

The Sizewell C Project

9.39 Response to the ExA's Request for Further Information at Deadline 4

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Planning Act 2008 Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009





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None provided.

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1 INTRODUCTION

1.1.1 In response to the Examining Authority's request for further information, dated 18 June 2021 [PD-027], the Applicant has prepared this paper to respond to the four points raised.

2 REQUEST ONE

2.1 The ExA's Request

2.1.1 Part (i) requests that the Applicant provides further information with regard to 'exactly where the veteran trees are located in relation to the Two Village Bypass (TVB) order limits, and alignment, showing precisely which such trees will or may be felled'.

2.2 The Applicant's Response

- In response to the Examining Authority's request, SZC Co. has prepared **Figure 1** which shows that two veteran trees, one ancient tree and one notable tree are proposed to be felled. **Figure 1** shows the locations of these trees, and also the location of the one ancient tree, the two veteran trees and the one notable tree that are proposed to be retained.
- In response to the Examining Authority's request, SZC Co. also submits an Updated Clearance Plan (SZC-SZ0701-XX-000-DRW-100169 Rev 3) as part of the **Two Village Bypass Plans for Approval** (Doc Ref. 2.8(B)) at Deadline 4. This Updated Clearance Plan replaces plan SZC-SZ0701-XX-000-DRW-100169 Rev 2 [AS-128]. The updated clearance plan results in the retention of an 8m hedgerow to the south of the existing path at Farnham Hall.

3 REQUEST TWO

3.1 The ExA's Request

3.1.1 Part (ii) requests that the Applicant provides further information with regard to 'the relationship between the order limits and alignment of the TVB in relation to both Foxburrow Wood, and Farnham Hall, Farnham Hall Farm House and (if different) Farnham Manor (showing and labelling the component parts using the dwelling names of those building complexes) and any trees in the ancient woodland which will or may be felled'.



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3.2 The Applicant's Response

- 3.2.1 The Applicant's response to this request is presented in **Figure 2** and **Appendix A**. **Figure 2** shows the relationship between the order limits and alignment of the Two village bypass in relation to Foxburrow Wood, Farnham Hall, Farnham Hall Farm House and Farnham Manor. **Appendix A** is a table setting out the distances between the Two village bypass and the properties at Farnham and Foxburrow Wood.
- 3.2.2 Section 1.4 of **Appendix B** confirms that Foxburrow Wood CWS ancient woodland would be retained in its entirety. A buffer distance of 15m from earthworks is proposed to prevent impacts to the trees on the edge of the woodland. The retention of this ancient woodland is also clearly shown **Figure 1**.

4 REQUEST THREE

4.1 The ExA's Request

4.1.1 Part (iii) requests that the Applicant provides further information with regard to the relationship between the order limits and alignment of the Two village bypass in relation to both Pond Wood and Nuttery Belt (showing and labelling the component parts using the dwelling names of those building complexes) and any trees in the ancient woodland which will or may be felled.

4.2 The Applicant's Response

- 4.2.1 The Applicant's response to this request is presented in **Figure 3** and **Appendix B**. **Figure 3** shows the relationship between the order limits and alignment of the Two village bypass in relation to both Pond Wood and Nuttery Belt. **Appendix B** sets out the distances between the Two village bypass and Pond Wood and Nuttery Belt.
- 4.2.2 Nuttery Belt is not ancient woodland. The eastern component of Pond Wood is ancient woodland, and Section 1.4 of **Appendix B** confirms that there would be no landtake or direct impacts to Pond Wood as it would be retained in its entirety. The retention of this ancient woodland is also clearly shown **Figure 1**.



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5 REQUEST FOUR

5.1 The ExA's Request

5.1.1 Part (iv) requests that the Applicant provides further information to identify where the following information is included within the Environmental Statement and other application documents:

"assessment of bats and any other protected species which use any parts, fly-lines, commuting routes, roosting, nesting or foraging areas related to those places"

5.2 The Applicants Response

- 5.2.1 The Applicant's response to this request is presented in two parts within this paper, as detailed below:
 - Part 1 Appendix B: Summary of Information Included within the Application to present a summary of:
 - Information on the baseline conditions and assessment findings presented with within Volume 5, Chapter 7 of the Environmental Statement [APP-425], Volume 1, Chapter 5 of the ES Addendum [AS-184] and supporting technical appendices and annexes in Appendix 7A [APP-426].
 - Part 2 Appendix C: Two Village Bypass: Additional Ecology Surveys to present two additional short surveys undertaken on 28th June 2021 of Foxburrow Wood, Farnham Hall Farm House, Farnham Manor, Ancient and Veteran trees, Pond Wood and Nuttery Belt (which supplements the information provided in Part 1 – Appendix B):
 - Extended Phase 1 Habitat Survey of these habitat features; and
 - Bat Emergence and Re-entry Survey of trees east of Farnham Hall
 - Note that the results of the additional surveys do not change the conclusions reached within Volume 5, Chapter 7 of the Environmental Statement [APP-425], Volume 1, Chapter 5 of the ES Addendum [AS-184]
- Whilst a substantial ecological baseline is in place for these habitat features (see **Appendix C**) and is sufficient for EIA purposes, SZC Co. will undertake additional surveys, given the concerns of stakeholders and to provide additional information to support Request 4. Subject to



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appropriate access being granted, the following surveys will be undertaken and the results submitted to examination at Deadline 7:

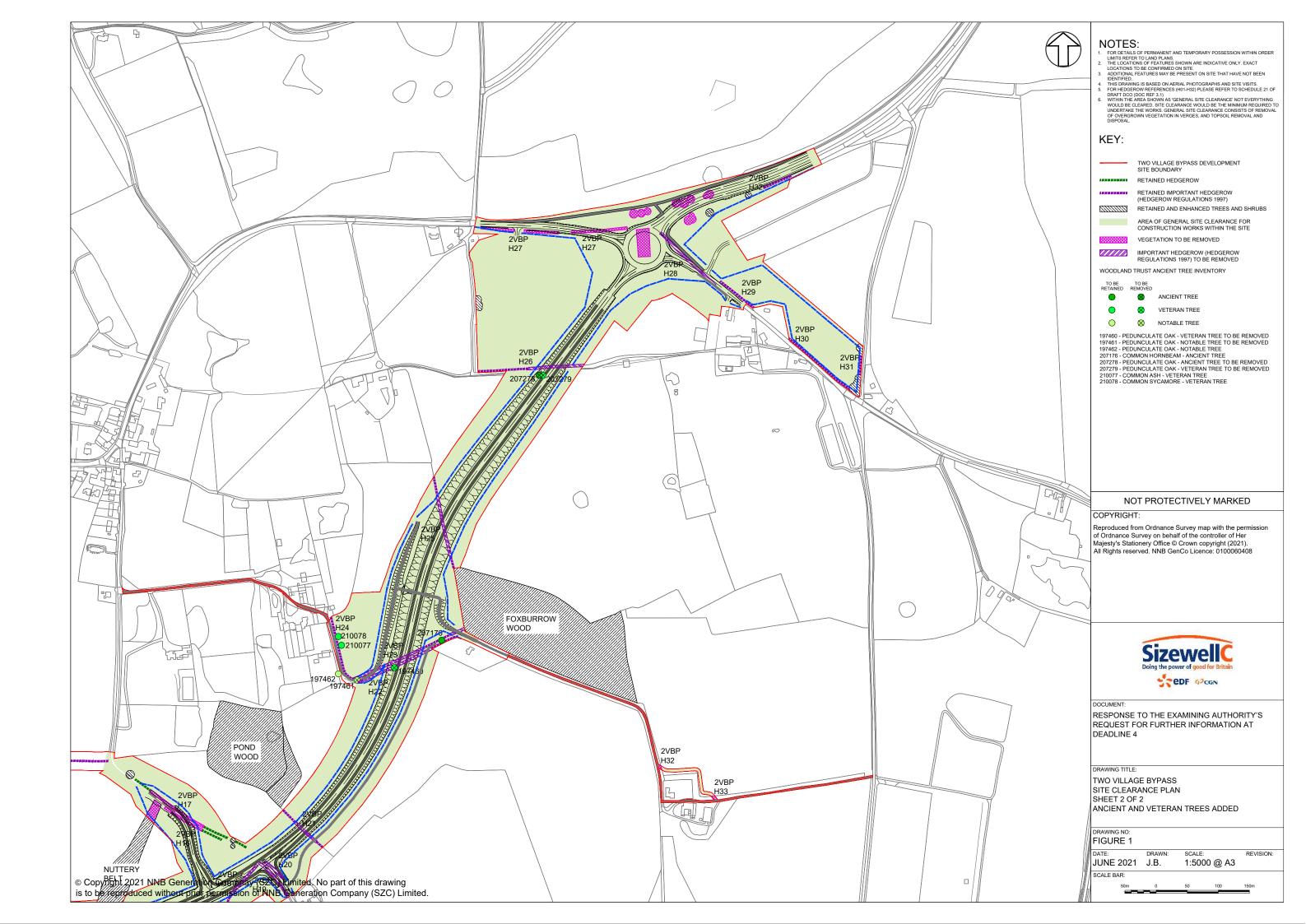
- Further emergence and/or re-entry surveys or an internal endoscope survey undertaken by a suitably qualified ecologist (with a bat and barn owl licence), to confirm the presence/absence of roosts in any trees which would be felled, prior to felling (see also Appendix C).
- Walkover survey of the habitat features including hedgerows/boundaries to further assess for field signs of badger.
- Habitat assessment of Pond Wood, Nuttery Belt and Foxburrow Wood for roosting bats, with particular focus on identifying trees in the periphery of the woodland (which are most likely to be impacted) and trees with suitability for supporting roosting barbastelle.
- Back-tracking survey for bats.
- Preliminary Bat Roost Assessment of buildings within the Farnham Hall/Manor complex and Farnham Hall Farmhouse complex, with follow-up presence/absence surveys of buildings likely to be indirectly impacted.

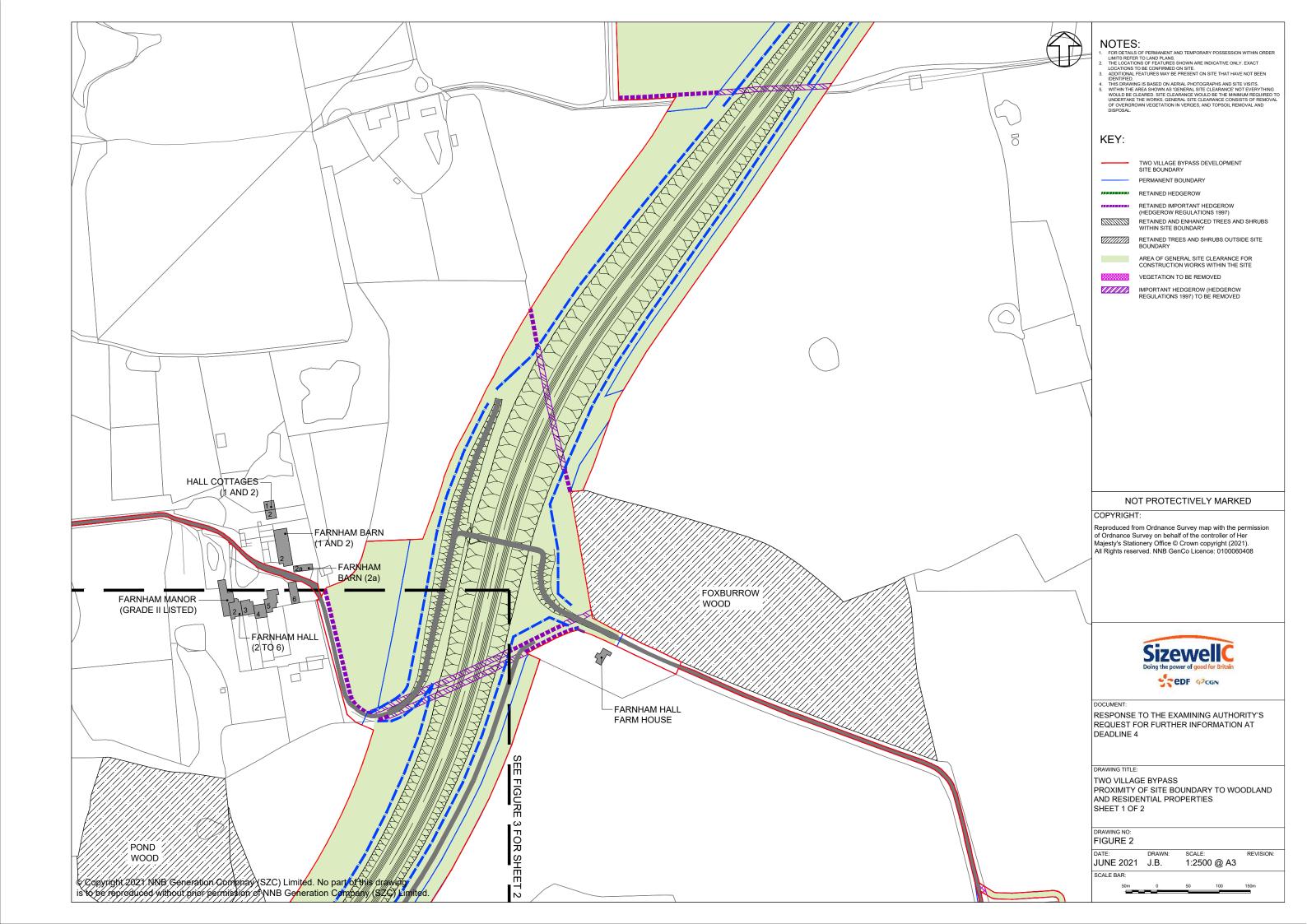


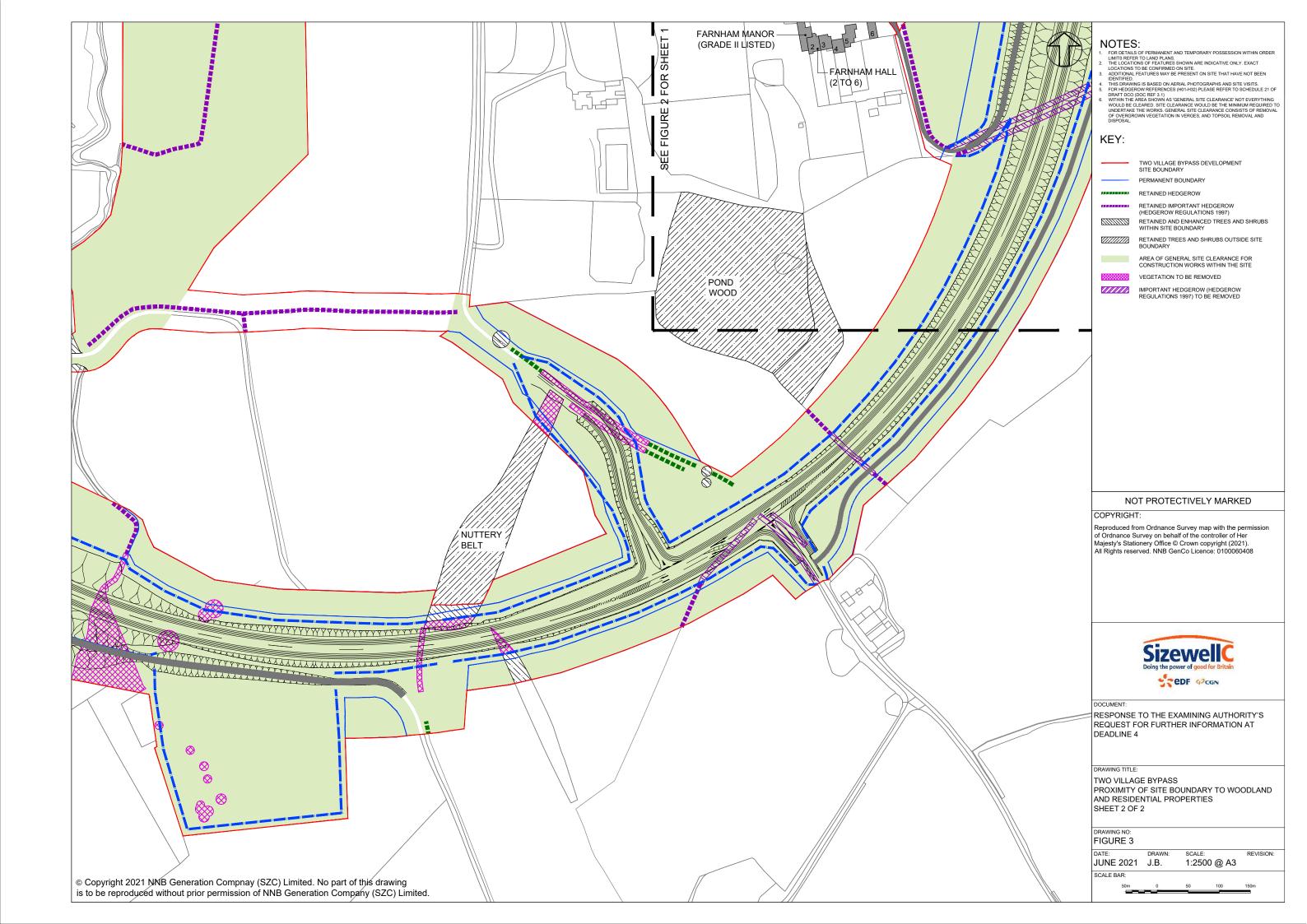
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FIGURES









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APPENDIX A: TABLE OF DISTANCES

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Property or woodland name	Distance to DCO boundary	Distance to permanent boundary	Distance to route alignment (edge of carriageway)		
Nuttery Belt	Part of woodland removed	Part of woodland removed	2.5m from existing edge of woodland to access road. 21.3m from existing edge of woodland to main carriageway.		
Pond Wood	6.5m	6.5m	54m		
Foxburrow Wood	0m	0m	43m		
1 Hall Cottages					
Property	36.5m to bridleway upgrade, 75.7m to wider DCO boundary	111.2m	176m		
Garden	27m to bridleway upgrade, 77.8m to wider DCO boundary	57.9m	158m		
2 Hall Cottages					
Property	31.3m to bridleway upgrade, 69.2m to wider DCO boundary	108.8m	177.6m		
Garden	4m to bridleway upgrade, 50.7m to wider DCO boundary	84m	153.5m		
Farnham Barn (1 and 2)					
Property	2.9m to bridleway upgrade, 32.6m to wider DCO boundary	90m	156.2m		
Garden	Om to bridleway upgrade, 15.9m to wider DCO boundary	16m	134.2m		
Farnham Barn (2a)					
Property	1.2m to bridleway upgrade, 18.1m to wider DCO boundary	72.4m	139.7m		
Garden	Om to bridleway upgrade, 14.2m to wider DCO boundary	72.4m	139.7m		
2 Farnham Hall	,				
Property	29.9m to bridleway upgrade, 62m to wider DCO boundary	122m	186m		
Garden	41.8m to bridleway upgrade, 65.6m to wider DCO boundary	105.4m	166.2m		

Property or woodland name	Distance to DCO boundary	Distance to permanent boundary	Distance to route alignment (edge of carriageway)
3 Farnham Hall			
Property	26m to bridleway upgrade, 52m to wider DCO boundary	112m	177m
Garden	34.8m to bridleway upgrade, 55.9m to wider DCO boundary	96.5m	157.8m
4 Farnham Hall	,		
Property	24.9m to bridleway upgrade, 42.5m to wider DCO boundary	102m	166.5m
Garden	35.4m to bridleway upgrade, 45.2m to wider DCO boundary	89.1m	151.6m
5 Farnham Hall	,		
Property	10.5m to bridleway upgrade, 31.5m to wider DCO boundary	95.8m	161.1m
Garden	21.7m to bridleway upgrade, 27.8m to wider DCO boundary	77m	140.4m
6 Farnham Hall	,		
Property	Om to bridleway upgrade, 13.8m to wider DCO boundary	77.9m	144m
Garden	0m	64m	130.3m
Farnham Manor (Grade II Listed)			
Property	23.9m to bridleway upgrade, 66.2m to wider DCO boundary	130m	194.9m
Garden	Om to bridleway upgrade, 44.1m to wider DCO boundary	61.6m	127.7m
Farnham Hall Farm House	·		
Property	6.5m	6.5m	92.8m
Garden	0m	0m	41.7m



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APPENDIX B: TWO VILLAGE BYPASS - SURVEY OVERVIEW NOTE

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_	Results of 2019 bat transect surveys.	
	Results of 2019 bat static detector surveys.	
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FIGURES



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- Figure 1 Two Village Bypass and Habitat Area Overview.
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- Figure 3 Phase 1 Habitat Map (2019) in Relation to Habitat Areas.
- Figure 4 Bat Transect Route, Static Detector Locations and Results
- Figure 5 Results of Bat Tree Assessment Surveys (2020 and 2021).
- Figure 6 Crossing Point Survey Locations (2021).
- Figure 7 Pond Locations and Results of GCN surveys (2019).
- Figure 8 Breeding Bird Transect Route and Results (2019).
- Figure 9 Wintering Bird Transect Route and Results (2020 2021).

ANNEXES

None provided.



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1 INTRODUCTION

1.1 Purpose of this note

- 1.1.1 This note has been prepared in response to a request for further information by the Examining Authority (dated 18 June 2021) in relation to the following list of habitat features associated with the Two Village Bypass. This request for further information is provided in full at [PD-027]. The habitat features listed in the request for further information are:
 - Nuttery Belt;
 - Pond Wood;
 - Foxburrow Wood;
 - Farnham Hall Farm House; and
 - Farnham Manor.
- 1.1.2 The Two Village Bypass site boundary (the area encompassed within this boundary is hereafter referred to as 'the site') and the above-mentioned habitat areas are shown in Figure 1.
- 1.1.3 The note provides a summary of information included in **Volume 5**, **Chapter 7** of the **Environmental Statement** (**ES**) [APP-425] and its supporting appendix, **Appendix 7A** [APP-426] and APP-427]. The note identifies the mitigation proposed to avoid, minimise or mitigate impacts on the habitat features mentioned above. The note also and summarises the surveys that have been completed to-date in relation to these, and the findings, in relation to the following ecological receptors:
 - plants and habitats;
 - bats (roosting, foraging and commuting);
 - amphibians;
 - badger;
 - otter and water vole;
 - breeding birds;
 - reptiles; and



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- invertebrates.
- 1.1.4 This note is supplemented by a technical note, **Appendix C** of SZC Co.'s **Responses to the Examining Authorities Request for Further Information** (Doc Ref. 9.39), which provides details of a short ecology survey which took place to provide a survey update in the available period (June 2021).
- 1.2 Consultee Comments and Responses To-Date
- 1.2.1 **Table 1** summarises comments provided by consultees in relation to the habitat features listed in 1.1.1. and the scope of ecological surveys at the two village bypass. It also includes SZC Co.'s response to each comment received.

Table 1 Consultee comments and SZC Co. responses which have informed the scope of the terrestrial ecology and ornithology surveys in relation to Foxburrow Wood CWS, Nuttery Belt, Pond Wood and the Farnham Hall buildings and farmhouses.

Consultee	Date	Comment	SZC Co. Response
Suffolk County Council.	February 2017.	Significant direct impacts on ancient woodland are avoided as Foxburrow Wood is bypassed, although there may be indirect effects to the north-west corner of the wood. Some small areas of secondary woodland may also be impacted at Nuttery Belt and Pond Wood. However, these impacts can be mitigated in the long term through effective and robust planting schemes and mitigation for disruption to connectivity for both otters and badgers can be incorporated into the detailed design of the scheme as required. It may also be possible for minor alterations to the routing of the two village bypass in order to avoid these woodlands.	The design of the proposed development has sought to avoid woodland where possible or reduce land take from these areas as far as reasonably practicable. Woodland planting also is also proposed as part of the design to mitigate for the loss of woodland where avoidance of woodland loss cannot be avoided.
Suffolk County Council.	10th April 2019.	It is acknowledged that the alignment of the two-villages bypass needs further work and assessment to ensure mitigation measures are in place for occupiers of properties close to the new route. The optimum routing needs to be examined and micro-sited to ensure impacts on ancient woodland and residents are minimised and that environmental sensitivities are minimised.	The design of the proposed development has sought to avoid areas of woodland where possible. Woodland planting is also proposed as part of the design to mitigate for the loss of woodland where avoidance of woodland loss cannot be avoided.



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Consultee	Date	Comment	SZC Co. Response
Natural England.	9th April 2019.	From the consultation documents it would appear that the proposed route would pass between Foxburrow Wood and Hall Cottages (Vol 1, para 12.5.4, pg. 336). However, according to Figures 2.12 and 12.1 (Vol 1, pg. 31 and pg. 337 respectively), part of the Foxburrow Wood ancient woodland would be destroyed by the bypass. As set out in NPS EN – 1, "Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat" (para 5.3.14, pg. 71). Clarity is therefore required on this issue within the ES.	Foxburrow Wood County Wildlife Site (CWS) ancient woodland will be retained in its entirety. A buffer distance of 15m from earthworks would be applied to minimise any impacts to the trees on the edge of the ancient woodland.
Environment Agency.	27th September 2019.	Protected species: Impacts to a range of protected species, habitat fragmentation and direct loss of habitat and changes to hydromorphology as a result of proposed river crossings has not been assessed.	Ecology surveys were undertaken during 2019 and 2020 to establish the ecological baseline of the of the site in order to inform the assessment and development of appropriate mitigation for all species. Further surveys are being undertaken in 2021 to further inform mitigation development and licensing.
Natural England	3 rd October 2019.	We note that a pedestrian bridge crossing over the bypass is now proposed within in a 4.5 metre cutting in close proximity to Foxburrow Wood. Whilst Figure 2.23 shows a semi natural buffer which would appear to be more than 15m from the road to the woodland (in line with the minimum buffer stated in the Ancient Woodland Standing Advice), this area will presumably be sloped from the woodland down to the road into the cutting. Whilst this buffer could, if	The proposed landscape strategy has sought to incorporate ecological connectivity into the design of where practicable. A buffer distance of 15m from earthworks would be applied to minimise any impacts to the trees on the edge of the ancient woodland.



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Consultee	Date	Comment	SZC Co. Response
		planted up, mitigate impacts to the woodland from lighting, air quality (dust and NOx), pollution, fly tipping etc. during construction and operation, the potential remains for impacts from damage to soil around the tree roots, changes to the water table and reduced ecological connectivity; we advise that the latter could be largely maintained through the implementation of a green bridge. This must therefore be assessed in further detail within the EIA in line with the avoid-mitigate-compensate hierarchy.	A biodiversity net gain assessment has been undertaken to help inform the landscape and ecology design. This is presented in Annex 7A.4 [APP-426] and was updated at Deadline 1 [REP1-018]. Biodiversity net gain at the site will be achieved as a result of the proposed mitigation planting post construction.
Royal Society for the Protection of Birds.	23rd September 2019.	We are concerned about the proximity of Foxburrow Wood CWS. Whilst it is difficult to determine from the map, we assume there will be no net loss from the site. Even so, in our view the likely impact would require mitigation. A cut through, with ancillary footbridge for the public footpath would, in our view, not be enough to mitigate impact and the loss of ecological functionality across the landscape. Therefore, we strongly advise the construction of a green bridge at this location to help retain connectivity with several locally important hedge lines. The drainage infiltration basins will need habitat surveys and protected species surveys prior to works. However, we believe these basins could be designed in such a way as to provide opportunities for Net Gain and request that careful thought is given to this. The areas of grass could be planted with wild flower and/or pollen and nectar mixes and managed in a sensitive way. There are also options to include skylark plots. Again, careful thought over the long-term management of these areas could contribute to Net Gain. We also have significant concerns on the loss of ecological connectivity along the river corridor as a result of the crossing. More detail is required to determine this	The proposed landscape strategy has sought to incorporate ecological connectivity into the design where practicable, including hedgerow planting along the length of the route and areas of tree and shrub planting. Ecology surveys were undertaken during 2019 and 2020 to establish the ecological baseline of the of the site in order to inform the assessment and development of appropriate mitigation for all species. Further surveys are being undertaken in 2021 to further inform mitigation development and licensing. A biodiversity net gain assessment has been undertaken to help inform the landscape and ecology design. This is presented in Annex 7A.4 [APP-426] and was updated at Deadline 1 [REP1-018]. Biodiversity net gain at the site will be achieved as a result of the proposed mitigation planting post construction.



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Consultee	Date	Comment	SZC Co. Response
O. ff. II.	ooth.	and we expect mitigation in terms of mammal passes and related protected species surveys. Furthermore, more evidence is required to understand how the by-pass might affect hydrology and the relationship between the river and its floodplain and consequently, the local wet meadows. If there is an effect, considerable effort will be needed to meet Net Gain, over and above what is currently being proposed.	
Suffolk County Council and East Suffolk Council.	26 th September 2019.	The route of the proposed two-village bypass crosses the River Alde and its floodplain and runs in close proximity to Foxburrow Wood County Wildlife Site, designated as ancient woodland. As well as the route of the road, the plans provided identify the need for areas of flood compensation storage to be created close to the route. The bypass is likely to result in several ecological impacts which have not been demonstrated can be adequately mitigated or compensated. Of particular concern is the loss of floodplain grazing marsh which is UK Priority Habitat (under Section 41 of the Natural Environment and Rural Communities Act (2006)); the fragmentation of habitats and species as a result of the use of a causeway and narrow span bridge crossing of the river, and the impact (particularly on hydrology) on Foxburrow Wood as a result of the construction of a cutting adjacent to it. The information presented in the Stage 4 consultation does not address any of these matters. This must be done before the submission of the DCO.	The proposed development has been designed to minimise the loss of floodplain grazing marsh where practicable. As described within paragraph 5.2.29 of the Volume 1, Chapter 5 of the ES Addendum [AS-184], it is proposed that the indicative floodplain grassland mitigation area shown on Volume 2, Figure 5.2.3 of this ES Addendum [AS-197], of approximately 2.77ha, would be used to create floodplain grazing marsh habitat. The focus would be on the creation of higher quality habitats, through enhancing the diversity of the grassland sward and the habitats within existing ditches close to the River Alde. In addition, new wetland channels would be created in this area to mitigate the loss of approximately 143m of ditches associated with the land take from the bypass, which form the most valuable element of the existing floodplain grassland in this location. The impacts to floodplain grazing marsh are assessed within this Volume 5, Chapter 7 of the ES [APP-425] and



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Consultee	Date	Comment	SZC Co. Response
			updated within Chapter 5 of the ES Addendum [AS-184].
Natural England	Nov 2019 letter	Natural England confirmed that the three linked blocks of woodland referred to as Foxburrow Wood (western blocks) and Palant's Grove (eastern block) are together listed under the Ancient Woodland Inventory (AWI) as 'Foxburrow Wood'.	SZC Co. noted the designation of Foxburrow Wood, including Palant's grove to the east, as an ancient woodland.
Natural England	March 2020 letter	Natural England confirmed that a request to amend the ancient woodland inventory (AWI) to remove Palant's Grove had been submitted, with supporting evidence. Foxburrow Wood and the eastern half of Palant's Grove are ancient woodland and will remain on the ancient woodland inventory. However, Natural England considered that sufficient evidence had been submitted, which follows Natural England's evidence standard, for removal of the western half of Palant's Grove from the Ancient Woodland Inventory. Therefore part of the woodland will be removed from the inventory. The woodland area removed from the Ancient Woodland Inventory is shown, with red hatching, on the map below.	SZC Co. acknowledges the removal of the western half of Palant's Grove from the Ancient Woodland Inventory.



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- 1.3 Woodland Loss and Creation
 - a) Woodland Loss
- 1.3.1 There will be no landtake of ancient woodland. See below and responses to Al.1.22 and Bio 1.31 included with SZC Co.'s Responses to the ExA's Written Questions (ExQ1) [REP2-100].
- 1.3.2 Approximately 0.38ha of woodland present will be permanently lost, and 0.1ha will be temporarily lost to facilitate construction and replanted at the end of the construction phase. This is shown on the **Two Village Bypass Site Clearance Plan** [AS-128], shown in **Figure 2** in relation to the habitat areas of interest
 - b) Woodland Creation
- 1.3.3 New tree planting is proposed along the route of the proposed TVB from south of Pond Wood to north of Mollett's Farm, and adjacent to Foxburrow Wood CWS and Farnham Hall Farmhouse to improve ecological connectivity. There will be 1.59ha of new tree planting, not including reinstatement of 0.1ha of woodland temporarily lost during construction. This is shown on the Two Village Bypass Proposed Landscape Masterplan and Finished Levels [AS-128]. See responses to LI.1.102 and Figure 18.44 included with SZC Co.'s Responses to the ExA's Written Questions (ExQ1) [REP2-100 and REP2-106].
- 1.3.4 Planting specifications and management proposals are provided in the Outline Landscape and Ecological Management Plan [AS-263].
- 1.4 Environmental Design and Mitigation
- 1.4.1 A summary of the environmental design and mitigation proposed in relation to the habitat features listed in 1.1.1I, as set out in **Volume 5**, **Chapter 7** of the **ES** [APP-425].
 - a) Foxburrow Wood
- 1.4.2 Foxburrow Wood CWS ancient woodland would be retained in its entirety. A buffer distance of 15m from earthworks is proposed to prevent impacts to the trees on the edge of the woodland. Some limited footpath works would be required at the edge of this zone. This requirement to maintain this buffer is detailed within the **Associated Development Design Principles** [REP2-041].
- 1.4.3 As identified in the Table 5.1 of **Part C** of the **Code of Construction Practice** (**CoCP**) [REP2-056], during the construction stage, close-



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boarded fencing would be erected along the side of woodland blocks, where the site abuts Foxburrow Wood CWS. This would help to minimise impacts from construction lighting and noise from construction activity.

b) Pond Wood and Nuttery Belt

- 1.4.4 Nuttery Belt would be directly impacted with woodland loss at the southern and northern tips of this belt (this is shown in **Figure 2**). The areas of woodland loss indicated on the clearance plan in **Figure 2** are 456m² at the northern end and 305m² at the southern end.
- 1.4.5 There would be no landtake or direct impacts to Pond Wood as it would be retained in its entirety.
- 1.4.6 Strategic landscaping is proposed to minimise potential effects on Pond Wood and Nuttery Belt through provision of planting, and will follow design principles set out in the **Associated Development Design Principles** [REP2-041].
- 1.4.7 Specific planting, management and landscape proposals are detailed in the Outline Landscape and Ecological Management Plan [AS-263].
- 1.4.8 As identified in the Table 5.1 of **Part C** of the **Code of Construction Practice (CoCP)** [REP2-056], during the construction stage, close-boarded fencing will be erected along the side of woodland blocks, where the site abuts Nuttery Belt and Pond Wood. This will help to minimise impacts from construction lighting and noise from construction activity.

c) Vicinity of Farnham Hall and Farmhouses

- 1.4.9 Native tree and shrub planting is proposed along the western side of the road cutting, as the route of the two village bypass passes Farnham Hall and residential properties, as well as along the western side of the proposed embankment up to the overbridge, to provide visual screening.
- 1.4.10 Native tree and shrub planting is also proposed on the east side of the overbridge, adjacent to Foxburrow Wood and Farnham Hall Farmhouse to provide visual screening and enhance ecological connectivity.
- 1.4.11 As defined in the Two Village Bypass Outline Landscape and Ecology Management Plan (olemp) [AS-263], those sections of the alignment which sit on free draining acid soils would be seeded to create speciesrich grassland, that is semi-improved acid grasslands. The grassland would comprise a native species mix including the following grass species: Sheep's Fescue (Festuca ovina), Slender Red Fescue (Festuca rubra subsp. litoralis), Common Bent (Agrostis capillaris), Crested Dog'stail (Cynosurus cristatus), Sweet Vernal Grass (Anthoxanthum odoratum)



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and Wavy Hair-grass (*Deschampsia flexuosa*). Forbe species would include the following: Yarrow (*Achillea millefolium*), Autumn Hawkbit (*Scorzoneroides autumnalis*), Common Knapweed (*Centaurea nigra*), Ribwort Plantain (*Plantago lanceolata*), Lady's Bedstraw (*Galium verum*), Cat's-ear (*Hypochaeris radicata*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Meadow Buttercup (*Ranunculus acris*), Ragged-Robin (*Silene flos-cuculi*), Common Sorrel (*Rumex acetosa*), Sheep's Sorrel (*Rumex acetosella*), Devil's-bit Scabious (*Succisa pratensis*) and Tufted Vetch (*Vicia cracca*).

1.4.12 The planting mentioned above is shown on the **Two Village Bypass Proposed Landscape Masterplan and Finished Levels** [AS-128] and the detailed planting specifications and management rationale are provided in the **oLEMP** [AS-263]



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2 SUMMARY OF SURVEYS COMPLETED TO-DATE

2.1 References

- 2.1.1 The data provided below on ecological surveys is taken from the following sources:
 - Volume 5, Chapter 7 of the ES [APP-425];
 - The primary data which is included at Volume 5, Appendix 7A [APP-426 and APP-427];
 - Volume 1, Chapter 5 of the ES Addendum [AS-184]
 - The Associated Development Site Bat Tree Report [REP2-121];
 and
 - Two Village Bypass Wintering Birds Report [REP2-125].
- 2.1.2 The exception to the statement in Paragraph 2.1.1 are any 2021 surveys which are currently on-going and have not yet been reported and submitted to the Examining Authority. These are reported based on raw data.
- 2.2 Plants and Habitats
 - a) Summary of Surveys
- 2.2.1 The following surveys were undertaken in 2019:
 - extended Phase 1 habitat survey of the route alignment plus a 50m buffer;
 - Hedgerow Regulations of all hedgerows within the route alignment;
 - National Vegetation Classification (NVC) of ditches within the site boundary and the River Alde.
 - b) Phase 1 Habitat Surveys
- 2.2.2 The Phase 1 habitat map is shown in Figure 3.



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ii. Nuttery Belt

- 2.2.3 This woodland was not directly surveyed in 2019. However, the two village bypass site as a whole was subject to a Phase 1 Habitat survey in 2019, including external views of Nuttery Belt, which enabled it to be mapped below as semi-natural broad-leaved woodland, a habitat type listed on the Suffolk Priority Species and Habitats List. The findings of the Phase 1 Habitat Survey of Nuttery Belt undertaken in June 2021 are included within Appendix C of SZC Co.'s Responses to the Examining Authorities Request for Further Information (Doc Ref. 9.39).
- 2.2.4 This woodland is considered of County importance under the CIEEM guidelines and medium importance under the EIA-specific methodology.

iii. Pond Wood

- 2.2.5 This was mapped as lowland broad-leaved semi-natural woodland, and the eastern component of the woodland is listed on the Ancient Woodland Inventory. It was recorded in 2019 as having a canopy of field maple, oak and beech, and an understorey of field maple, hazel and elder. Ground flora was dominated by bluebell, red campion, cleavers, ramsons and dog's mercury.
- 2.2.6 This woodland is considered of County importance under the CIEEM guidelines and medium importance under the EIA-specific methodology.

iv. Foxburrow Wood County Wildlife Site

- 2.2.7 This is a woodland of 3.82 ha, which is designated as a County Wildlife Site (CWS). Together within the eastern part of Palant's Grove, Foxburrow Wood (also shown in Figure 1), is listed on the ancient woodland inventory. The Western part of Palant's grove was removed from the ancient woodland inventory in 2020 but remains part of the CWS.
- 2.2.8 The 2019 Phase 1 survey recorded this woodland as having a canopy dominated by oak and a sparse understorey of elder and hawthorn. The ground flora was recorded to be dominated by bluebells.
- 2.2.9 The citation for this sites notes "Foxburrow Wood is an ancient wood on sandy soils with a variety of tree species including oak (Quercus spp.), Ash (Fraxinus excelsior) and Beech (Fagus sylvatica) (some of which are very mature) in the canopy and also Hazel Field Maple (Acer campestre), Hawthorn (Crataegus monogyna) and Hornbeam (Carpinus betulus) coppice. In the shrub layer, Elder (Sambucus nigra) and Holly (Ilex aquifolium) are also present. The perimeter of the wood is marked by a ditch and bank boundary with one very old oak pollard on the northern



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edge. The ground flora includes ferns and carpets of Bluebell (Hyacinthoides non-scripta), with Dog's-mercury (Mercurialis perennis) dominant in parts."

- 2.2.10 This woodland is considered to be of national importance under CIEEM guidelines, and of high importance under the EIA-specific methodology.
 - c) Hedgerow Regulations
- 2.2.11 These surveys identified seven 'important' hedgerows, three of which are directly relevant to the area of interest (hedge numbers shown in **Figure 3**)**Error! Reference source not found.**:
 - Hedge 49 connected to Farnham Manor building complex;
 - Hedge 50 connecting Pond Wood to Foxburrow Wood;
 - Hedge 53 north to south, running parallel to Nuttery Belt;
 - d) National Vegetation Classification of Watercourses and Ditches
- 2.2.12 No water courses are located within proximity of or connected to Nuttery Belt, Foxburrow Wood or Pond Wood, or any of the Farnham Manor or Farmhouse building complexes, so these survey results, which focussed on the River Alde floodplain, do not relate to the habitat features of interest.
- 2.3 Bats
 - a) Summary of Surveys
- 2.3.1 The following bat surveys of have been completed to-date:
 - Bat transect surveys (2019);
 - Static detector surveys (2019);
 - Bat tree assessment surveys (2020 and 2021); and
 - Crossing point surveys (2021 Survey Report not yet submitted to Examining Authority).
 - b) Transect surveys (2019)
- 2.3.2 The transect route included (as shown in **Figure 4**):
 - the eastern and southern edges of Nuttery Belt;



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- the southern, western and northern edges of Foxburrow Wood and the southern boundary of Farnham Hall Farmhouse; and
- the track which passes through Farnham Hall Manor.
- 2.3.3 The results of these surveys are shown in **Figure 4**.
 - c) Static bat detector surveys (2019).
- 2.3.4 Static detector locations are shown in **Figure 4**, and included:
 - the hedgerows connected to Foxburrow Wood to the north and west;
 - the woodland belt connected to the south-western corner of Nuttery Belt;
 - the hedgerow connected to the southern corner of Nuttery Belt; and
 - the hedgerow connected to the southern corner of Pond Wood



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Table 2: Results of 2019 bat transect surveys.

Location		Species recorded each month at each location							
	April	May	June	July	August	September	October		
Perimeter of Foxburrow Wood (north, west, south)	None	Common pipistrelle x 2	Common pipistrelle x 2 Soprano pipistrelle x 1	Common pipistrelle x 8 Soprano pipistrelle x 1	None	Soprano pipistrelle x 2 Barbastelle x 1	Soprano pipistrelle x 1		
Hedgerow between Foxburrow Wood and Pond Wood	None	Common pipistrelle x 4	Common pipistrelle x 3 Soprano pipistrelle x 1	Soprano pipistrelle x 1 Common pipistrelle x 1	Pipistrelle sp. x 1	Soprano pipistrelle x 1	Common pipistrelle x 1 Soprano pipistrelle x 1		
Eastern edge of Pond Wood	None	None	None	None	Soprano pipistrelle x 2	None	None		
Eastern and southern edge of Nuttery Belt	None	Barbastelle x 1	Common pipistrelle x 2	Common pipistrelle x 2 Nyctalus sp. x 1	Barbastelle x 1	None	Soprano pipistrelle x 2		
Track through Farnham Manor and around eastern edge	None	Common pipistrelle x 5 Common pipistrelle x 1 Big bat x 1	Serotine x 1 Myotis sp. x 1 Nyctalus sp. x 1 Big bat x 2 Unknown sp. x 1 Soprano pipistrelle x 2	Soprano pipistrelle x 8 Common pipistrelle x 2 Soprano pipistrelle x 3	Common pipistrelle x 3	Soprano pipistrelle x 1 Common pipistrelle x 3	Soprano pipistrelle x 4		



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Table 3 Results of 2019 bat static detector surveys.

Location	Month	Mean passes per night (ppn)					
		Barbastelle	Myotis sp.	Big bat sp.	Nathusius' pipistrelle	Pipistrelle sp.	Long-eared bat sp.
Hedgerows connected to	April	4.4	3.4	0	0	28	0
Foxburrow Wood to the north	May	10	1	2.6	0.8	650.2	0.6
and west	June	7.2	35.8	10.6	1.2	692.6	0.8
	July	0.6	9.6	6	1.2	216.8	0
Woodland belt connected to	April	9.6	1.8	0.8	0	15	0.6
the south-western corner of	May	51.6	3.8	0.8	0.6	577.8	2.2
Nuttery Belt	June	2.4	4.8	13.2	15.6	514.8	0
	July	N/A	N/A	N/A	N/A	N/A	N/A
Hedgerow connected to the	April	8.4	13.4	0.8	0	47.8	0.2
southern corner of Nuttery	May	58.6	1.6	1.8	0.4	470	3.4
Belt	June	0.4	4.2	5.4	0.8	428.8	0
	July	38.8	12.4	184.4	1.8	342.4	0
Hedgerow connected to the	April	0	0.8	0	0.2	3.8	0
southern corner of Pond	May	0.4	0.2	0.4	0.4	110	0.6
Wood	June	0.2	3.4	1	0.4	27.2	0
	July	0.8	10.4	7.2	1.4	100.4	0



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- d) Bat tree assessments (2020 and 2021)
- 2.3.5 Ground-level tree assessments (GLTA) of trees within the two village bypass site boundary were conducted in 2020.
- 2.3.6 In 2021 the results of these were reviewed and cross referenced with the **Two Village Bypass Clearance Plan** [AS-128] to determine which trees with roosting bat potential were situated within the proposed vegetation removal zone.
- 2.3.7 Where possible, 2021 surveys included an aerial inspection of trees, using ladders or climbing equipment and endoscopes, torches. Where this was not possible the GLTA survey was updated.
- 2.3.8 Within the two village bypass site, 36 trees were identified for removal, of which 28 were identified as being of High or Moderate bat roost potential.
- 2.3.9 No confirmed roosts were identified.
- 2.3.10 The full results of the 2021 and 2021 have been submitted to the Examining Authority in the **Bat Roost Surveys in Trees Associated Development Sites** [REP2-121] report.
 - i. Foxburrow Wood
- 2.3.11 Foxburrow Wood and Pond Wood are not located within the vegetation removal zones and were not included in the 2020 and 2021 Bat tree assessments. However, the hedgerows connecting these woodland blocks to the wider landscape would be impacted, as shown in **Figure 2**.
- 2.3.12 A number of trees were identified within the hedgerows connected to Foxburrow Wood and Pond Wood, however (H22 and H23). The locations are shown in **Figure 5** below.
- 2.3.13 These trees consisted of mature ash (trees 119 and 122 high and moderate value) and a semi-mature ash (tree 121 High value).
 - ii. Nuttery Belt
- 2.3.14 The northern and southern tips of Nuttery Belt would be impacted by the vegetation removal zone as shown in **Figure 2**.
- 2.3.15 **Figure 5** below shows the bat roost value of trees within Nuttery Wood recorded within the 2020 and 2021 bat tree assessment surveys. Six trees of high value were identified, and five trees of moderate value. These trees consisted almost entirely of mature field maple and ash, with one dead cherry tree. No roosts were confirmed.



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- 2.3.16 Details of these trees are Tabulated in **Table 2** of the **Bat Roost Surveys** in **Trees Associated Development Sites** [REP2-121] report, which includes species, tree descriptions and details of the features.
 - iii. Farnham Manor/Farm House
- 2.3.17 The 2020 and 2021 bat tree assessment surveys did not cover the land within the boundaries of these properties given that there is no proposed tree loss, and no trees were identified within connected habitats which were proposed to be removed.
 - e) Crossing Point Surveys
- 2.3.18 Crossing point surveys are used where linear features (hedgerows, water courses, tree-lines) are due to be severed by development. Two surveyors positioned themselves on either side of the location of severance, facing towards each other, and use bat detectors to monitor bat activity, supplemented in the case of these surveys with infra-red cameras as a visual aid. The aim of these surveys is to identify commuting routes or foraging areas in order to inform mitigation design.
- 2.3.19 Crossing point surveys of features due to be severed by the two village bypass were completed in April, May and June 2021 and are ongoing in July 2021. The locations of the surveys relevant to this review are shown in **Figure 6** below, and the results are summarised in **Table 4** below.



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Table 4 Results of crossing point surveys completed to-date.*

	Month	Species Recorded	Surveyor Observations
CP4	May	Nyctalus noctule Pipistrellus Pipistrellus pygmaeus	Foraging <i>P.pygmaeus</i> and <i>P.pipistrellus</i> recorded flying up and down the tree-line. Early observations suggest roosting nearby, potentially within Nuttery Belt.
	June	Pipistrellus pygmaeus Pipistrellus pygmaeus Pipistrellus Barbastella barbastellus Nyctalus noctula Plecotus auratus Eptesicus serotinus	Approximately six passes of commuting and foraging <i>P. pygmaeus</i> , and five passes of commuting and foraging <i>P. pipistrellus</i> observed. One commuting bat of each <i>N. noctula</i> and <i>E. serotinus</i> . Two <i>B. barbastellus</i> observed foraging constantly from 1hr 17 minutes after sunset. <i>P. auritus</i> heard but not observed.
CP5	May	Nyctalus noctule Pipistrellus pygmaeus Pipistrellus	N. noctula observed flying overhead into Pond Wood. P. pygmaeus and P.pipistrellus observed commuting both north and south down the lane and foraging overhead. Almost constant Pipistrellus sp. activity throughout the survey.
	June	Pipistrellus Pipistrellus pygmaeus	Pipistrelle heard, but not seen on many occasions. Occasionally observed commuting south over the hedge.
CP6	April	Pipistrellus Pipistrellus pygmaeus	Majority of bats observed were commuting south down the hedgerow away from Pond Wood.
	June		Awaiting survey data
CP7	April	Pipistrellus Pipistrellus pygmaeus Plecotus aurltus(?) Barbasella barbastellus(?)	Pipistrellus sp. frequently recorded commuting east and west along road. Appears to be an established commuting route. B. barbastellus and/or P. auritus possibly recorded on two occasions but not observed by surveyors. All flight was on road side of hedge.
	June		Awaiting survey data
CP8	April	Pipistrellus Pipistrellus pygmaeus Nyctalus noctula	N. noctula observed flying approx. 30m high SSE. P. pipistrellus observe flying north along hedgerow. All other Pipistrellus sp. not seen.
	June		Awaiting survey data

^{*}Note that full analysis of the survey data has not yet been completed so these findings are subject to change.



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2.4 Amphibians

a) Summary of Surveys

- 2.4.1 A desk-based survey was completed to identify ponds within the site and within 500m of the two village bypass site boundary. Where access was possible, in 2019 these were subject to:
 - Habitat Suitability Index (HSI); and
 - eDNA presence/absence surveys.
- 2.4.2 Updated eDNA sampling of these ponds (and ponds newly identified in 2021 see 2.4.8) was undertaken in 2021. At the time of reporting results of these eDNA samples had not yet been received. Once available, this information will be submitted to the Examining Authority.
 - b) Results of HSI and eDNA
 - i. 2019 Surveys
- 2.4.3 Twenty-five ponds were identified within 500m of the two village bypass site boundary two of which were present within Pond Wood (P016 and P300) and four of which were present within the vicinity of Farnham Hall (P017, P018, P019, P020).
- 2.4.4 The ponds located within Pond Wood (P016 and P300) were of Average and Below Average in the Habitat Suitability Index (HSI) respectively, and samples from both ponds were negative for GCN eDNA in 2019.
- 2.4.5 The accessible ponds located within the Vicinity of Farnham Hall (P017 and P020) were assessed as being Good and Poor suitability respectively in the HSI assessment, and samples from both ponds were negative for GCN eDNA in 2019.
- 2.4.6 All ponds subject to eDNA sampling in 2019 (some were scoped out due to distance/connectivity or were defunct) returned a negative eDNA result. P018 and P019 were not surveyed as access was not possible.
- 2.4.7 The results of the 2019 great crested newt surveys are shown in **Figure 7**, and full results are included at **Volume 5**, **Appendix 7A**, **Annex 7A.3** of the **ES** [APP-426].
 - ii. 2021 Surveys
- 2.4.8 All ponds within Pond Wood and the vicinity of Farnham Hall (including those previously inaccessible) were subject to HSI and eDNA survey in



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2021. In addition, a number of new ponds were identified, one within Pond Wood (300A) and two within the vicinity of Farnham Hall (18a and 18b). The locations of these ponds are shown in **Figure 7**.

- 2.4.9 The 2021 HSI results are shown below:
 - P016 Below Average (Average in 2019);
 - P017 Good (Good in 2019);
 - P018 Average;
 - P018a Good;
 - P018b Good;
 - P019 Poor;
 - P020 Below Average (Poor in 2019);
 - P300 Below Average (As recorded in 2019);
 - P300a Poor.
- 2.4.10 No ponds were presented within Nuttery Belt or Foxburrow Wood during the time of survey.
- 2.4.11 The results of the 2021 great crested newt surveys will be submitted to the examining authority at an appropriate deadline



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- 2.5 Badger
 - a) Summary of Surveys
- 2.5.1 A desk-study was completed in 2019 to search for records of badger within the site or its surrounding habitats.
- 2.5.2 As part of the Preliminary Ecological Appraisal in 2019 [APP-426], a protected species walkover was completed, which searched for field signs of protected species such as badger.
 - b) Survey Results
- 2.5.3 A single record of badger was identified within the site boundary during the 2019 Preliminary Ecological Appraisal. The sett was not within the habitat features identified in paragraph 1.1.1.
- 2.5.4 The walkover survey identified a single outlier badger sett present within the site. The presence of badger within the site is considered to be of local importance under the CIEEM guidelines (Ref. 7.24), and of very low importance under the EIA-specific methodology. Further details are provided within **Volume 5**, **Appendix 7A** of the **ES** [APP-426].
- 2.6 Otter and Water Vole
 - a) Summary of Surveys
- 2.6.1 Otter and water vole surveys of water courses within the two village bypass site were conducted in 2019.
 - b) Survey Results
- 2.6.2 Signs of otter and water vole were recorded associated with the watercourses within the River Alde valley within the two village bypass site boundary, however this area is to the west of the area of interest in this document and not associated with any of the habitat areas of interest within this document. Further details are provided within **Volume 5**, **Appendix 7A**, **Annex 7A.3** of the **ES** [APP-426].



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- 2.7 Breeding and Wintering Birds
 - a) Summary of Surveys
- 2.7.1 Breeding bird transect surveys were undertaken at the two village bypass between April June 2019, and wintering bird transect surveys were undertaken between November 2020 and March 2021.
 - b) Survey Results
- 2.7.2 The results of the breeding bird surveys are shown in **Figure 8** and described below in relation to the habitat features of interest. Further details are provided within **Volume 5**, **Appendix 7A**, **Annex 7A.3** of the **ES** [APP-426].
- 2.7.3 The results of the wintering bird surveys are shown in **Figure 9** and described below in relation to the habitat features of interest. Further details are provided within the **Two Village Bypass Wintering Bird Report 2021** [REP2-125].
 - c) Nuttery Belt
 - i. Breeding Birds
- 2.7.4 Song Thrush and Linnet (both red-listed and Section 41 NERC act species) were recorded to the south of Nuttery Belt, within the two village bypass site boundary.
- 2.7.5 Two bull finches and a kestrel were recorded within Nuttery Belt (outside of the two village bypass site boundary). These are both amber listed species, and bull finch are also listed in Section 41 of the NERC act.
 - ii. Wintering Birds
- 2.7.6 Stock dove (six individuals) and song thrush were both recorded within Nuttery Belt or around its boundaries. Stock dove are an amber-listed species, and song thrush are Section 41 NERC act species.
 - d) Foxburrow Wood
 - i. Breeding Birds
- 2.7.7 Two song thrush (red-list and Section 41 NERC act) were recorded at the northern edge of Foxburrow Wood.



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ii. Wintering Birds

- 2.7.8 Marsh tit, dunnock, lesser redpoll, song thrush and bullfinch (all Section 41 NERC act), redwing (a Schedule 1 species, at least seven individuals observed) were all observed associated with Foxburrow Wood.
- 2.7.9 A marsh harrier (an amber-listed species) was observed flying to the north of Foxburrow Wood on the November survey occasion.
 - e) Pond Wood
 - i. Breeding Birds
- 2.7.10 A single kestrel (amber-listed) was recorded within Pond Wood.
 - ii. Wintering Birds
- 2.7.11 No birds were recorded within Pond Wood or around its boundaries during any of the survey visits.
 - f) Farnham Hall
 - i. Breeding Birds
- 2.7.12 A single mistle thrush (red-listed) was recorded in the area of Farnham Hall.
 - ii. Wintering Birds
- 2.7.13 Wintering birds were recorded on the final (March) survey visit only. This survey recorded one song thrush and two dunnocks within the vicinity of Farnham Hall, both Section 41 NERC act species.
 - g) Farnham Hall Farm Houses
 - i. Breeding Birds
- 2.7.14 A single skylark (red-listed and Section 41 NERC act) was recorded in the area of Farnham Hall Farm Houses.
 - ii. Wintering Birds
- 2.7.15 Wintering birds were recorded on the final (March) survey visit only. This survey recorded one song thrush and two dunnocks within the vicinity of Farnham Hall, both Section 41 NERC act species.



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2.8 Reptiles

- 2.8.1 The extended Phase 1 habitat survey identified small pockets of poorly connected, sub-optimal reptile habitat. Therefore, no targeted surveys were undertaken for reptiles. A low population of common species of reptile was assumed for the assessment. Further details are provided within Volume 5, Appendix 7A, of the ES [APP-426] and Annex 7A of the ES [APP-426].
- 2.8.2
- 2.9 Invertebrates
- 2.9.1 Invertebrate surveys in 2019 focussed on the ditches and riparian habitats within the River Alde floodplain. The habitat features listed in 1.1.1 or surrounding areas were not included in these surveys. Further details are provided within **Volume 5**, **Appendix 7A**, **Annex 7A.3** of the **ES** [APP-426].



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3 SUMMARY

- 3.1 Overview and Assessment of Impacts
- From the primary data outlined above and conclusions drawn in **Volume**5, **Chapter 7** of the **ES** [APP-425] and **Volume 1**, **Chapter 5** of the **ES**Addendum [AS-184], the impacts of proposed two village bypass on the habitat features of interest in relation to the relevant ecological receptors associated with these habitat features are summarised below.
 - b) Plants and Habitats
- 3.1.2 The assessment of Foxburrow Wood (considering the impact pathways of habitat fragmentation and changes in air quality) within **Volume 5**, **Chapter 7** of the **ES** [APP-425] determined a negligible adverse effect, based on the results of air quality assessments and the primary mitigation proposed. This negligible adverse effect is considered **not significant** (Para 7.6.129 of [APP-425]). The updated assessment presented within the **Volume 1**, **Chapter 5** of the **ES Addendum** to consider the removal of Palant's Grove from the AW confirmed the effects would remain as described within the **ES** [AS-184]. See also the responses to **Bio.1.15** [REP2-100] and **AQ.1.64** [REP2-100] within SZC Co.'s **Responses to the ExA's Written Questions** (ExQ1).
- 3.1.3 The same conclusions were made within **Volume 5**, **Chapter 7** of the **ES** [APP-425] regarding lowland mixed deciduous woodland (including Nuttery Belt and Pond Wood), although with a minor beneficial overall effect (**not significant**) given the improved habitat connectivity and woodland planting (Para 7.6.133 of [APP-425]).
- 3.1.4 The assessment of hedgerows (such as those connecting the woodland blocks described above) within **Volume 5**, **Chapter 7** of the **ES** [APP-425] determined the main impact pathway affecting this habitat type to be habitat fragmentation, although the overall effect is considered to be minor beneficial (**not significant**) due to improved habitat connectivity and increase in habitat extent (Para 7.6.136 of [APP-425]). See also the responses to **Bio 1.138** and **Bio.1.142** within SZC Co.'s **Responses to the ExA's Written Questions** (ExQ1) [REP2-100].
 - c) Bats
- 3.1.5 The assessment of impacts on the bat assemblage within **Volume 5**, **Chapter 7** of the **ES** [APP-425] considered the impact pathways of habitat loss and fragmentation, disturbance from noise and vibration, disturbance from light and incidental mortality. For each of these impact pathways, a

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minor adverse impact is anticipated, which is considered to be not **significant** is anticipated (Paras 1.6.156, 7.6.159, 7.6.165 and 7.6.167 of [APP-425]).

- 3.1.6 Surveys are continuing in 2021 to further inform the mitigation requirements for the two village bypass proposals and the protected species licences. To date, a number of likely bat commuting routes have been identified, as well as a barbastelle foraging area within the proximity of Nuttery Wood.
 - d) **Breeding and Wintering Birds**
- 3.1.7 The assessment of impacts on the bird assemblage within **Volume 5**. Chapter 7 of the ES [APP-425] considered the impact pathways of habitat loss and fragmentation and disturbance effects (light, noise and visual). Both pathways were considered to result in a minor adverse effect, which is considered to be **not significant** (Para.7.6.144 to 7.6.151 of [APP-425]).

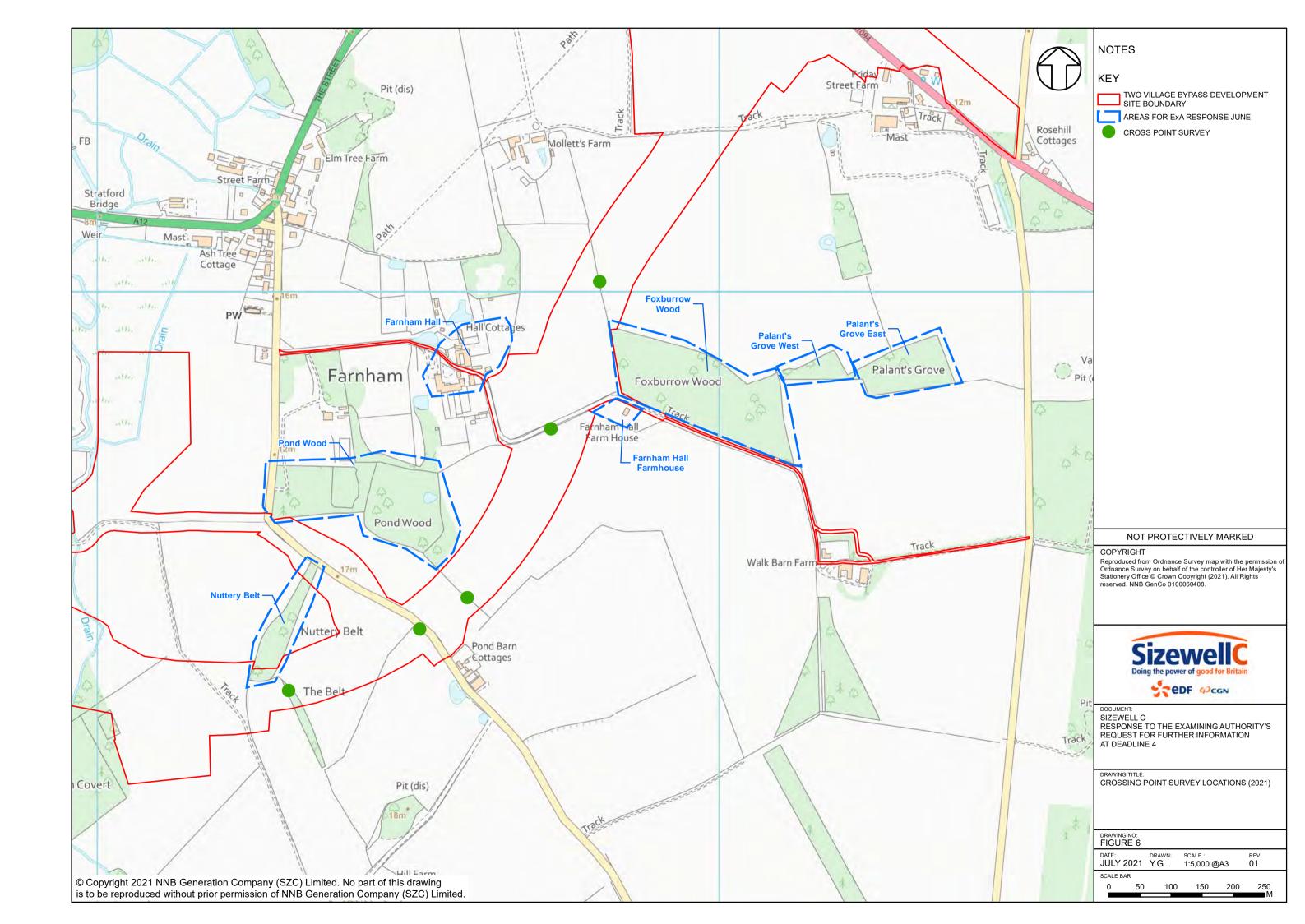


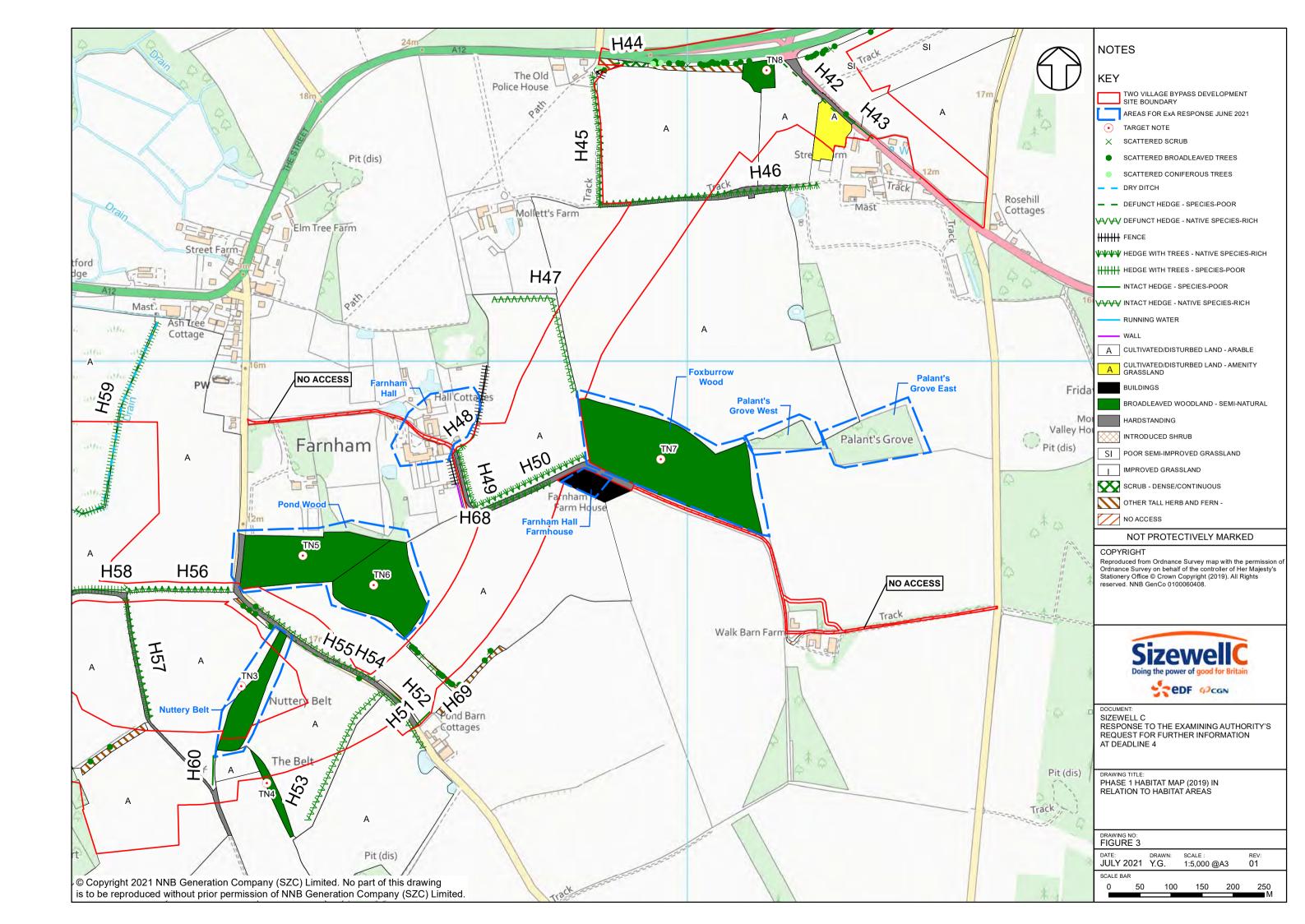
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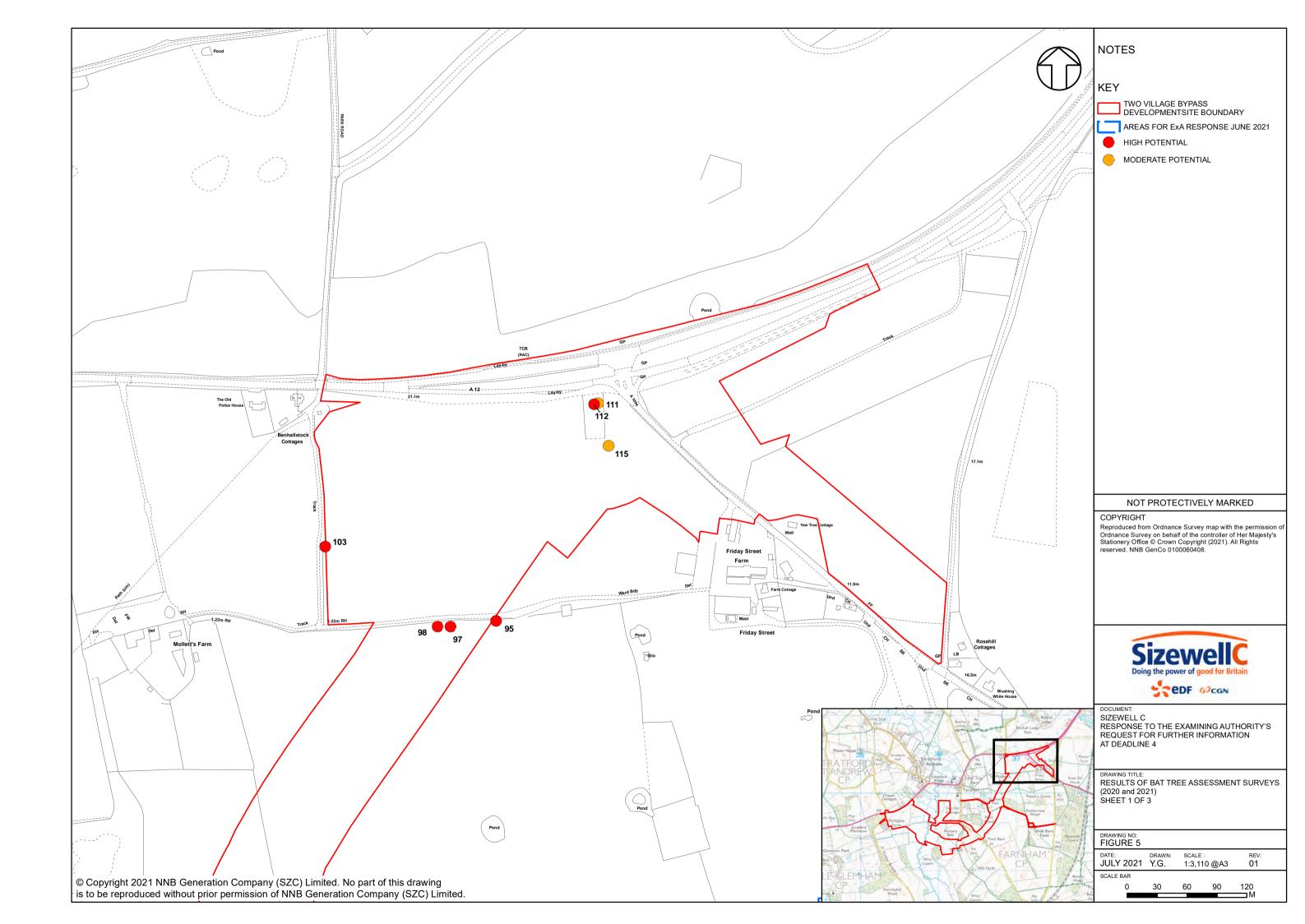
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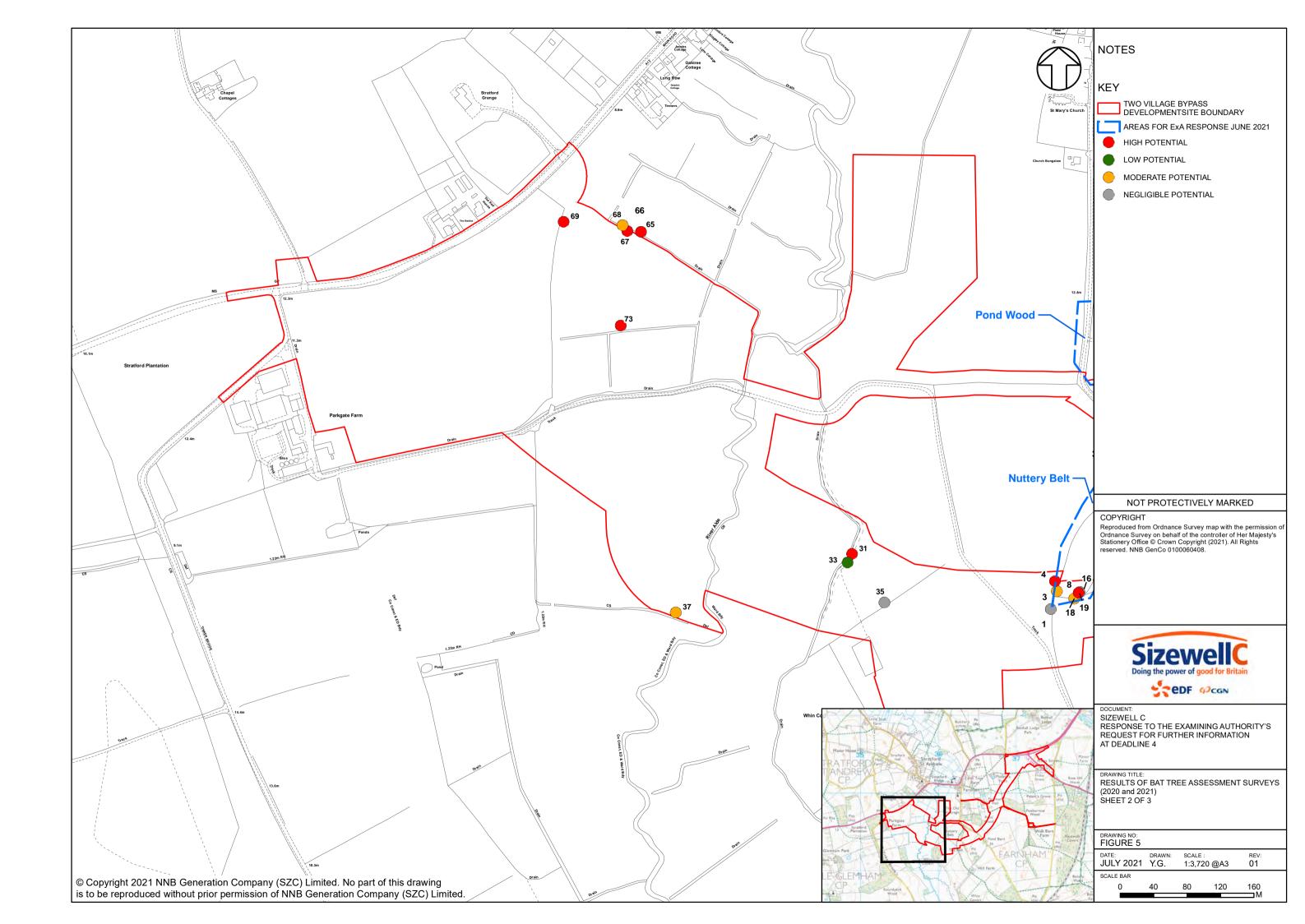
APPENDIX B FIGURES

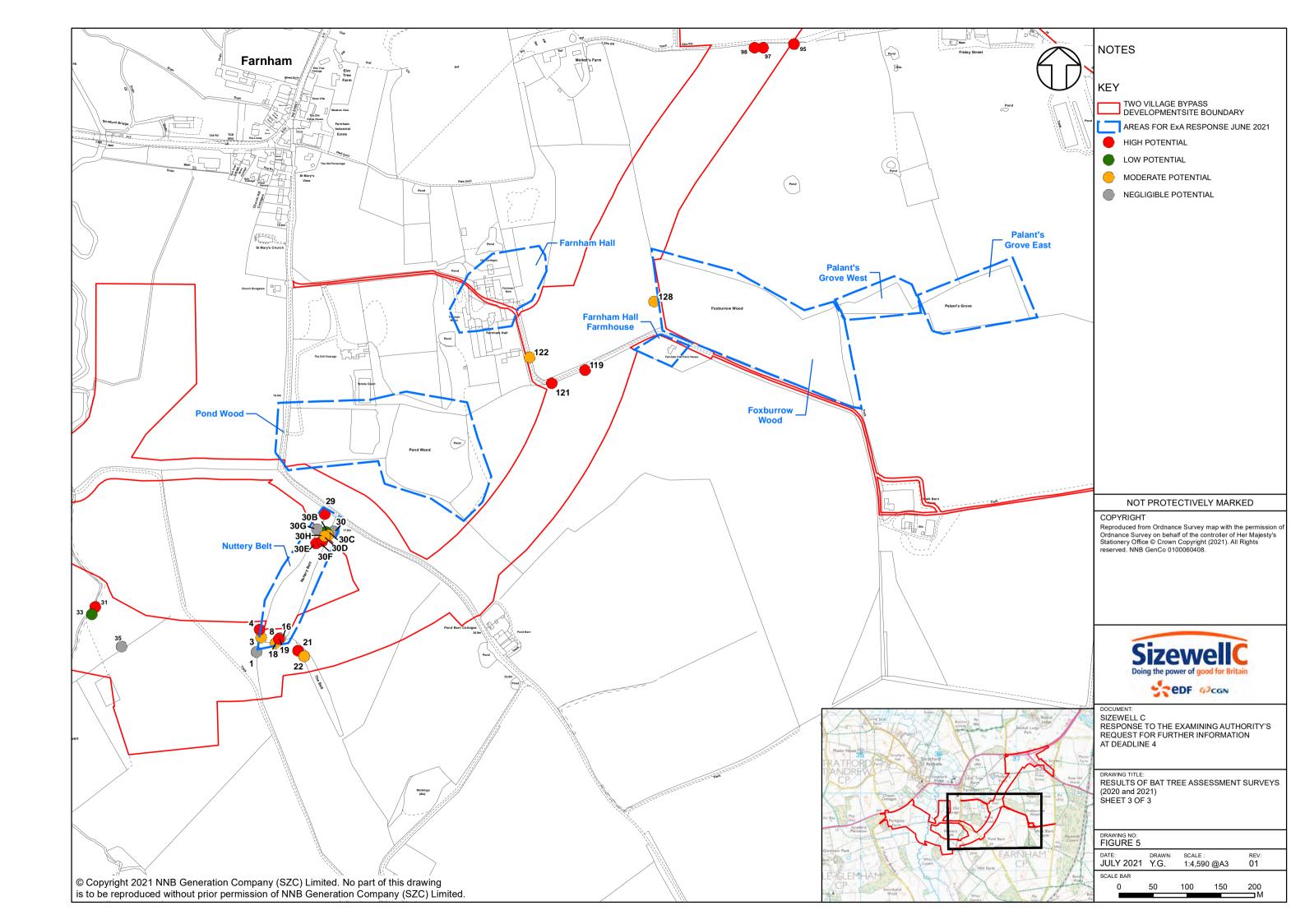
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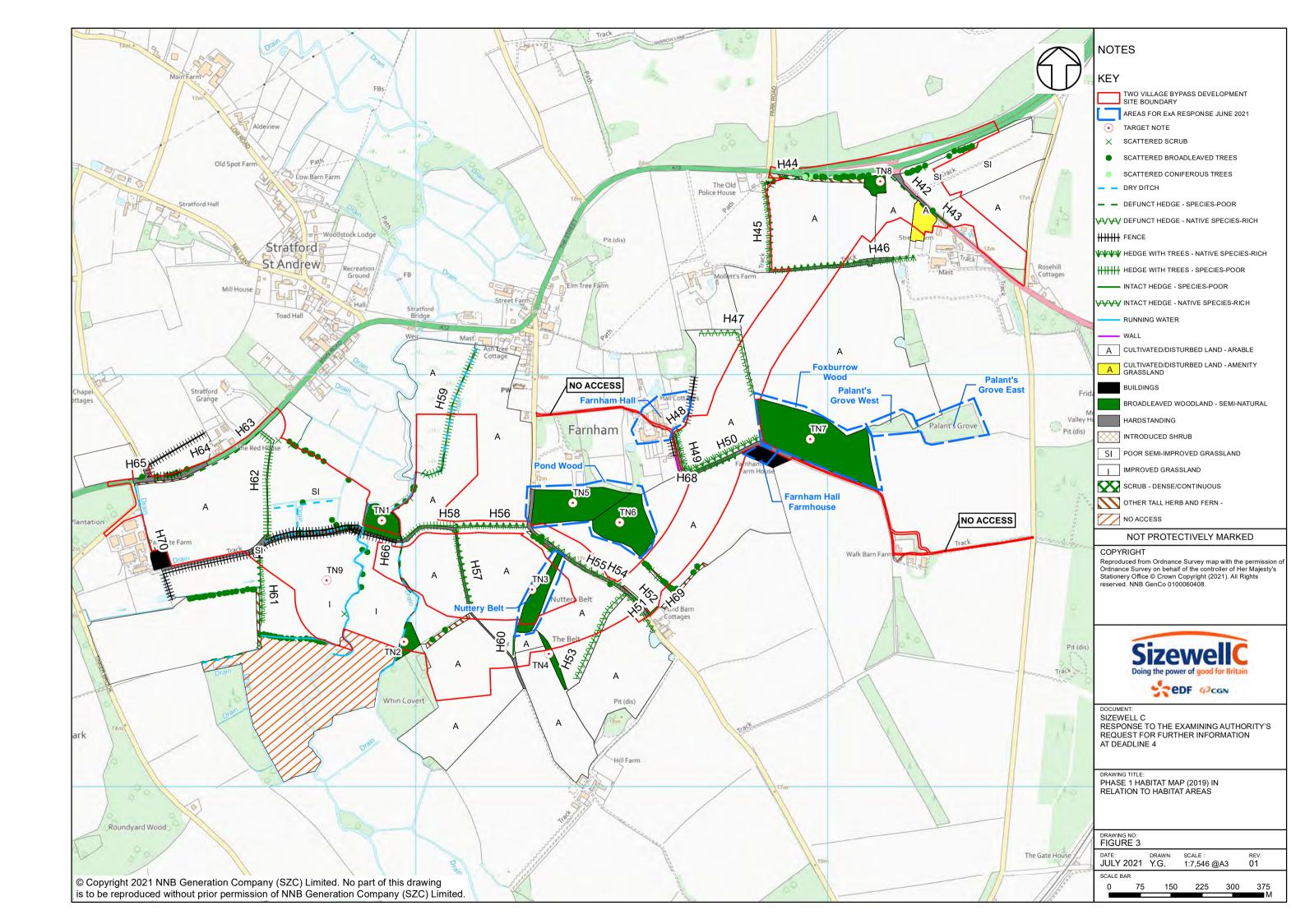


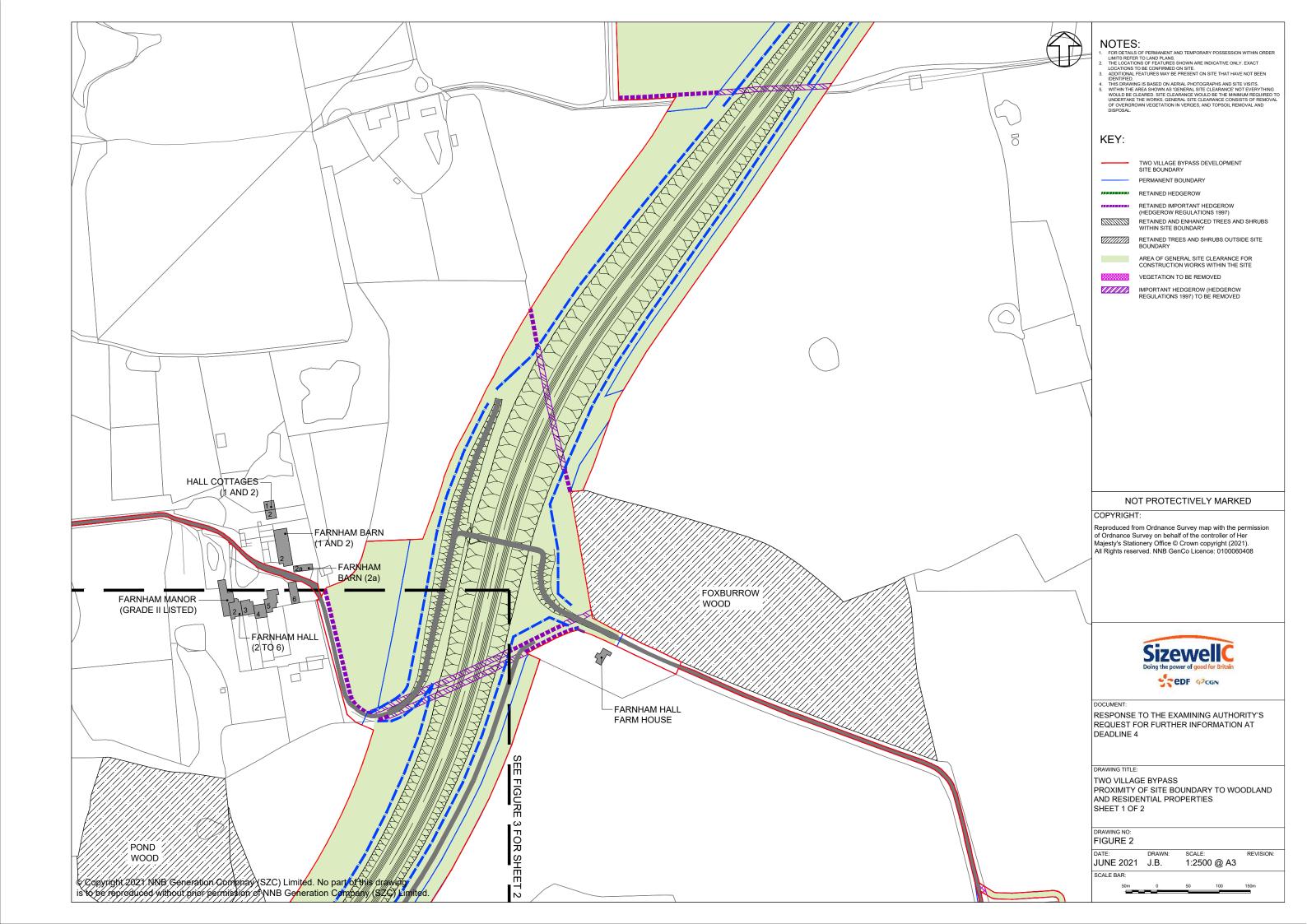


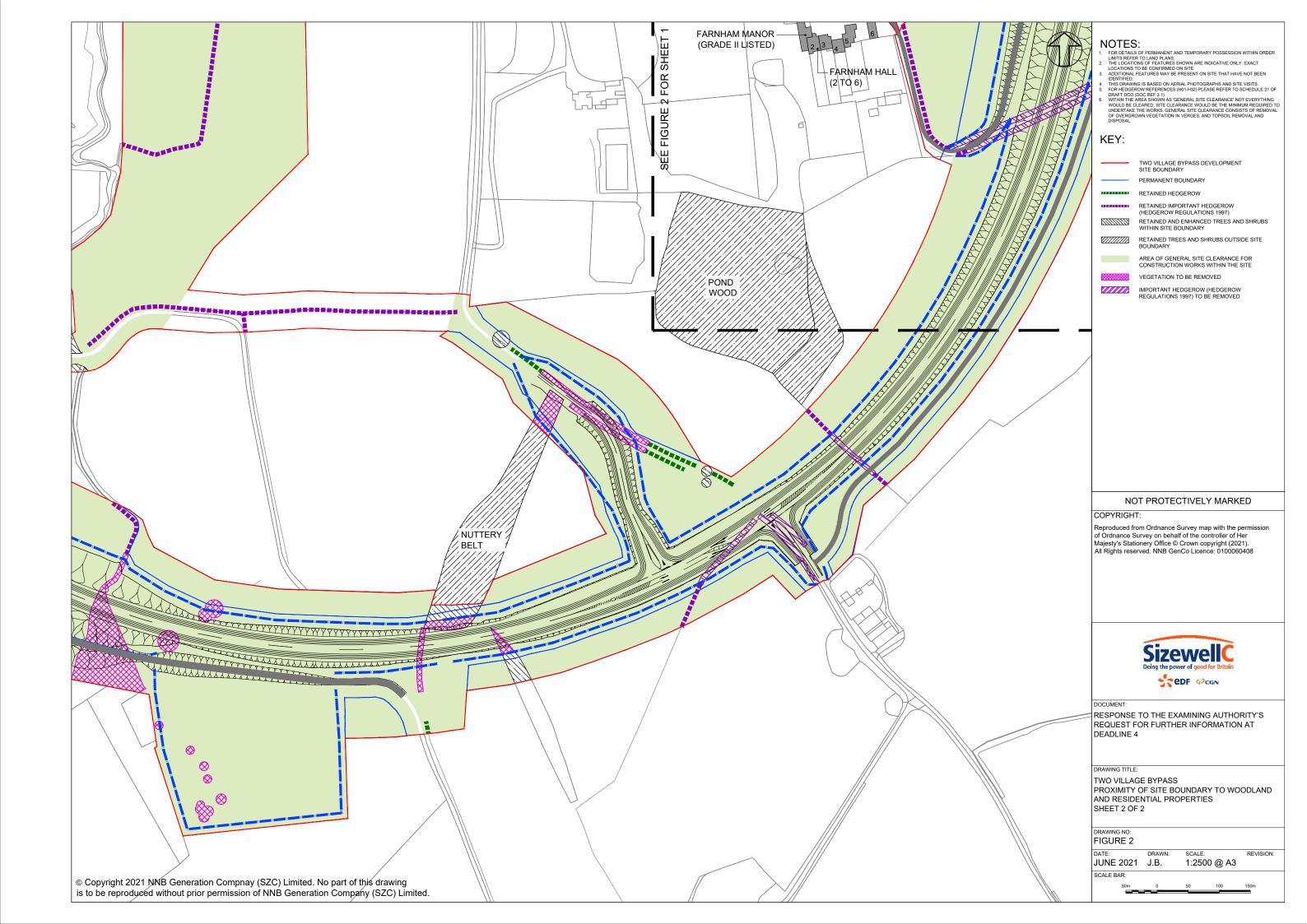


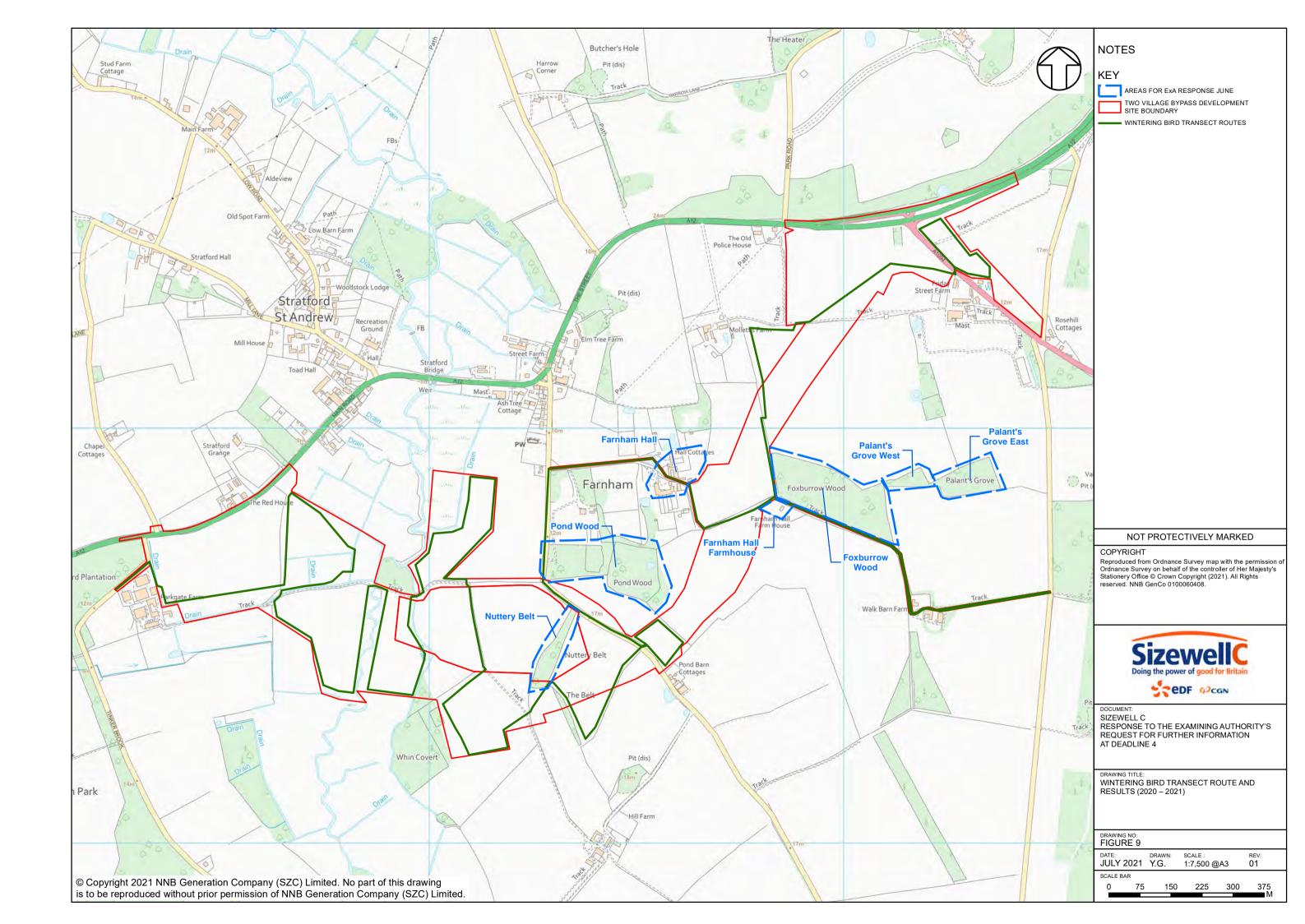


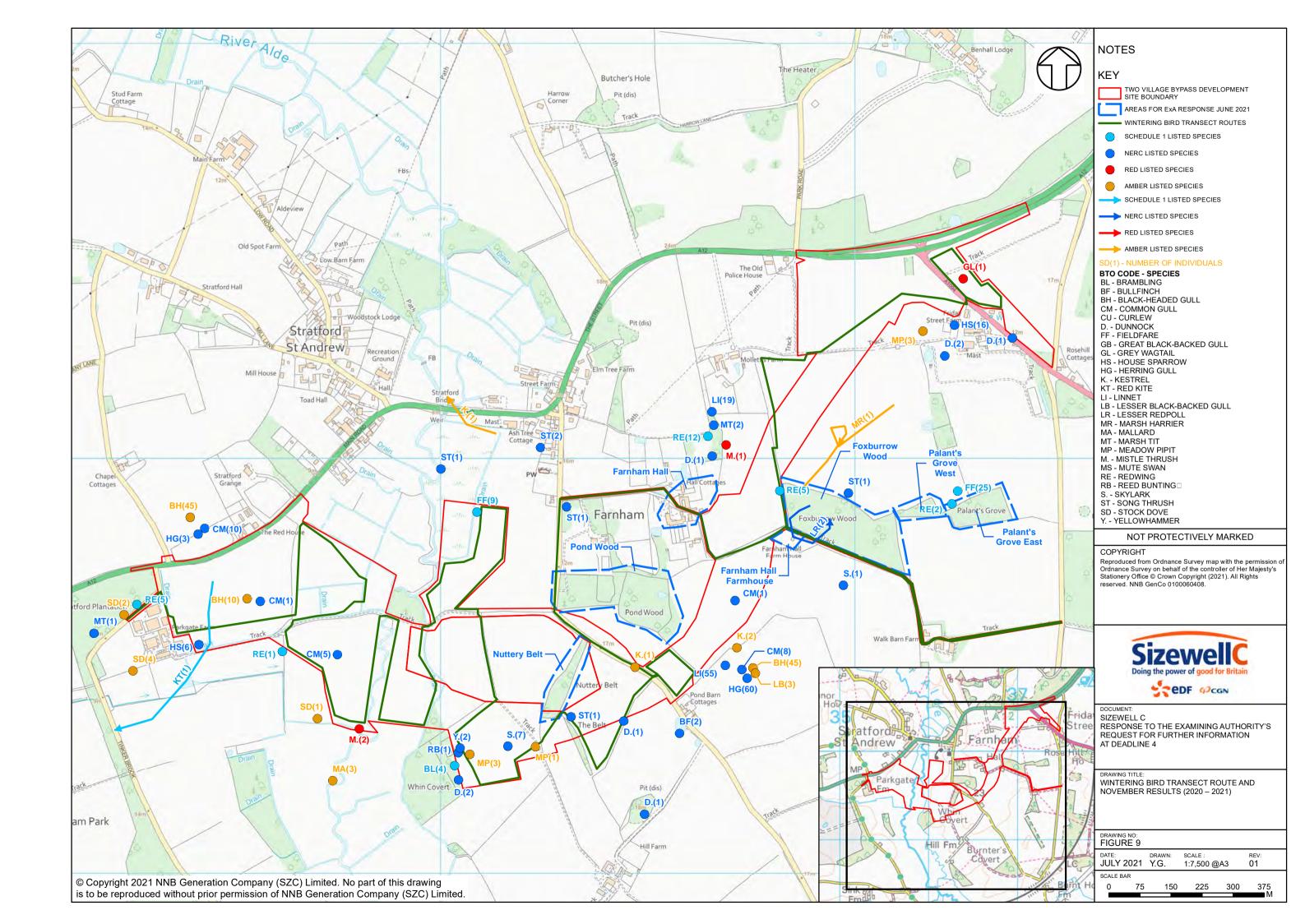


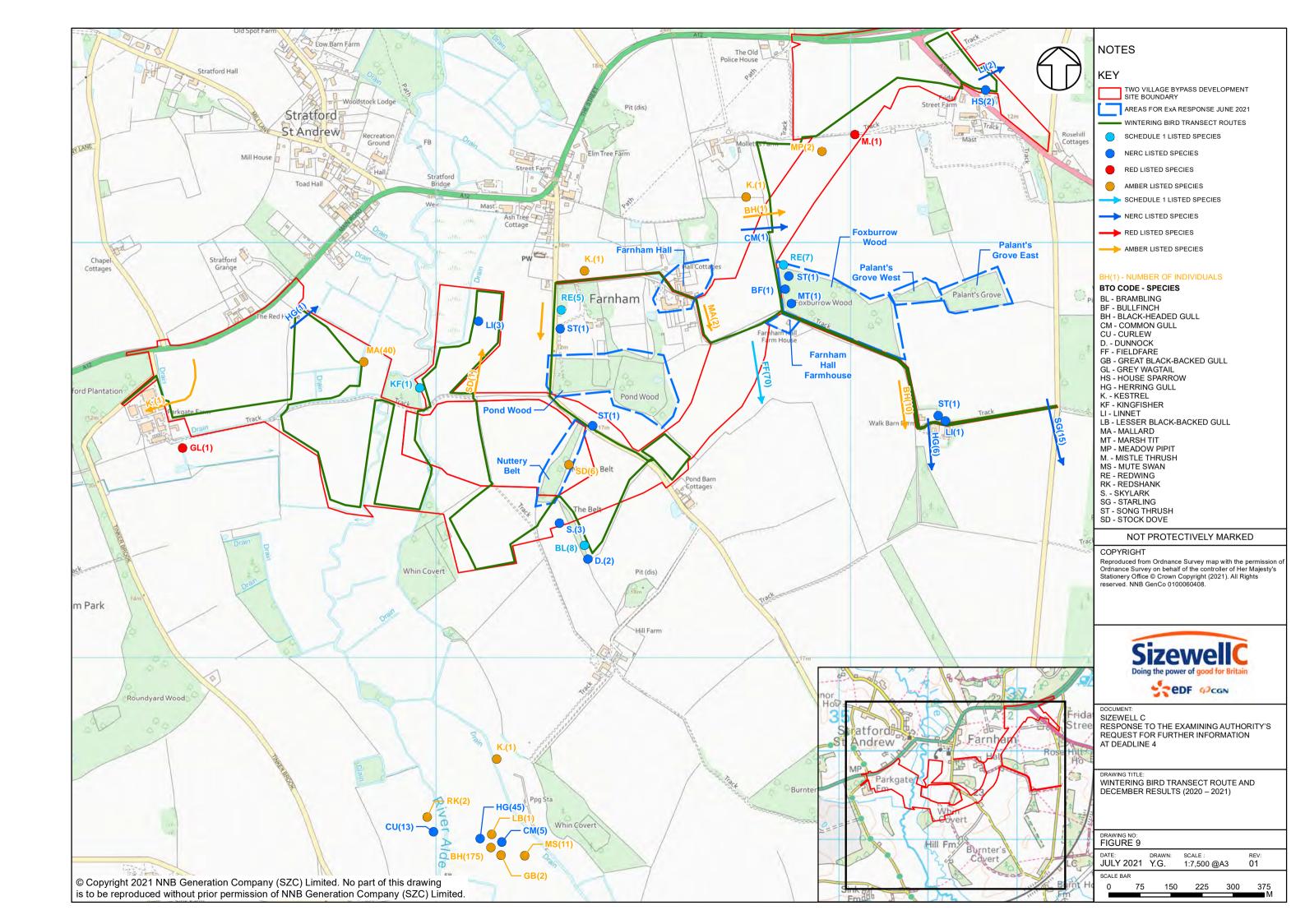


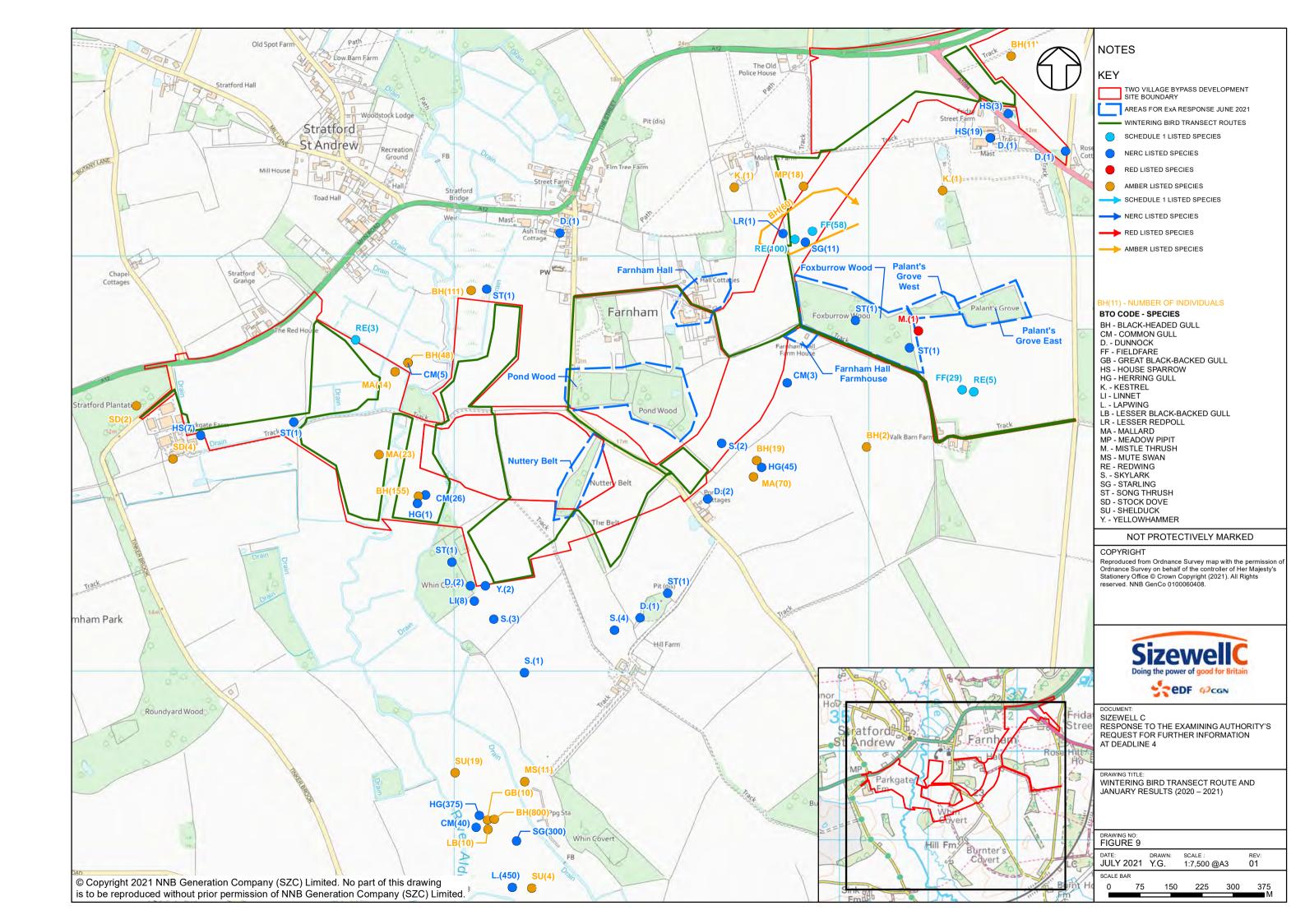


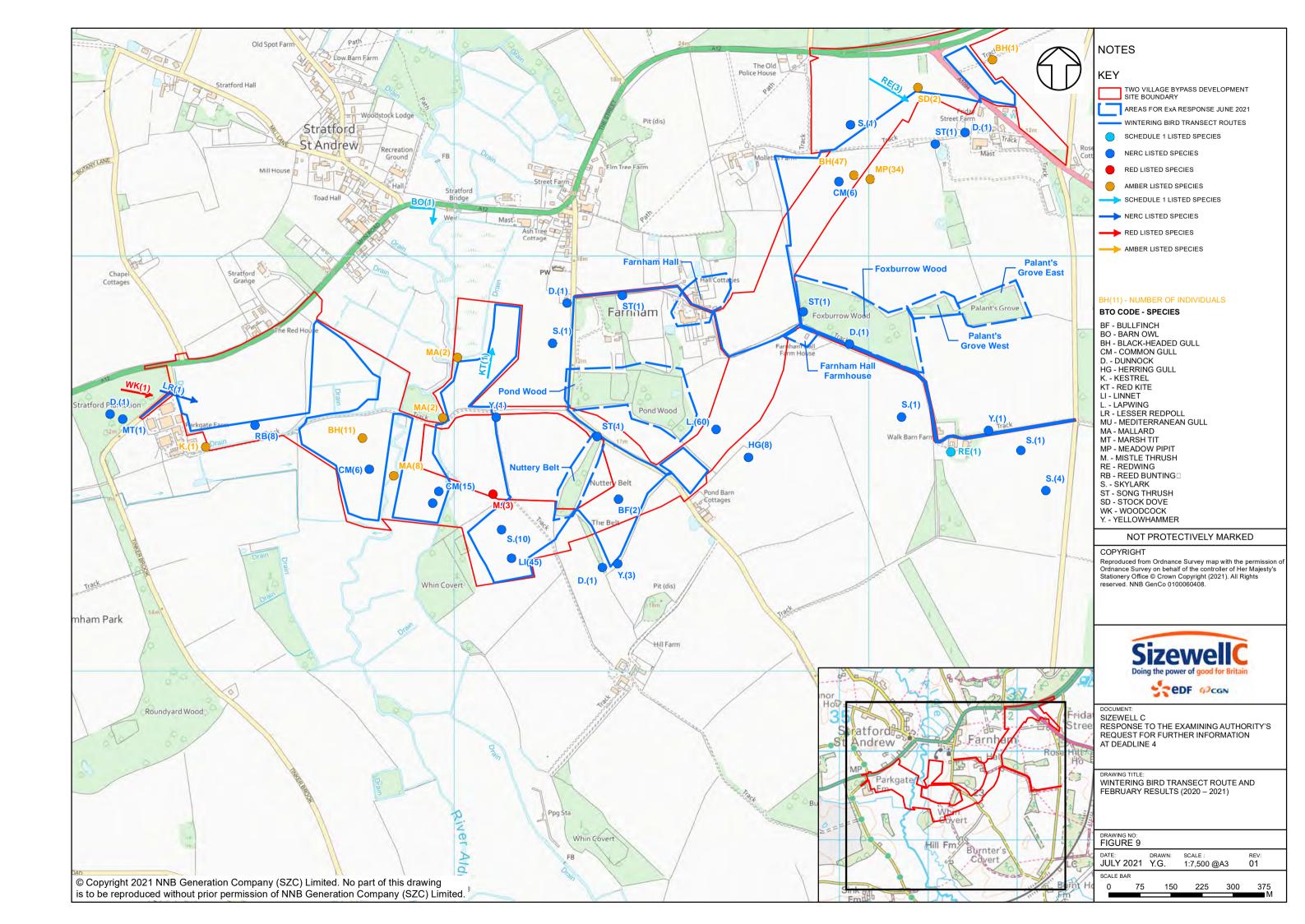


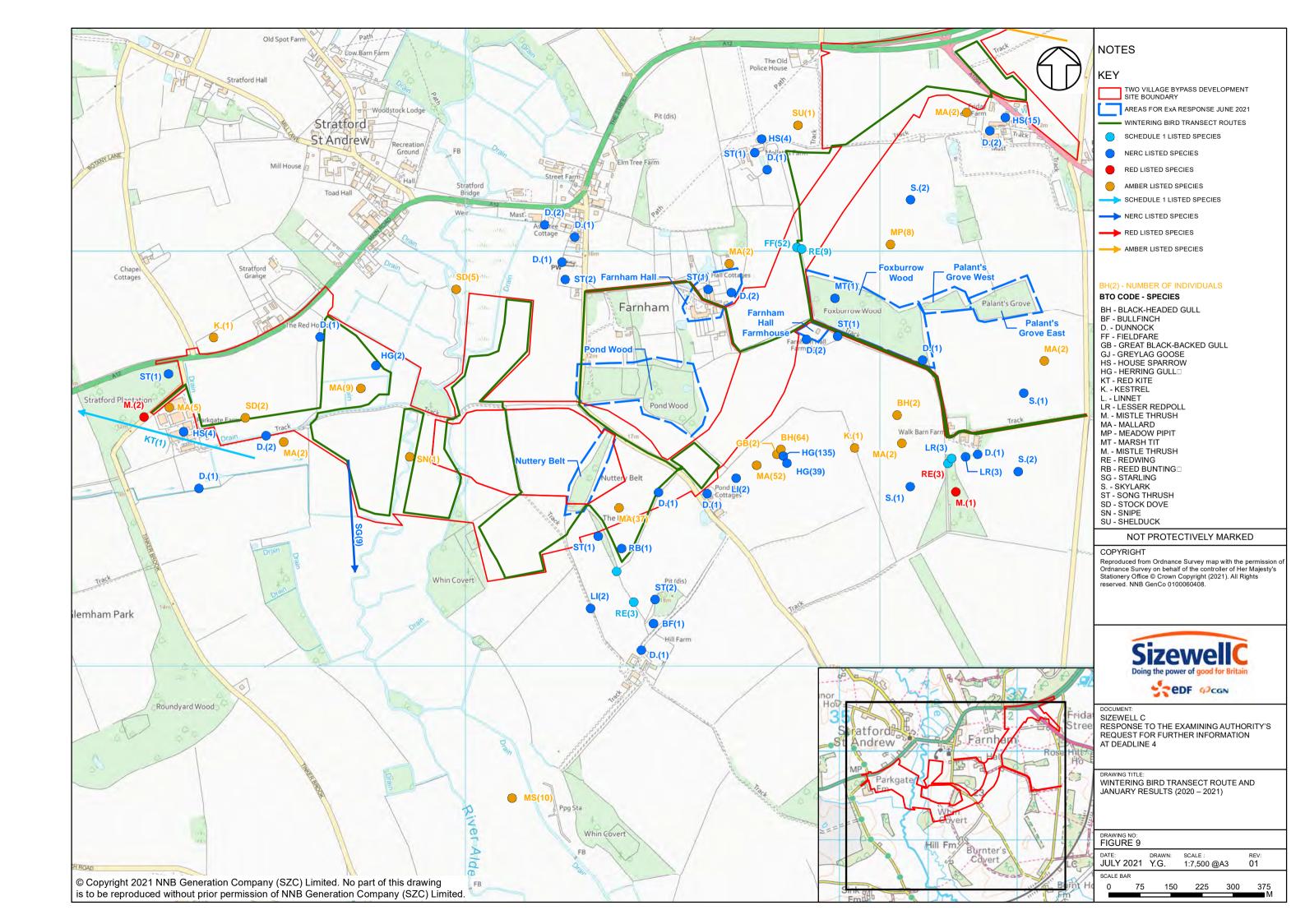


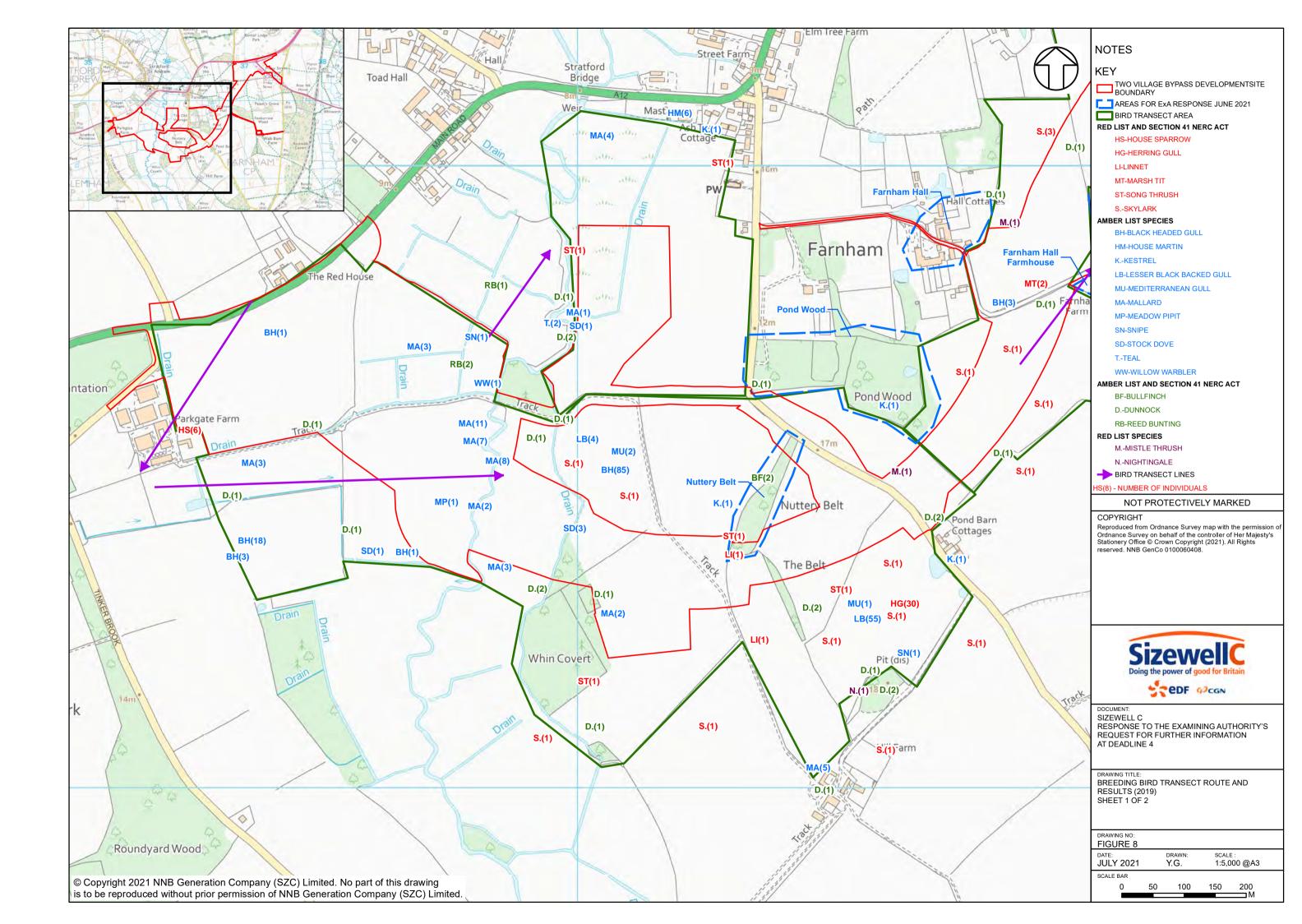


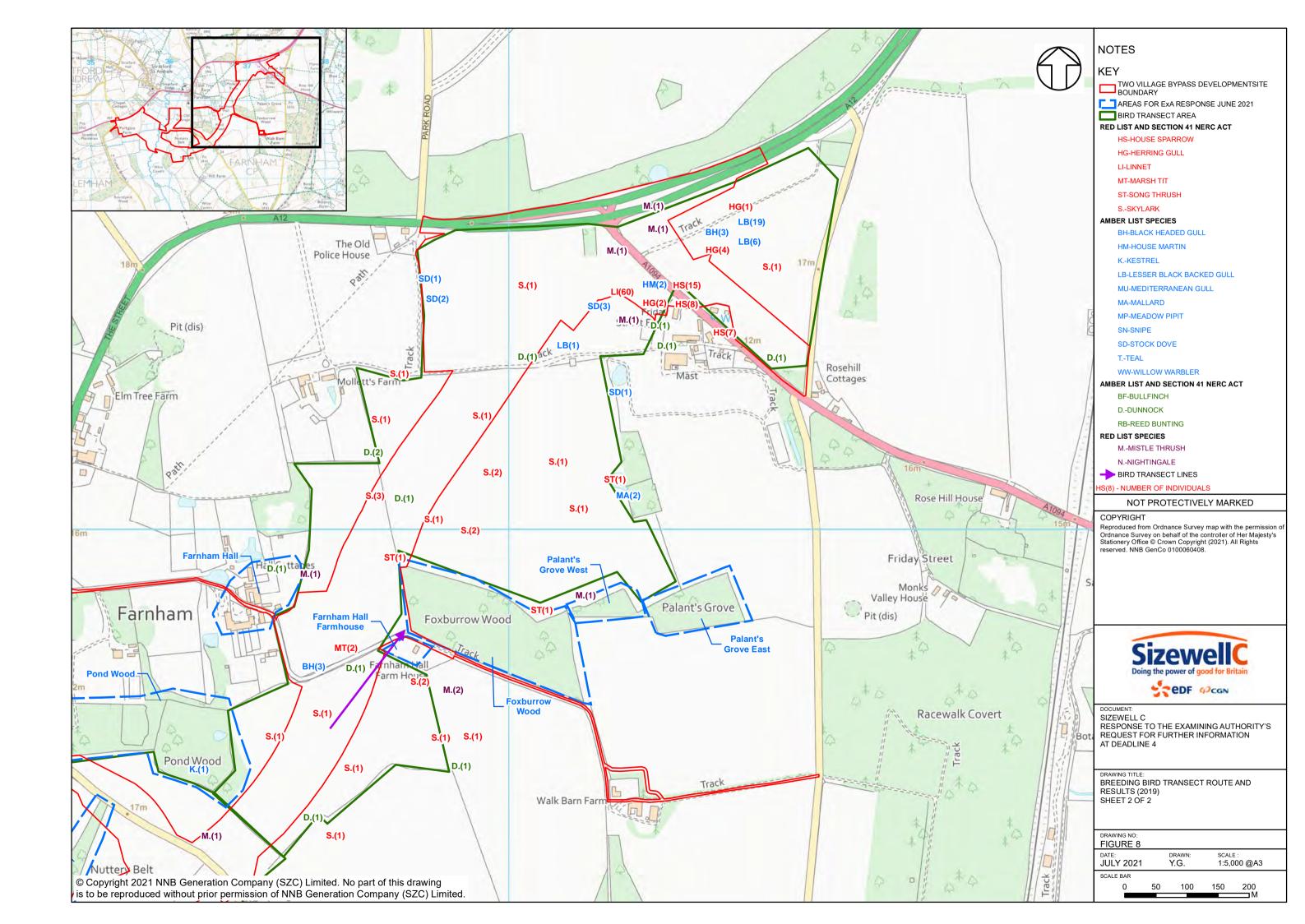


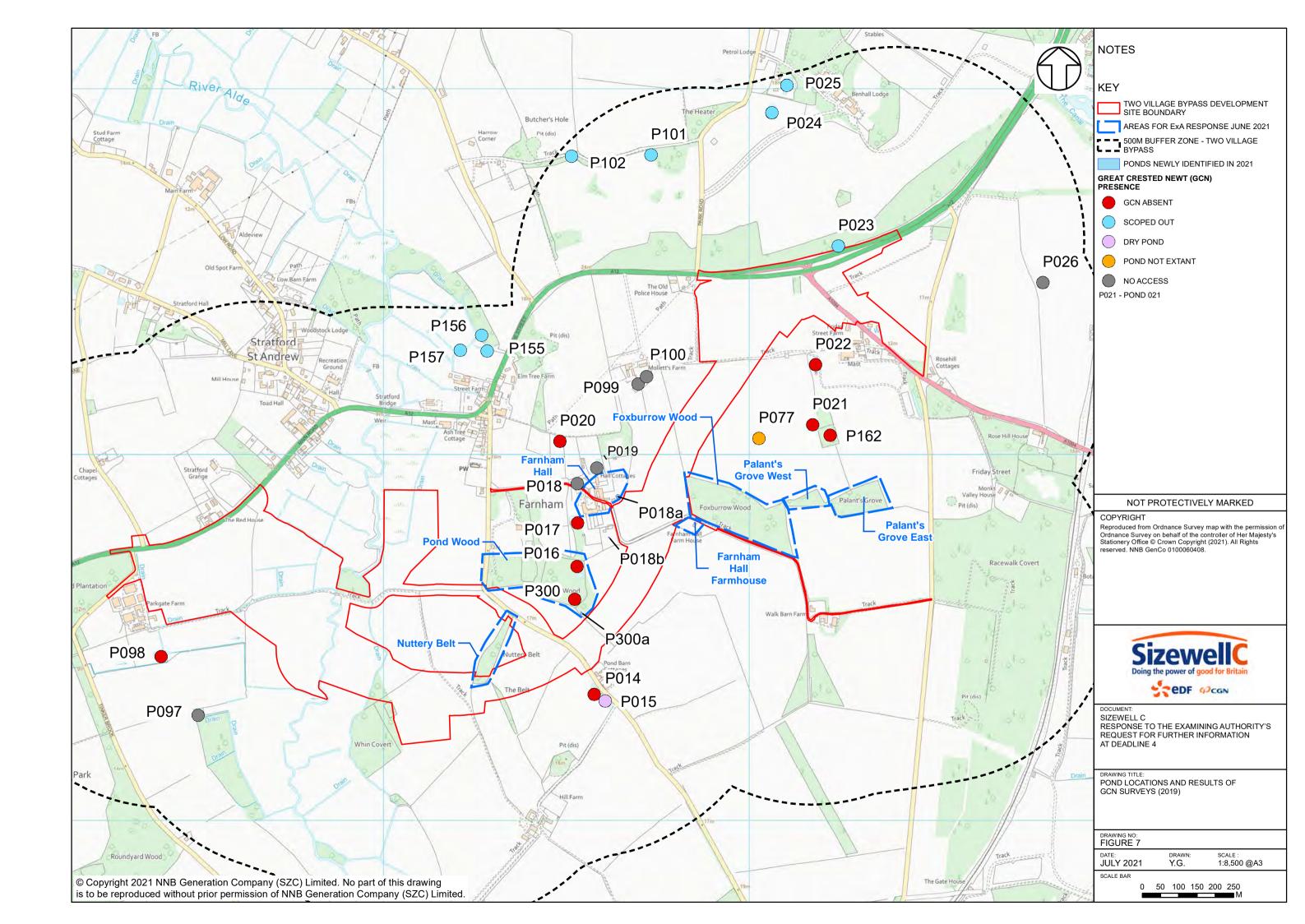


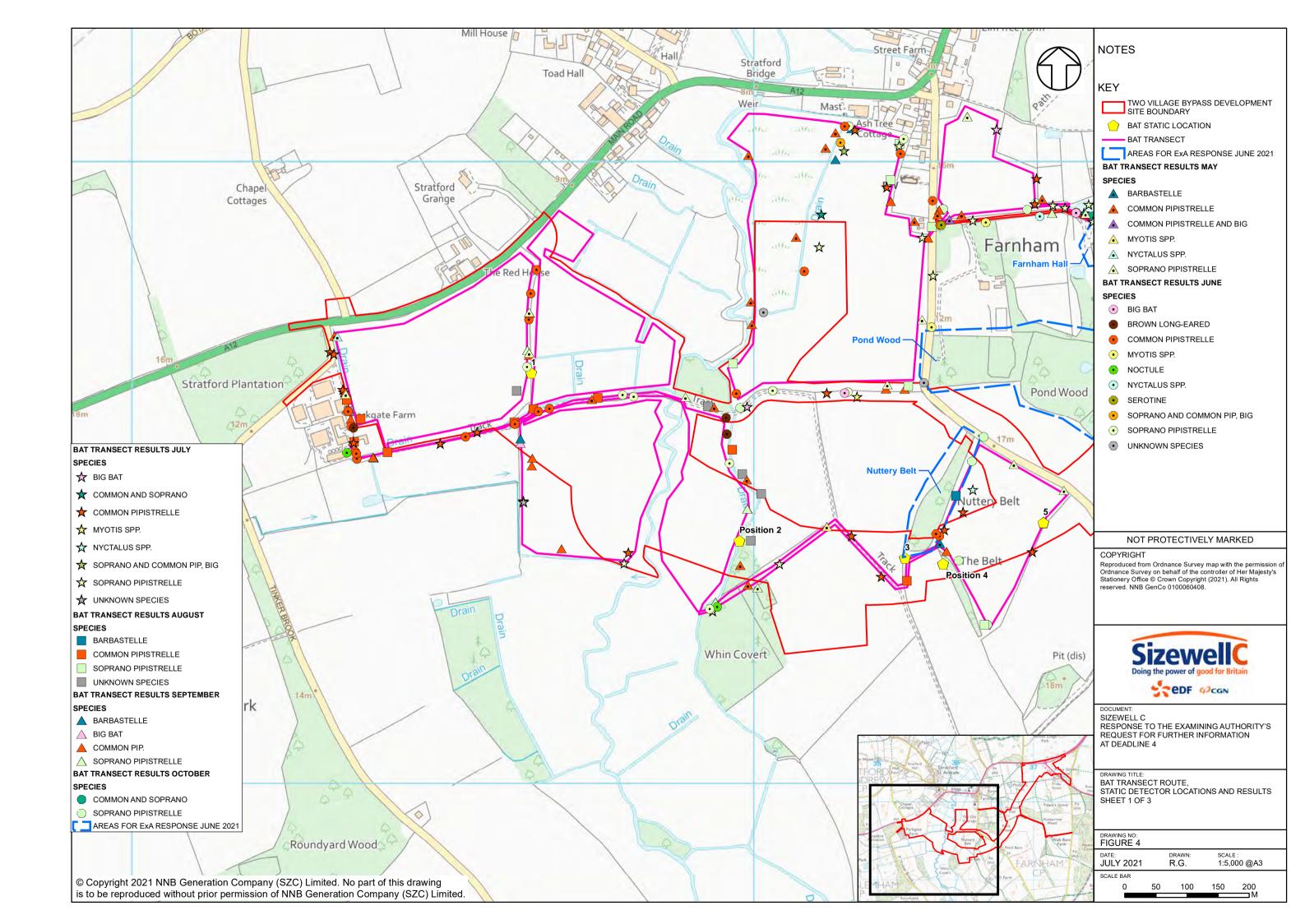


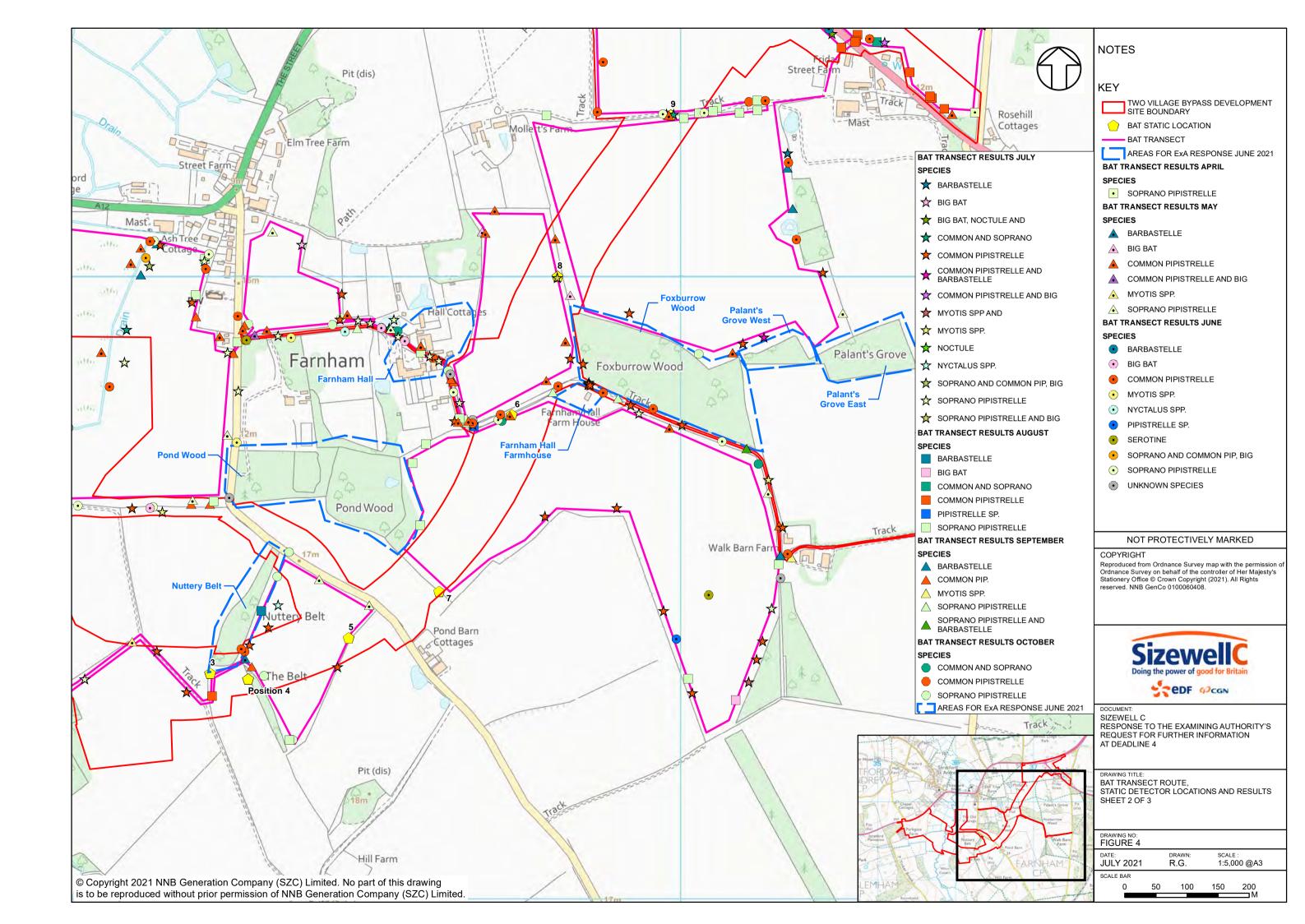


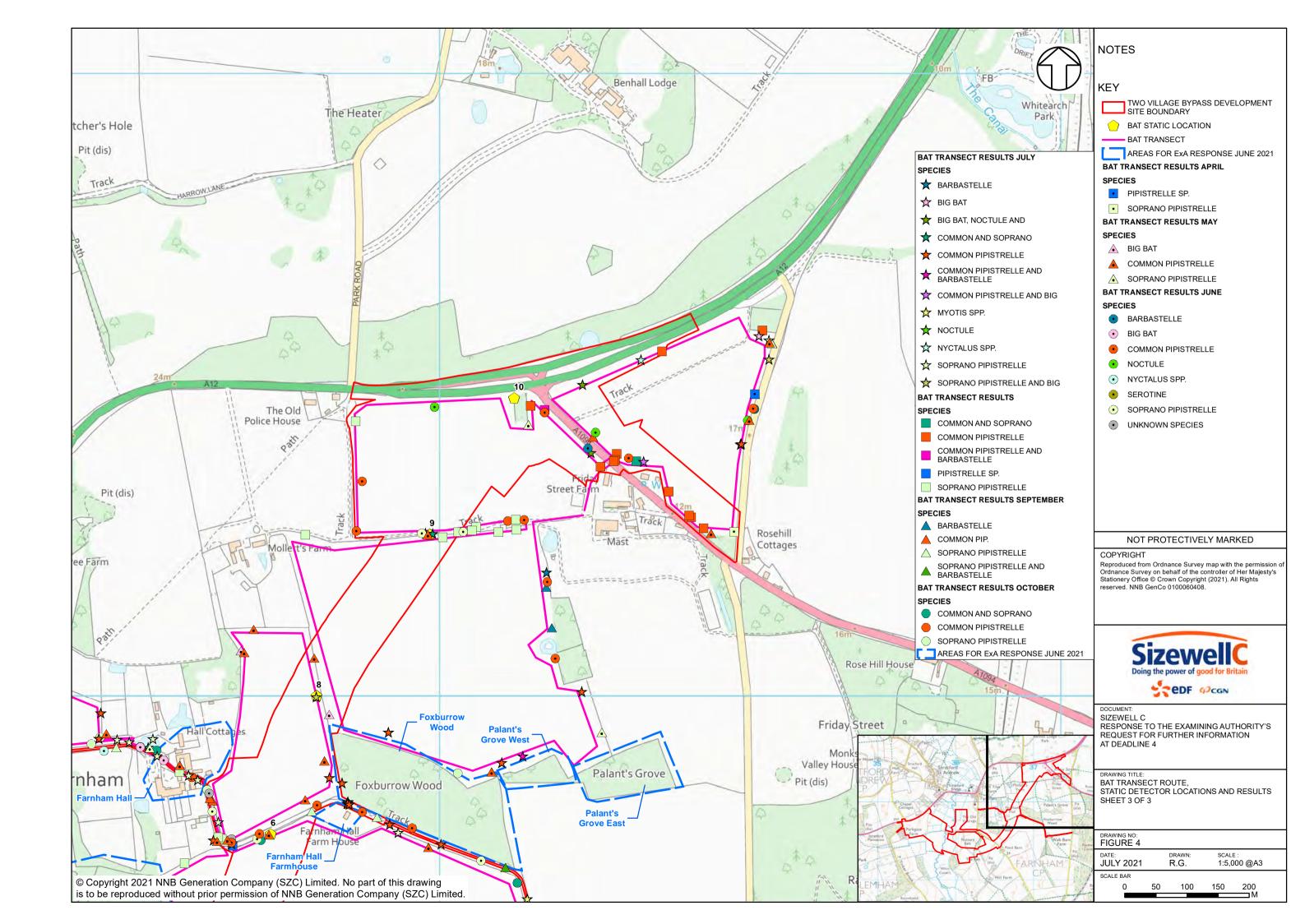














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APPENDIX C: TWO VILLAGE BYPASS - ADDITIONAL ECOLOGY SURVEYS

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ADDITIONAL ECOLOGY SURVEYS

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ADDITIONAL ECOLOGY SURVEYS

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1 PURPOSE OF THIS REPORT

- 1.1.1 The Examining Authority has requested additional information regarding the following woodlands located on the route of the two village bypass [PD-027]:
 - **Nuttery Belt**;
 - Pond Wood; and
 - Foxburrow Wood;
- 1.1.2 This technical note forms **Appendix C** of SZC Co.'s response and provides details of a short ecology survey which took place to provide a survey update in the available period. The context to the information request is provided within Section 5 of SZC Co.'s Responses to the Examining Authorities Request for Further Information (Doc Ref. 9.39).
- 1.1.3 This note has been prepared to supplement the information included within SZC Co.'s application to date, as Summarised in Appendix B of SZC Co.'s Responses to the Examining Authorities Request for Further Information (Doc Ref. 9.39).
- 2 FIELD SURVEY METHODOLOGY
- 2.1 Extended Phase 1 Habitat Survey
- 2.1.1 A walkover survey of the woodland areas specified by the Examining Authority was undertaken by a suitably qualified ecologist (who is an Associate member of the Charted Institute of Ecology and Environmental Management ACIEEM) on 28th June 2021. The weather conditions were dry and warm (approximately 18°C), there had been light rain showers throughout the day before the walkover began.
- 212 The ecological walkover survey followed the 'Extended Phase 1' methodology as set out in Guidelines for Baseline Ecological Assessment (Ref 2.1). This method of survey provides information on the habitats in the survey area and assesses the potential for legally protected species to occur on or adjacent to the survey area. Habitats were recorded within the surveyed area using the system set out within the Joint Nature Conservation Committees' (JNCC) Handbook for Phase 1 habitat survey: A technique for environmental audit (Ref. 2.2).



ADDITIONAL ECOLOGY SURVEYS

- 2.1.3 The Extended Phase 1 Habitat Survey encompassed the following areas (as shown on **Figure 1**):
 - Foxburrow Wood;
 - Public Right of Way (PRoW) at Farnham Hall, including trees 197460 (Veteran Oak) and 207176 (Ancient Hornbeam);
 - Pond Wood; and
 - Nuttery Belt.
- 2.1.4 It should be noted that the surveyors were unable to enter Foxburrow Wood and Pond Wood due to access restrictions¹; however, it was possible to assess the habitats present within these woodlands from the adjacent land parcels.
- 2.2 Bat Emergence Survey
- A dusk emergence survey was undertaken at trees 207278 (Ancient Oak) and 207279 (Veteran Oak) (**Figure 2**) to check for the presence/absence of bats. The survey was undertaken in accordance with the Bat Conservation Trust Guidelines (Ref 2.3). These trees are identified in the **Bat Roost in Trees Associated Development** report as tree 97 and 98 [REP2-121].
- 2.2.2 The survey was undertaken by a suitably qualified ecologist (who is an Associate member of the Charted Institute of Ecology and Environmental Management ACIEEM), supported by an additional surveyor on 28th June 2021. The weather conditions were overcast with a light breeze (turning moderate towards the end of the survey). The temperature was approximately 15°C, dropping to 13°C overnight. There were light rain showers throughout the day preceding the emergence survey. The survey began at 21:00 and ended at 23:00 (sunset 21:19).
- 3 RESULTS AND RECOMMENDATIONS
- 3.1 Extended Phase 1 Habitat Survey
- 3.1.1 **Figure 1** shows the ecological potential of the surveyed areas and descriptions of the habitat in each area are provided below. The target

¹ It was not possible to confirm access rights with a number of landowners in the area in time for the survey to take place.



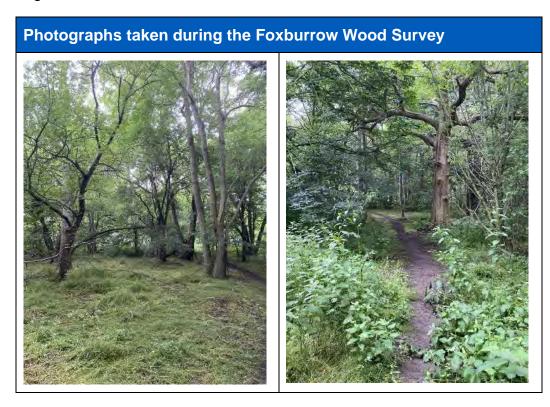
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notes provided in Annex A highlight any additional features of ecological interest.

Foxburrow Wood a)

3.1.2 Foxborrow Wood is an Ancient Woodland. Access to the woodland was limited but the visible trees were recorded as a mixture of mature and semimature sycamore (Acer pseudoplatanus), ash (Fraxinus excelsior) and birch. This woodland was assessed as having high potential to support commuting and foraging bats. No potential roost signs were visible from the edge of the woodland.





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- Public Right of Way (PRoW) at Farnham Hall, including trees 197460 (Veteran Oak) and 207176 (Ancient Hornbeam) b)
- Hedges with mature and potentially veteran trees line both sides of the 3.1.3 PRoW. Species noted include oak (Quercus spp), ash, honeysuckle

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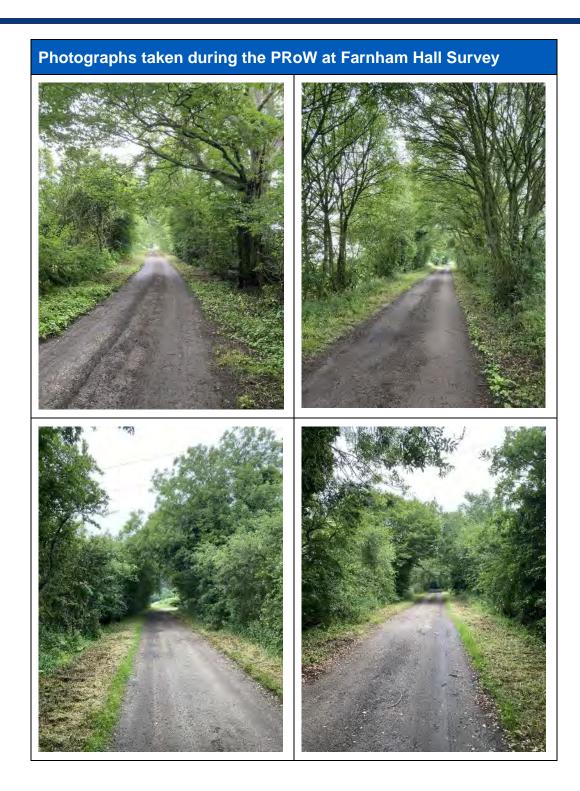
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(Lonicera), nettle (Urtica dioica), common hogweed (Heracleum sphondylium), hawthorn (Crataegus monogyna), garlic mustard (Alliaria petiolata), common nipplewort (Lapsana communis) and herb Robert (Geranium robertianum). There were limited features for roosting bats visible from the ground; the houses along the PRoW may offer potential roosting for bats but no access was provided. The hedgerow was assessed as having high potential to support commuting and foraging bats due to the connectivity to other areas of woodland. The hedgerow is considered in greater detail within the crossing point surveys (identified and described in Section 2.3.e) of Appendix B of SZC Co.'s Responses to the Examining Authorities Request for Further Information (Doc Ref. 9.39)), the results of which will be submitted to examination at an appropriate deadline.



ADDITIONAL ECOLOGY SURVEYS





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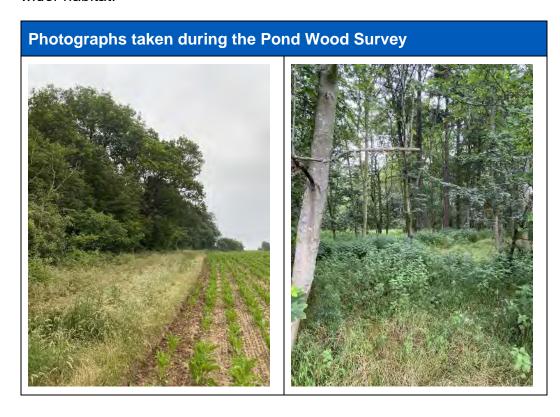


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Pond Wood c)

3.1.4 Pond Wood is an area of woodland consisting of mature and semi-mature trees (sycamore, oak, ash and hawthorn). The visible trees had limited potential for roosting bats but the woodland was assessed as having high potential for commuting and foraging bats as there is good connection to wider habitat.





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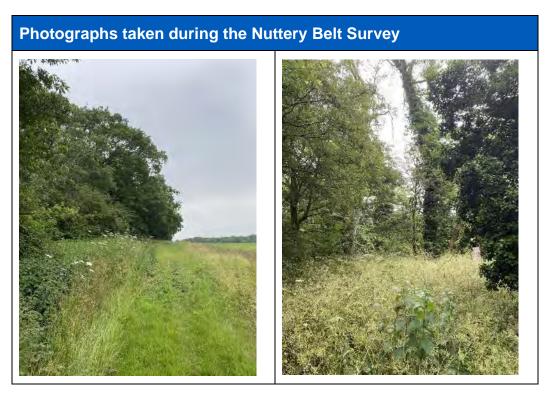


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d) **Nuttery Belt**

3.1.5 Nuttery Belt is a small patch of woodland consisting of predominately mature and semi-mature ash and oak. A dense groundflora is present, dominated by cow parsley (Anthriscus sylvestris), nettle and ground ivy (Glechoma hederacea).





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Bat Emergence Survey 3.2

3.2.1 During a daytime assessment of ancient and veteran trees 207278 and 207279, large cracks and crevices and broken limbs were identified (as shown in the photographs below) and, therefore, both trees were assessed has having a high potential to support roosting bats (in 2020 [REP2-121] and reconfirmed in June 2021). The trees are also situated within a wellestablished hedgerow with several small gaps (field entrances) which is highly suitable to support commuting and foraging bats.



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- 3.2.2 During the dusk survey both common pipistrelle Pipistrellus and soprano pipistrelle *Pipistrellus pygmaeus* were observed in and around both trees.
- 3.2.3 A barn owl Tyto alba was also observed emerging and re-entering tree 207278, therefore it should be considered a potential roost site.
- 3.2.4



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4 REFERENCES

- Ref. 2.1 Institute of Environmental Assessment, 1995. Guidelines for Baseline Ecological Assessment.
- Ref. 2.2 Joint Nature Conservation Committees' (JNCC), 2010. Handbook for Phase 1 habitat survey: A technique for environmental audit. 2010 Edition.
- Ref 2.3 Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London.



ADDITIONAL ECOLOGY SURVEYS

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ANNEX A: TARGET NOTES

Target Note Number	National Grid Reference	Photographs	Description
TN - 001	TM 36534 59926	N/A	Pond in garden behind hedge. Not possible to survey but potential habitat for Great Crested Newts <i>Triturus cristatus</i> .
			This is noted as Pond 018 of Volume 5 , Appendix 7A of the ES [APP-426]. Whilst no access was granted for the 2019 surveys, it has been surveyed in 2021 (HSI and eDNA). The results of the 2021 survey will submitted to examination at an appropriate deadline. SZC Co. note that no Great Crested newts have been detected in this area to date.



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Target Note Number	National Grid Reference	Photographs	Description
TN - 002	TM 36540 59558		Potential mammal pathway identified within post and wire mesh fence line along edge of woodland. No evidence (e.g. hairs in wire mesh fencing or footprints) noted at the time of the survey to confirm use of pathway by badger <i>Meles meles</i> , however it cannot be ruled out that it is not used by badger given its proximity to the woodland. Access to the woodland was not available at the time of the survey and therefore further surveys of the woodland, once access is granted, should be undertaken to confirm the presence/absence of badger (i.e. setts).

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APPENDIX C FIGURES

