ‘enhancement’. Network Rail’s position is that the 10% BNG target is consistent with the

requirements of the Environment Act 2021 which will, when the relevant provisions are brought into force, require that certain developments deliver at least 10% increase in biodiversity. The CSIE Scheme will also deliver wider benefits which will support broader policy considerations around climate change and sustainability through encouraging a reduction in car travel and a model shift towards public transport. As a result, Network Rail do not believe that an increased BNG target is warranted and given the development plan only seeks to enhance biodiversity, the commitment to a 10% increase in line with the Environment Act 2021 is sufficient.

6.6.4.4 In relation to aiming for 20% BNG, CCiC have also stated that "this higher target would also allow for the element of risk associated with proposed translocation and recreation of habitats".

6.6.4.5 The risk of habitats failing to establish will be dealt with through the management of retained and new habitats to a good condition, based on Natural England's The Mosaic Approach: Managing Habitats for Species (2013) (Appendix B). This will be detailed in a 30-year Ecological Management Plan provided at the detailed design stage as a commitment of Network Rail. Therefore, there is not a requirement for greater than 10% BNG.

6.6.4.6 CCiC have commented that:

- "The application provides limited information about how the biodiversity net gain target would be achieved" and
- "The priority must be for biodiversity net gain to be secured on site and the application must demonstrate that all options to achieve this within the application boundary have been exhausted before offsite mitigation could be considered".

6.6.4.7 The priority has been to achieve BNG on site and all land within the site boundary has been considered for its suitability for either habitat creation or habitat enhancement. Network Rail have already extended the site boundary within Hobson's Park during the options selection process. This allowed for greater habitat creation and enhancement to be accommodated. It is not possible to achieve BNG within the site through applying the Natural England biodiversity metric as factors such as the existing status of Hobson's Park as mitigation land for the 'Great Kneighton' development in the Trumpington area, resulting in inflation of the areas required for mitigation.

6.6.4.8 Furthermore, CCiC have stated that

> "More information about the proposed biodiversity enhancement must be submitted before the application is determined" and "In addition, if offsite mitigation is appropriate, then this must be as closely related to the application site as possible".

6.6.4.9 This is in relation to the feasibility of achieving BNG through the processes outlined in the application. Appropriate mitigation will be achieved and the BNG target of 10% will be reached through a combination of onsite and offsite mitigation. The types and extents of habitats to be created and enhanced have been chosen through the application of the Natural England 2.0 Biodiversity Metric (**D52**). This has been revised to take into account the revised scheme as of December 2021. The metric indicates where the unit loss of certain habitat types, such as woodland, must be replaced by the same habitat type. This has been followed in accordance with the metric.

6.6.4.10 In addition, offsite habitat creation has been discussed with Cambridgeshire County Council and a split agreed for 50% grassland, 40% woodland and scrub and 10% ponds. In establishing the area of each of these habitat types, the deficit in units left from the onsite mitigation has been taken into account to ensure those habitats which must be replaced 'like for like' are taken into account. Network Rail have entered into negotiations with Cambridgeshire County Council to ensure the offsite mitigation is delivered at Lower Valley Farm, Fulford, located approximately 6.5km from the proposed

scheme. The layout of the offsite mitigation will be provided at the detailed design stage of the project and managed through a binding agreement.

6.7 OBJ/24 South Cambridgeshire District Council

6.7.1 Biodiversity Net Gain

6.7.1.1 CCiC have requested:

> "Network Rail to align with the Council's Doubling Nature Strategy 2021 and the commitment to promote and achieve biodiversity net gain within the Oxford-Cambridge Arc, and to achieve 20% biodiversity net gain through the development, which would deliver greater benefits for the natural environment."

6.7.1.2 The target set in the SCDC Doubling Nature Strategy (2021) (Appendix E) is aspirational, and on page 12 of that document, SCDC recognise that a 20% increase in BNG cannot be required until adopted in planning policy or mandated at national level (which, as explained above, it is not). I have addressed the reasons why Network Rail is committing to 10% rather than 20% BNG when dealing with the CCiC objection in the preceding section.

6.7.1.3 Furthermore, SCDC have stated

- "The application has not provided sufficient Information to demonstrate the 10% biodiversity net gain target is achievable and can provide appropriate mitigation on or near to the site, and as a result has not demonstrated compliance with Local Plan 2018 policy NH/4, and NPPF 2021 paragraph 174"; and
- "This approach is unacceptable, because insufficient information has been submitted at this stage to demonstrate to the Council that these options are deliverable and would achieve the target and would provide appropriate mitigation for the scheme".

6.7.1.4 I have provided further details of the proposed BNG provision when dealing with the CCiC objection in the preceding section.

7 Conclusions

7.1 There is one ecological receptor which will experience significant effects as a result of the CSIE Project. This is the loss of woodland due to the development which is significant at the local level. Effects of this will be mitigated in the long term by the creation of areas of woodland within the landscaping design of the project.

7.2 Effects on other ecological receptors identified in objections (corn bunting, Nine Wells LNR, BNG and mature tree loss) have all been adequately mitigated through appropriate measures and effects have been established to be not significant.

7.3 Effective mitigating measures are already in place for Nine Wells LNR which is beyond the site. The Code of Construction Practice Part B will detail how any risk of pollution will be minimised as far as reasonable, this is explained in the Code of Construction Practice Part A (Appendix 2.4 of **NR16**).

7.4 Further data has been provided regarding the population status and resilience of nesting corn bunting and skylark within the site. Mitigating measures have been outlined to minimise impacts on these species with monitoring to ensure mitigation can be adapted as required.

7.5 Clarity has been provided regarding the extent of habitat creation onsite and offsite. Confirmation has been provided in relation to how a minimum of 10% BNG will be delivered and where this will be delivered.

7.6 Only one temporarily significant residual effect was predicted at a local level on woodlands due to the time to target condition required for compensatory planting. The ES adequately covers potential effects relating to biodiversity using appropriately qualified ecologists, industry standard, survey and assessment guidance and adheres to local and national legislation and policy requirements.

8 Declarations

8.1.1.1 I hereby declare as follows:

- This proof of evidence includes all facts which I regard as being relevant to the opinion that I have expressed and that the Inquiry's attention has be drawn to any matter which would affect the validity of that opinion.
- I believe the facts that I have stated in this proof of evidence are true and that the opinions expressed are correct.
- I understand my duty to the Inquiry to help it with matters within my expertise and I have complied with that duty.

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