

Norfolk Vanguard Offshore Wind Farm

Appendix 22.2

Great Crested Newt Survey Report

Environmental Statement

Volume 3 - Appendices

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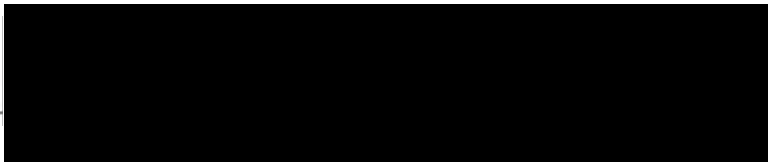
Environmental Impact Assessment Environmental Statement

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June 2018

For and on behalf of Norfolk Vanguard Limited

Approved by: Ruari Lean and Rebecca Sherwood

Signed: 

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For and on behalf of Royal HaskoningDHV

Drafted by: Gordon Campbell

Approved by: Jon Allen

Signed: 

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Glossary

AfL	Agreement for Lease
CIEEM	Chartered Institute of Ecology and Environmental Management
DCO	Development Consent Order
EIA	Environmental Impact Assessment
EPS	European Protected Species
EU	European Union
ES	Environmental Statement
HDD	Horizontal Directional Drilling
HVDC	High Voltage Direct Current
HSI	Habitat Suitability Index
NSIP	National Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
SPR	Scottish Power Renewables (UK) Limited
UK BAP	UK Biodiversity Action Plan
VWPL	Vattenfall Wind Power Ltd
ZDA	Zone Development Agreement

Terminology

Cable Relay Station	Primarily comprised of an outdoor compound containing reactors (also called inductors, or coils) and switchgear to increase the power transfer capability of the cables under the HVAC technology scenario as considered in the PEIR. This is no longer required for the project as the HVDC technology has been selected.
Landfall	Where the offshore cables come ashore at Happisburgh South
Mobilisation area	Areas approx. 100 x 100m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.
Mobilisation zone	Area within which the mobilisation area will be located.
National Grid new / replacement overhead line tower	New overhead line towers to be installed at the National Grid substation.
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400kV overhead lines
National Grid substation extension	The permanent footprint of the National Grid substation extension
National Grid temporary works area	Land adjacent to the Necton National Grid substation which would be temporarily required during construction of the National Grid substation

	extension.
Necton National Grid substation	The existing 400kV substation at Necton, which will be the grid connection location for Norfolk Vanguard
Onshore cable corridor	200m wide onshore corridor within which the onshore cable route would be located as submitted for PEIR.
Onshore cable route	The 45m easement which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.
Onshore cables	The cables which take the electricity from landfall to the onshore project substation
Onshore project area	All onshore electrical infrastructure (landfall; onshore cable route, accesses, trenchless crossing technique (e.g. Horizontal Directional Drilling (HDD)) zones and mobilisation areas; onshore project substation and extension to the Necton National Grid substation and overhead line modification)
Onshore project substation	A compound containing electrical equipment to enable connection to the National Grid. The substation will convert the exported power from HVDC to HVAC, to 400kV (grid voltage). This also contains equipment to help maintain stable grid voltage.
Onshore project substation temporary construction compound	Land adjacent to the onshore project substation which would be temporarily required during construction of the onshore project substation.
The project	Norfolk Vanguard Offshore Wind Farm, including the onshore and offshore infrastructure

22 GCN SURVEY REPORT

22.1 Introduction

1. The aim of this report is to present the findings of a suite of great crested newt *Triturus cristatus* presence/absence surveys (herein the 'Great Crested Newt Survey') which have been conducted with respect to the Norfolk Vanguard Offshore Wind Farm (herein referred to as the 'project') onshore project area.

22.1.1 Project Background

2. In December 2009 as part of the UK Offshore Wind Round 3 tender process, The Crown Estate awarded the joint venture company, East Anglia Offshore Wind (EAOW) Ltd, the rights to develop Zone 5 (later called the 'East Anglia zone'). These rights were granted through a Zone Development Agreement (ZDA). EAOW Ltd. is a 50:50 joint venture owned by Vattenfall Wind Power Ltd (VWPL) and Scottish Power Renewables (UK) Limited (SPR).
3. Under the ZDA, the joint venture consented East Anglia ONE, and commenced the Environmental Impact Assessments (EIA) for East Anglia THREE (prior to the project being taken forward to submission by SPR) and East Anglia FOUR (up to submission of a request for Scoping Opinion in 2012).
4. In December 2014, a decision was taken to split the zone, with VWPL having development rights within the north of the former East Anglia Zone, and SPR continuing to develop the southern part. In agreement with The Crown Estate, the ZDA was effectively dissolved in 2016. New Agreement for Lease (AfL) areas have been awarded by The Crown Estate within the former Zone, separately to VWPL and its affiliate companies, and SPR and its affiliates.
5. VWPL are now developing plans for the northern half of the zone, which is split into two development areas: Norfolk Vanguard and Norfolk Boreas. Norfolk Vanguard will have a capacity of 1800MW which is enough to power 1.3 million UK households¹. Norfolk Vanguard Limited (an affiliate company of VWPL) is now undertaking the Environmental Impact Assessment (EIA) and Environmental Statement (ES) for Norfolk Vanguard and a Scoping Report was submitted to the Planning Inspectorate in October 2016 (Royal HaskoningDHV, 2016).
6. Norfolk Vanguard is a National Significant Infrastructure Project (NSIP) and as such is subject to a Development Consent Order (DCO) process in order to obtain planning permission. An EIA is required as part of a DCO application under the Planning Act

¹ assuming a load factor of 34.88 <http://www.renewableuk.com/page/UKWEDEexplained>

2008. In order to inform the ES, ecological baseline data is required with respect to the onshore project area. This report represents part of that ecological baseline.

22.1.2 Site Description

7. The onshore project area at the time of the survey consisted of the following key elements:
 - Landfall;
 - Cable relay station (CRS) (no longer required);
 - Onshore cable corridor;
 - Onshore project substation; and
 - Extension to the existing Necton National Grid substation and overhead line modifications.
8. The location of the onshore project area is shown on Figure 1, Annex A: Figures. During the development of the project, the onshore Scoping Area that was initially defined has been refined, to identify three landfall options, associated CRS zones, as well as an onshore project substation search zone in proximity to the Necton National Grid substation. A 200m wide cable corridor has been identified, within which the cable will be located, and trenchless crossing (e.g. Horizontal Directional Drilling (HDD)) zones and mobilisation zones have been identified along the onshore cable corridor. The surveys undertaken for great crested newt were designed and based on the project infrastructure and search zones at that time (March 2017). As the project design is further refined, these search zones will decrease in size, and the final options for the siting of infrastructure (i.e. one landfall, refined onshore cable route, one onshore project substation) will be taken forward.
9. For more details of the project as submitted for the ES, see Chapter 5 Project Description. Norfolk Vanguard Limited have selected the High Voltage Direct Current (HVDC) technology, removing the requirement for the CRS from the project, however as this report details a survey done at a specific moment in time, reference to these areas remains in this document.

22.1.3 Purpose and Scope of this Report

10. An Extended Phase 1 Habitat Survey for the project was undertaken during February 2017. The findings are reported in Appendix 22.1. The Extended Phase 1 Habitat Survey included a Habitat Suitability Index (HSI) assessment (following Oldham *et al.*, 2000) of all standing water bodies within 250m of all proposed temporary works and within 500m of all proposed permanent works (herein referred to as the 'survey area') for their ability to support breeding populations of great crested newts.

11. During the Extended Phase 1 Habitat Survey, a total of 208 standing water bodies were subject to a HSI to determine their habitat suitability. Of these, 25 were no longer present, or are now part of another pond or dry at the time of the survey. In these instances, these water bodies were discounted. The remaining 183 were subject to a HSI assessment. The results of which are summarised in Table 22.1. The locations of these water bodies are shown on Figure 2, Annex A: Figures.

Table 22.1 Summary of the 2017 HSI assessments

Habitat suitability index score	Habitat Suitability	No. of standing water bodies
<0.5	Poor	47
0.5 – 0.59	Below average	59
0.6 – 0.69	Average	36
0.7 – 0.79	Good	25
> 0.8	Excellent	16

12. Suitable terrestrial habitat for supporting foraging and hibernating great crested newts was observed throughout the survey area. Part of the habitat suitability assessment includes an assessment of the habitat surrounding a potential breeding pond for its suitability to support foraging and hibernating newts.
13. All standing water bodies identified as containing ‘average’, ‘good’ or ‘excellent’ habitat suitability (a HSI score of 0.6 or greater) were recommended to be subject to presence / likely absence surveys. This includes 77 standing water bodies. Those standing water bodies with a HSI score of lower than 0.6 (i.e. ‘below average’ or ‘poor’ suitability) have been scoped out of further assessment. Additional water bodies were subject to HSI during April 2017. Five of these water bodies were also identified as providing a HSI score of 0.6 or greater, hence making the total number of water bodies recommended to be subject to presence / likely absence surveys 82.
14. This report presents the findings of the suite of great crested newt presence / likely absence surveys (referred to in this document as the ‘Great Crested Newt Survey’) of these 82 water bodies. This report also presents the findings of a population size class assessment survey (i.e. an additional two survey visits) for those water bodies where great crested newt presence was found.
15. The findings of this report will provide details of the great crested newt population present within the survey area. This was used to inform the project PEIR which will be submitted in Autumn 2017. To this end, the findings of this report have also been

used to identify outline mitigation measures and licensing requirements which may be required.

16. This report has been prepared in line with the guidelines as set out in the Chartered Institute of Ecology and Environmental Management’s (CIEEM) Guidelines on Ecological Report Writing (2nd Edition, December 2015).

22.1.4 Consultation

17. The methodology set out in this report was issued on 17th March 2017, as part of the project Evidence Plan Process to the following stakeholders for comment:

- Natural England;
- Environment Agency;
- Breckland Council;
- Norfolk County Council; and
- Norfolk Wildlife Trust.

18. Feedback was received from Norfolk County Council and Natural England on the 23rd March 2017 and 3rd April 2017 confirming that the methodology and approach to surveys was appropriate and acceptable.

22.2 Legislation and Policy

19. Table 22.2 summarises the relevant information relating to the legal protection afforded to great crested newts. However it should be noted that this is for information only and is not intended to be comprehensive or to replace specialised legal advice.

Table 22.2 Summary of the key legislation and policy relevant to great crested newts

Legislation	Relevance
European Union (EU) Directive 92/43/EEC (The Habitats Directive)	This Directive provides protection for specific habitats listed in Annex I and species listed in Annex II of the Directive. The Directive sets out decision making procedures for the protection of Special Areas of Conservation (SAC) and Special Protection Areas (SPA) and these are implemented in the UK through The Conservation of Habitats and Species Regulations 2010. Great crested newts are listed on Annex II of the directive.
The Conservation of Habitats and Species Regulations 2010 (as amended)	Codifies the EU Directive 92/43/EEC (The Habitats Directive) into UK law; provides legal protection for European Protected Species (EPS). Great crested newts are an EPS.
Wildlife and Countryside Act 1981 (as amended)	This Act makes it an offence to intentionally kill, injure or take any animal listed in Schedule 5 of the Act and protects occupied and unoccupied places

Legislation	Relevance
	<p>used for shelter or protection.</p> <p>Great crested newts are listed on Schedule 5.</p>
Natural Environment and Rural Communities Act 2006	<p>Section 41 of the Act requires the Secretary of State to compile a list of habitats and species of principal importance for the conservation of biodiversity in England.</p> <p>Decision makers of public bodies, in the execution of their duties, must have regard to the conservation of biodiversity in England, and the list is intended to guide them.</p> <p>Natural England have compiled a list of species of Principal Importance. Great crested newts are on this list.</p>
Policy	Relevance
UK Post-2010 Biodiversity Framework	Supersedes the UK Biodiversity Action Plan (UK BAP), which fulfilled legal obligation under the Convention on Biological Diversity to identify and produce action plans for produce priority habitats and species.

22.3 Methodology

22.3.1 Survey Area

20. The survey area, as set out Section 22.1.3, included all standing water bodies within 250m of all proposed temporary works and within 500m of all proposed permanent works. The standing water bodies which comprise the survey area are shown on Figure 2, Annex A: Figures.

22.3.2 Survey Methodology

21. Great crested newt presence/absence surveys were undertaken between 17th April and 7th June 2017. A full calendar of the survey dates within this period is provided in Table 22.3 in section 22.3.4.
22. A total of 43 water bodies were surveyed in order to determine presence / likely absence of great crested newts. These 43 water bodies are drawn from the 82 water bodies identified during the Extended Phase 1 Habitat Survey and during the presence/absence surveys as requiring further survey due to being assessed as providing average or higher habitat suitability to support great crested newts. The remaining 34 water bodies identified as requiring further survey could not be surveyed in 2017 due to landowner access restrictions.
23. The Great Crested Newt Survey was undertaken in accordance with the protocol set out in the Great Crested Newt Mitigation Guidelines (English Nature, 2001) and

- Natural England's Standing Advice for Great Crested Newts (Natural England, 2015). Each standing water body scoped into the survey was subject to four survey visits between mid-March and mid-June, with at least two visits during the peak season (mid-April to mid-May). During each visit, each standing water body was subject to three survey methods, including torching and bottle-trapping, and one of either netting or egg-searching. Each survey method was used to record number, sex, life-stage of all great crested newts founding during the surveys. All other amphibians found were also recorded.
24. If the presence of great crested newts was found during the 1-4 survey visits, two further survey visits were undertaken to calculate the great crested newt population size class estimate. The same survey methods as outlined above have been followed for these subsequent visits.
 25. The Great Crested Newt Mitigation Guidelines (English Nature, 2001) were adhered to when using each survey method. Torching surveys were conducted using 500,000 candle torches and the full perimeter of each pond was subject to torching where possible. Where bottle trapping was used, traps were two-metres apart around the pond's perimeter with a maximum of 16 traps in any one pond. Where vegetation cover was too dense or the water too turbid to effectively using the torching method, netting was used. In these instances, at least 15 minutes of netting per 50m of shoreline was undertaken.
 26. Weather conditions were recorded during each survey visit. No surveys were conducted if the night time temperatures were $<5^{\circ}\text{C}$ at the start of the survey, there was strong wind or heavy rain. The vegetation cover and turbidity of the water were also each recorded during each visit. A scale of 1-5 was used, with '1' representing no vegetation cover obscuring the pond surface, or low turbidity allowing visibility to the pond floor, and '5' being dense vegetation cover ensuring none of the pond is visible, or high turbidity resulting in zero visibility during torching.
 27. For those water bodies where great crested newt presence was recorded during the Great Crested Newt Survey, a population size class assessment was carried out. This assessment provides an estimate of the population size class – not of the actual population size – of each great crested newt population found. The methodology for estimating the population size class followed the approach set out in the Great Crested Newt Mitigation Guidelines was followed (English Nature, 2001). The maximum count of great crested newts achieved during a single survey visit, using either the torching method or bottle trapping, was identified for each water body. This maximum count was then classified into 'high, 'medium' or 'low' population size class using the following categories:

- ‘small’ for maximum counts up to 10;
- ‘medium’ for maximum counts between 11 and 100; and
- ‘large’ for maximum counts over 100.

22.3.3 Surveyors

28. The Great Crested Newt Survey was undertaken by a team of four Royal HaskoningDHV ecologists. All survey teams contained at least one surveyor holding a great crested newt WML-CL08 Level 1 Class Licence for survey great crested newts.
29. The survey team was led by Gordon Campbell, BA. (Hons) MSc, Associate Member of CIEEM (ACIEEM). Gordon has 4 years’ experience of great crested newt surveying and holds a WML-CL08 Level 1 Class Licence (Licence no. 2016-27219-CLS-CLS). The survey team included:
- Thomas Chillcott, BSc. MSc. Graduate Member of CIEEM (GradCIEEM), WML-CL08 licence (Licence no. 2015-10886-CLS-CLS);
 - Charlotte Clements, BSc. Affiliate Member of the IEMA, WML-CL08 licence (Licence no. 2016-25773-CLS-CLS)
 - Maria Walentek, BSc. MSc. Associate Member of the Institute of Environmental Assessment (AIEMA); and
 - Jack Douglas, BSc. (Hons).

22.3.4 Weather Conditions

30. Table 22.3 summarises the weather conditions encountered during each of the survey visits within the surveying period. On two occasions, survey visits commenced during temperatures below 5°C.
31. Temperatures recorded at each individual water body are shown in the full survey results provided in Annex B: Full Survey Results.

Table 22.3 Weather conditions (*yellow indicates weather conditions which exceed survey guidelines*)

Visit	Date	Weather conditions	Temperature (°C)	
			@ Survey Start	@ Survey finish
Visit 1	18 th April 2017	Dry, overcast, mild, low wind	5.4	4.5
	19 th April 2017	Dry, overcast, mild, low wind	5.1	4.0
	20 th April 2017	Dry, overcast, mild, low wind	6.8	5.1
	24 th April 2017	Dry, clear, cool, low wind	4.2	2.9
	25 th April 2017	Dry, clear, cool, low wind	3.0	2.0

Visit	Date	Weather conditions	Temperature (°C)	
			@ Survey Start	@ Survey finish
Visit 2	2 nd May 2017	Dry, overcast, mild, low wind	7.0	5.2
	3 rd May 2017	Dry, overcast, mild, low wind	8.2	7.8
	4 th May 2017	Dry, overcast, mild, low wind	8.2	7.1
	8 th May 2017	Dry, overcast, mild, low wind	8.2	8.0
Visit 3	15 th May 2017	Damp, overcast, warm, low wind	16.0	14.2
	16 th May 2017	Damp, overcast, warm, low wind	16.5	13.0
	22 nd May 2017	Dry, overcast, warm, low wind	11.6	7.5
	23 rd May 2017	Dry, overcast, warm, low wind	17.8	15.0
Visit 4	30 th May 2017	Dry, overcast, warm, low wind	16.0	16.0
	31 st May 2017	Dry, overcast, warm, low wind	15.5	9.9
	5 th June 2017	Dry, overcast, warm, moderate wind	14.5	13.7
	6 th June 2017	Heavy rain showers, mild, strong winds	12.0	12.0
	8 th June 2017	Dry, overcast, warm, low wind	15.1	15.1
Visit 5	12 th June 2017	Dry, clear, warm, no wind	14.9	14.9
	13 th June 2017	Dry, clear, warm, no wind	19.4	16.4
Visit 6	19 th June 2017	Dry, clear, hot, no wind	26.0	18.1

22.3.5 Survey Limitations

32. The survey team covered all land to which landowner access permission was granted. This included 43 of the 82 water bodies identified as suitable to support great crested newts (section 22.1.3). The remaining 39 water bodies, plus all water bodies which were not subject to habitat suitability assessment during the Extended Phase 1 Habitat Survey due to restricted landowner access. These water bodies will be surveyed during future survey seasons, when full landowner access is obtained.
33. In some cases, physical access to the entire pond perimeter was not possible due to dense vegetation cover. For these ponds, the surveys were conducted from the accessible areas of the perimeter only. Where vegetation was too dense to successfully torch or the water was too turbid (a vegetation or turbidity score of 4 or

above), netting was used. For some ponds, cattle were present in the field and so bottle trapping was not used in case of damage to the traps or at the request of the landowner. In these cases, alternative survey techniques (i.e. torching, netting and eggs searches) were used. The details of the limitations encountered against each individual water body are recorded within Annex B: Full Survey Results. The limitations encountered were not considered to prevent reliable survey results being obtained from any of the ponds surveyed.

34. Survey visit 4 on 5th June 2017 was undertaken during heavy rain showers and strong wind. Surveys in one area were postponed to the 8th June 2017 due to weather conditions. Surveys in a separate area were undertaken successfully due to good local conditions for surveying. The surveys undertaken on the 24th and 25th May 2017 were commenced during temperatures of less than 5°C. In both cases, there temperatures were not significantly lower than 5°C, and were surrounded by warmer evenings which came after an unusually cold early April. Given this, it was considered likely that great crested newts would still be active on these nights, given the truncated breeding period.
35. Whilst the survey team made the utmost effort to pick up all sightings of great crested newts present during the field survey, on occasion due to human error some sightings may be overlooked. However despite this, the data presented in this report is considered to provide an accurate description of the habitats within the survey area and provide a robust understanding of the survey area's great crested newt population.

22.4 Results

22.4.1 Survey results

36. Great crested newt presence was recorded in five water bodies during the Great Crested Newt Survey. Three of these water bodies were located within the project area, with the remaining two located within the wider great crested newt survey area.
37. The great crested newts breeding ponds found during the Great Crested Newt Surveys are considered to be part of three separate metapopulations.
38. Presence was not recorded in the remaining 38 water bodies surveyed.
39. Table 22.4 summarises the findings of Great Crested Newt Survey. Those water bodies where presence was recorded are shown on Figure 3, Annex A: Figures.

Table 22.4 Water bodies with great crested newt presence

Water body reference	Peak adult count using any method	Eggs found	Population size class assessment	Metapopulation
TF9010-50	2	No	Small	Metapopulation 1
TF9614-154	1	Yes	Small	Metapopulation 2
TF9614-155	12	No	Medium	Metapopulation 2
TF9614-157	0	Yes	Small	Metapopulation 2
TF0721-256	3	No	Small	Metapopulation 3

40. Other amphibians including smooth newts *Lissotriton vulgaris*, palmate newts *Lissotriton helveticus*, common frog *Rana temporaria* and common toad *Bufo bufo* have been recorded widely throughout the survey area.

22.5 Recommendations

41. The results of the Great Crested Newt Survey outlined in section 22.4 showed that there are five standing water bodies within the survey area in which presence of great crested newts has been confirmed.

22.5.1 Potential Impacts

42. The Great Crested Newt Survey has been undertaken within a survey area sufficient enough to encompass the known project area at the time of survey inception. This project area covers a number of different site selection options for the project, comprising the potential development alternatives. Some of these options will be ruled out during the project design process, and as such the project area will continue to be refined during this process. As a consequence, this report will inevitably present survey results which are no longer relevant to the final project area when a detailed EIA and DCO application for the project is completed. For this reason, no site status assessment has been undertaken at this stage. This site status assessment will be undertaken based on the final project area once available, and be used to inform the project EIA and DCO application to be submitted in June 2018. As a result, the potential impacts discussed in this report are outline only and are presented in order to steer any future detailed mitigation for the project.
43. Given the great crested newts recorded during the Great Crested Newt Survey, consideration of the potential impacts of the project upon great crested newt populations will be required in order to ensure that adequate steps are taken to minimise the risk of killing or injuring any great crested newts, or damaging any great

crested newt aquatic or terrestrial habitat during construction. Specifically, the following potential impacts should be considered in detail:

- Mortality during site clearance and construction,
 - Disturbance of resting sites during construction,
 - Terrestrial and aquatic habitat loss and modification, and
 - Habitat fragmentation and isolation.
44. If any impacts are identified, the options for mitigating these at the design stage will be considered. Options for avoiding known great crested newt breeding ponds will be considered in the first instance, followed by avoiding terrestrial great crested newt habitat. If neither of these options are available, on-site mitigation, and finally offsite mitigation will be considered.
45. If mitigation is required in order to ensure there is no adverse impact on the great crested newt population identified due to the project, the Great Crested Newt Mitigation Guidelines (English Nature, 2001) should be used to inform any mitigation design.

22.5.2 Further Surveys

46. For those water bodies surveyed during the Great Crested Newt Survey, no further surveys are recommended at this stage. Depending on the works planned within the survey area, pre-construction surveys may be required and an ecologist should be consulted.
47. For the 34 water bodies for which landowner access was not possible during the Great Crested Newt Survey, a great crested newt presence / likely absence survey will need to be undertaken prior to the start of construction in order to characterise the baseline environment. The methodology for these surveys will follow the methodology set out in section 22.3.
48. For the additional 212 standing water bodies that were not visited during the Extended Phase 1 Habitat Survey due to landowner access restrictions – and for which no habitat suitability assessment has been possible – a habitat suitability assessment in the first instance will be undertaken and if required great crested newt presence / likely absence surveys will be subsequently undertaken prior to any construction activity in order to ensure legal compliance along with informing any mitigation measures and/or licensing requirements.

22.6 Conclusions

49. A suite of great crested newt presence/absence surveys were conducted for 43 standing water bodies located within the survey area which comprises 250m

surrounding the onshore project area temporary works and 500m surrounding the onshore project area permanent works. This report presents the findings of these surveys.

50. Great crested newt presence was found in five standing water bodies within the survey area. Four of these water bodies were found to support populations within the 'low' population size class, and one was found to support a population in the 'medium' size class. Three of these water bodies were located within the project area, with the remaining two located within the great crested newt survey area. These results are considered to represent three separate metapopulations.
51. Due to the absence of landowner permission, a further 34 standing water bodies require great crested newt presence / likely absence surveys to be undertaken prior to the start of construction. In addition, 212 standing water bodies require a habitat suitability assessment to be undertaken and if required great crested newt presence / likely absence surveys subsequently undertaken.

22.7 References

Chartered Institute of Ecology and Environmental Management (CIEEM) (2016a) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

Chartered Institute of Ecology and Environmental Management (CIEEM) (2016b) Professional Code of Conduct, Revised June 2016.

English Nature (2001) Great crested newt mitigation guidelines. August 2001

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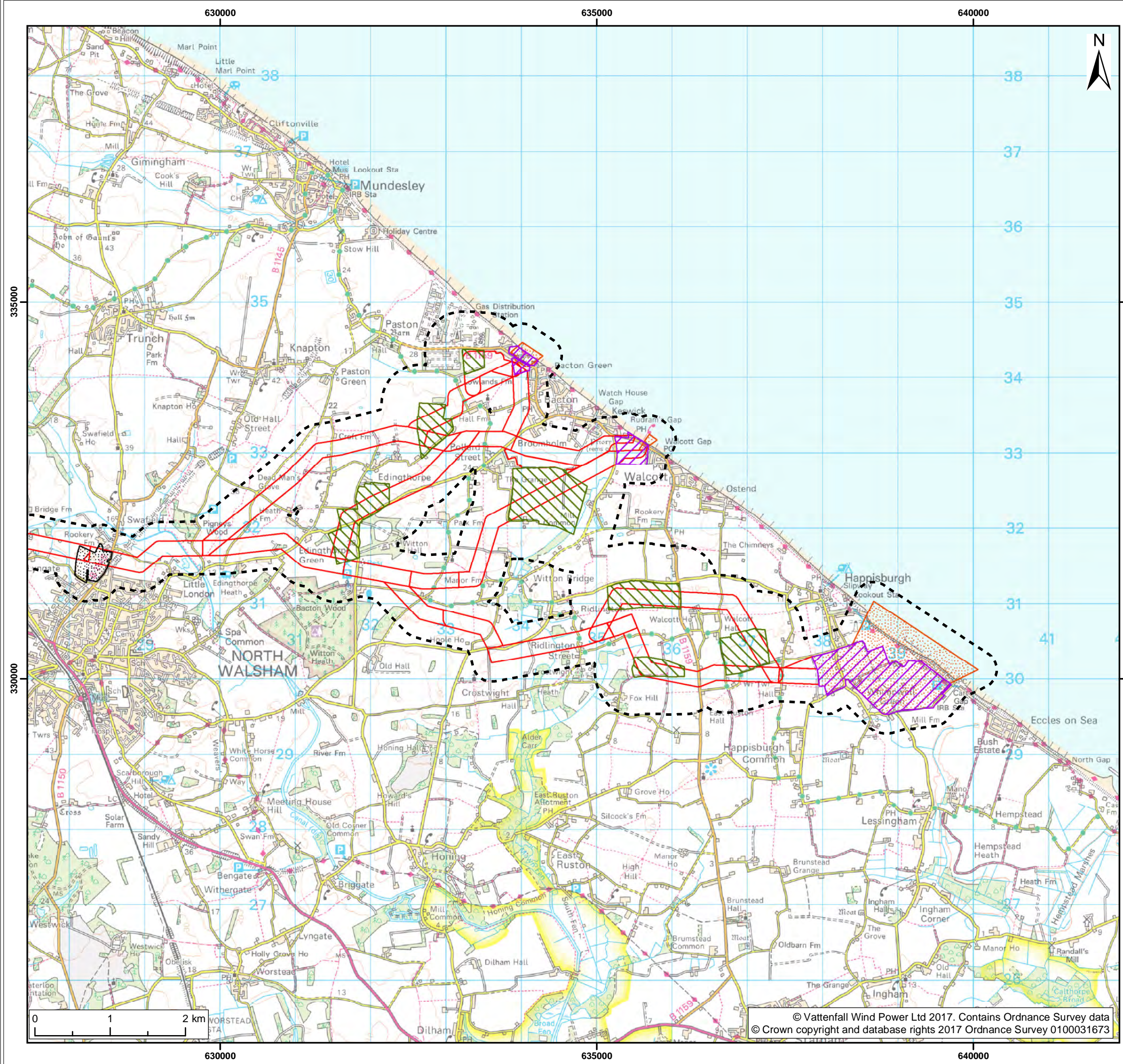
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Royal HaskoningDHV (2017a) Norfolk Vanguard Offshore Wind Farm: Onshore Ecology and Onshore Ornithology Method Statement. Document Reference PB4476-003-029.

Royal HaskoningDHV (2017b) Norfolk Vanguard Offshore Wind Farm: Extended Phase 1 Habitat Survey Report. Document Reference PB4476-003-040.

22.8 Annex A: Figures



Legend:

- Survey Area
- Norfolk Vanguard Onshore Infrastructure**
- Landfall Zone
- Cable Relay Station Search Zone
- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone
- Mobilisation Zone

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:
Survey Location (Map 1 of 5)

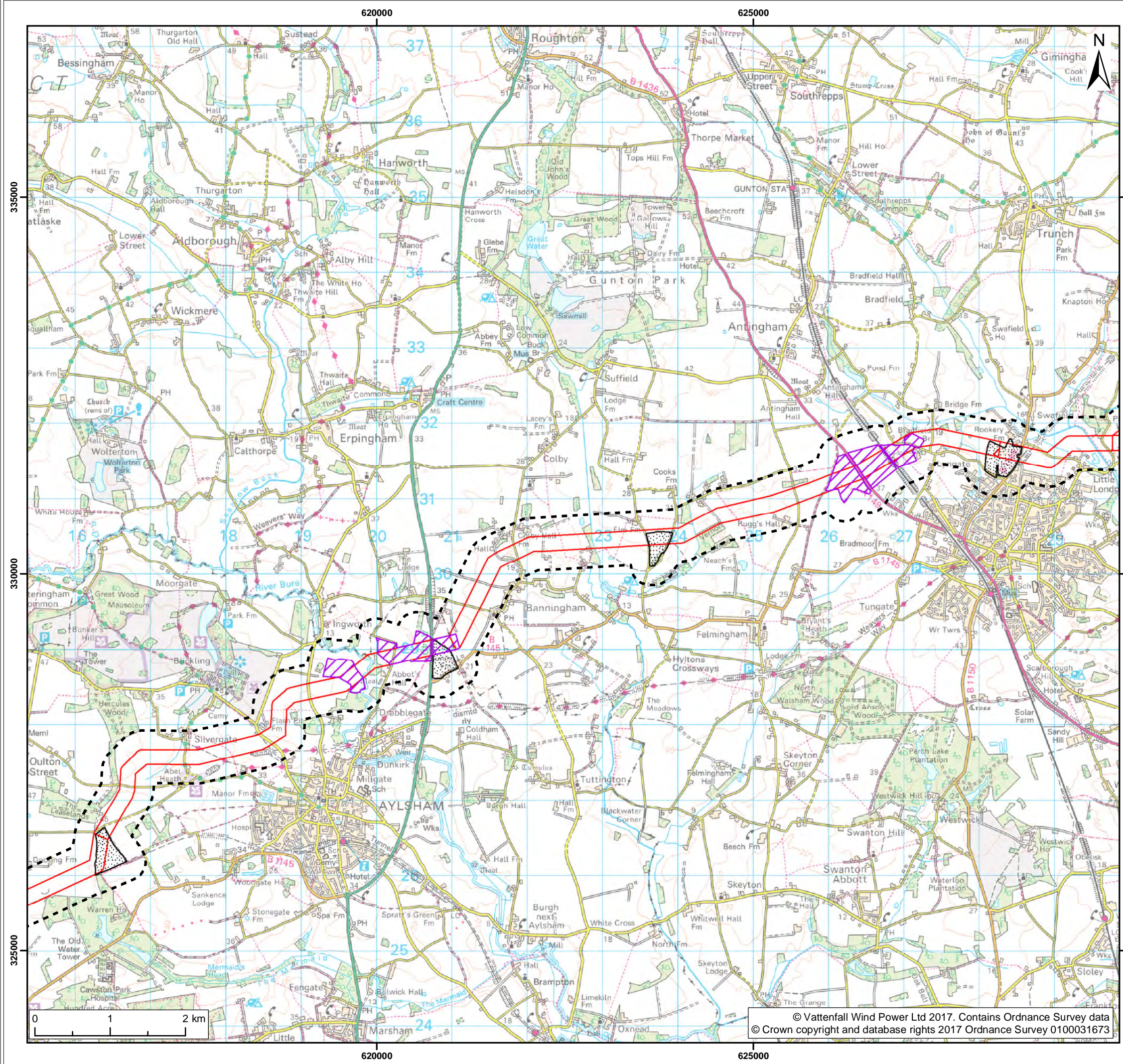
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
02	07/09/2017	LB	GC	A3	1:50,000	
01	25/07/2017	LB	GC	A3	1:50,000	

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

- Survey Area
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone
- Mobilisation Zone

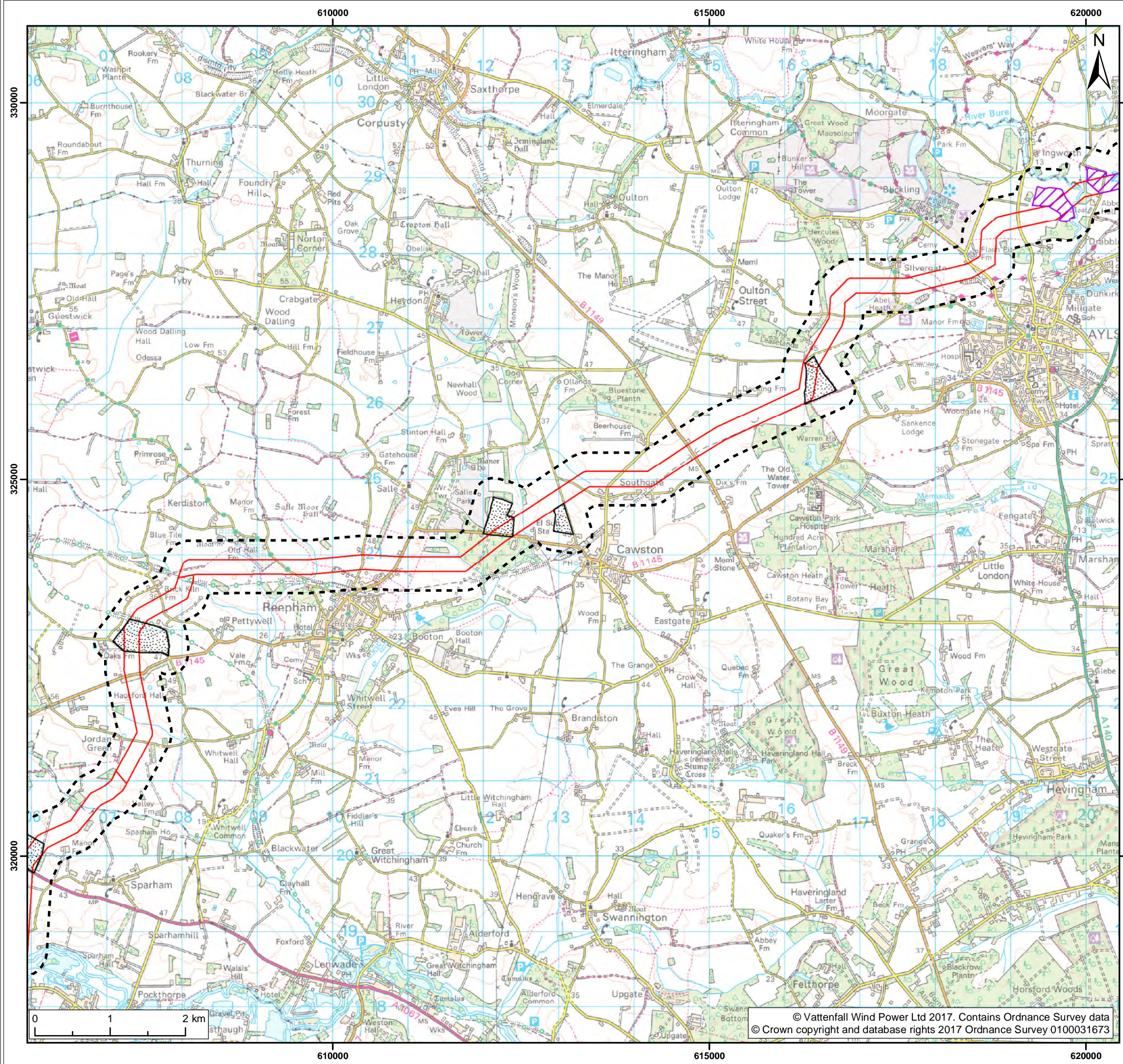
Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title: Survey Location (Map 2 of 5)

Figure:	1	Drawing No:	PB4476-004-0222-001			
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
02	07/09/2017	LB	GC	A3	1:50,000	
01	25/07/2017	LB	GC	A3	1:50,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Survey Area
 - Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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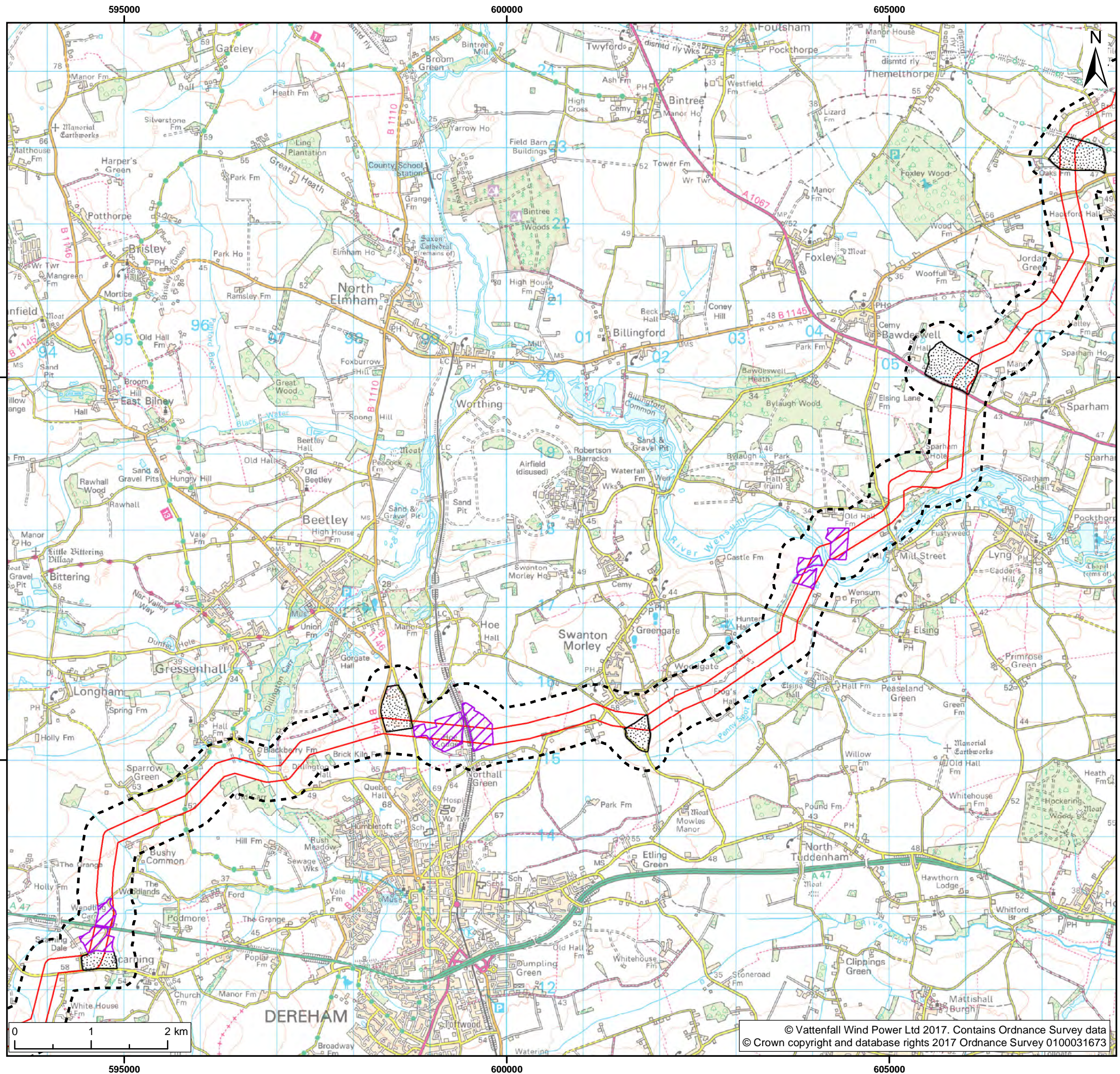
Title:
**Survey Location
(Map 3 of 5)**

Figure: 1	Drawing No: PB4476-004-0222-001				
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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01	25/07/2017	LB	GC	A3	1:50,000

Co-ordinate system: British National Grid **EPSG: 27700**



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Legend:

- Survey Area
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone
- Mobilisation Zone

Project: Norfolk Vanguard

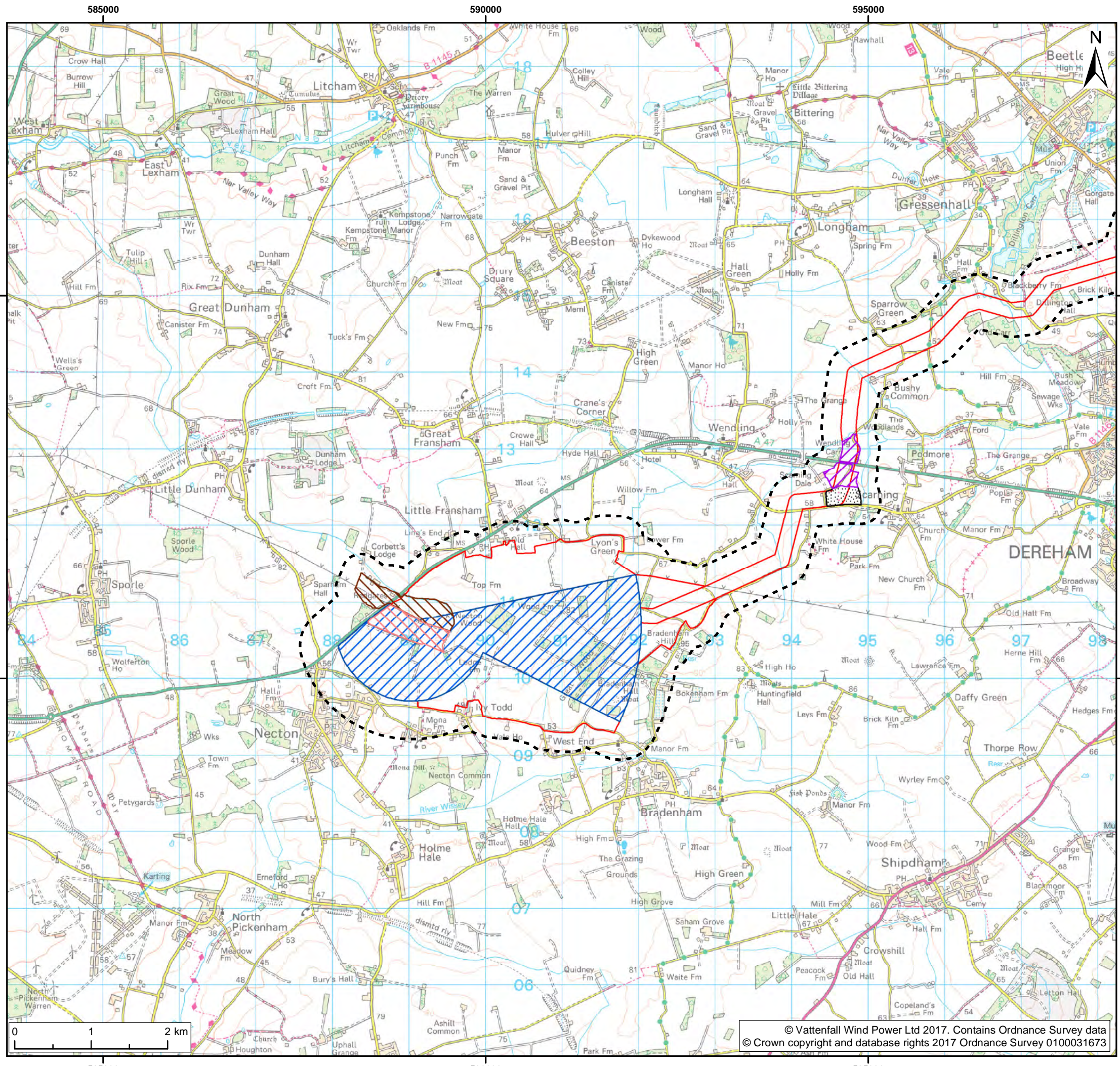
Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title: Survey Location (Map 4 of 5)

Figure: 1	Drawing No: PB4476-004-0222-001				
Revision: 02	Date: 07/09/2017	Drawn: LB	Checked: GC	Size: A3	Scale: 1:50,000
01	25/07/2017	LB	GC	A3	1:50,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Survey Area
 - Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
 - Project Substation Search Zone
 - National Grid Substation Extension Zone
 - Overhead Line Modification Zone

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:

Survey Location
(Map 5 of 5)

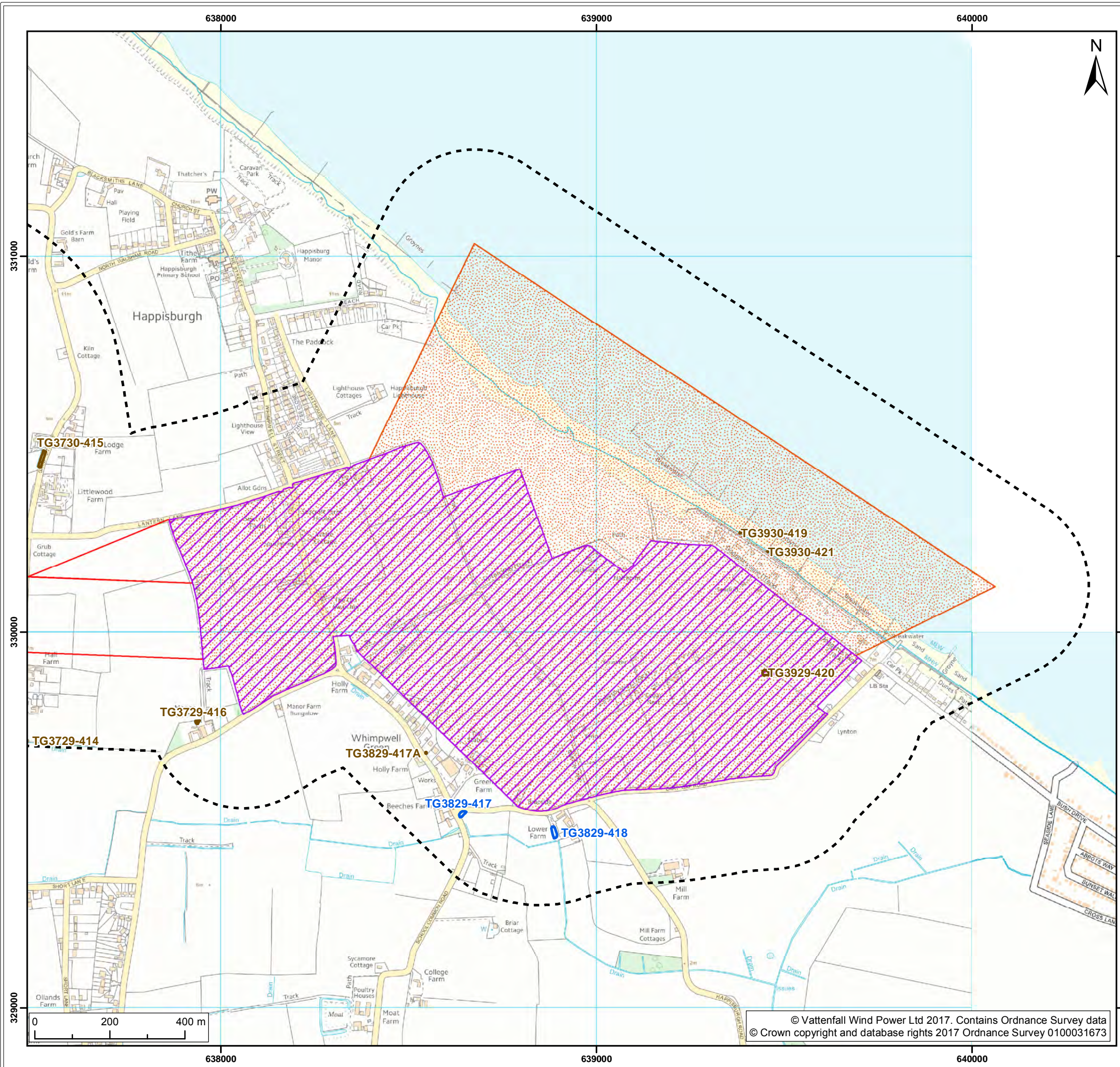
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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01	25/07/2017	LB	GC	A3	1:50,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Landfall Zone
 - Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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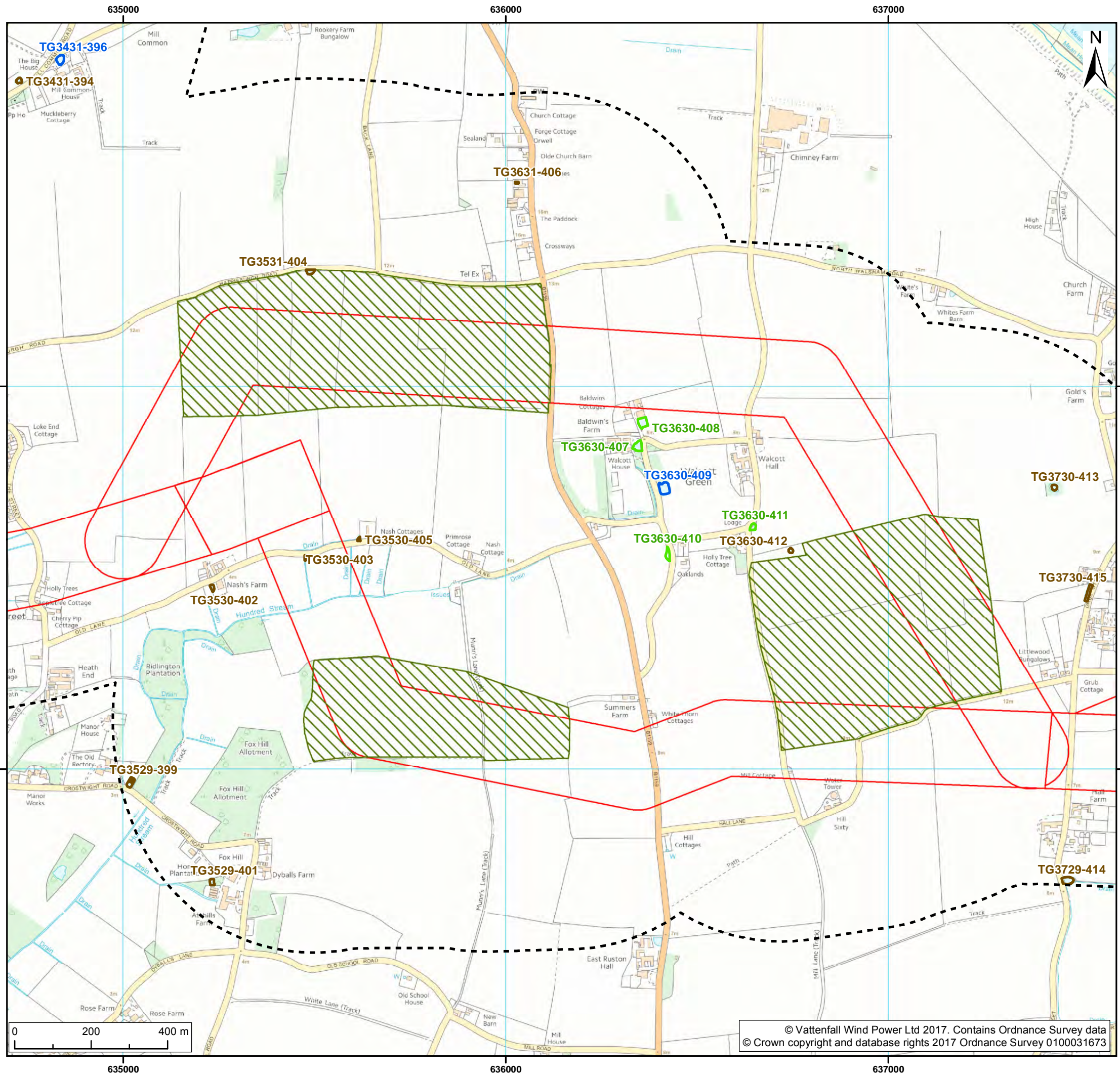
Title:
Habitat Suitability Index Results (map 1 of 25)

Figure:	2	Drawing No:	PB4476-004-0222-002		
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Cable Relay Station Search Zone
 - Onshore Cable Corridor
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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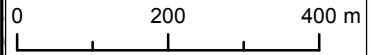
Title: Habitat Suitability Index Results (map 2 of 25)

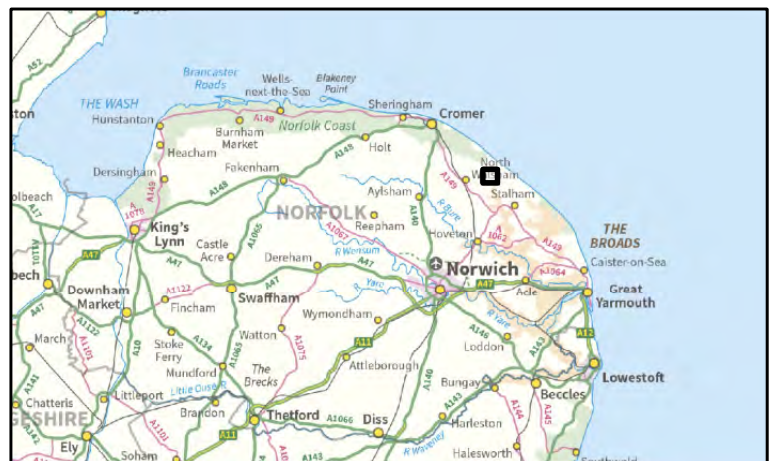
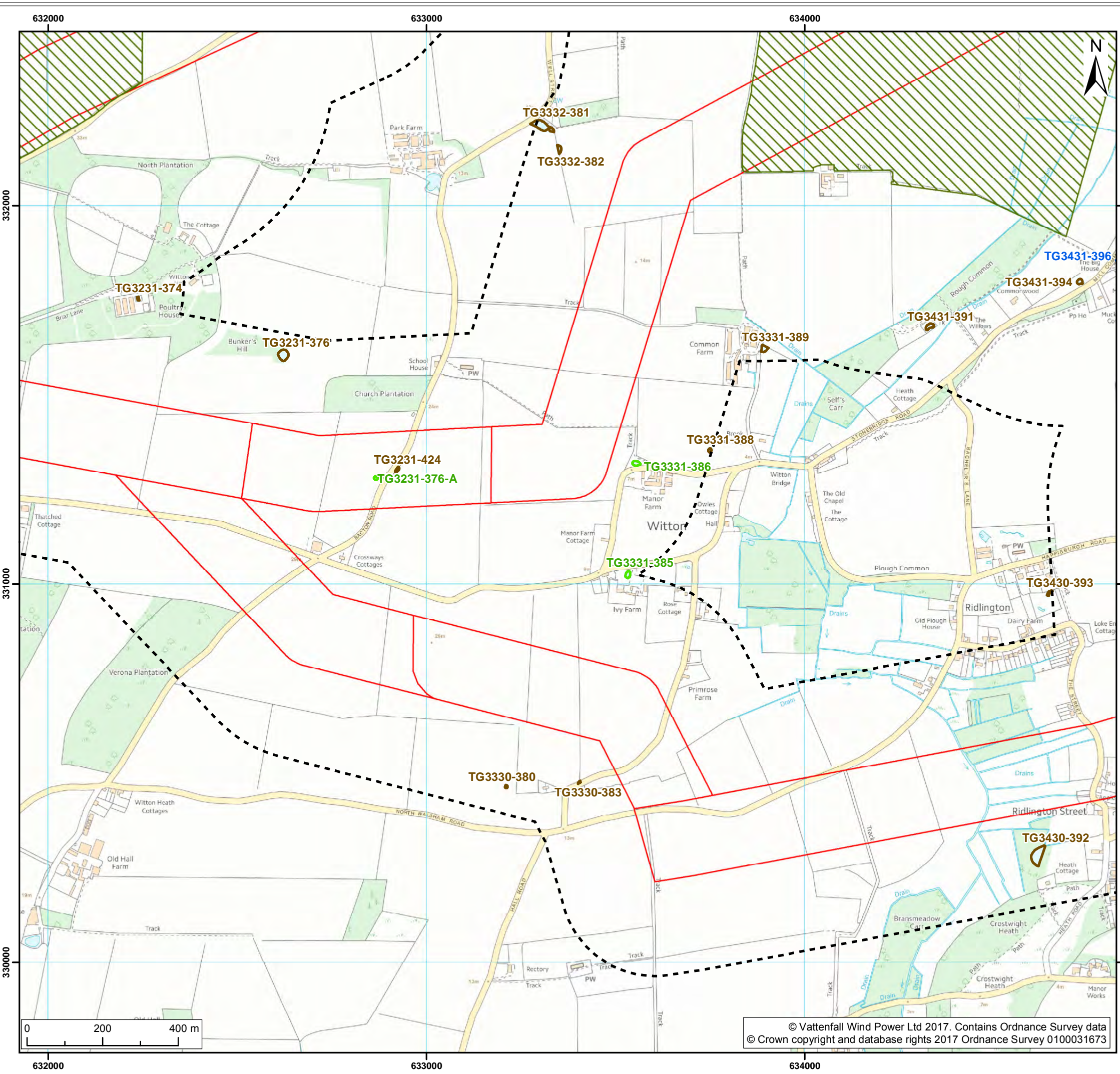
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700



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- Legend:**
- Norfolk Vanguard Onshore Infrastructure
 - Cable Relay Station Search Zone
 - Onshore Cable Corridor
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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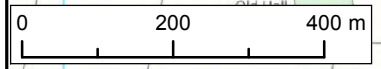
Title: Habitat Suitability Index Results (map 3 of 25)

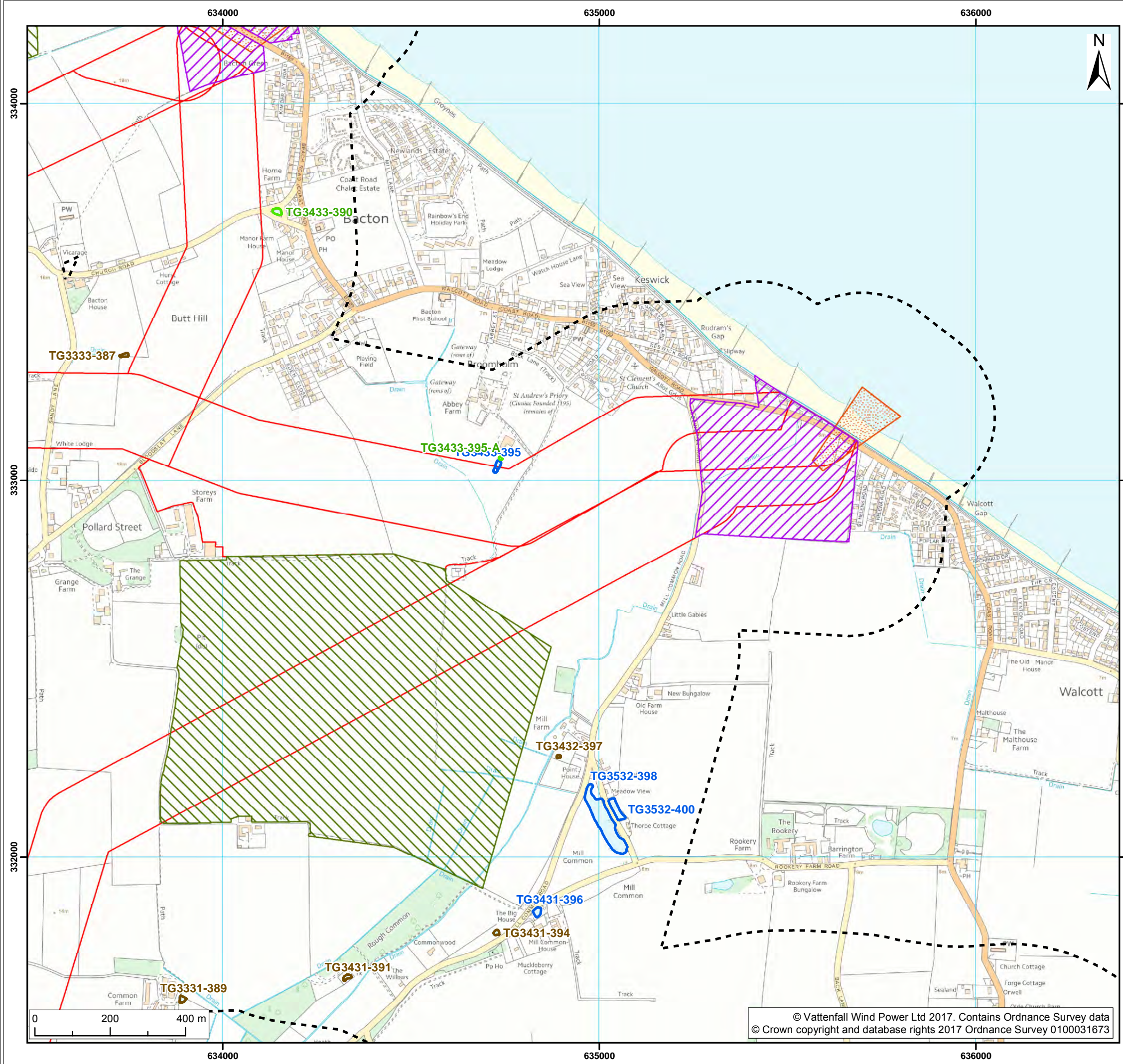
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700



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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Landfall Zone
 - Cable Relay Station Search Zone
 - Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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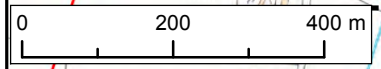
Title:
Habitat Suitability Index Results (map 4 of 25)

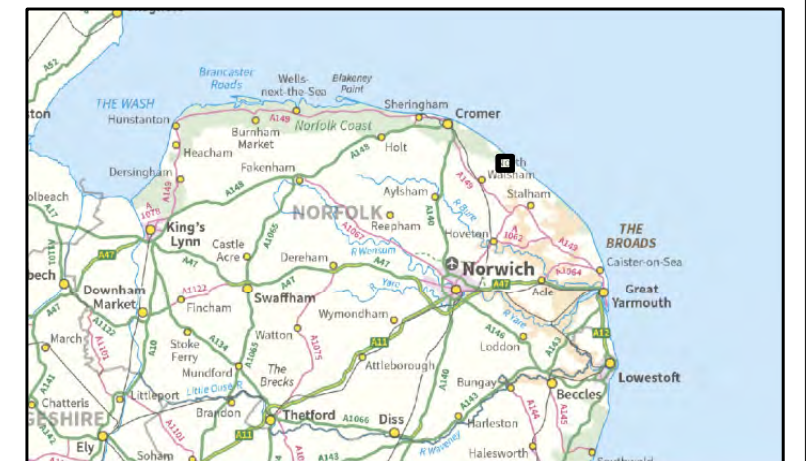
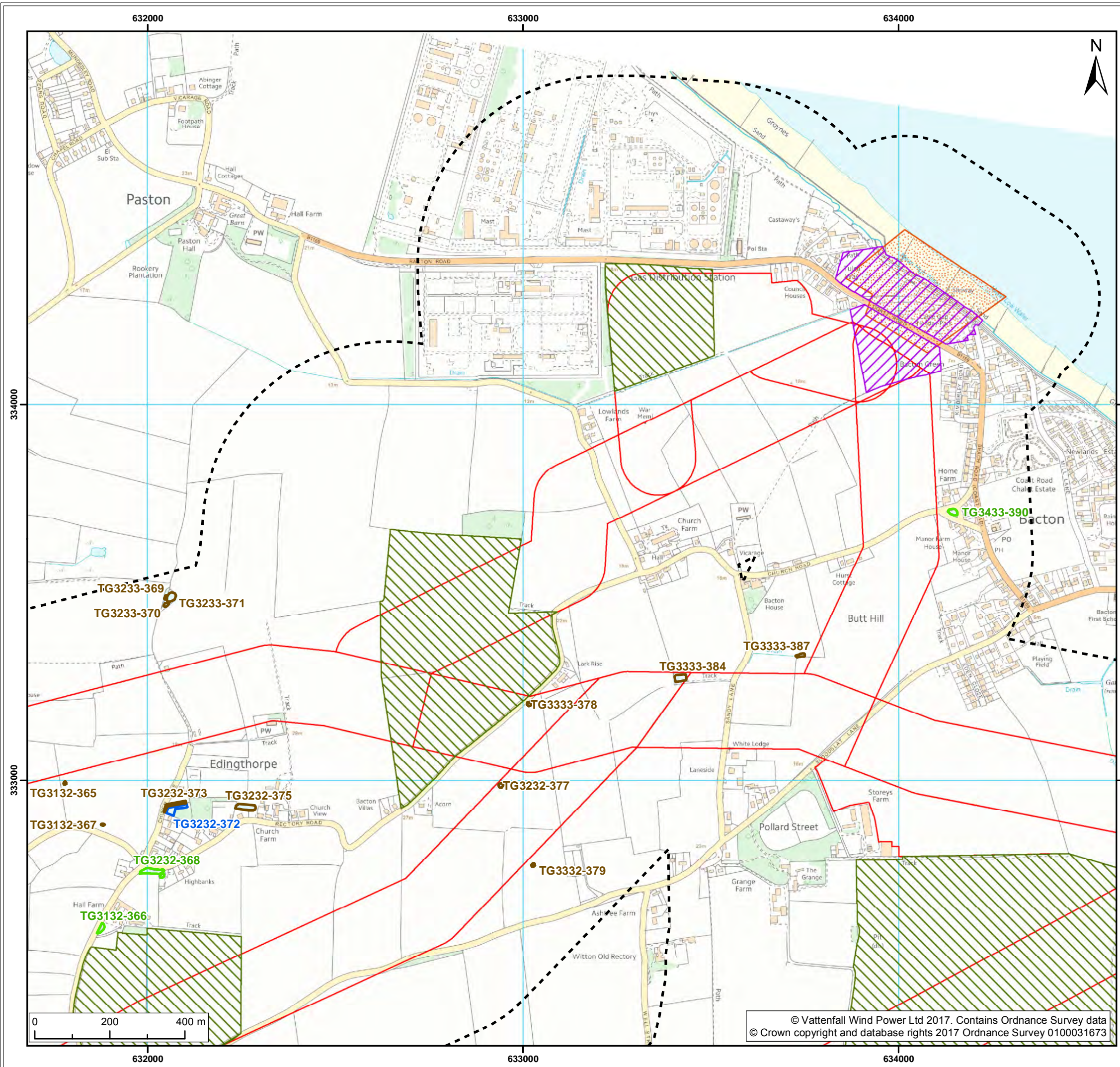
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700



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Legend:

Norfolk Vanguard Onshore Infrastructure

- Landfall Zone
- Cable Relay Station Search Zone
- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone

Habitat Suitability Index Results

- Not surveyed for HSI
- HSI score of below 0.6 – scoped out of further surveys
- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:
Habitat Suitability Index Results (map 5 of 25)

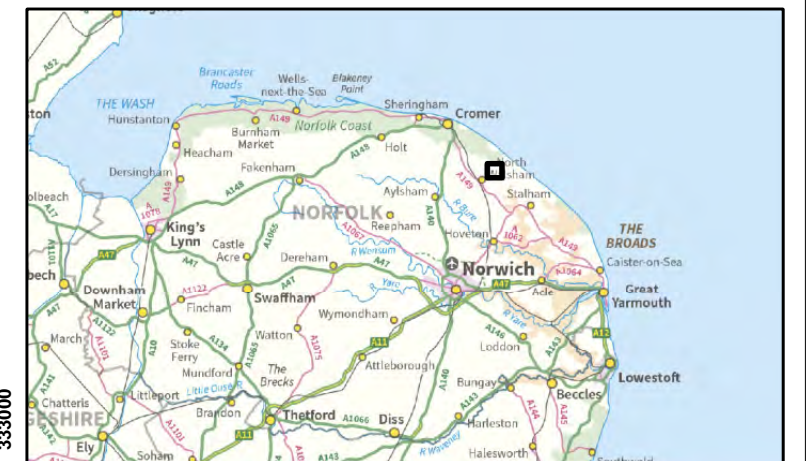
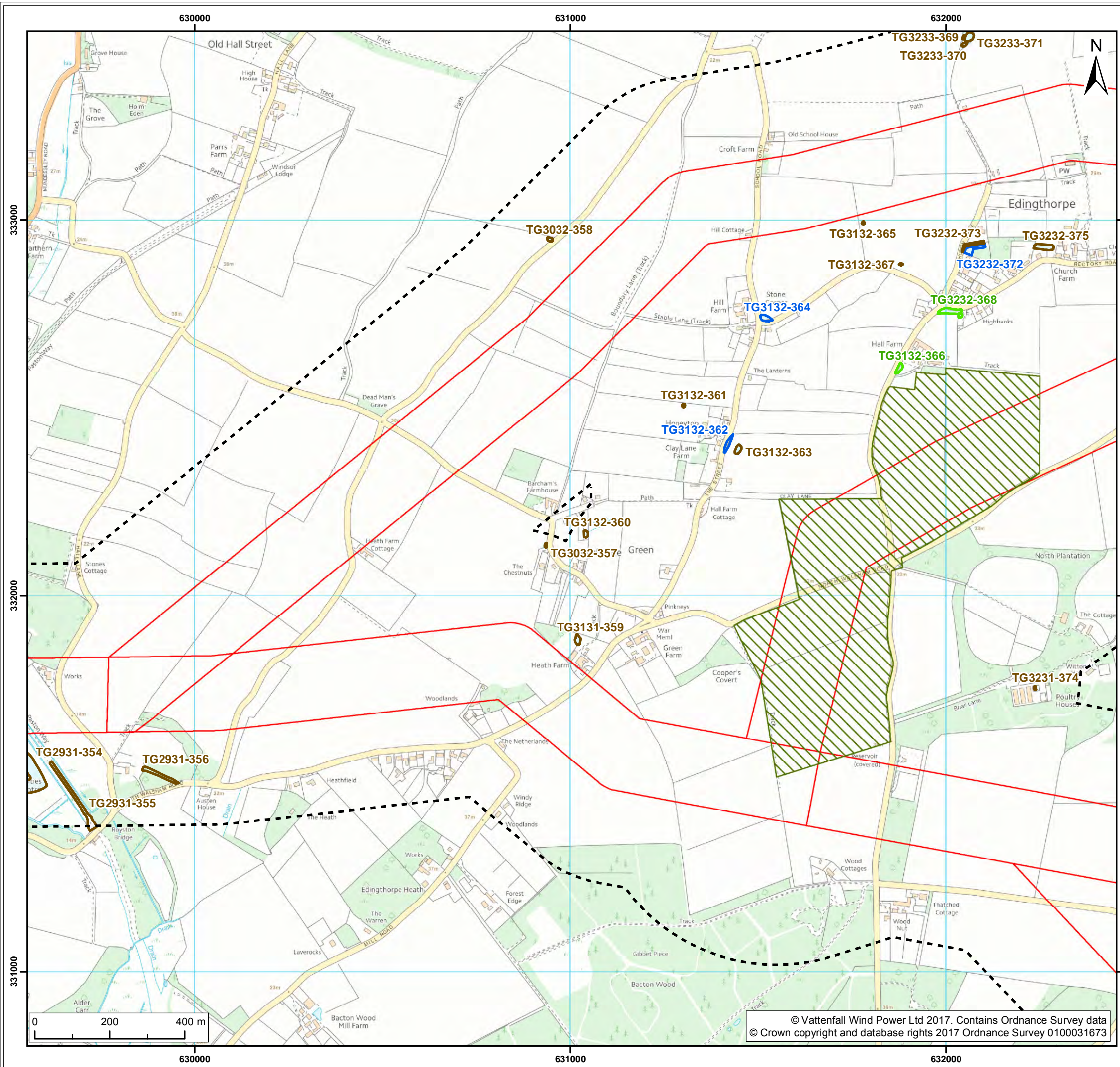
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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:**
- Norfolk Vanguard Onshore Infrastructure**
 - Cable Relay Station Search Zone
 - Onshore Cable Corridor
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:
 Habitat Suitability Index Results
 (map 6 of 25)

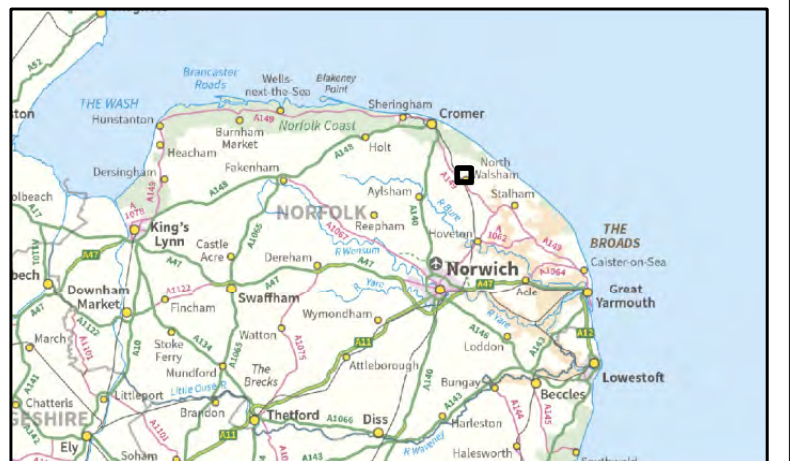
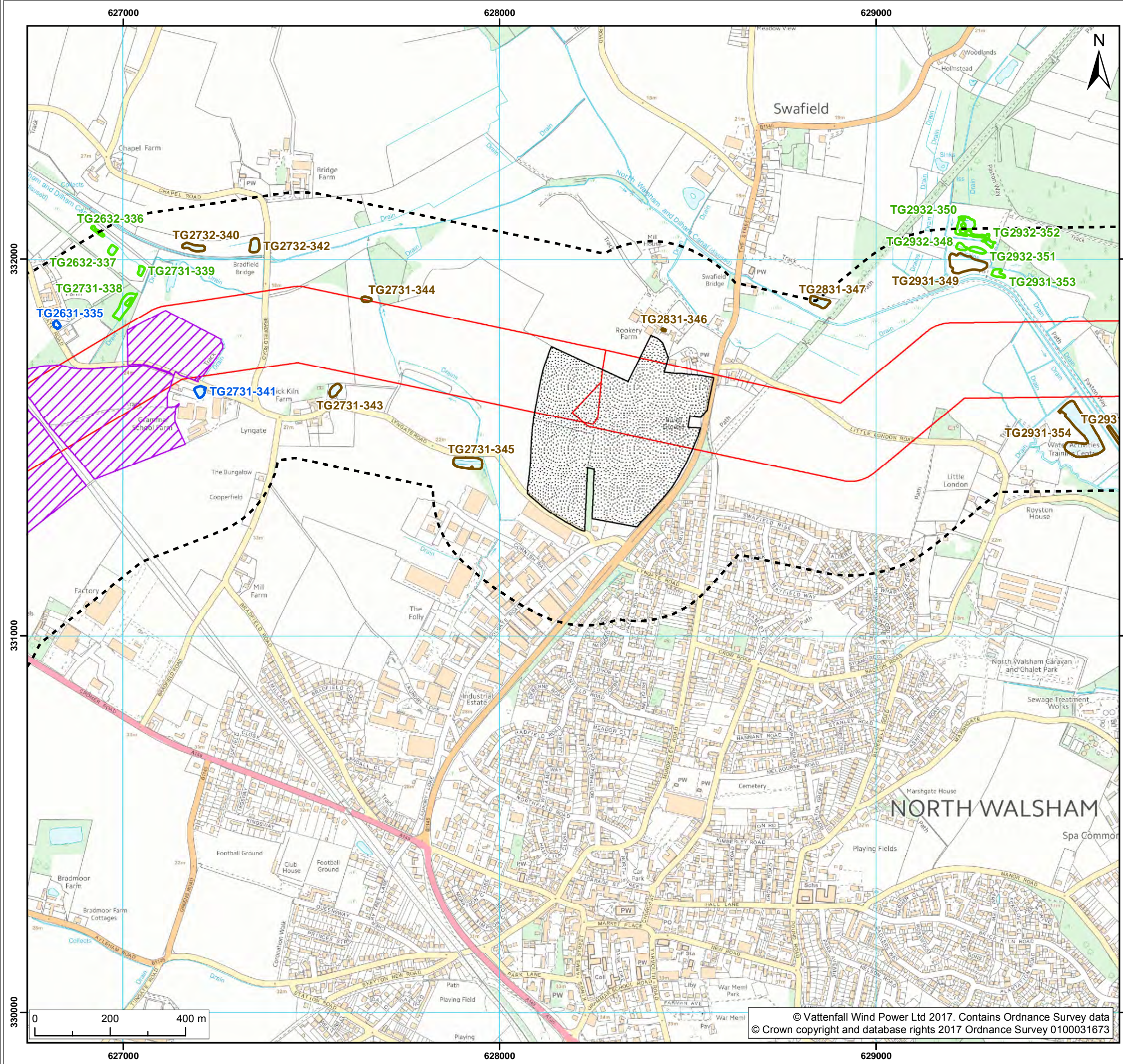
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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone
- Mobilisation Zone

Habitat Suitability Index Results

- Not surveyed for HSI
- HSI score of below 0.6 – scoped out of further surveys
- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:

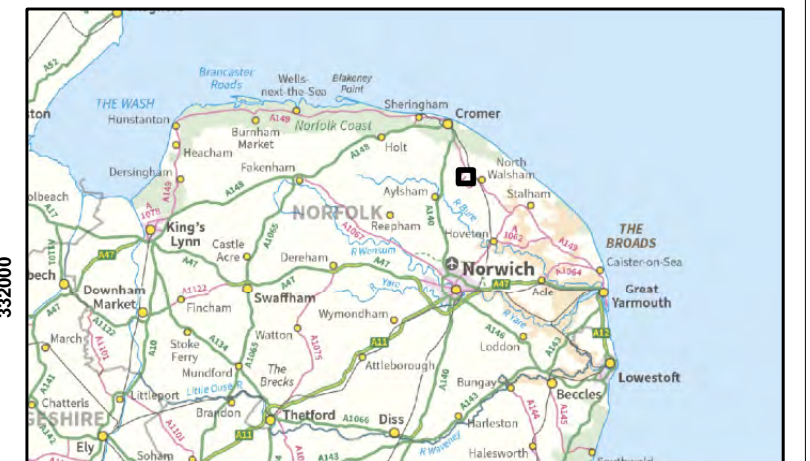
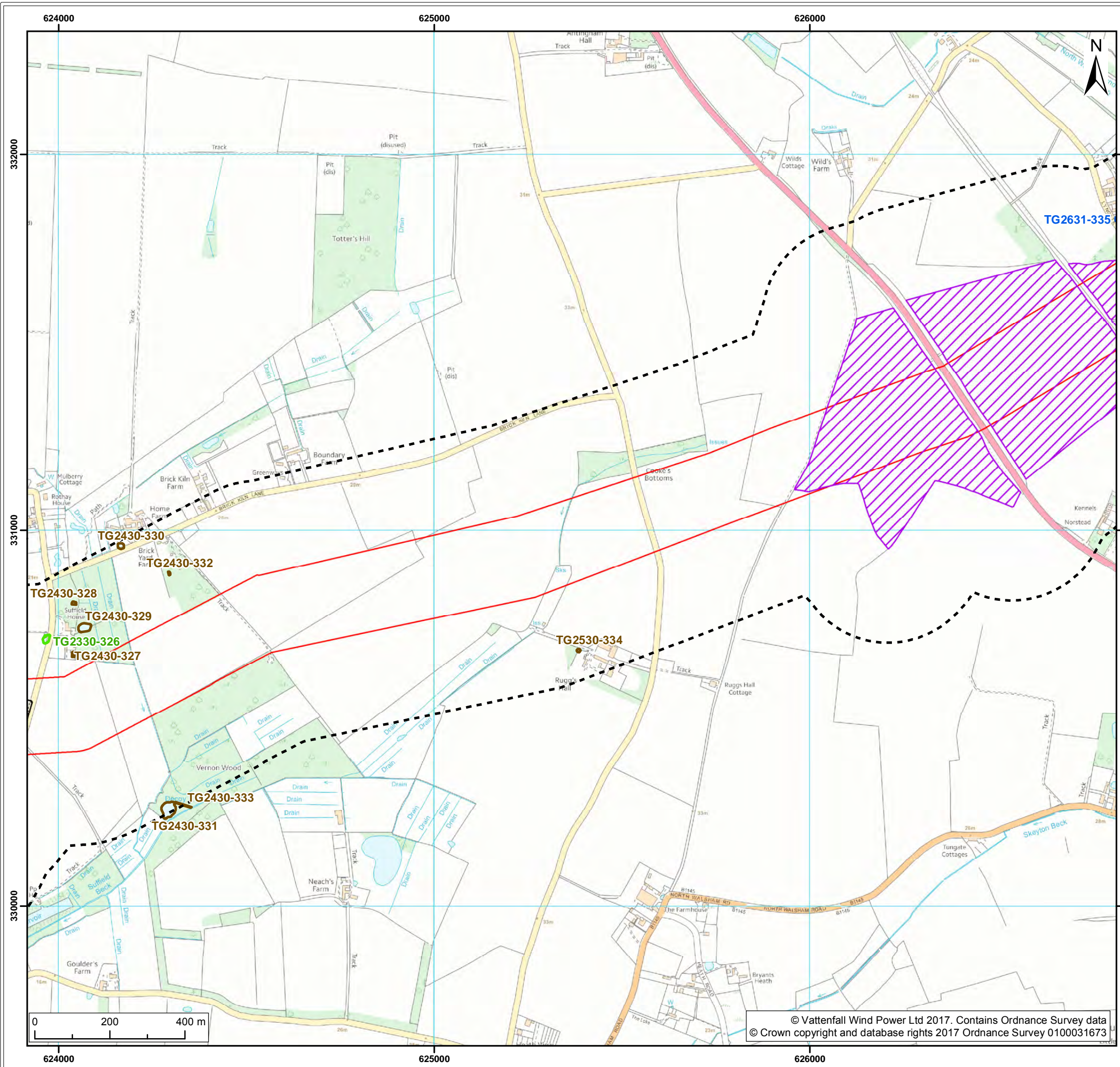
Habitat Suitability Index Results
(map 7 of 25)

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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:**
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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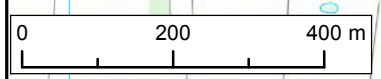
Title:
Habitat Suitability Index Results
(map 8 of 25)

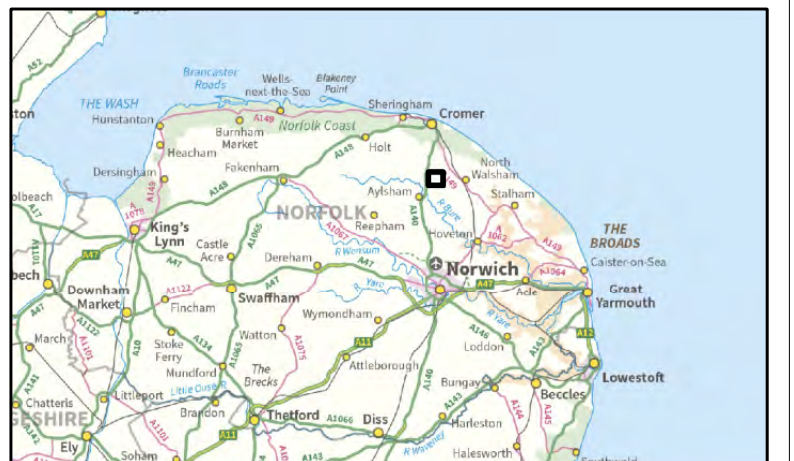
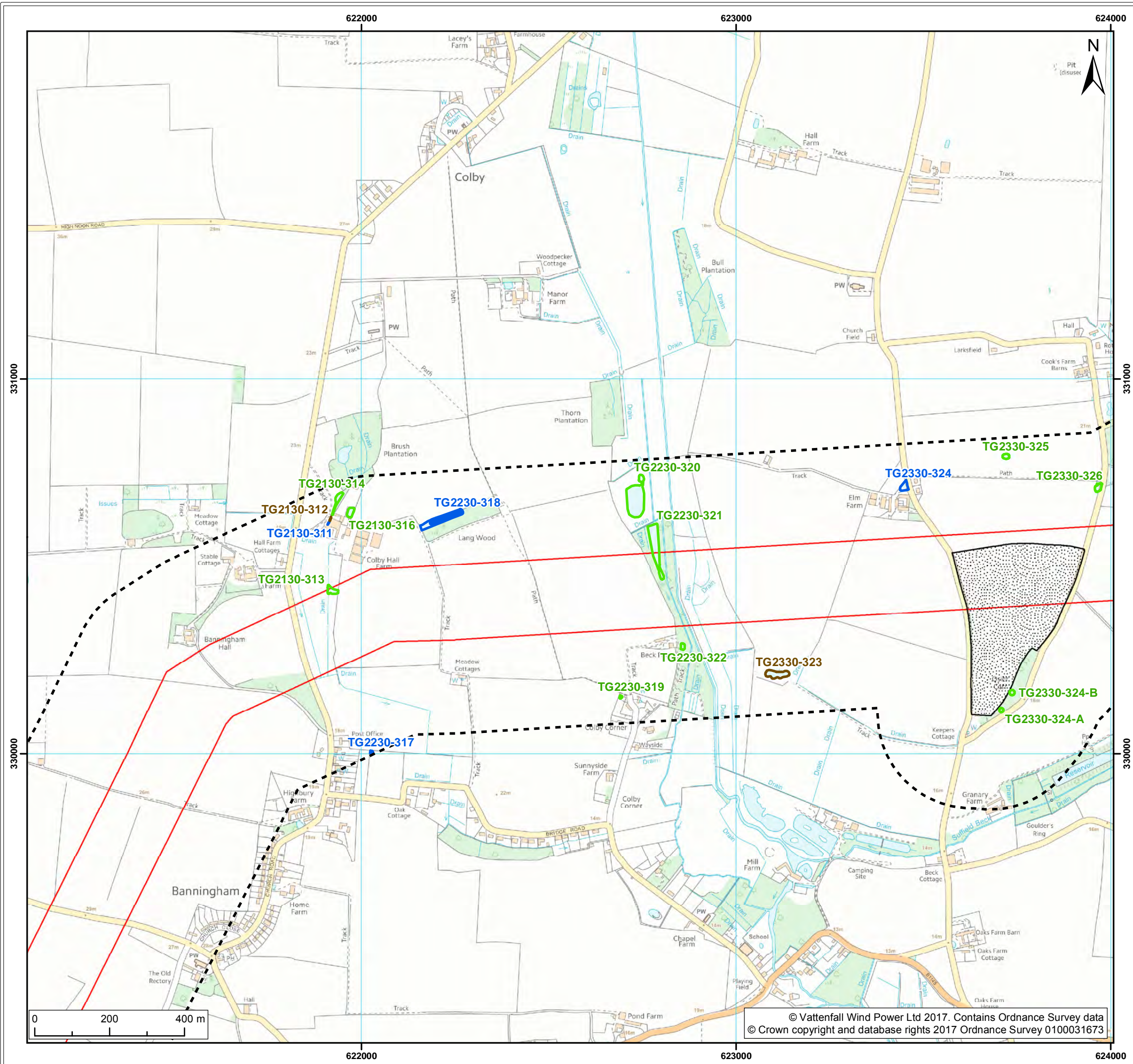
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700



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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Mobilisation Zone
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

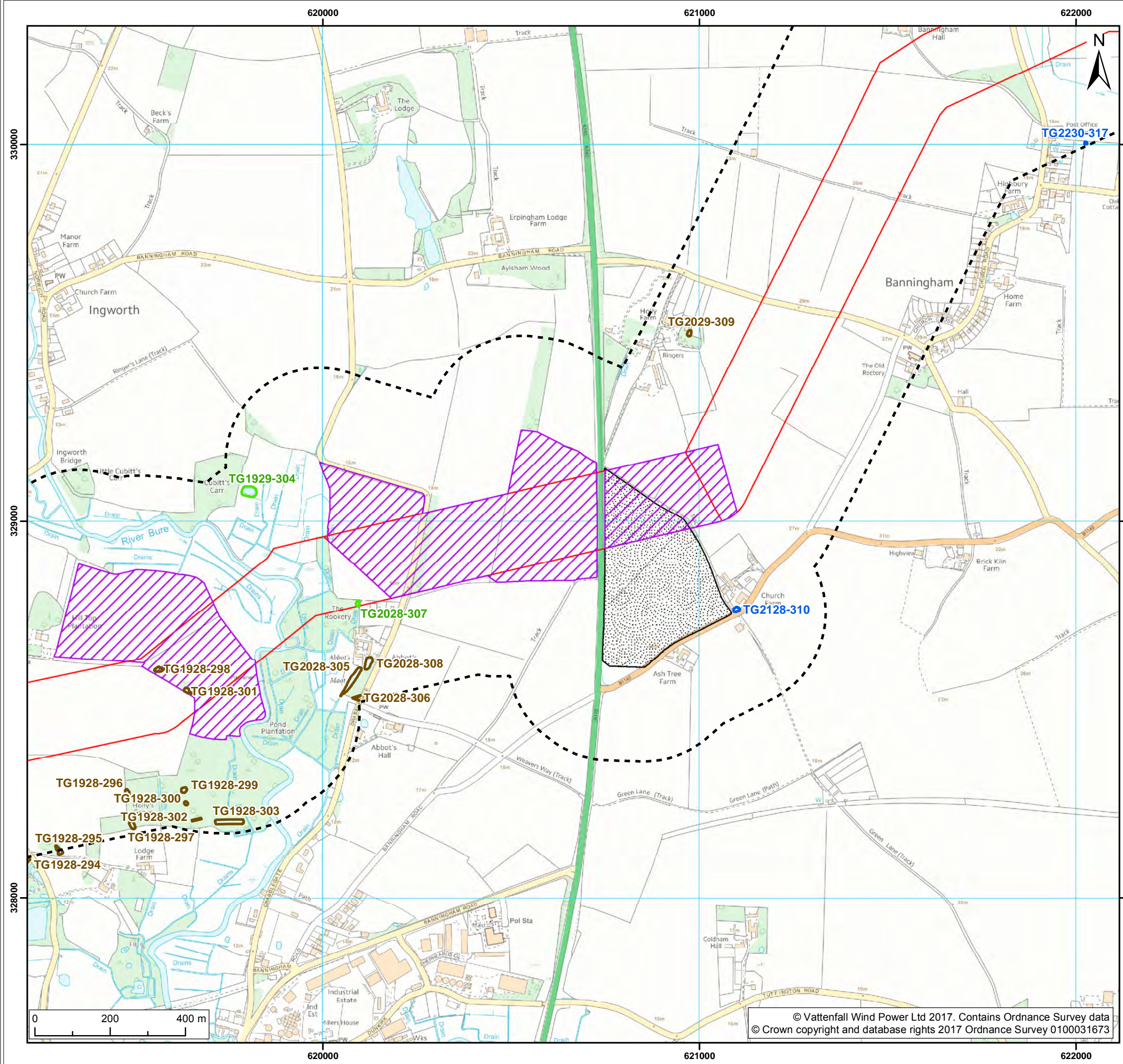
Title:
Habitat Suitability Index Results (map 9 of 25)

Figure:	2	Drawing No:	PB4476-004-0222-002			
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:**
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results
(map 10 of 25)

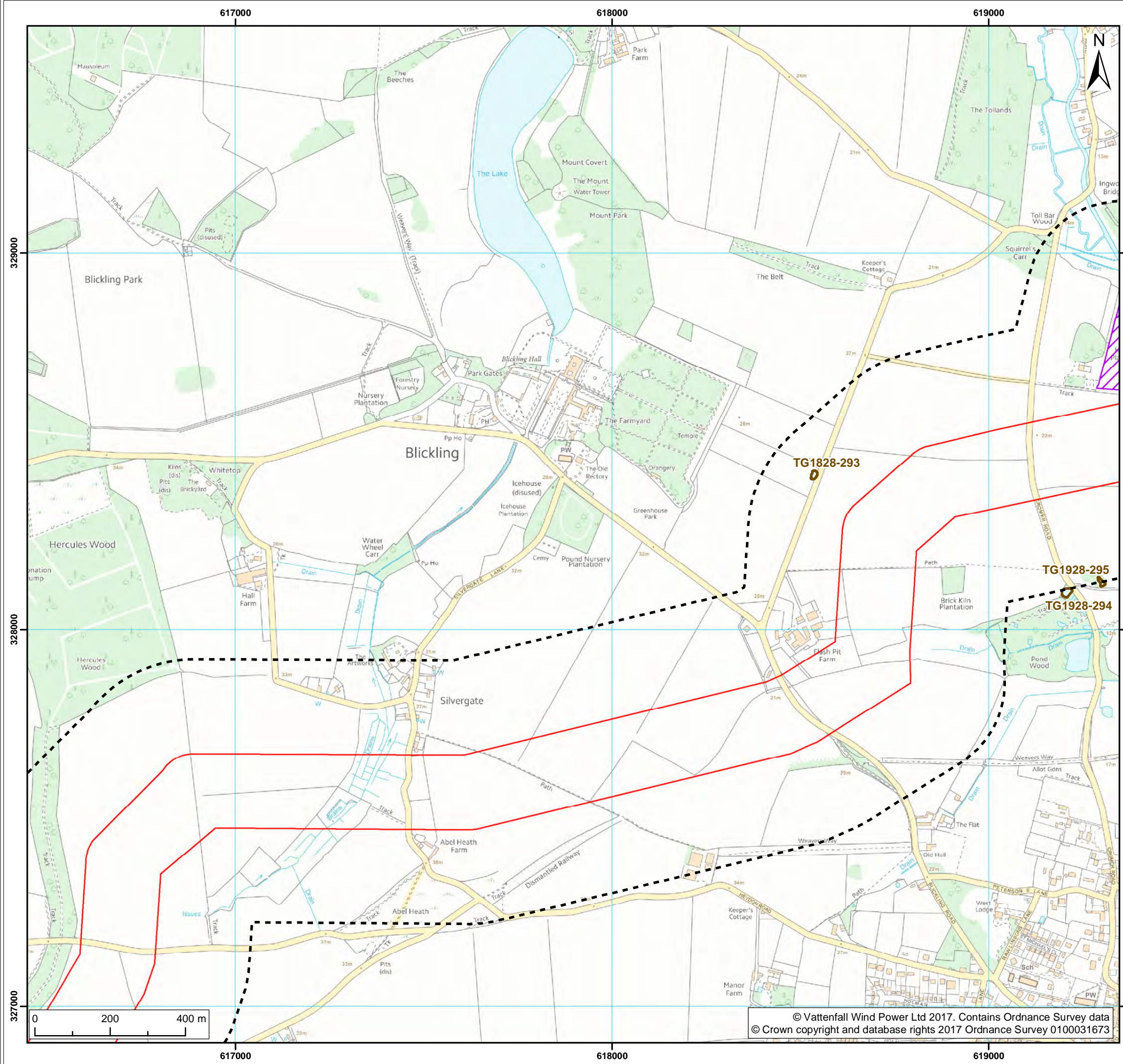
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Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results
(map 11 of 25)

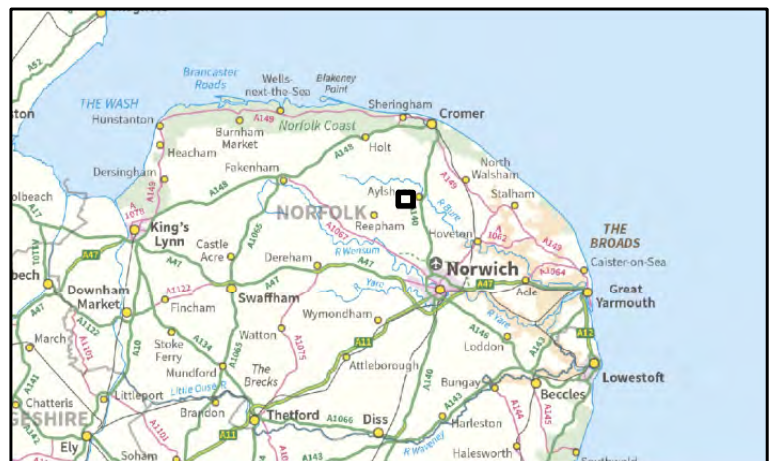
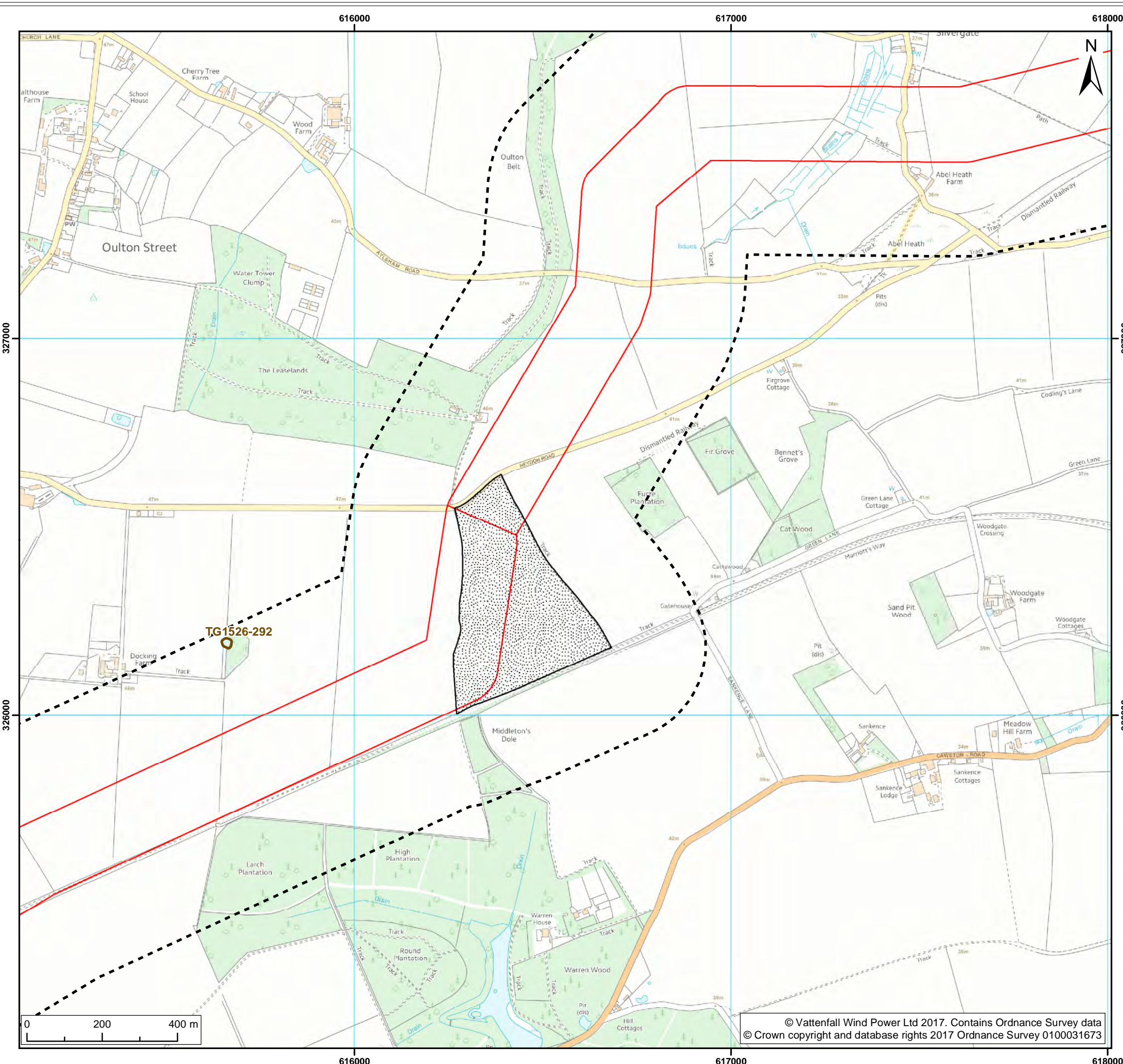
Figure:	2	Drawing No:	PB4476-004-0222-002			
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Mobilisation Zone

Habitat Suitability Index Results

- Not surveyed for HSI
- Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:

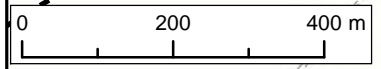
Habitat Suitability Index Results (map 12 of 25)

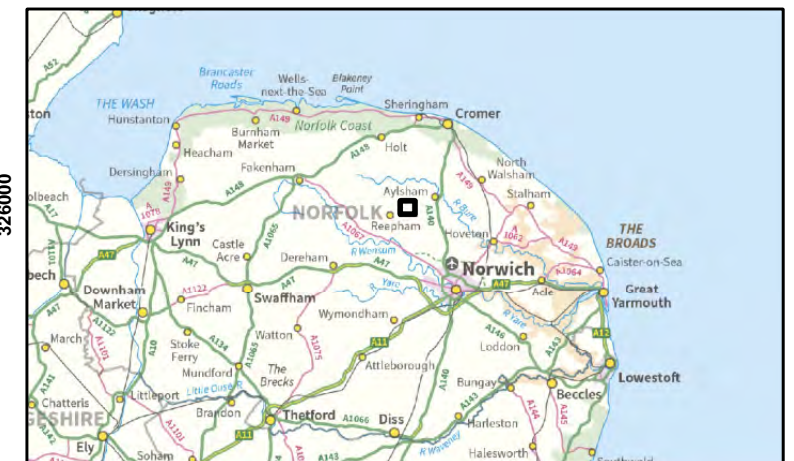
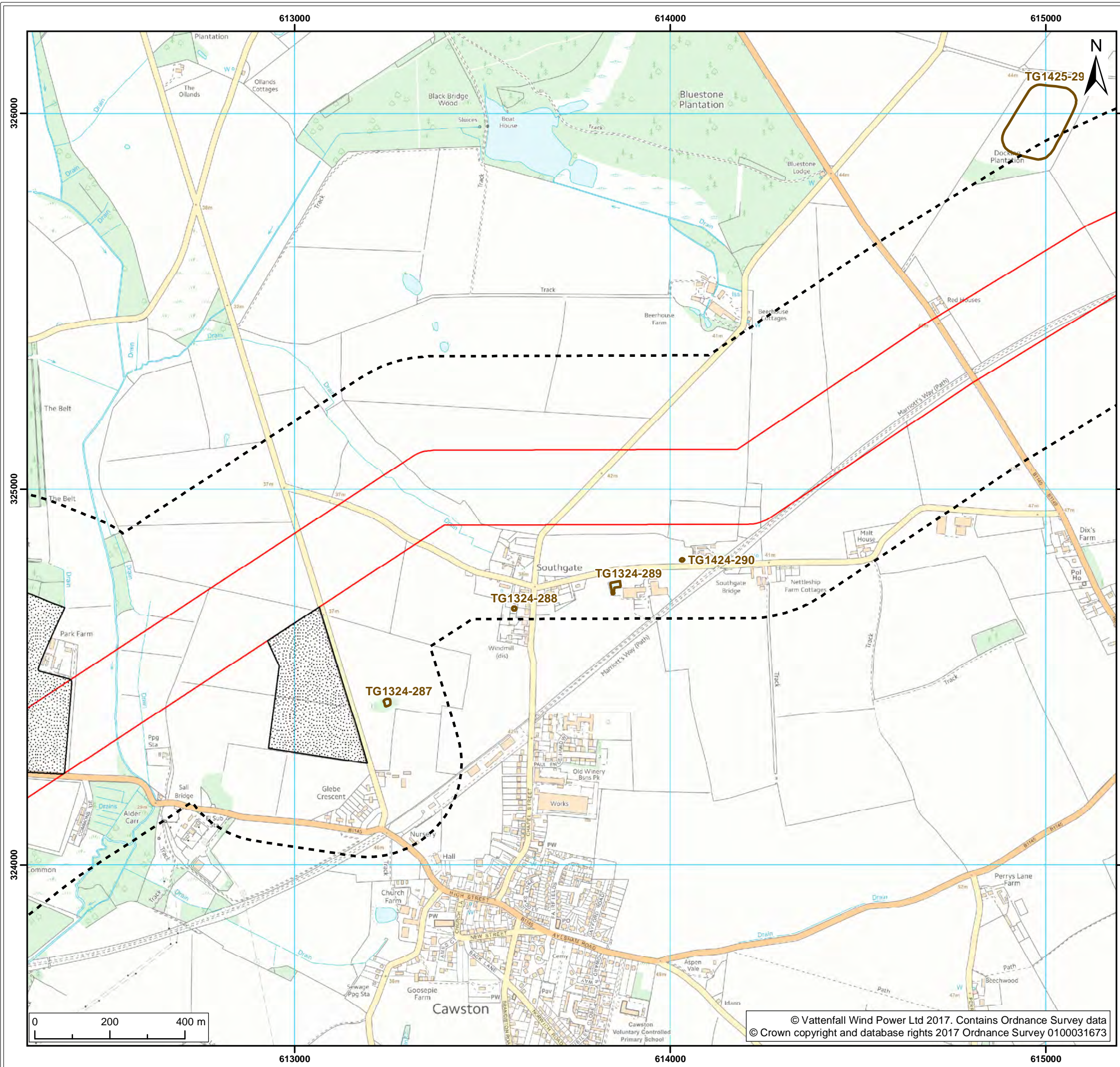
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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Mobilisation Zone

Habitat Suitability Index Results

- Not surveyed for HSI
- Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results
(map 13 of 25)

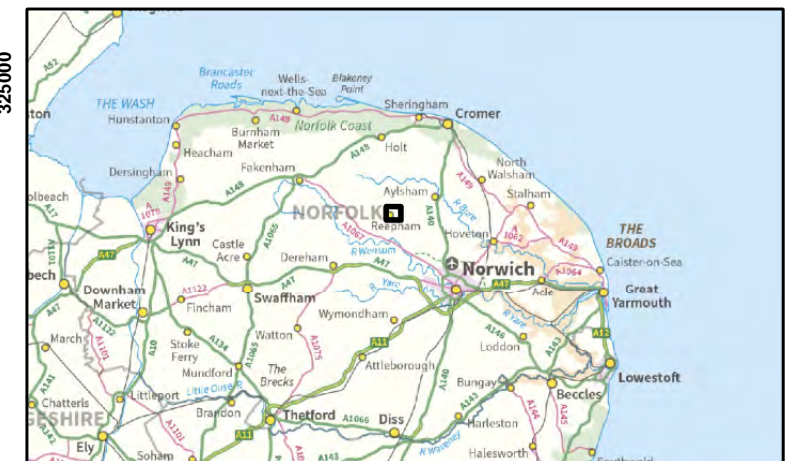
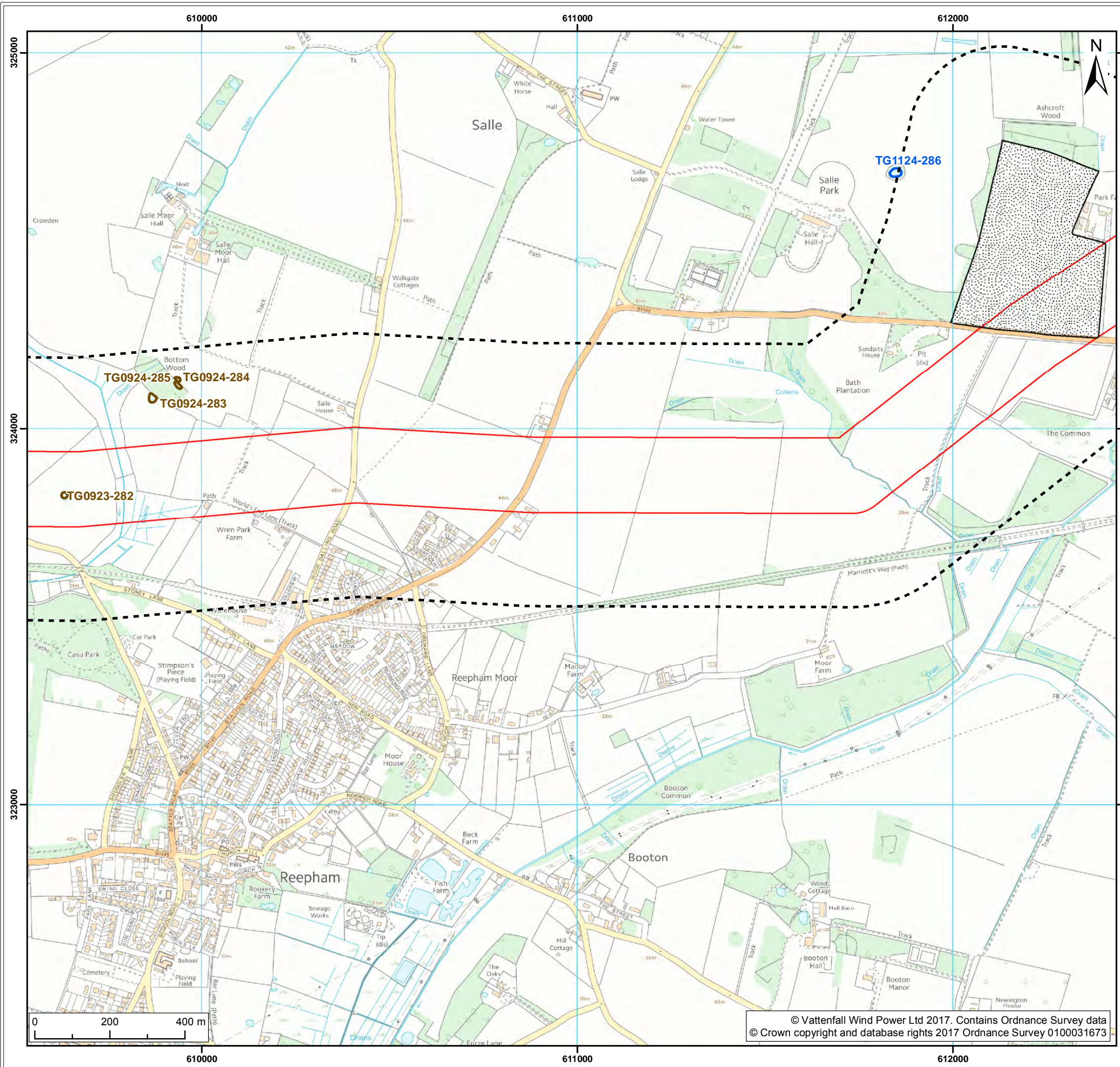
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Mobilisation Zone
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

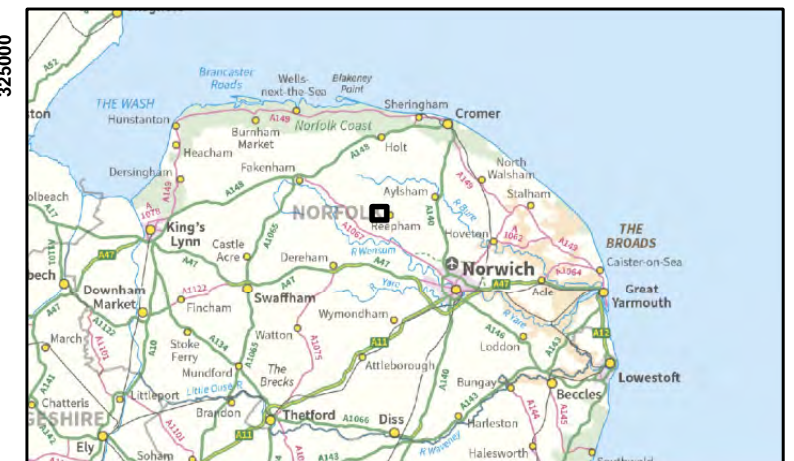
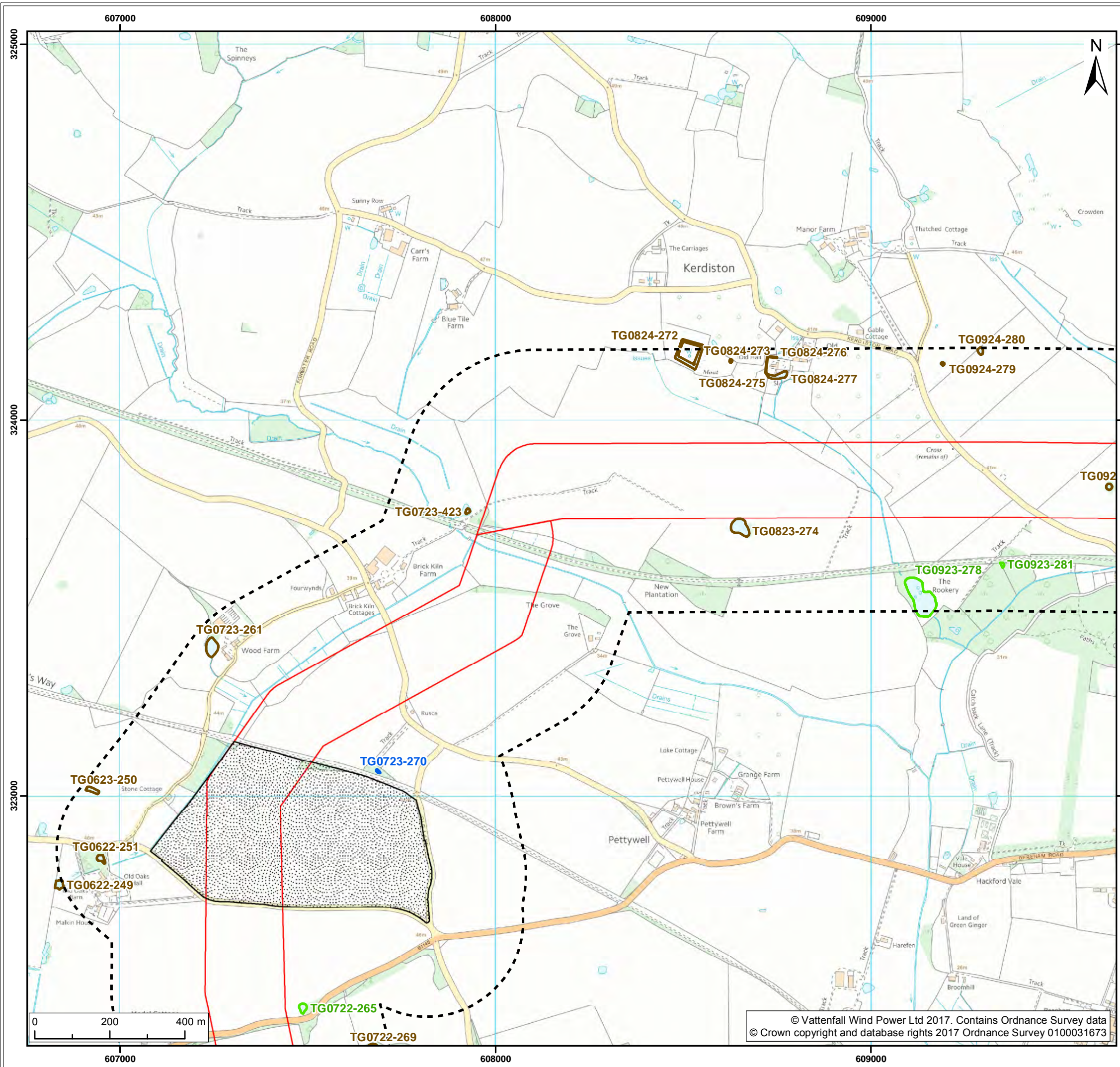
Title:
Habitat Suitability Index Results (map 14 of 25)

Figure:	2	Drawing No:	PB4476-004-0222-002			
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700



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- Legend:**
- Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Mobilisation Zone
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title: Habitat Suitability Index Results (map 15 of 25)

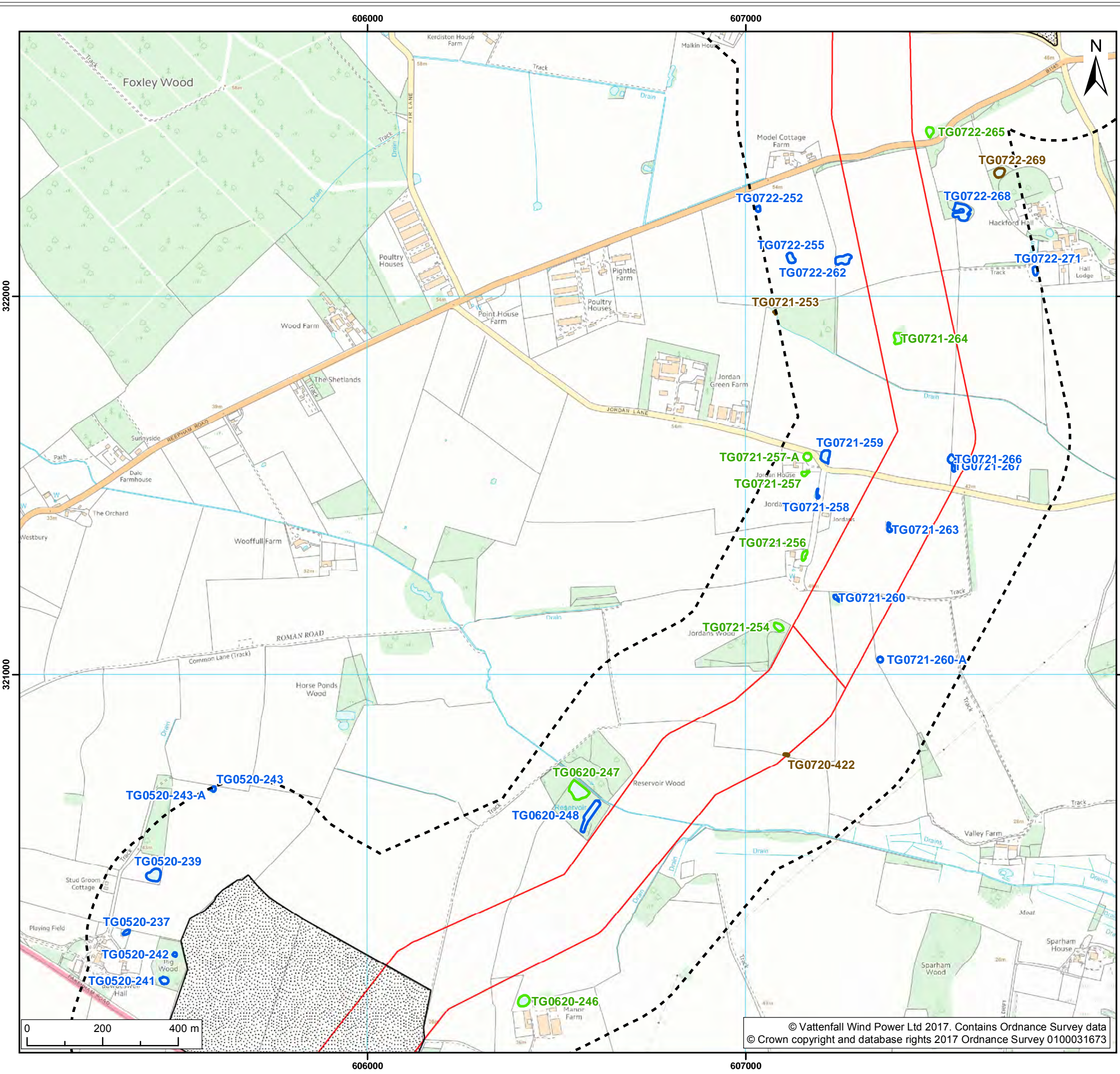
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Mobilisation Zone

Habitat Suitability Index Results

- Not surveyed for HSI
- HSI score of below 0.6 – scoped out of further surveys
- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:

Habitat Suitability Index Results
(map 16 of 25)

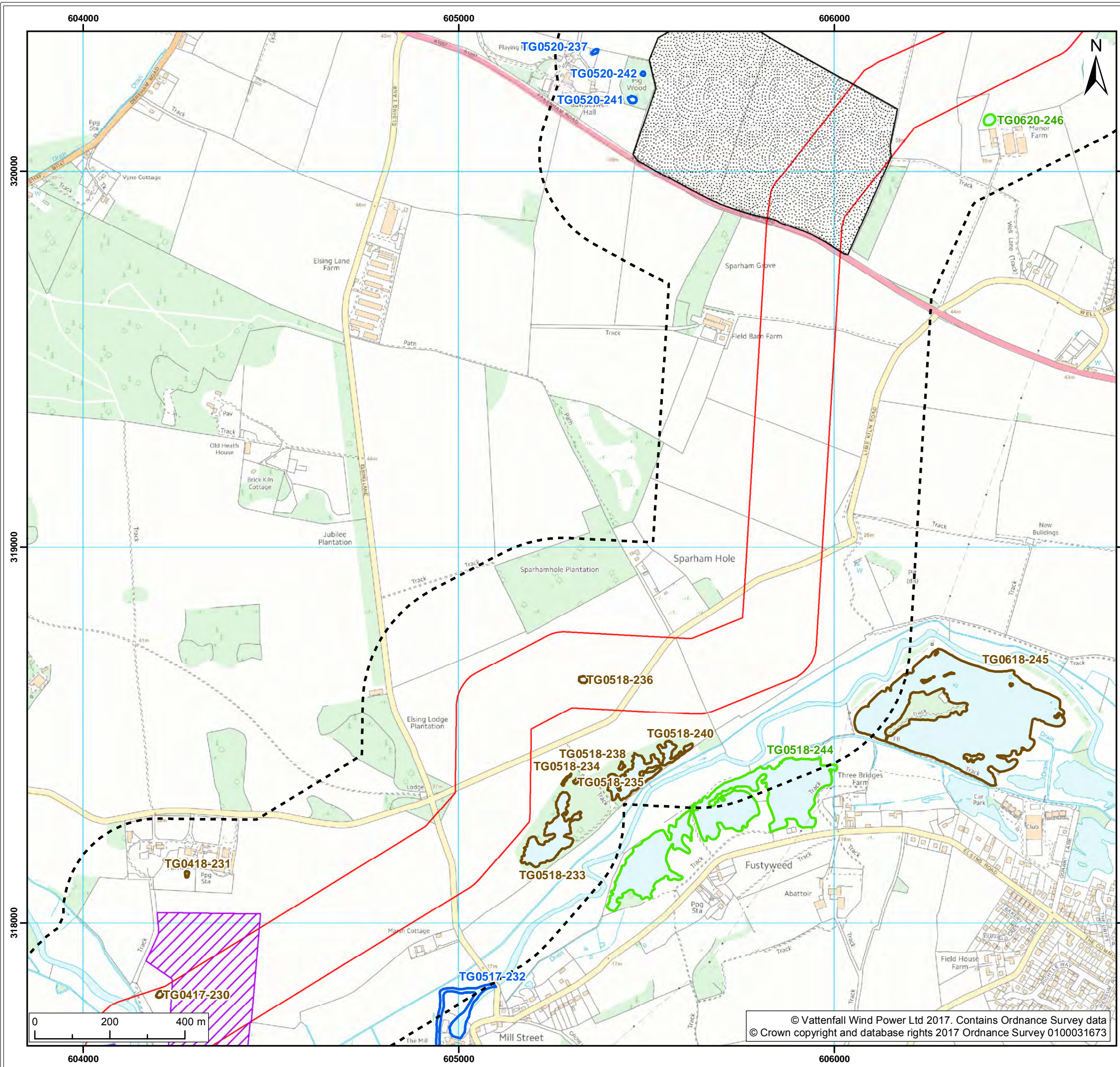
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:**
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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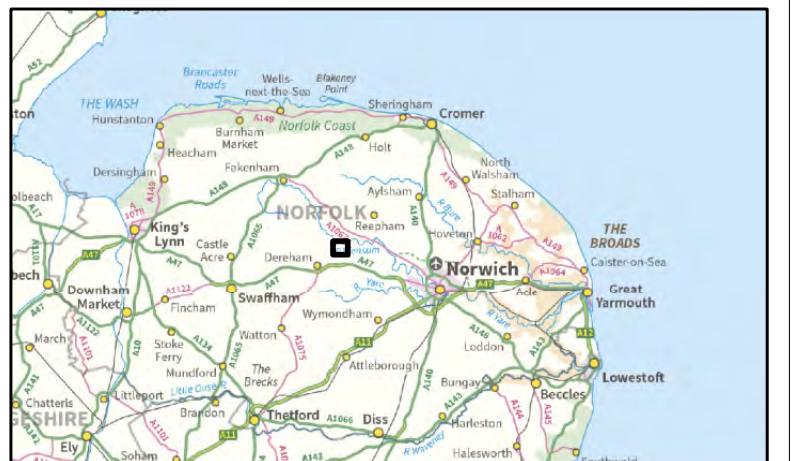
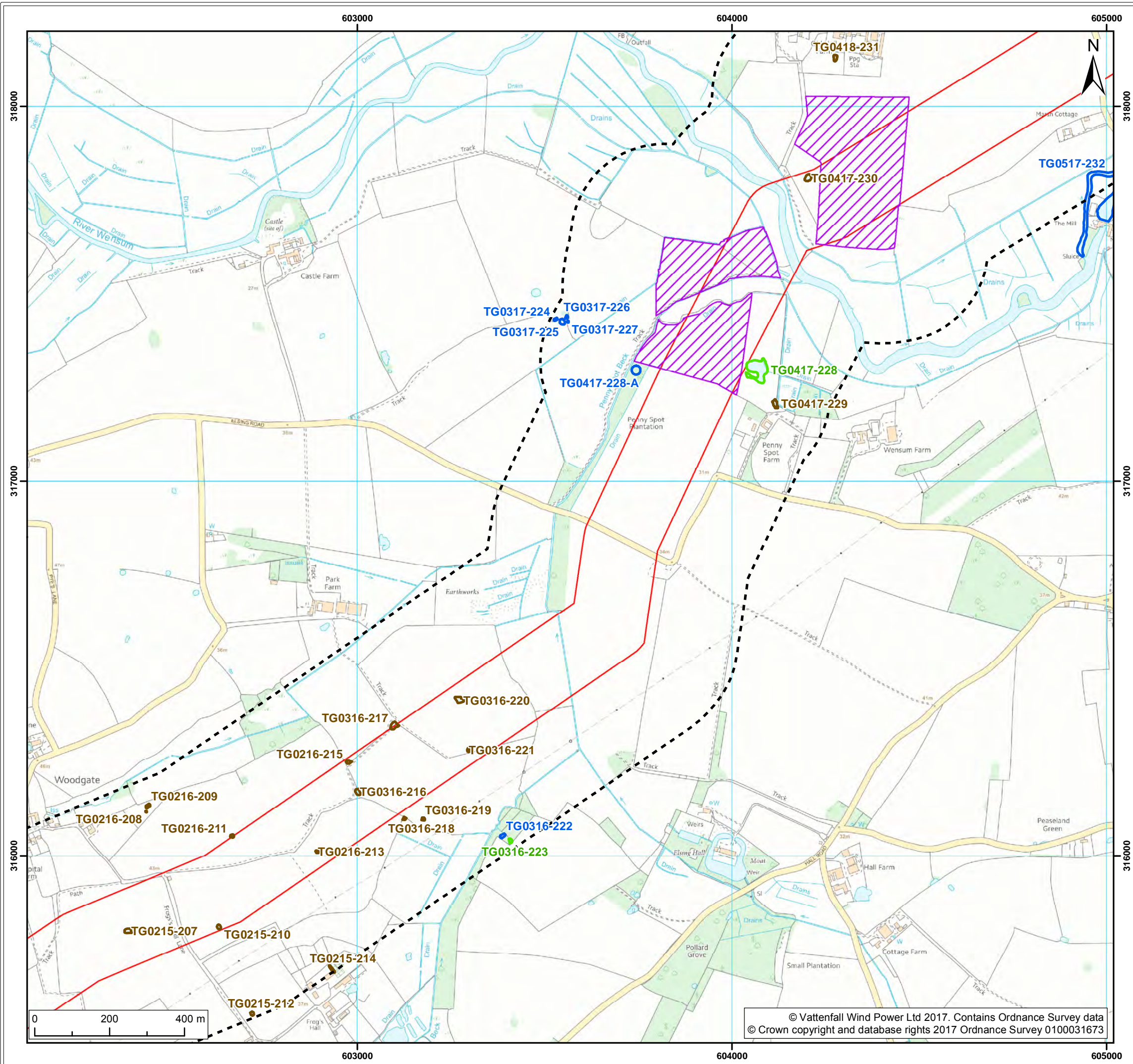
Title:
Habitat Suitability Index Results
(map 17 of 25)

Figure:	2	Drawing No:	PB4476-004-0222-002			
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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700



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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title: Habitat Suitability Index Results (map 18 of 25)

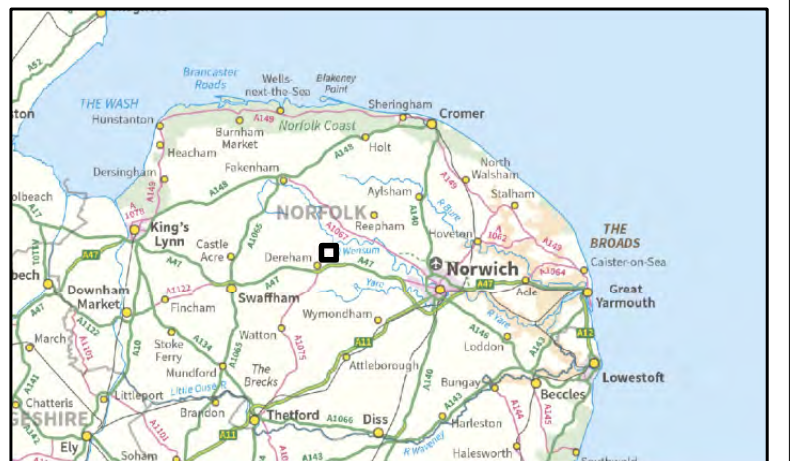
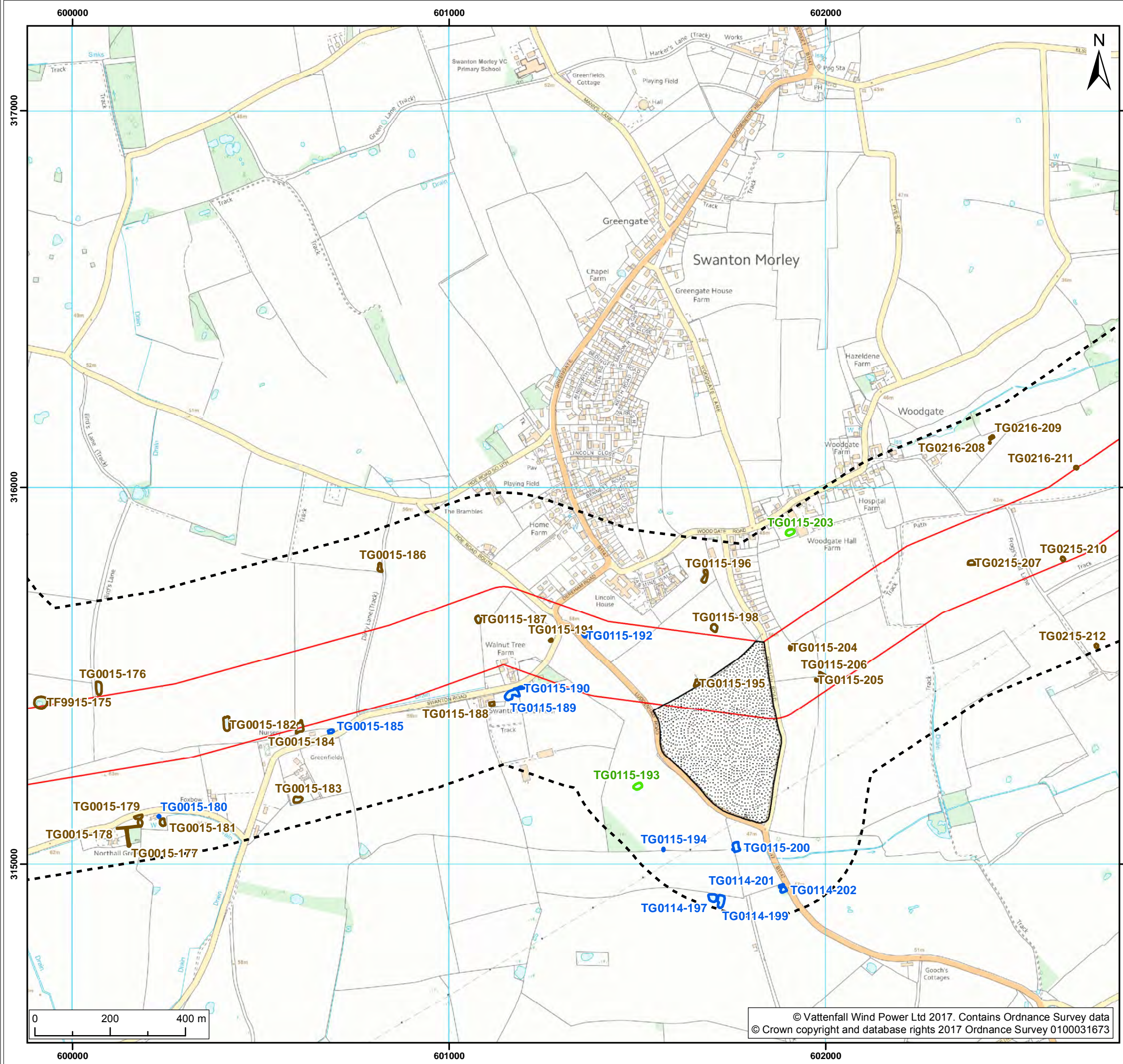
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:**
- Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Mobilisation Zone
 - Habitat Suitability Index Results**
 - Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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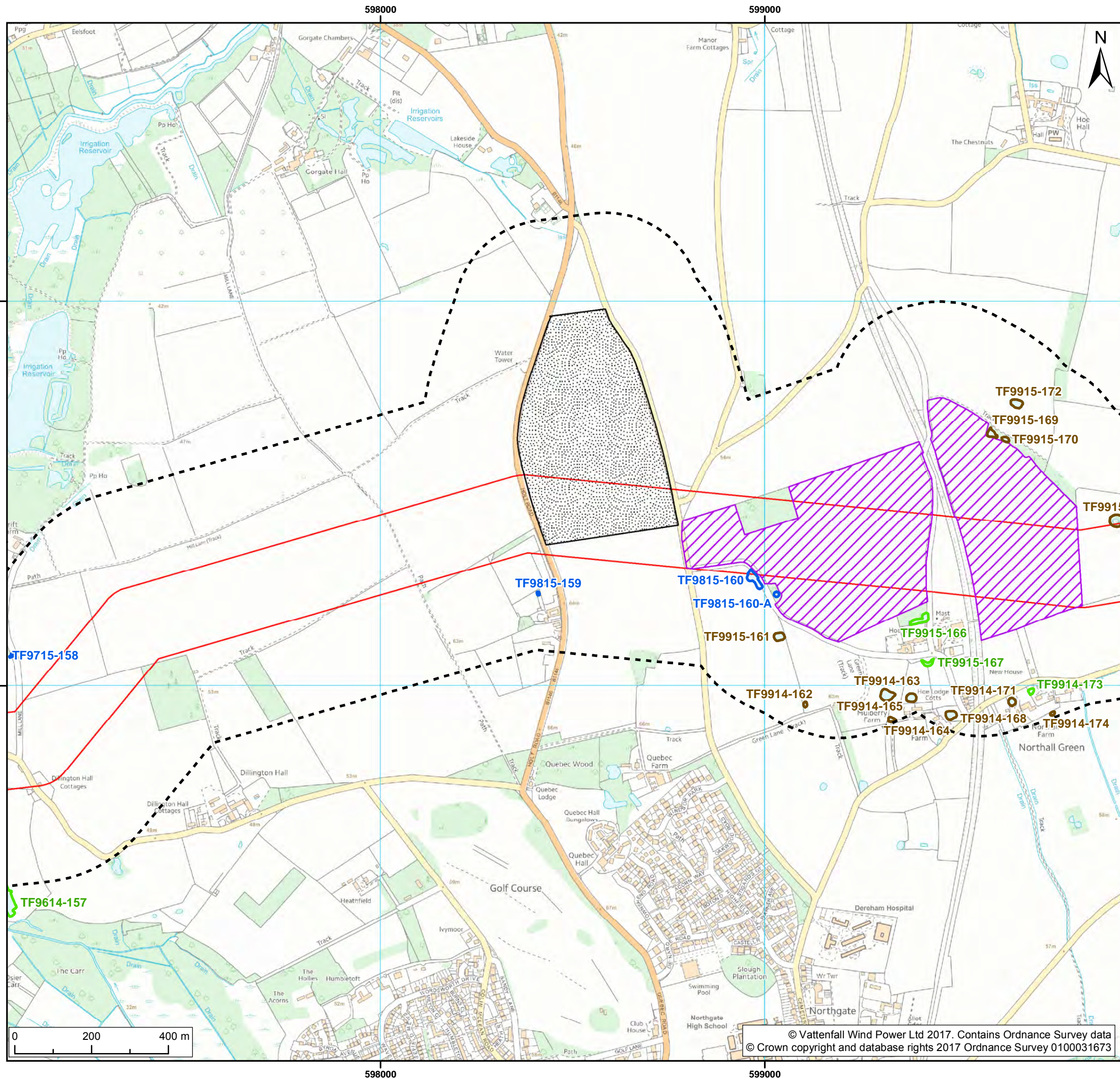
Title:
Habitat Suitability Index Results
(map 19 of 25)

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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700



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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

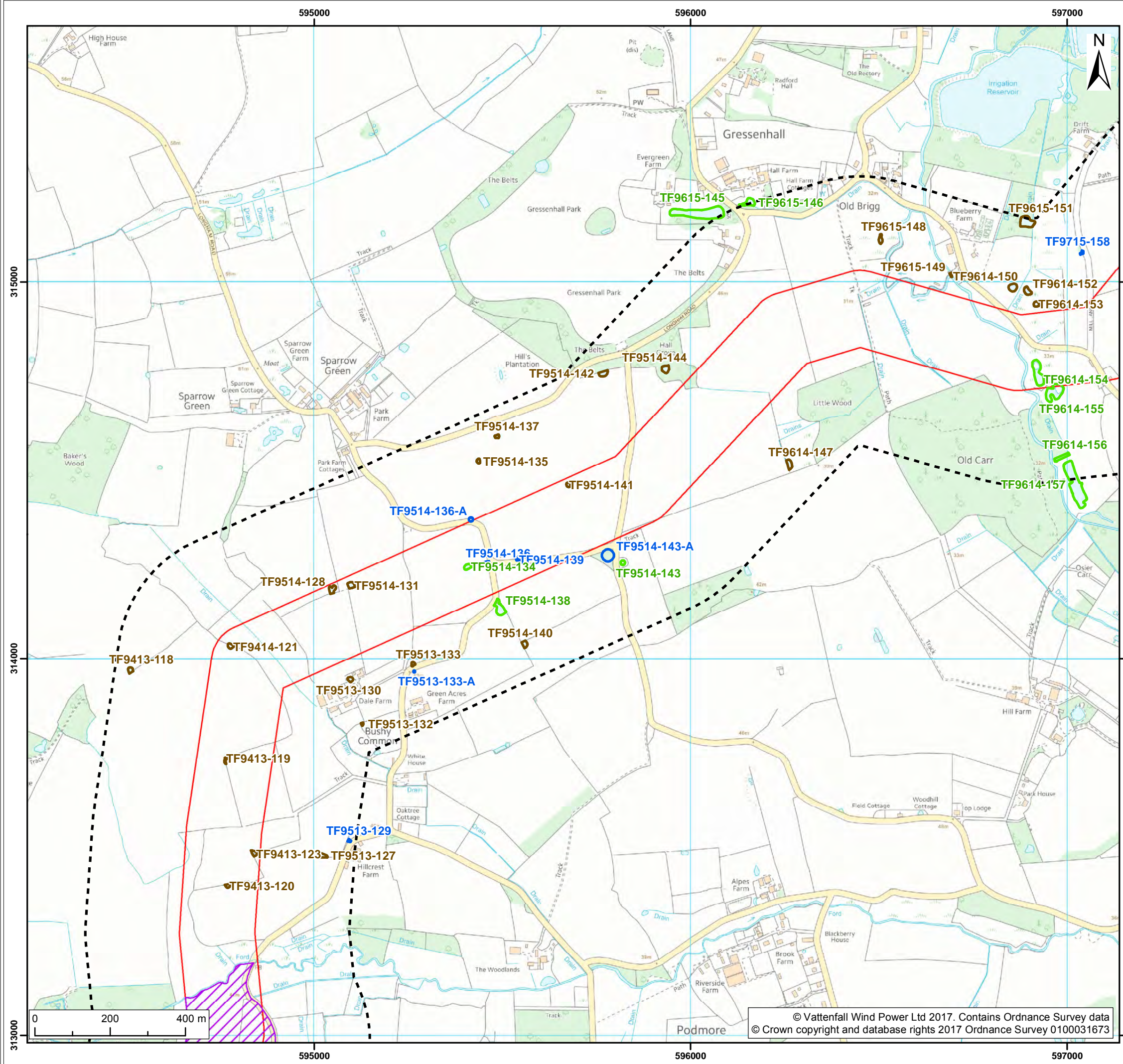
Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results (map 20 of 25)

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01	25/07/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700





Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone

Habitat Suitability Index Results

- Not surveyed for HSI
- HSI score of below 0.6 – scoped out of further surveys
- HSI score of 0.6 or above – scoped into further surveys
- Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results (map 21 of 25)

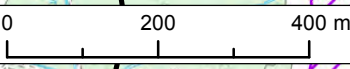
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01	25/07/2017	LB	GC	A3	1:10,000

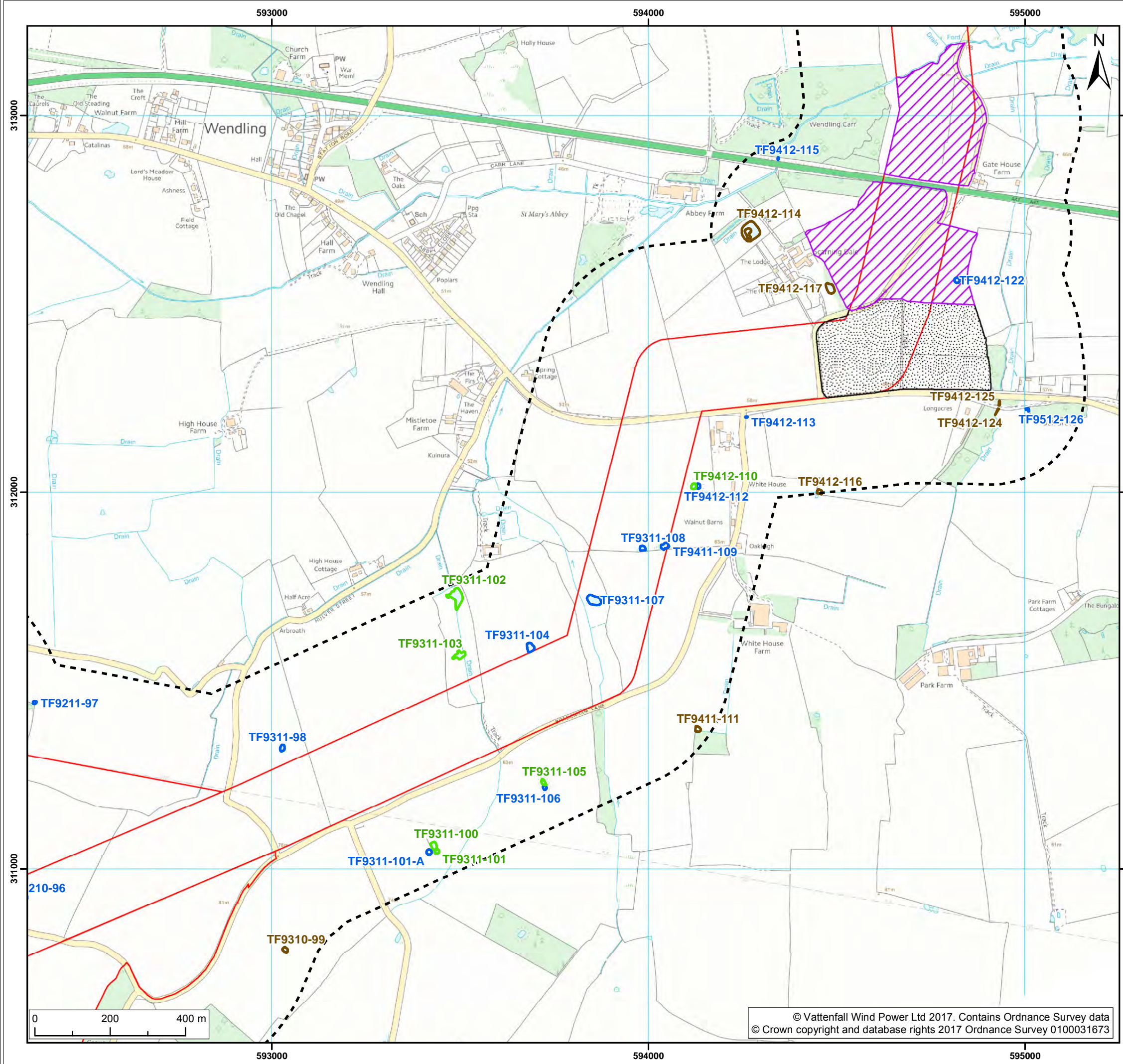
Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results
(map 22 of 25)

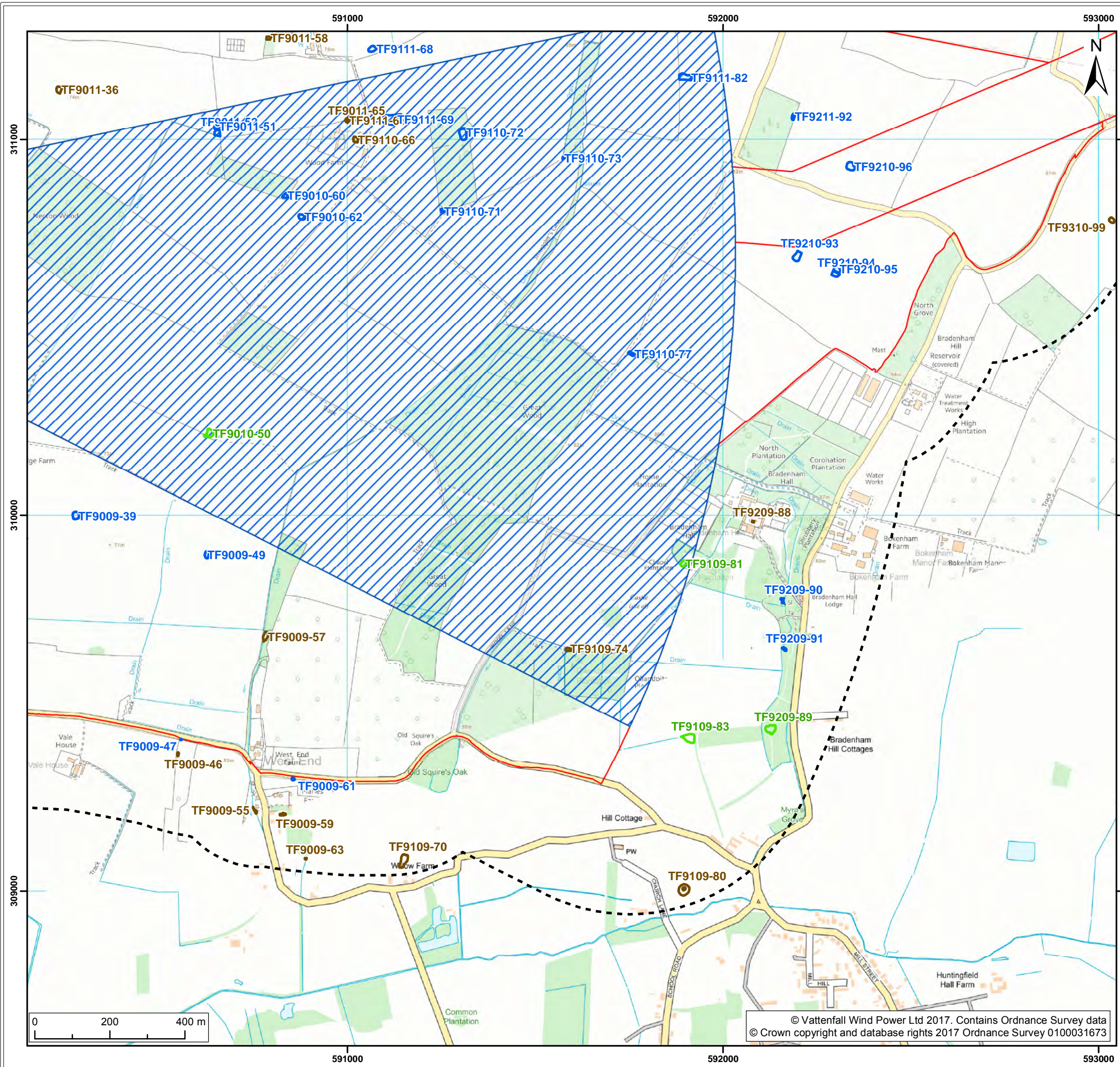
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - ▨ Project Substation Search Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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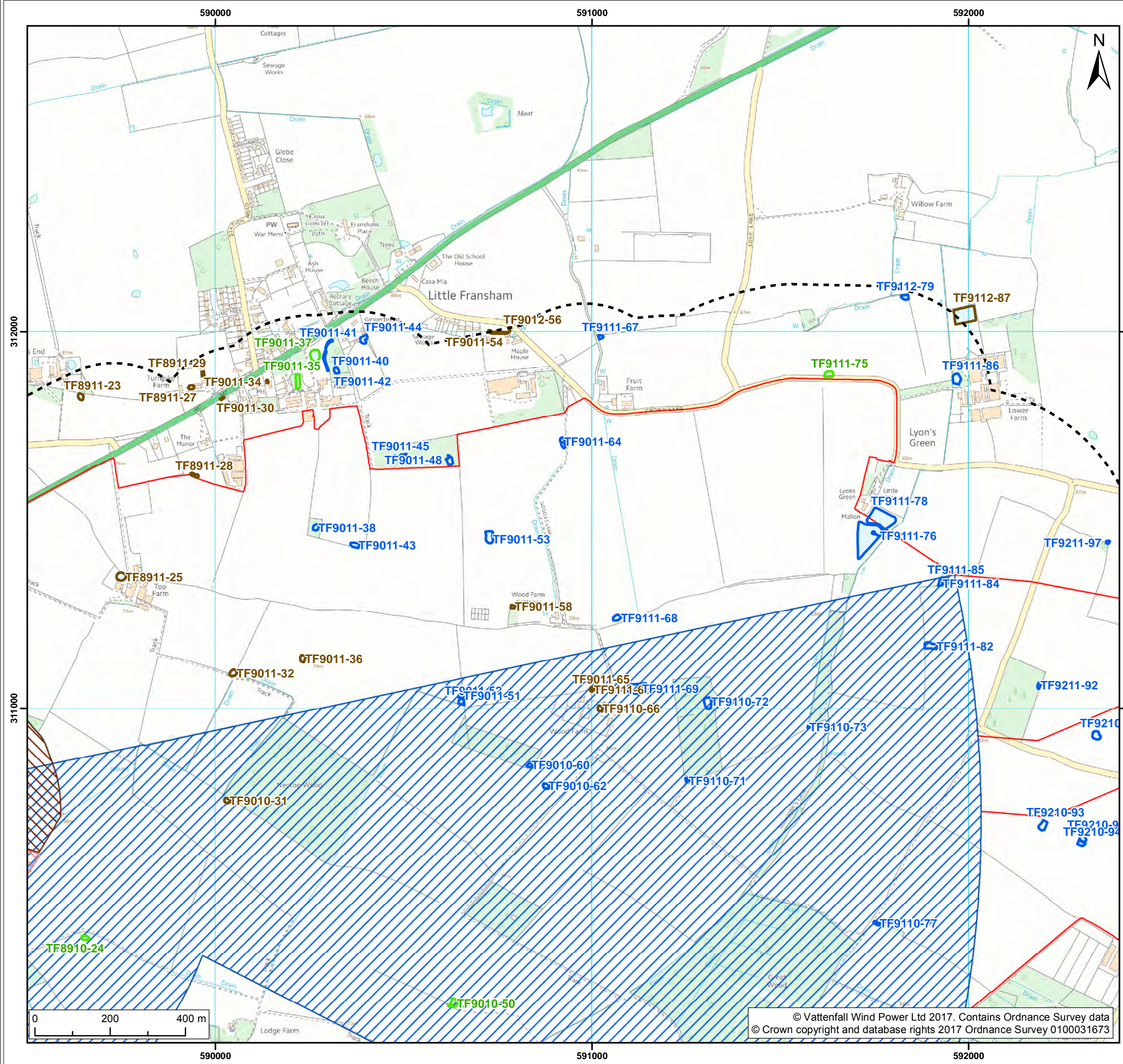
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Habitat Suitability Index Results (map 23 of 25)

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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:**
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Project Substation Search Zone
 - National Grid Substation Extension Zone
 - Overhead Line Modification Zone
- Habitat Suitability Index Results**
- Not surveyed for HSI
 - HSI score of below 0.6 – scoped out of further surveys
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results
(map 24 of 25)

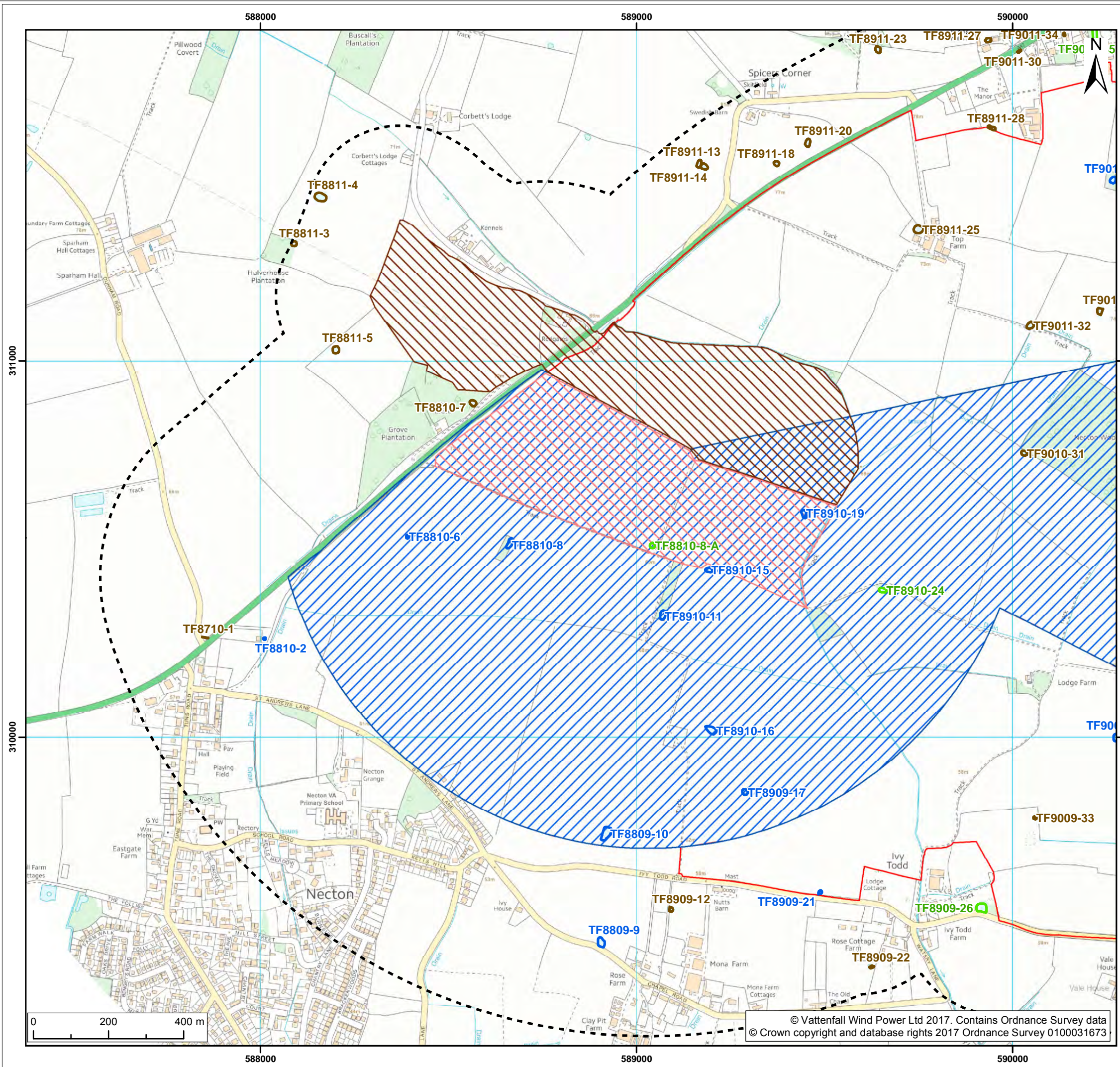
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Project Substation Search Zone
- National Grid Substation Extension Zone
- Overhead Line Modification Zone

Habitat Suitability Index Results

- Not surveyed for HSI
- HSI score of below 0.6 – scoped out of further surveys
- HSI score of 0.6 or above – scoped into further surveys
- Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Habitat Suitability Index Results (map 25 of 25)

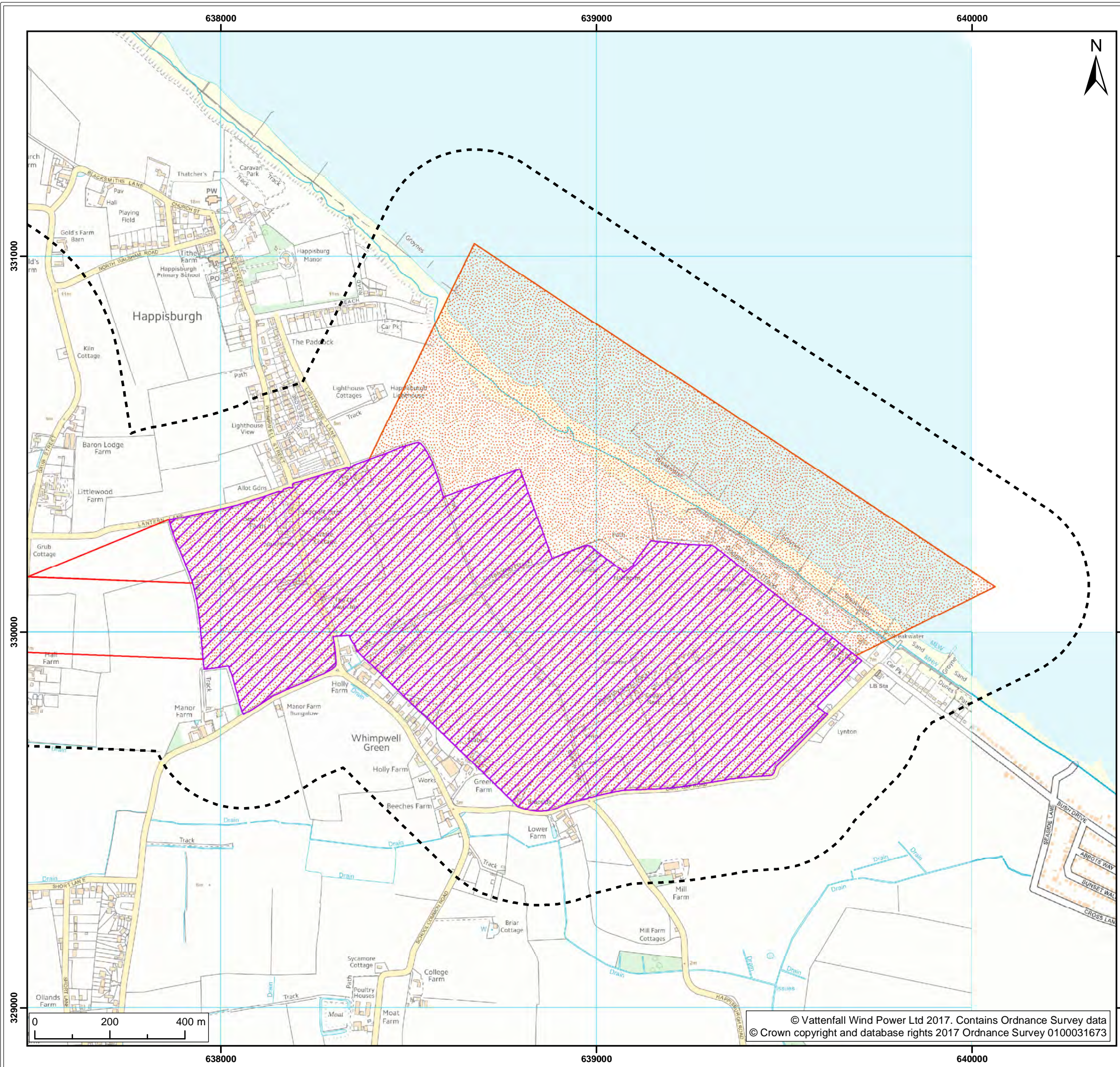
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01	25/07/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

-  Landfall Zone
-  Onshore Cable Corridor
-  Horizontal Directional Drilling (HDD) Zone
-  Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:
Presence / Absence Survey Results
(map 1 of 25)

Figure:	3	Drawing No:	PB4476-004-0222-003			
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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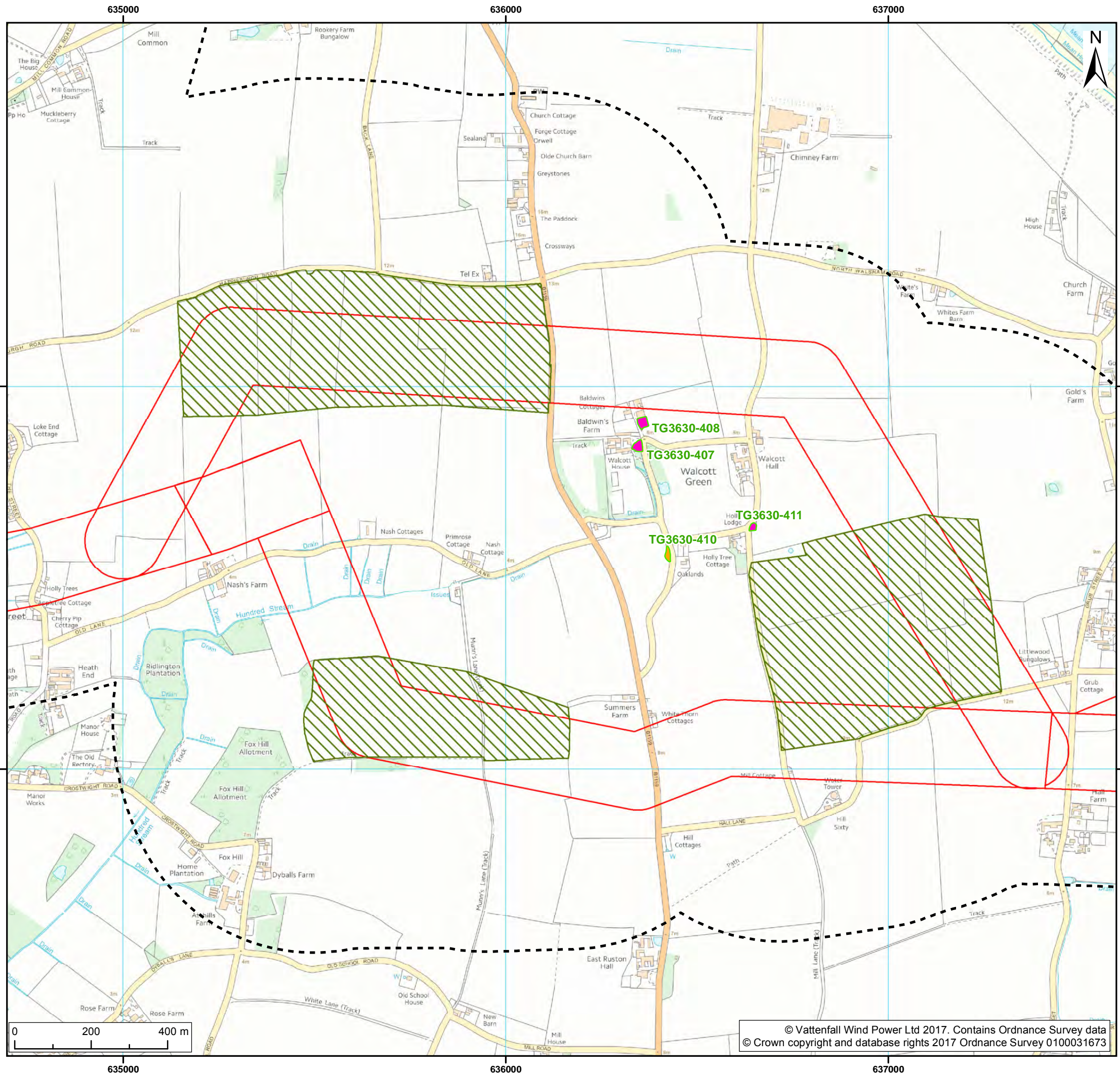
Co-ordinate system: British National Grid EPSG: 27700



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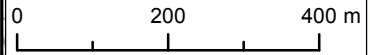
- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Cable Relay Station Search Zone
 - Onshore Cable Corridor
- Presence/absence survey results**
- Not surveyed
 - GCN absent
- Habitat Suitability Index Results**
- HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

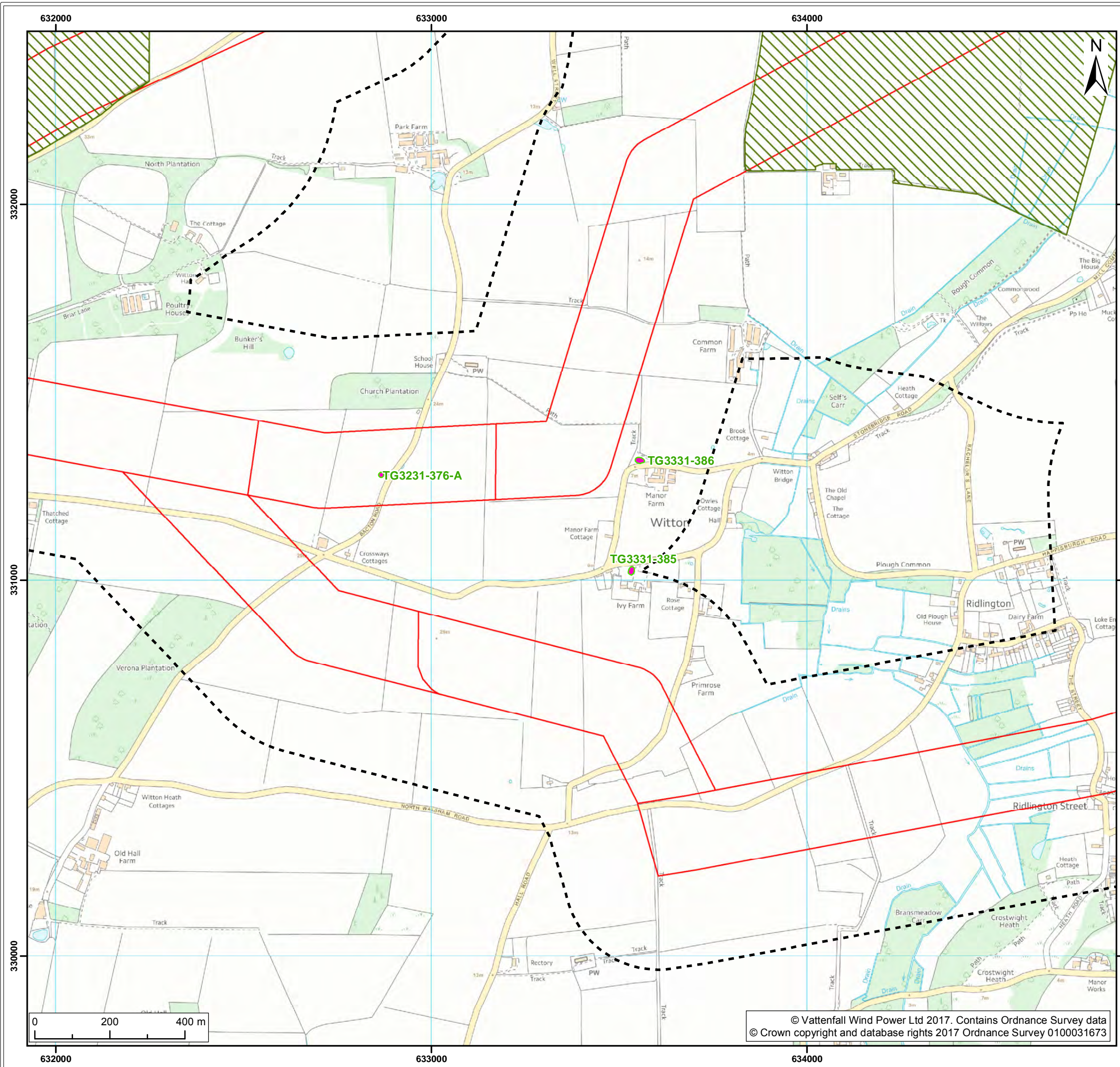
Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title: Presence / Absence Survey Results (map 2 of 25)

Figure: 3	Drawing No: PB4476-004-0222-003				
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700





- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Cable Relay Station Search Zone
 - Onshore Cable Corridor
 - Presence/absence survey results**
 - Not surveyed
 - Habitat Suitability Index Results**
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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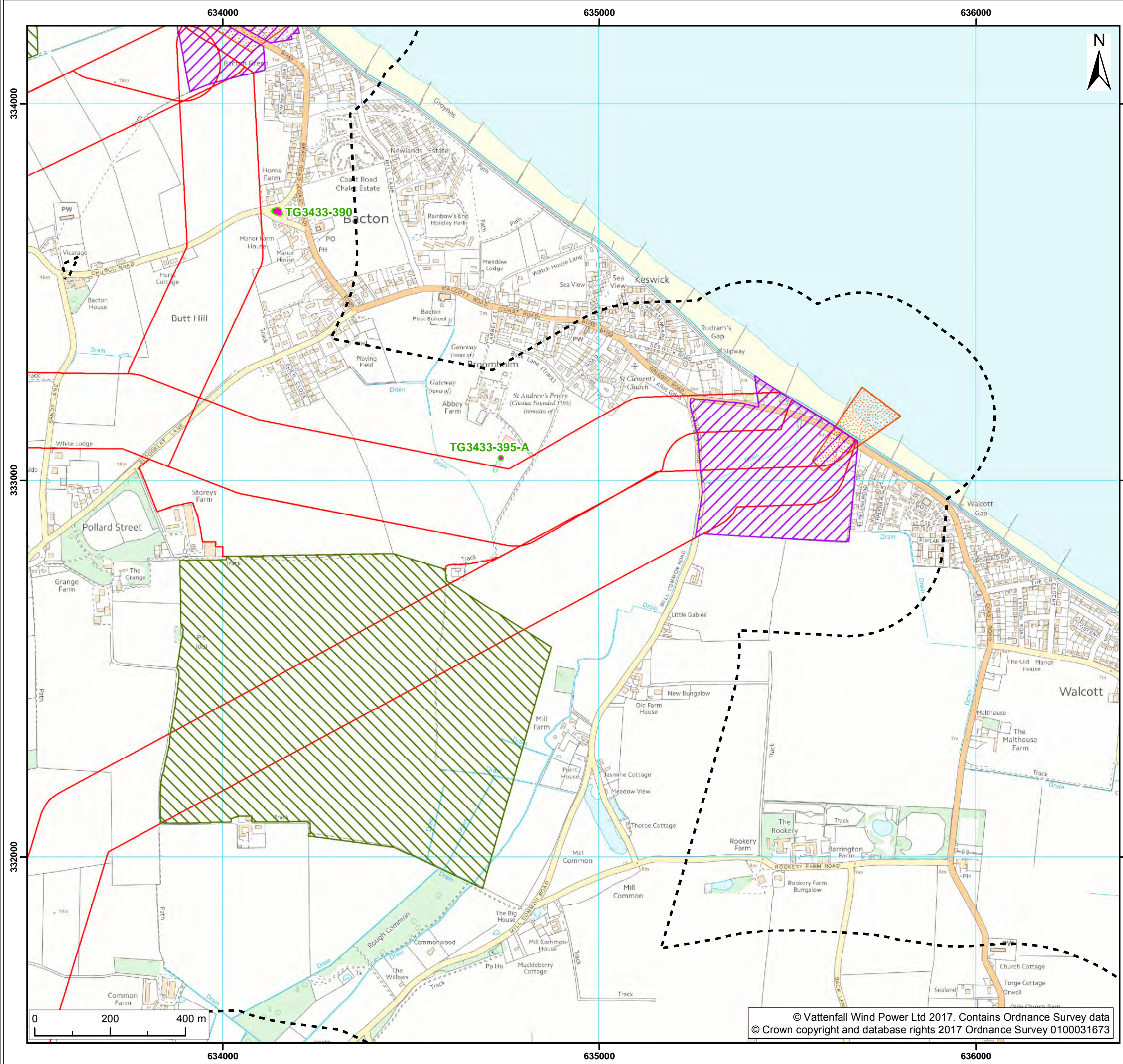
Title:
Presence / Absence Survey Results (map 3 of 25)

Figure: 3	Drawing No: PB4476-004-0222-003				
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700




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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Landfall Zone
 - Cable Relay Station Search Zone
 - Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
- Presence/absence survey results**
- Not surveyed
 - HSI score of 0.6 or above – scoped into further surveys
- Habitat Suitability Index Results**
- Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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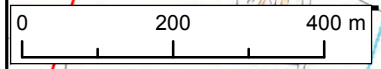
Title:
Presence / Absence Survey Results (map 4 of 25)

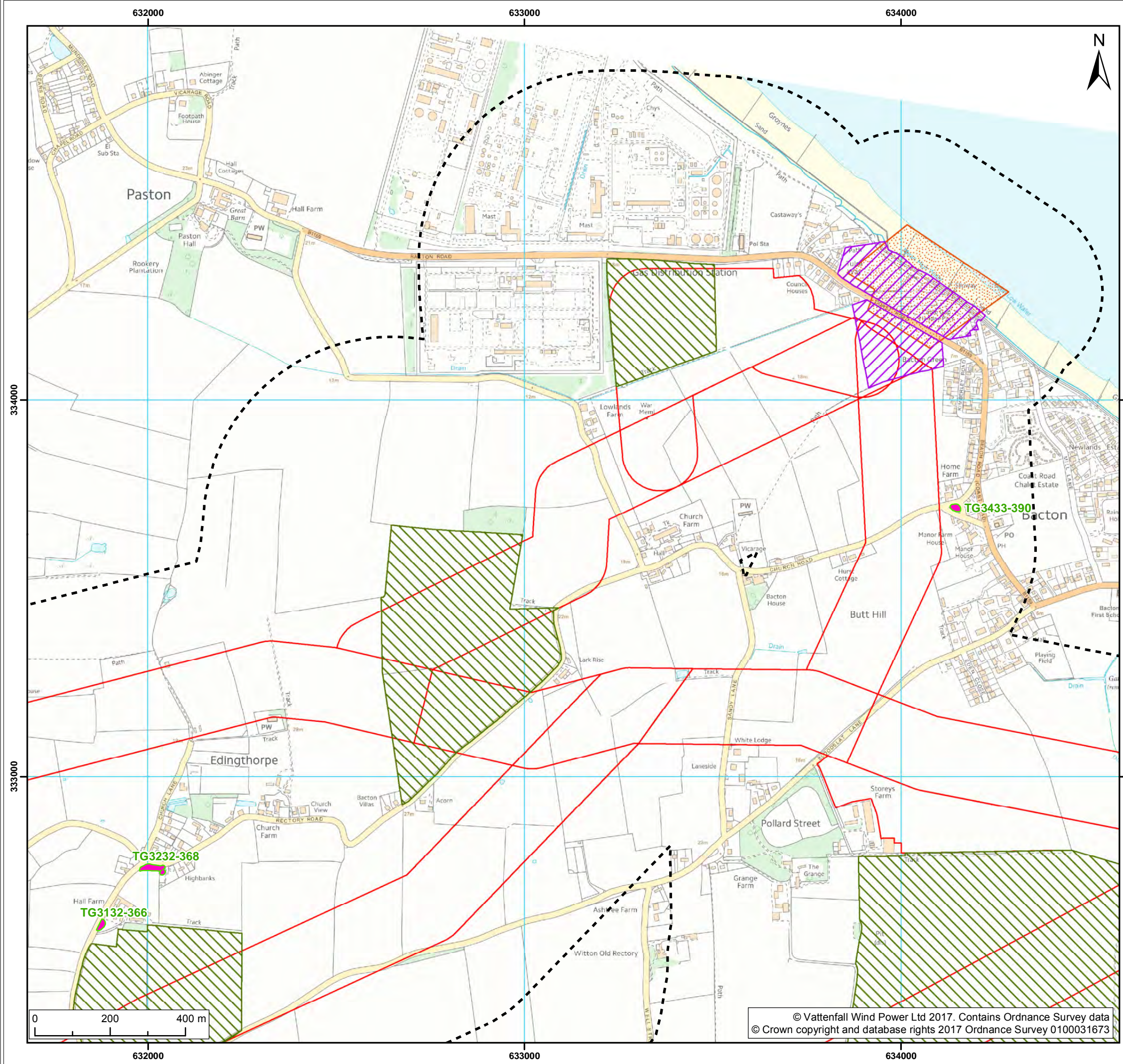
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02	01/09/2017	LB	GC	A3	1:10,000

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Landfall Zone
- Cable Relay Station Search Zone
- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone

Presence/absence survey results

- Not surveyed

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title: Presence / Absence Survey Results (map 5 of 25)

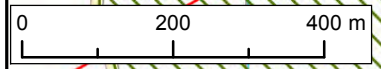
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02	01/09/2017	LB	GC	A3	1:10,000

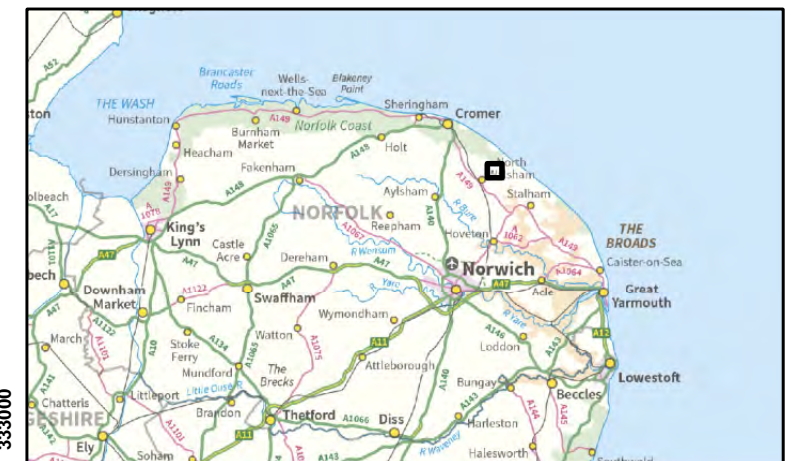
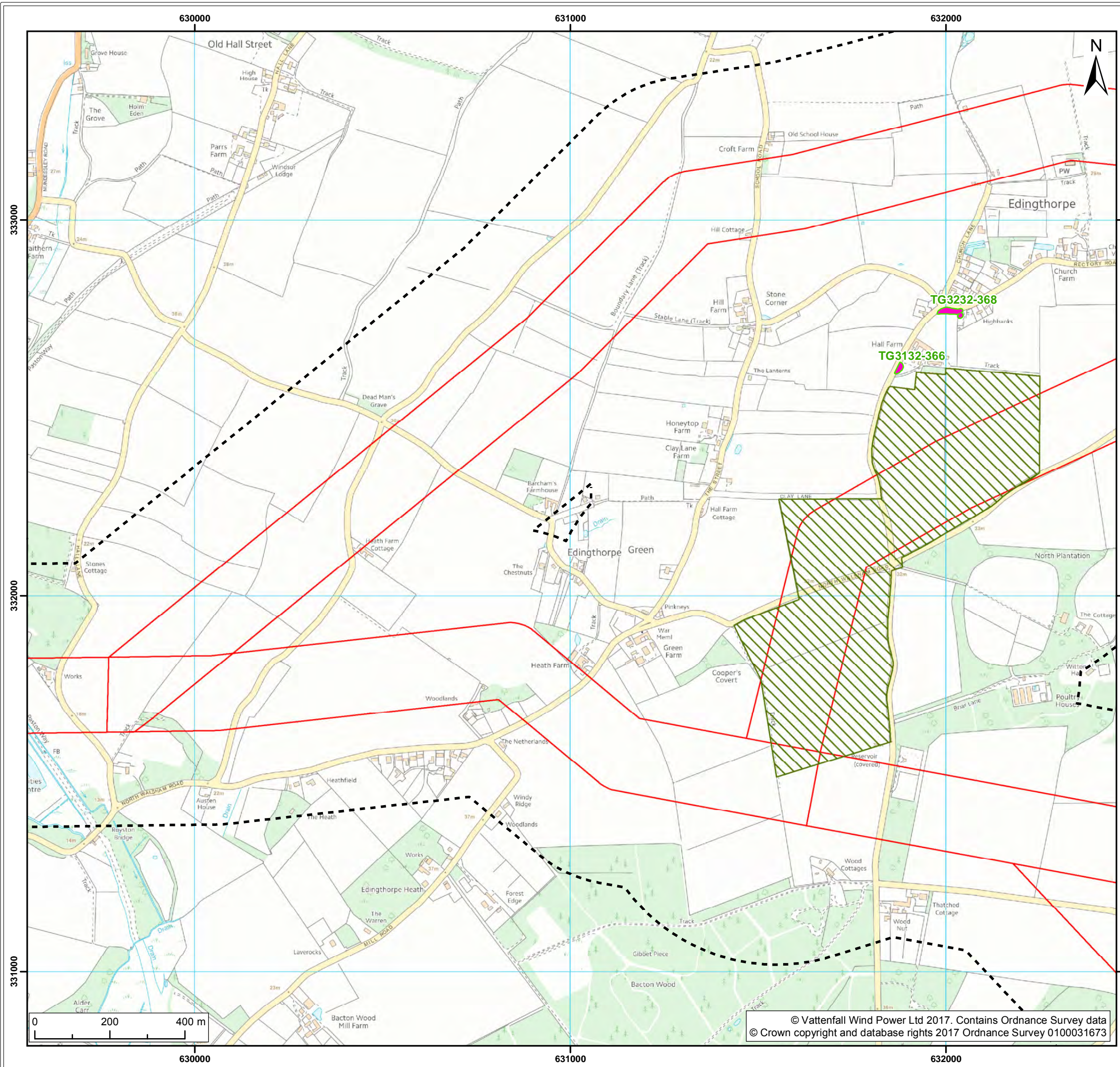
Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Cable Relay Station Search Zone
 - Onshore Cable Corridor
 - Presence/absence survey results**
 - Not surveyed
 - Habitat Suitability Index Results**
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

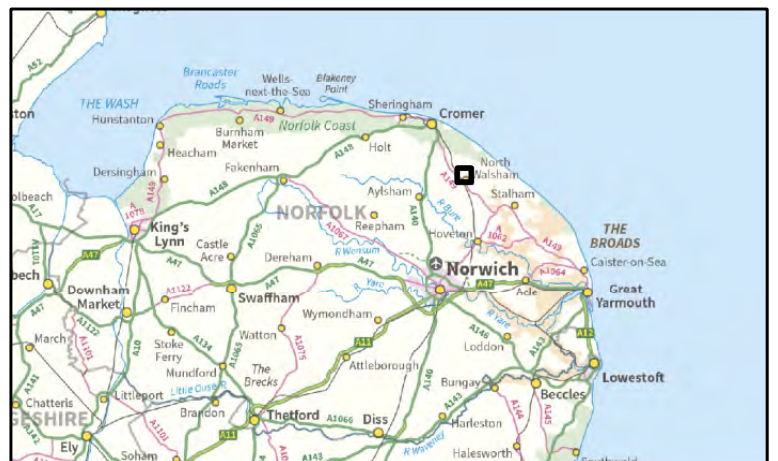
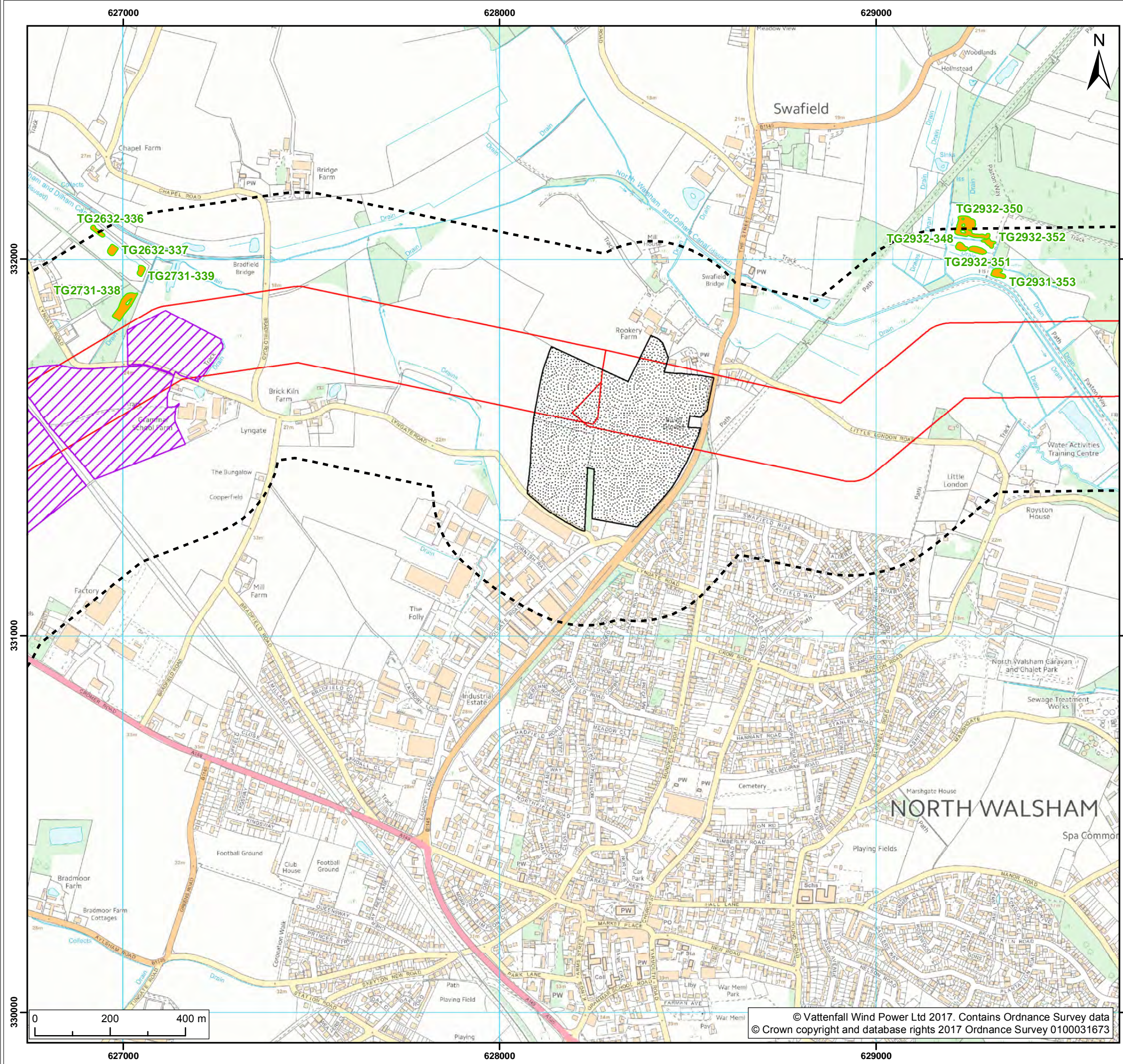
Title:
Presence / Absence Survey Results
(map 6 of 25)

Figure:	3	Drawing No:	PB4476-004-0222-003			
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700




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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
 - Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
 - Presence/absence survey results**
 - GCN absent
 - Habitat Suitability Index Results**
 - HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

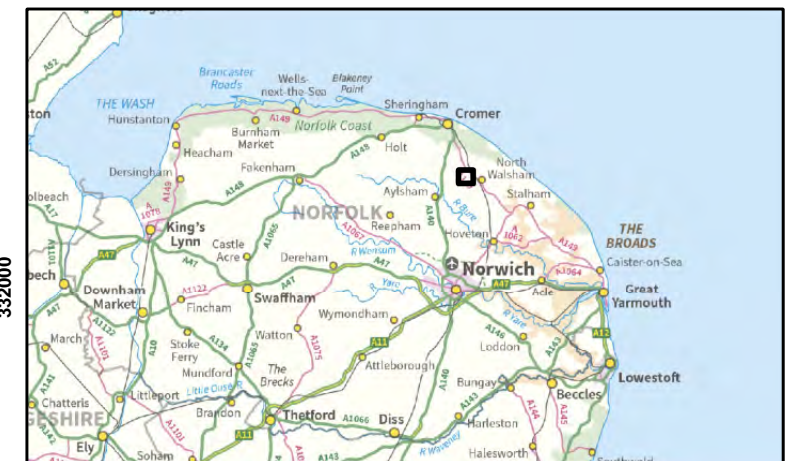
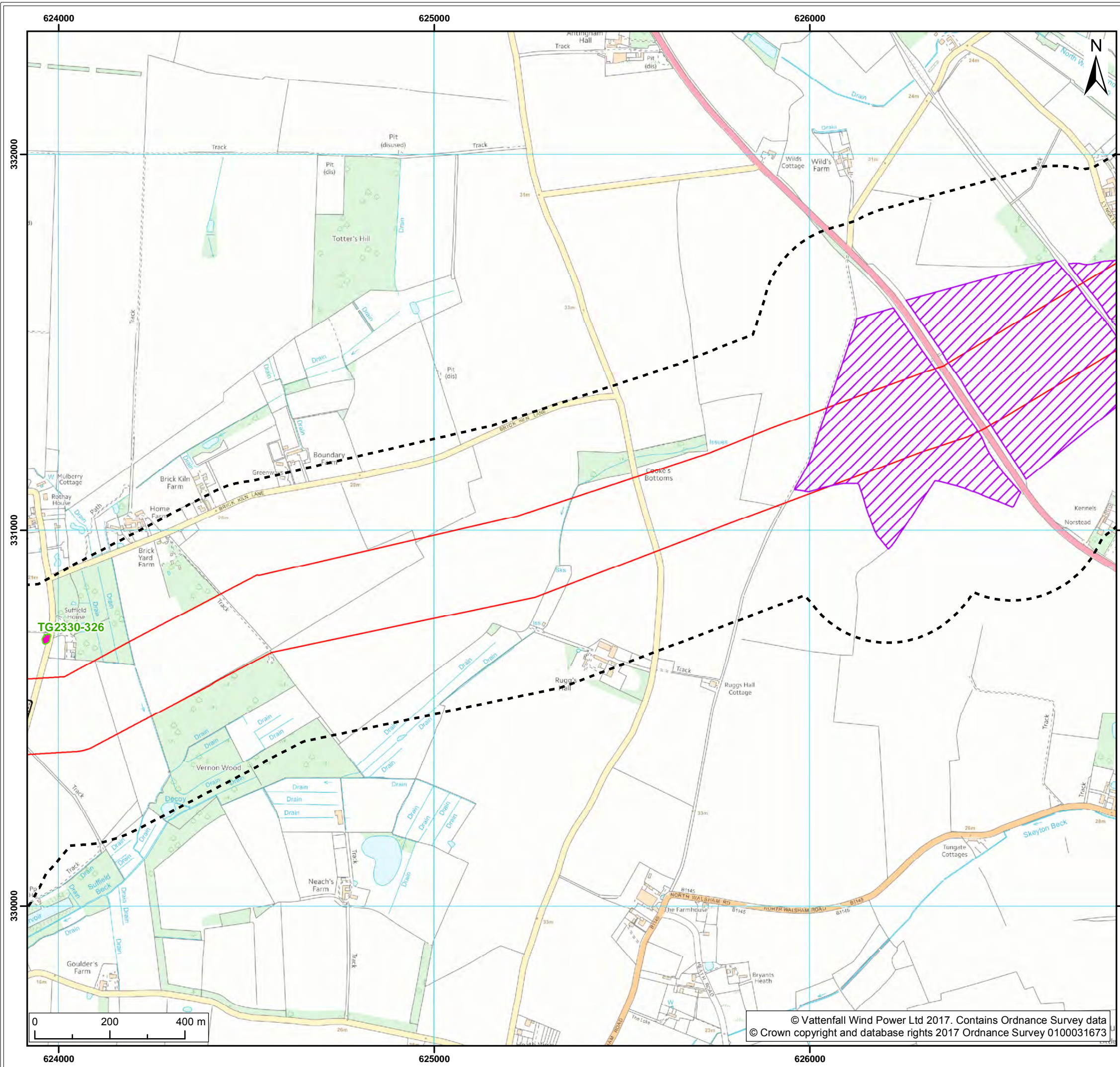
Project: Norfolk Vanguard
 Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title: Presence / Absence Survey Results (map 7 of 25)

Figure:	3	Drawing No:	PB4476-004-0222-003			
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700





- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Presence/absence survey results**
- Not surveyed
- Habitat Suitability Index Results**
- HSI score of 0.6 or above – scoped into further surveys
 - Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Presence / Absence Survey Results
(map 8 of 25)

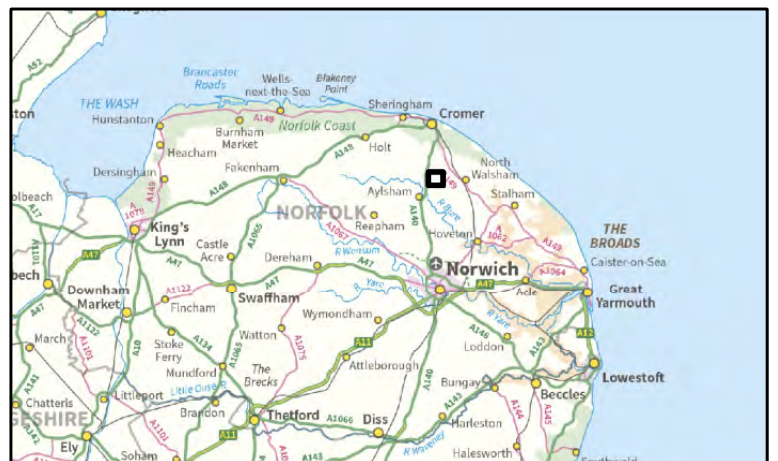
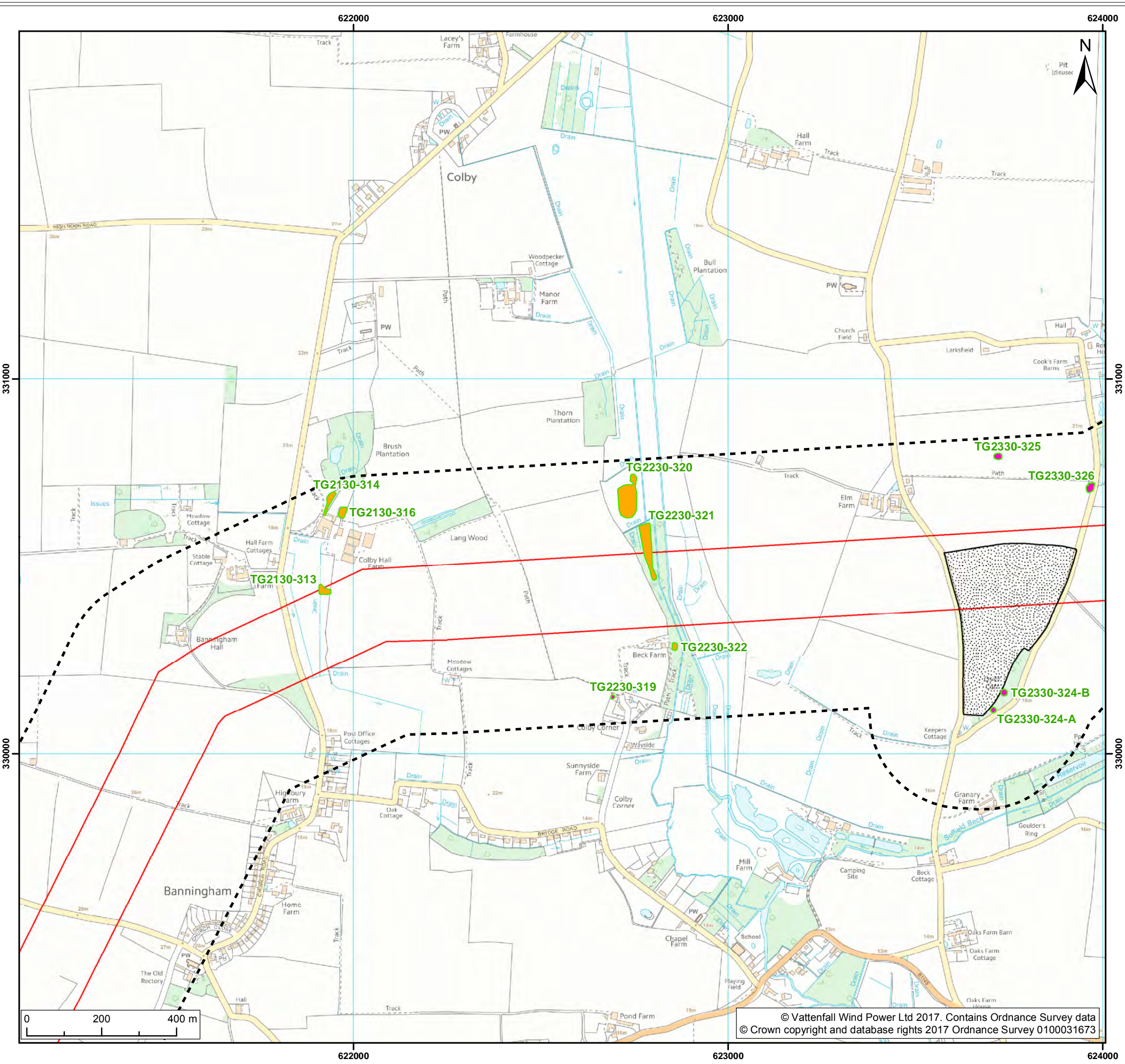
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Mobilisation Zone
- Presence/absence survey results**
- Not surveyed
 - GCN absent
- Habitat Suitability Index Results**
- HSI score of 0.6 or above – scoped into further surveys
 - Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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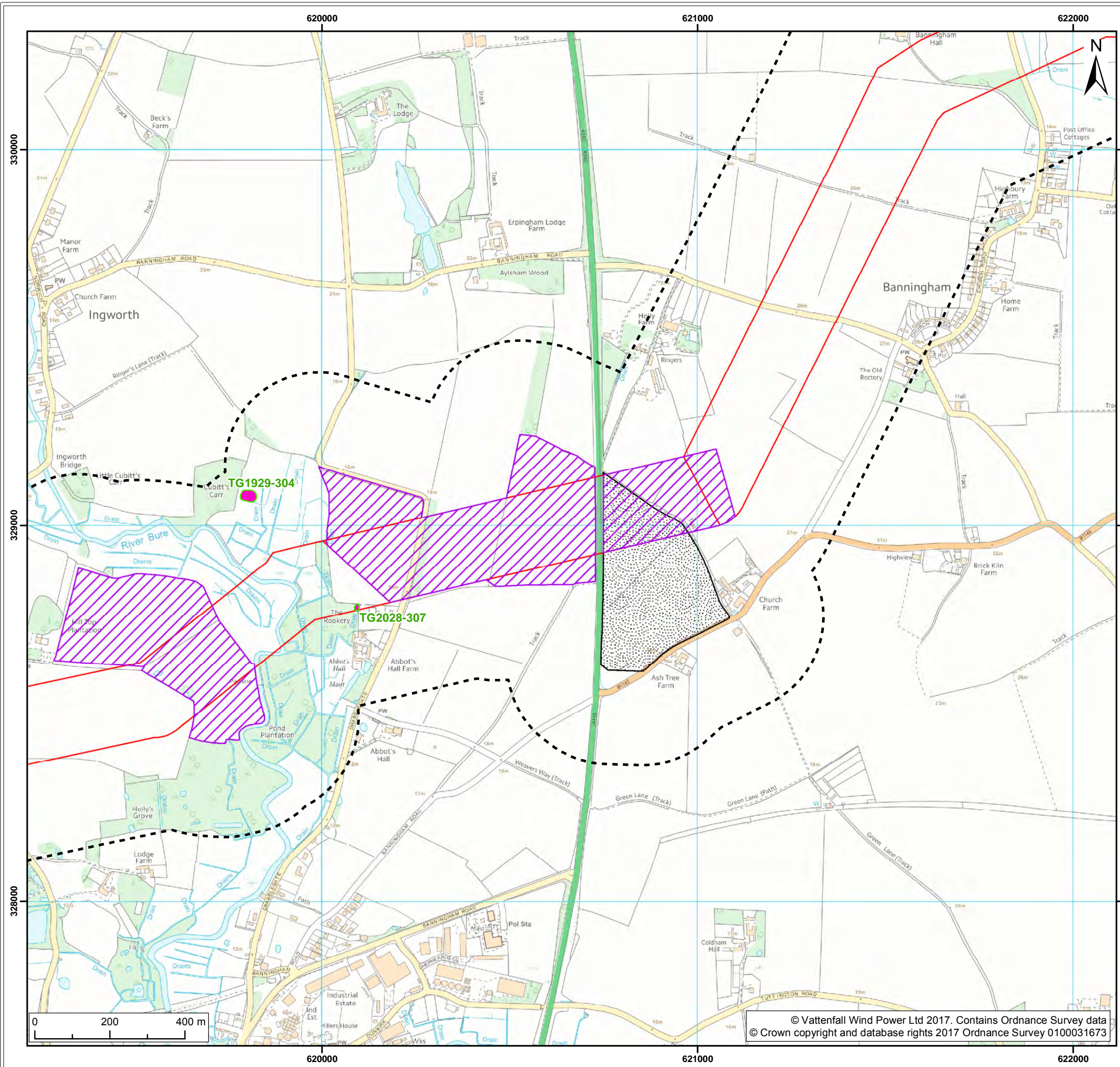
Title:
Presence / Absence Survey Results (map 9 of 25)

Figure:	3	Drawing No:	PB4476-004-0222-003		
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Presence/absence survey results**
- Not surveyed
- Habitat Suitability Index Results**
- HSI score of 0.6 or above – scoped into further surveys
 - Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Presence / Absence Survey Results
(map 10 of 25)

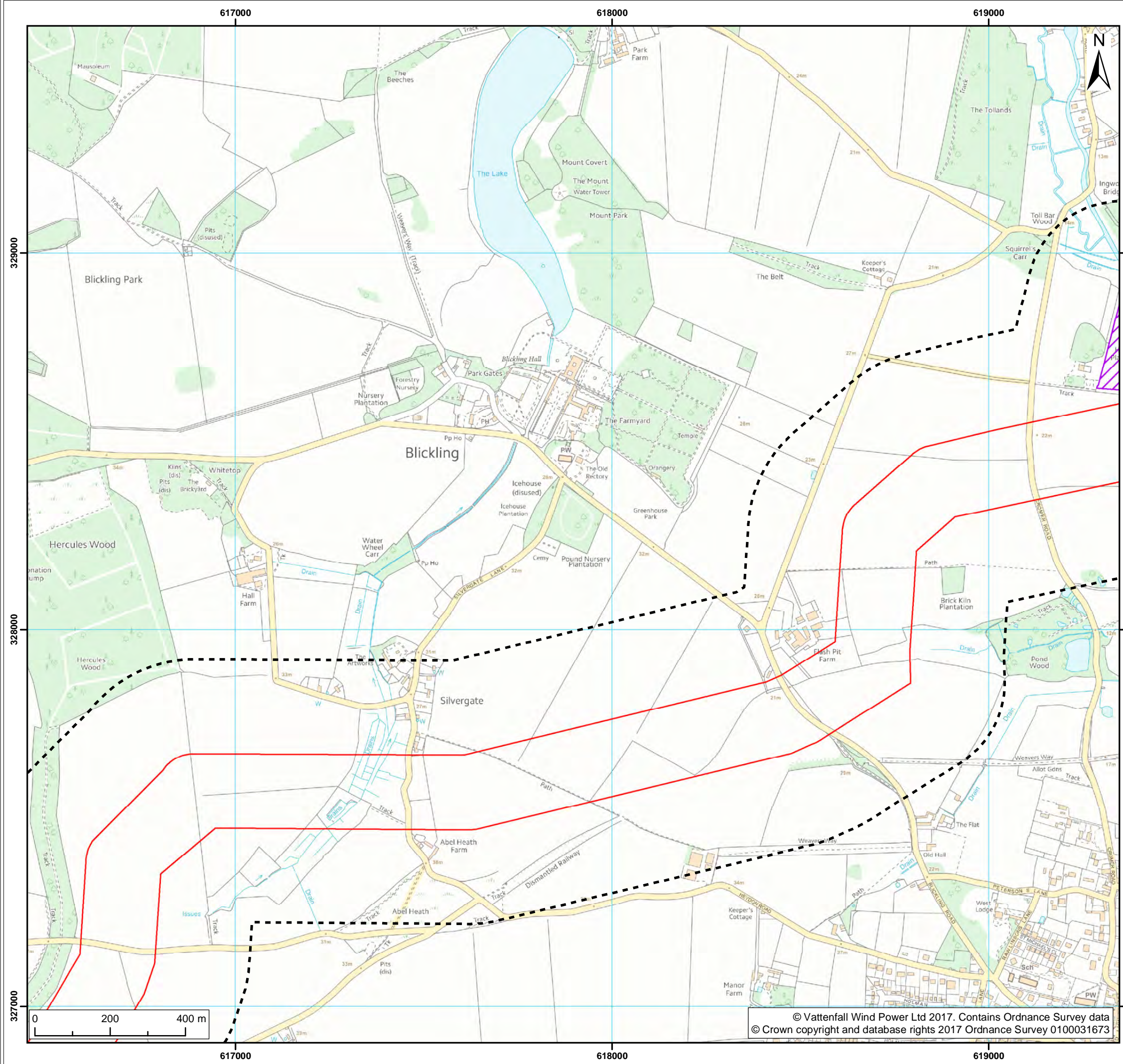
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone
- Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
------------------------------	--

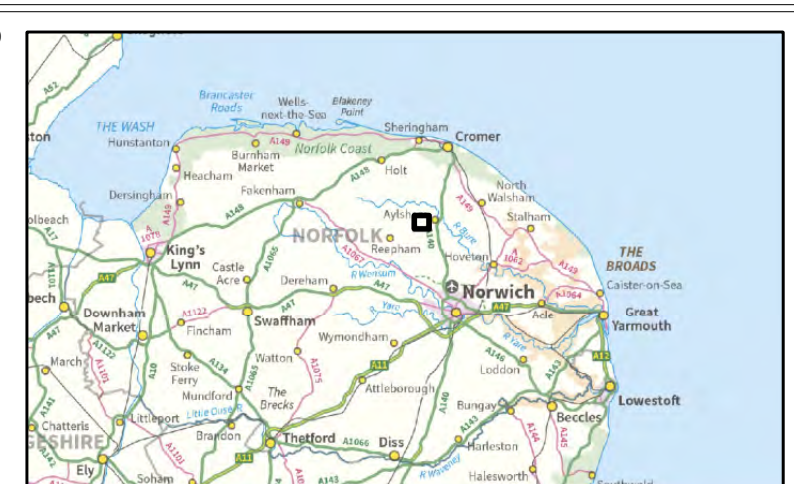
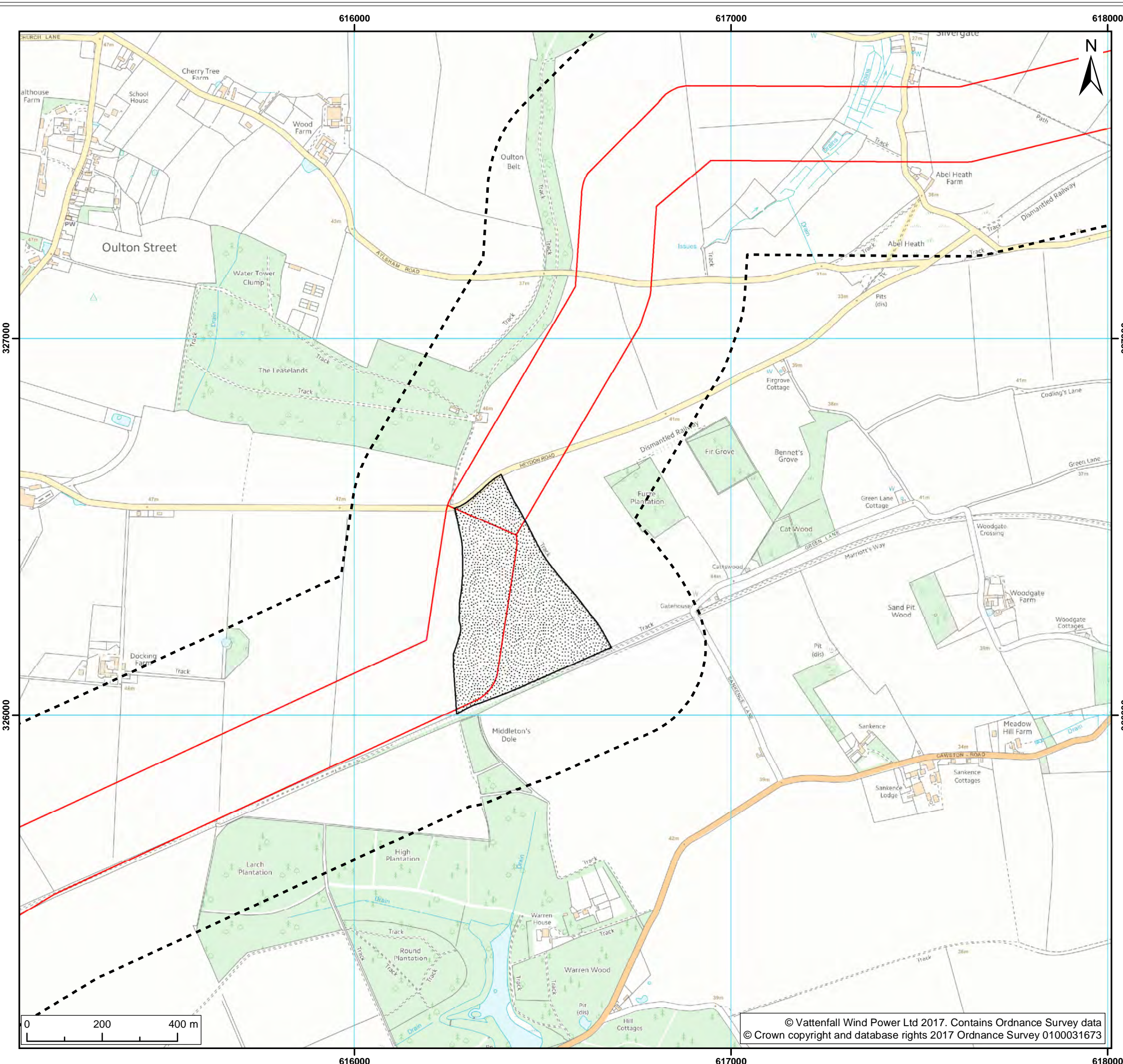
Title:
Presence / Absence Survey Results
(map 11 of 25)

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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore

- Onshore Cable Corridor
- Mobilisation Zone
- Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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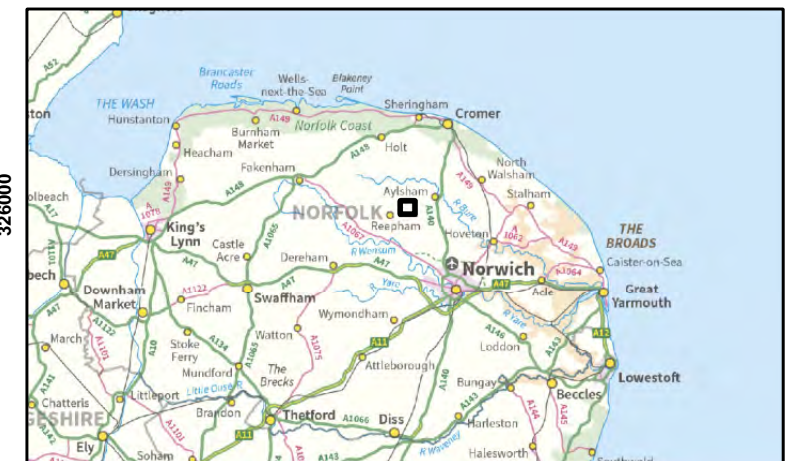
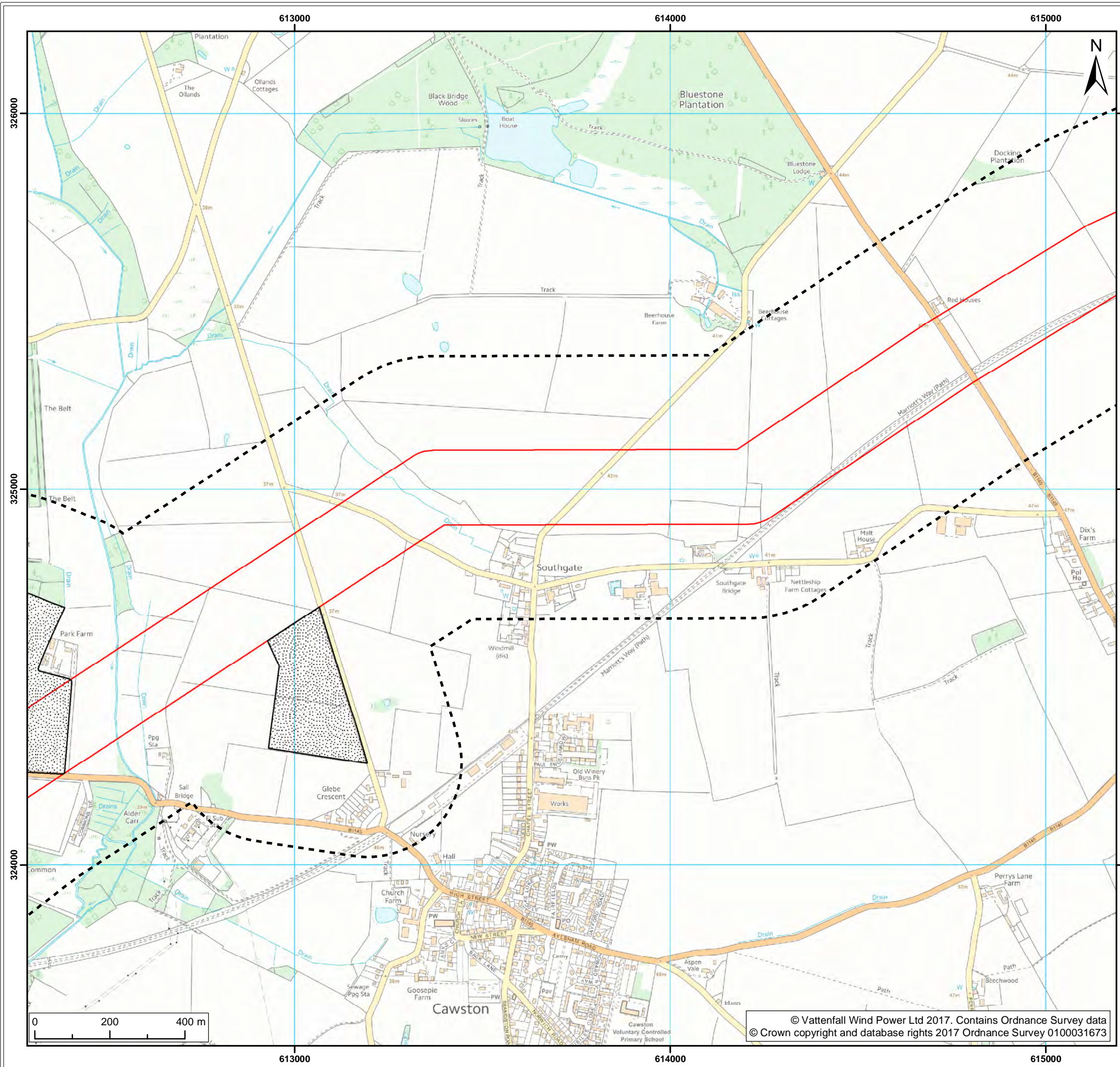
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Presence / Absence Survey Results
(map 12 of 25)

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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore

- Onshore Cable Corridor
- Mobilisation Zone
- Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
------------------------------	--

Title:
Presence / Absence Survey Results
(map 13 of 25)

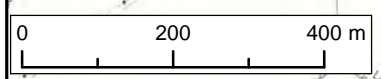
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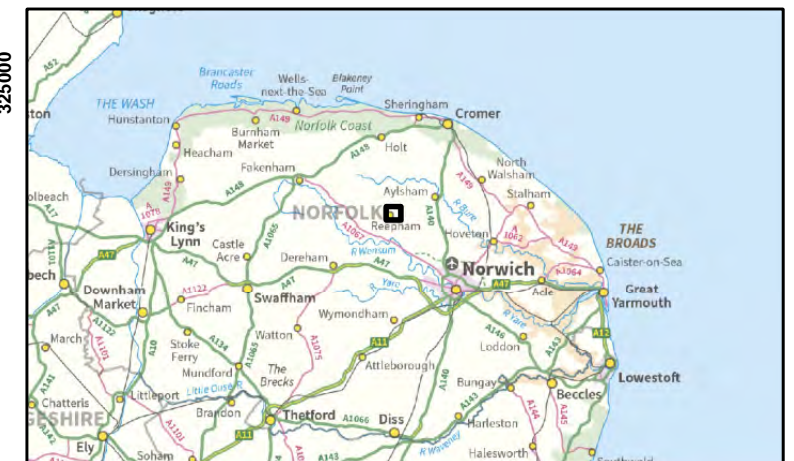
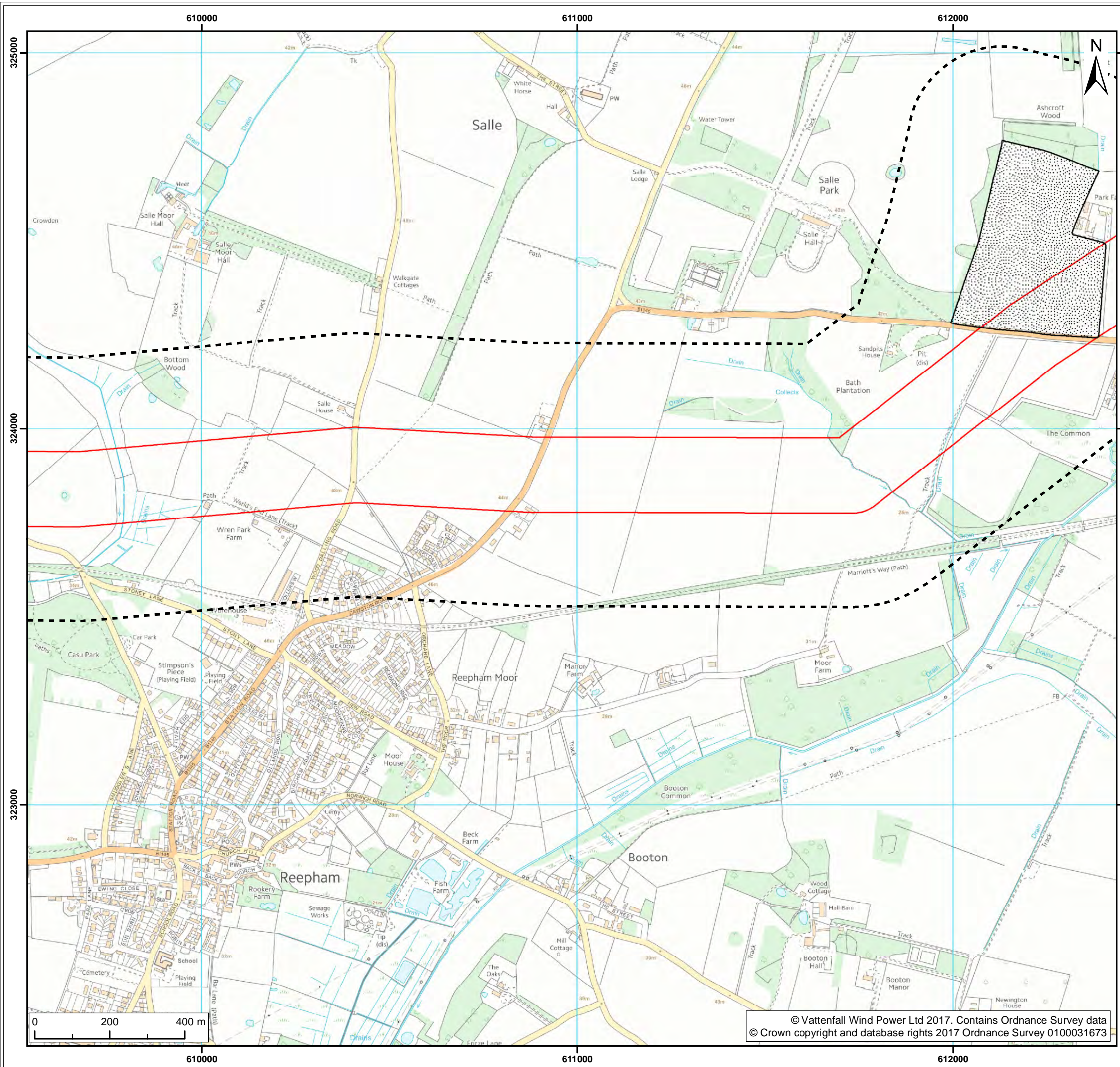
Co-ordinate system: British National Grid EPSG: 27700

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Legend:

- Onshore Cable Corridor
- Mobilisation Zone
- Survey

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title: Presence / Absence Survey Results (map 14 of 25)

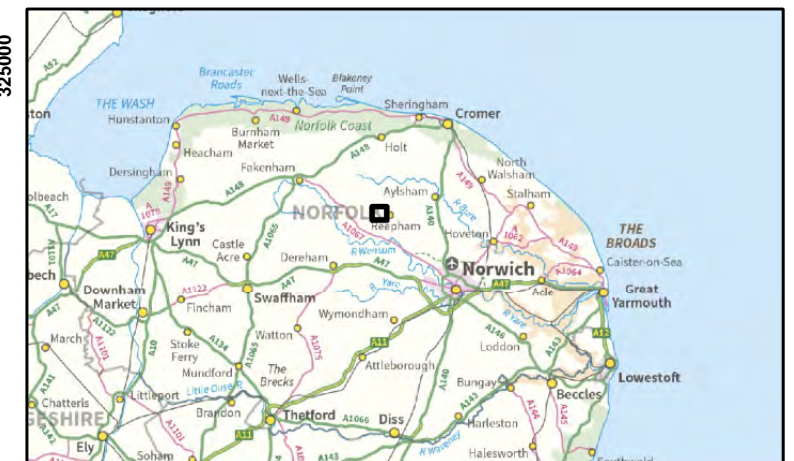
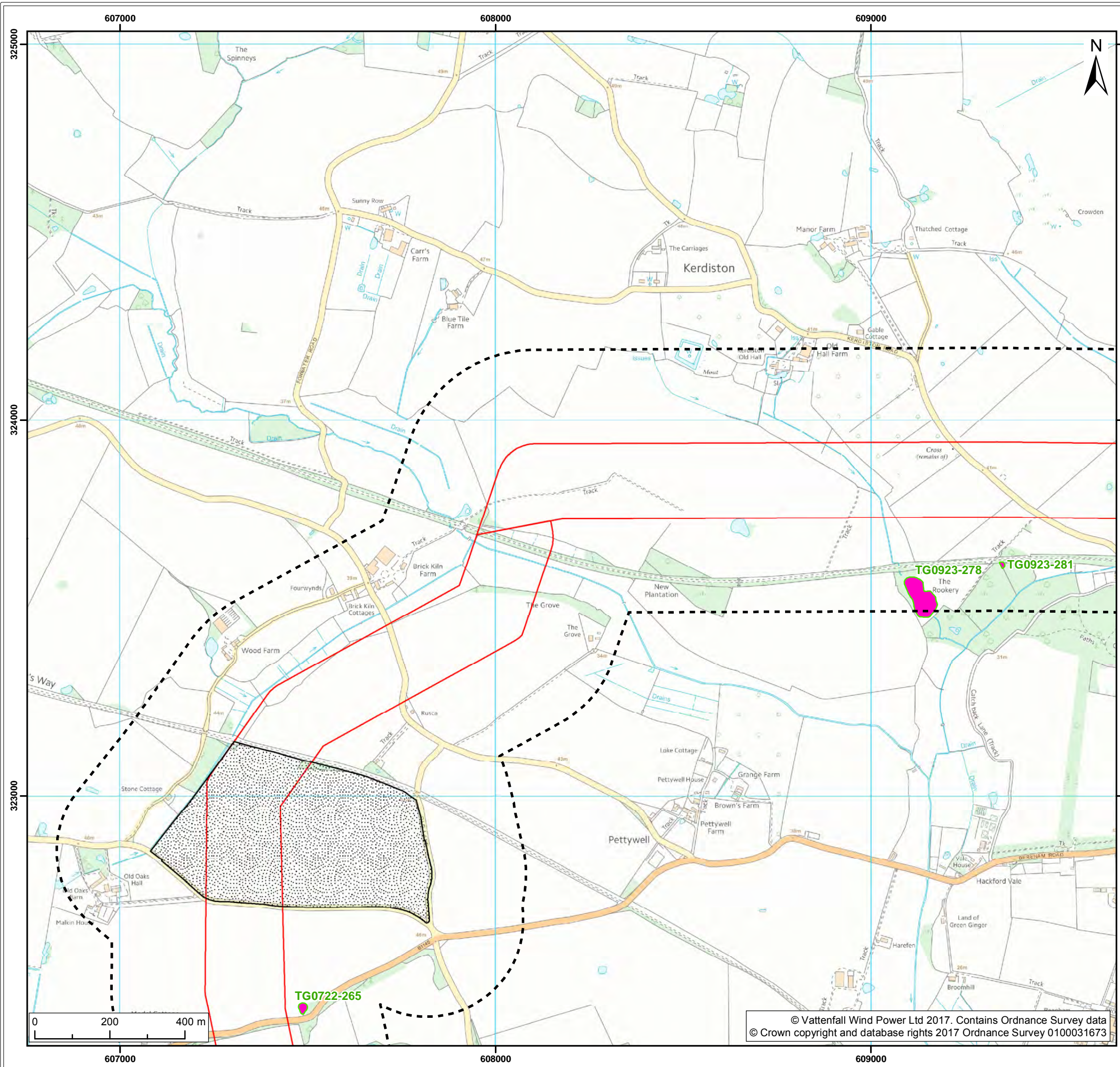
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid **EPSG:** 27700

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Legend:

Norfolk Vanguard Onshore

- Onshore Cable Corridor
- Mobilisation Zone

Presence/absence survey results

- Not surveyed

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

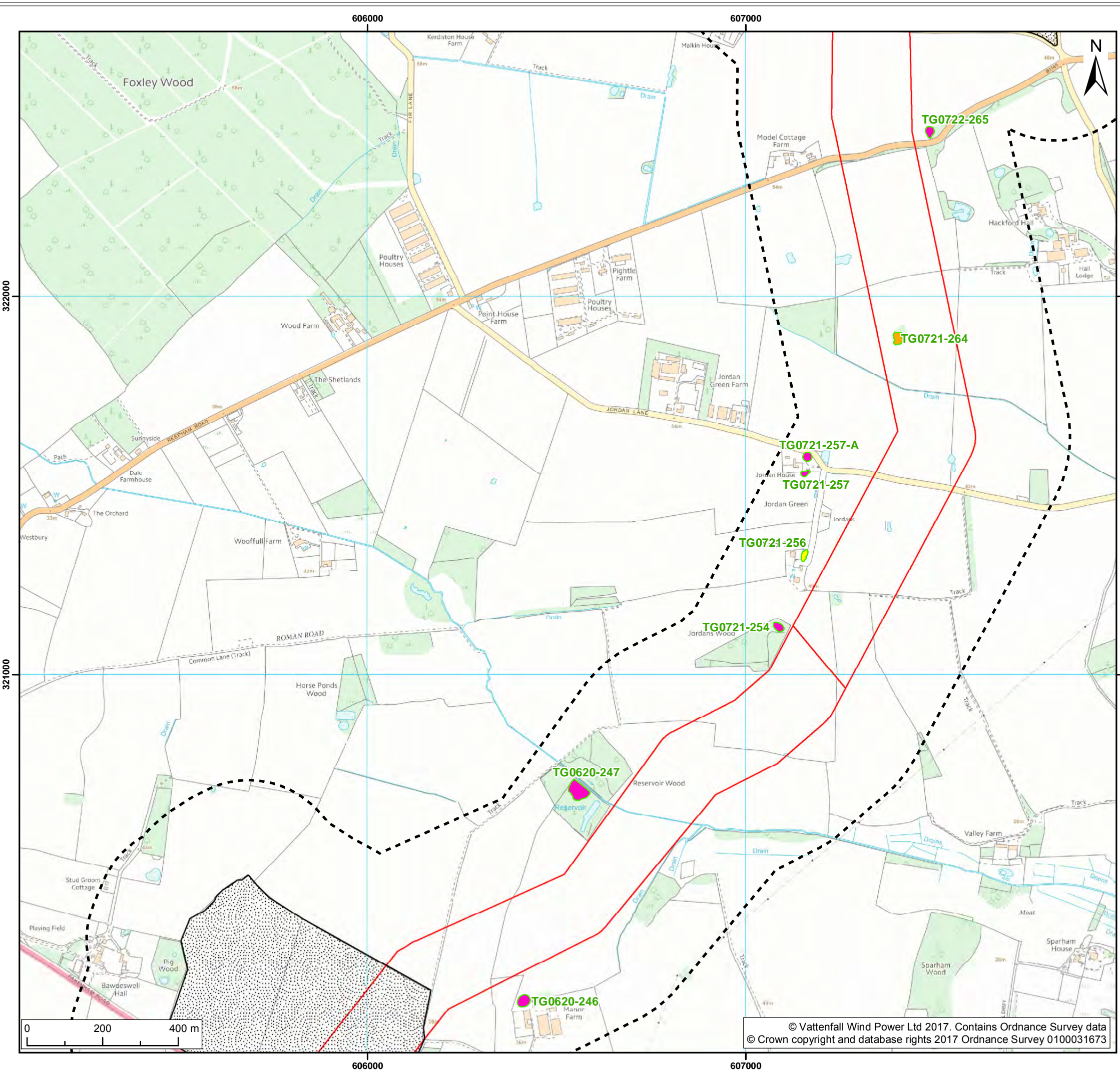
Title:
Presence / Absence Survey Results (map 15 of 25)

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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Mobilisation Zone

Presence/absence survey results

- Not surveyed
- GCN absent
- GCN present

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

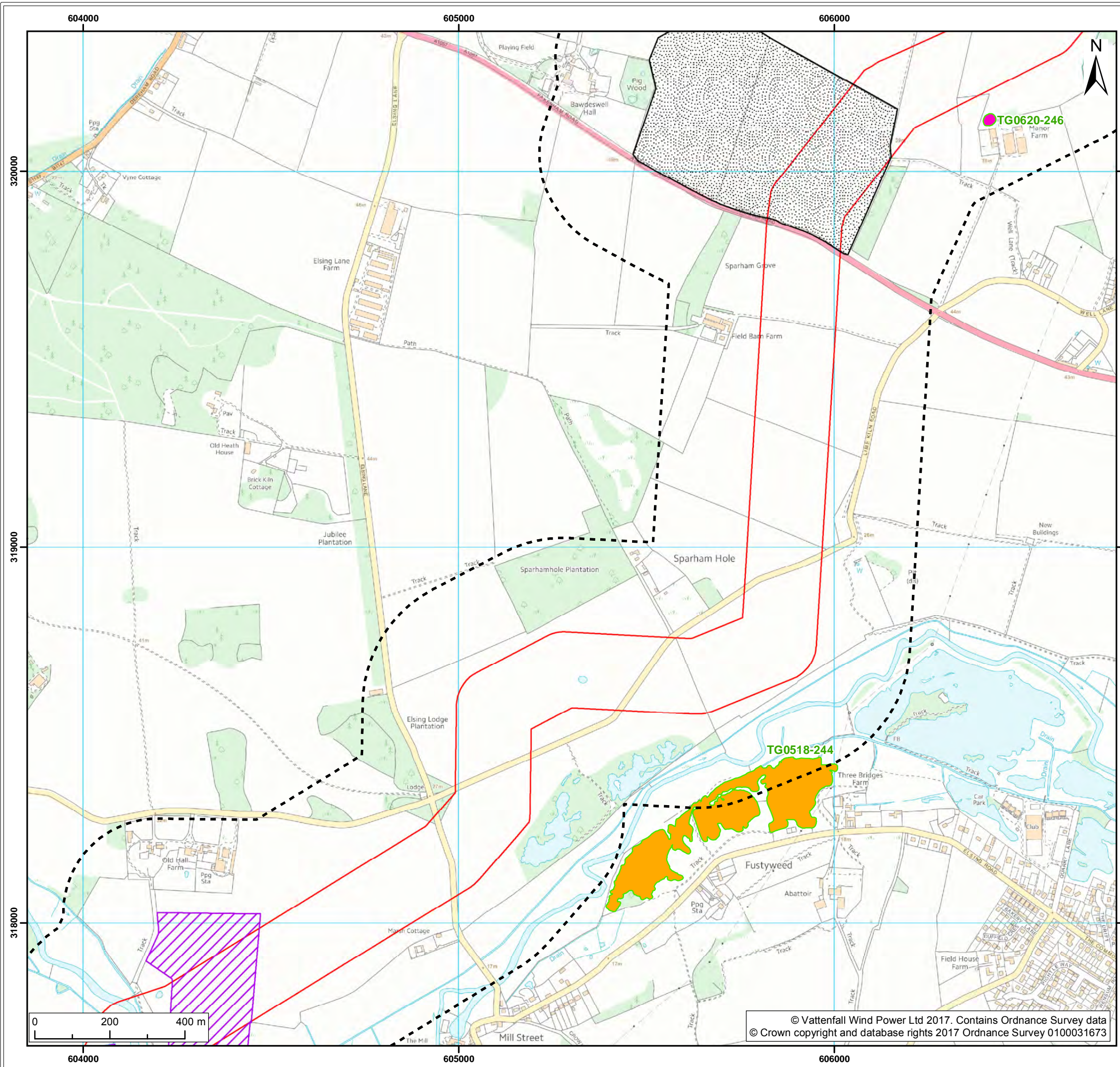
Title:
Presence / Absence Survey Results (map 16 of 25)

Figure:	3	Drawing No:	PB4476-004-0222-003			
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700



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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone
- Mobilisation Zone

Presence/absence survey results

- Not surveyed
- GCN absent

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project: Norfolk Vanguard

Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

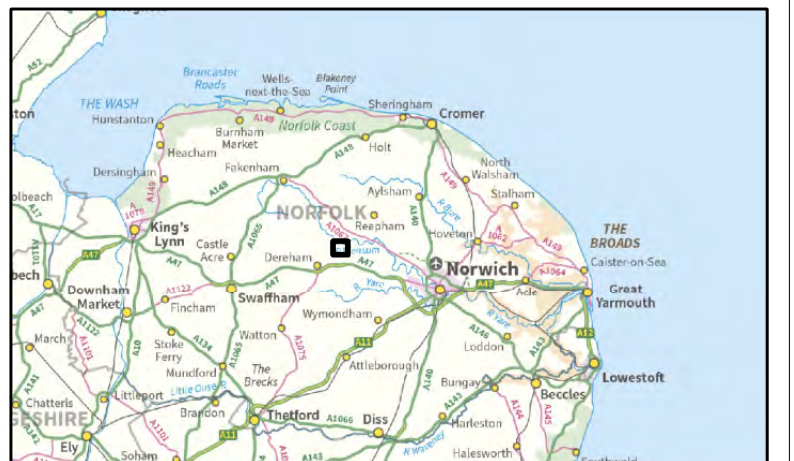
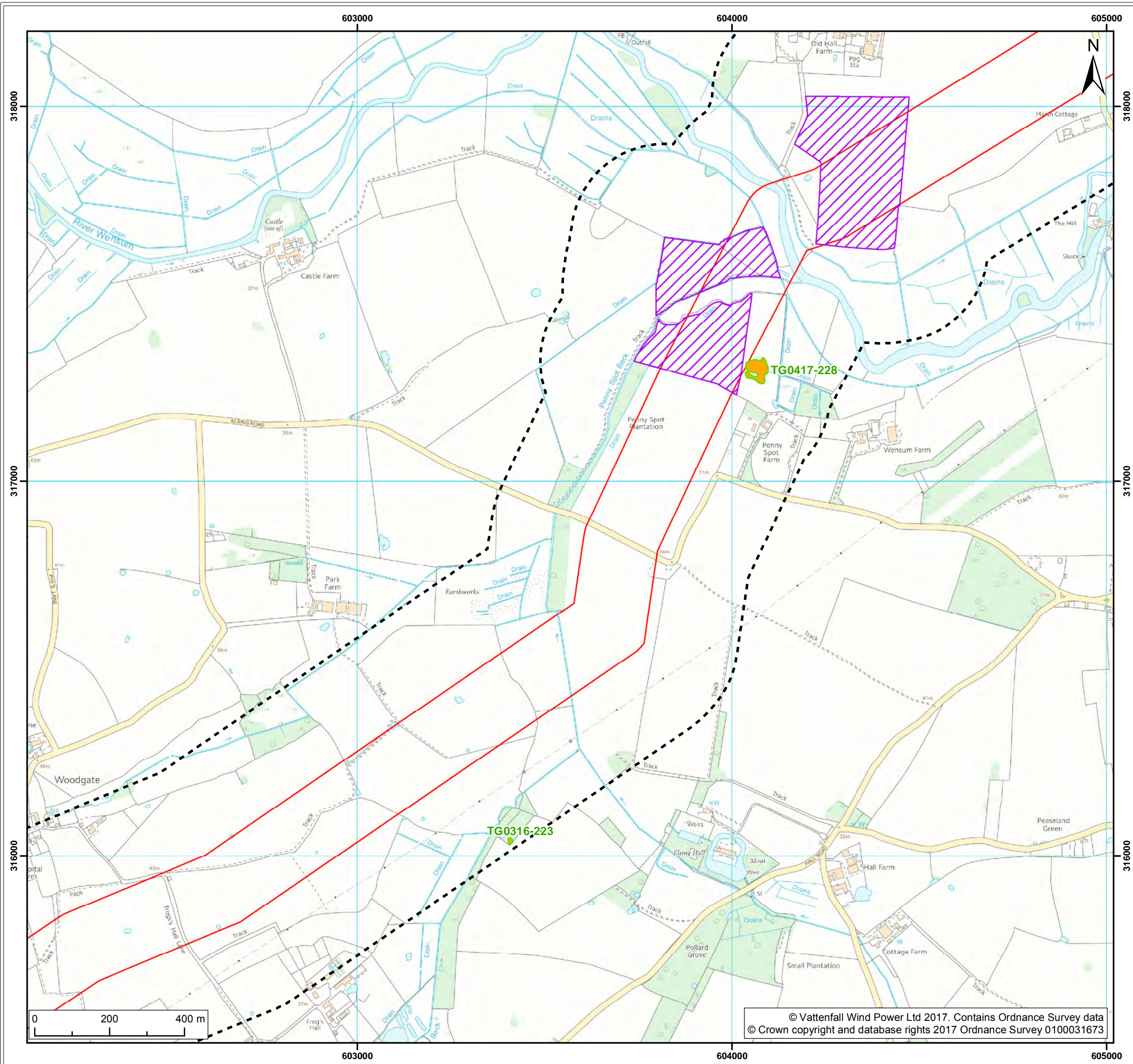
Title: Presence / Absence Survey Results (map 17 of 25)

Figure:	3	Drawing No:	PB4476-004-0222-003			
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
- Presence/absence survey results**
- GCN absent
- Habitat Suitability Index Results**
- HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
------------------------------	--

Title:
Presence / Absence Survey Results (map 18 of 25)

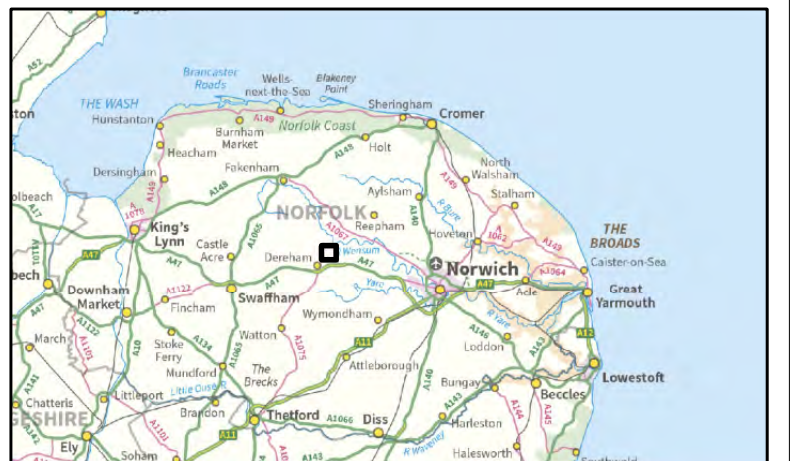
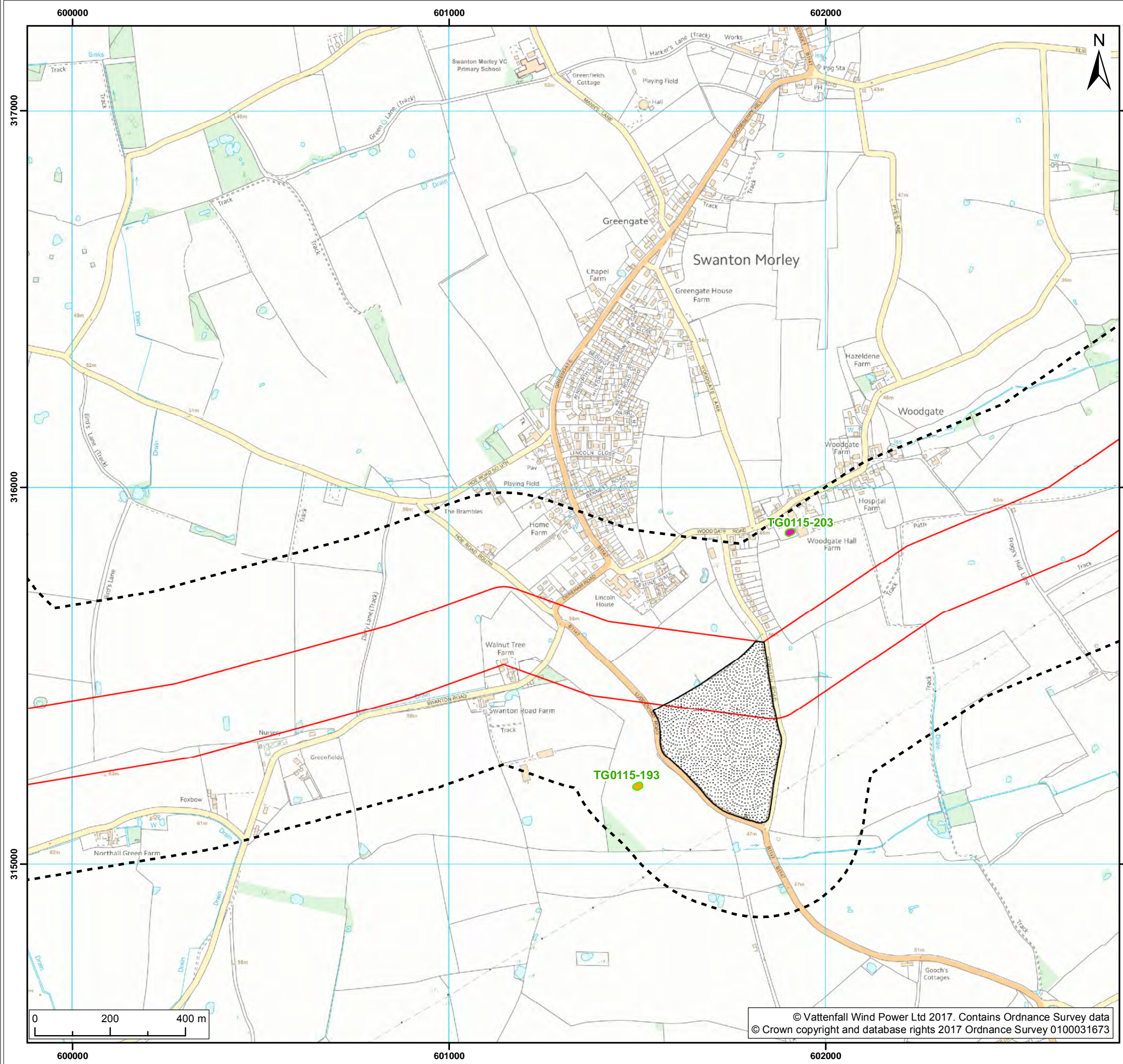
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Mobilisation Zone

Presence/absence survey results

- Not surveyed
- GCN absent

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

Title:

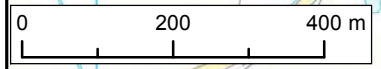
Presence / Absence Survey Results (map 19 of 25)

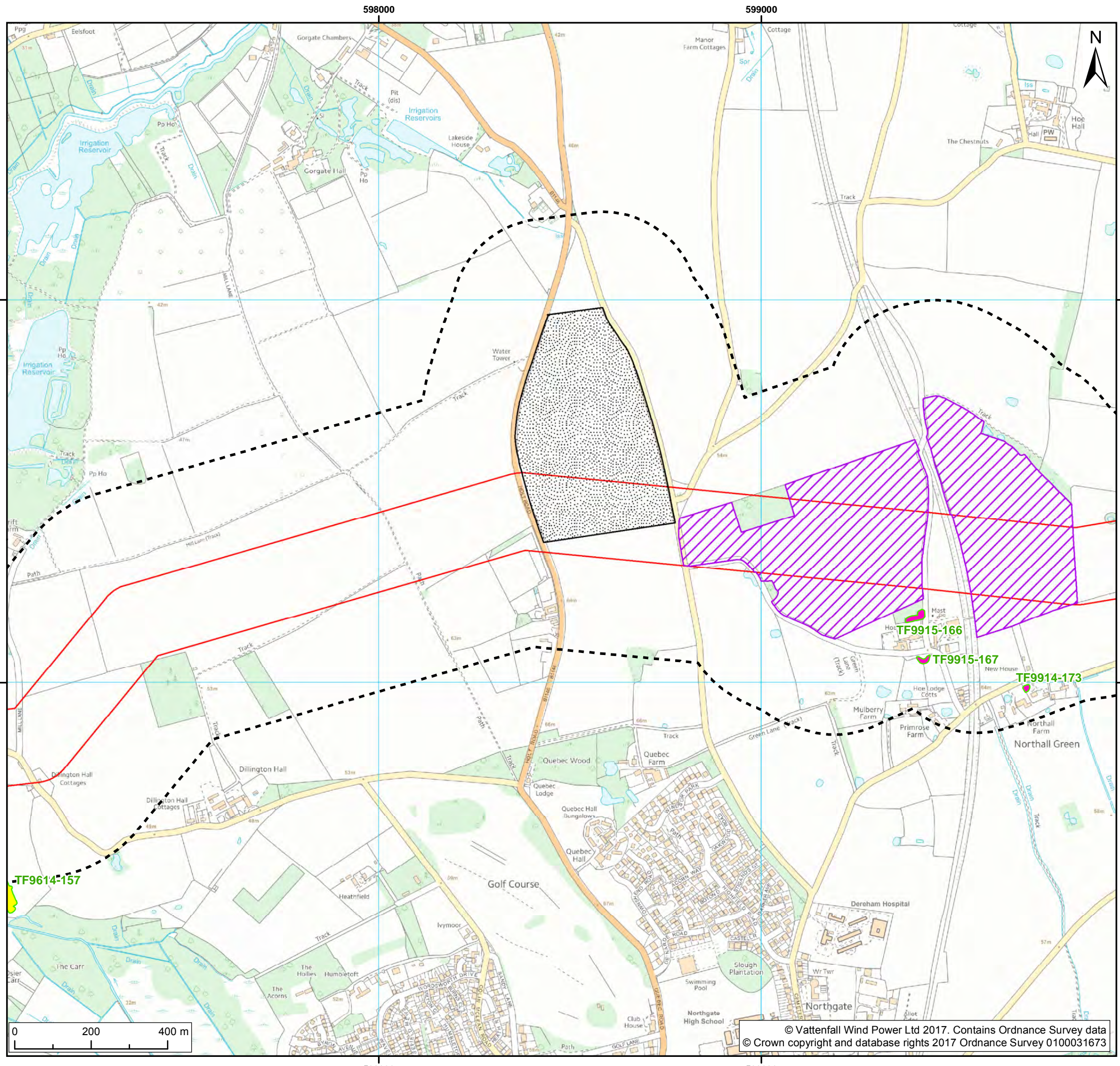
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700



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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone
- Mobilisation Zone

Presence/absence survey results

- Not surveyed
- GCN present

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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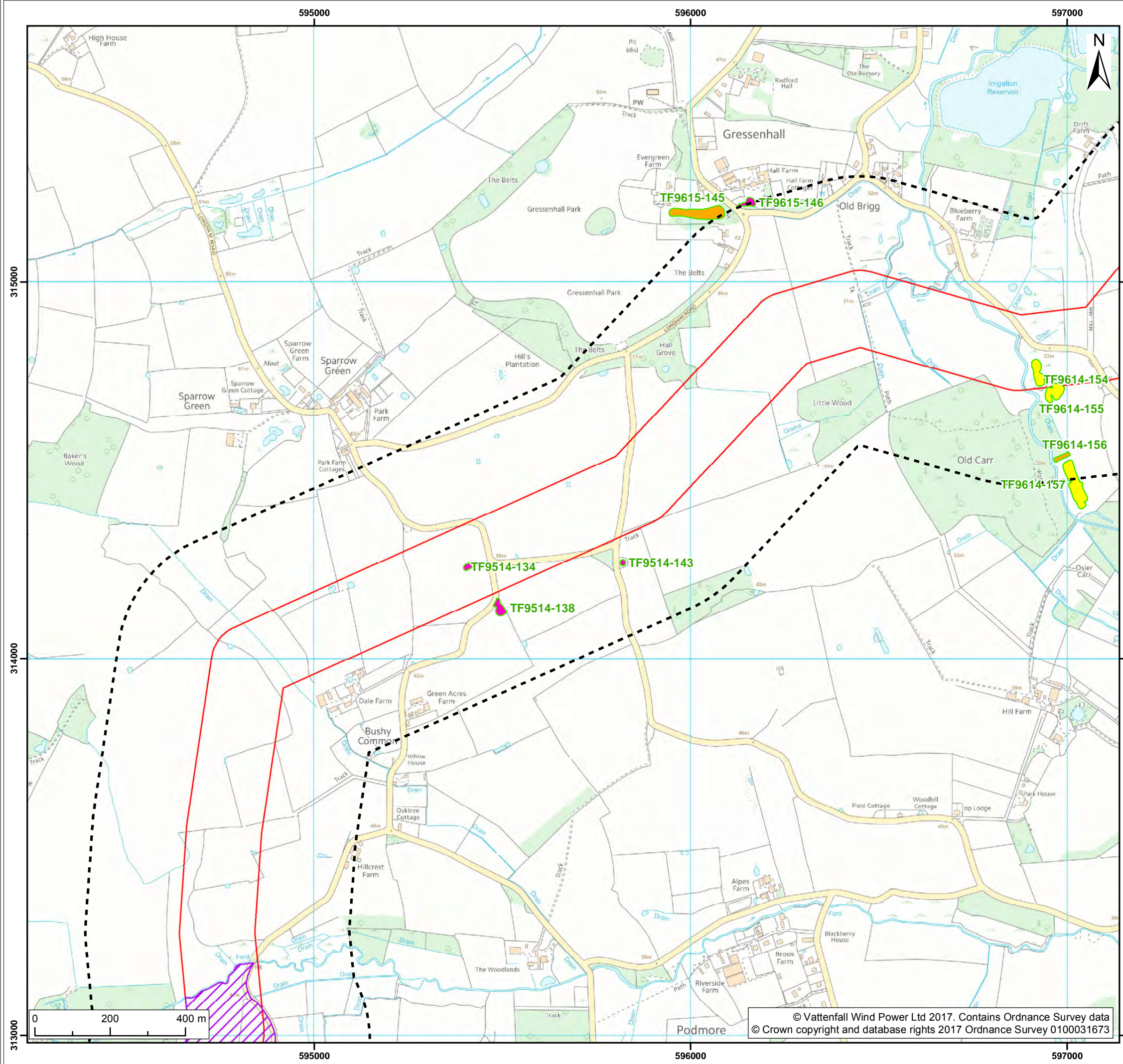
Title:
Presence / Absence Survey Results (map 20 of 25)

Figure: 3	Drawing No: PB4476-004-0222-003				
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Horizontal Directional Drilling (HDD) Zone

Presence/absence survey results

- Not surveyed
- GCN absent
- GCN present

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project:	Norfolk Vanguard	Report:	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:

Presence / Absence Survey Results
(map 21 of 25)

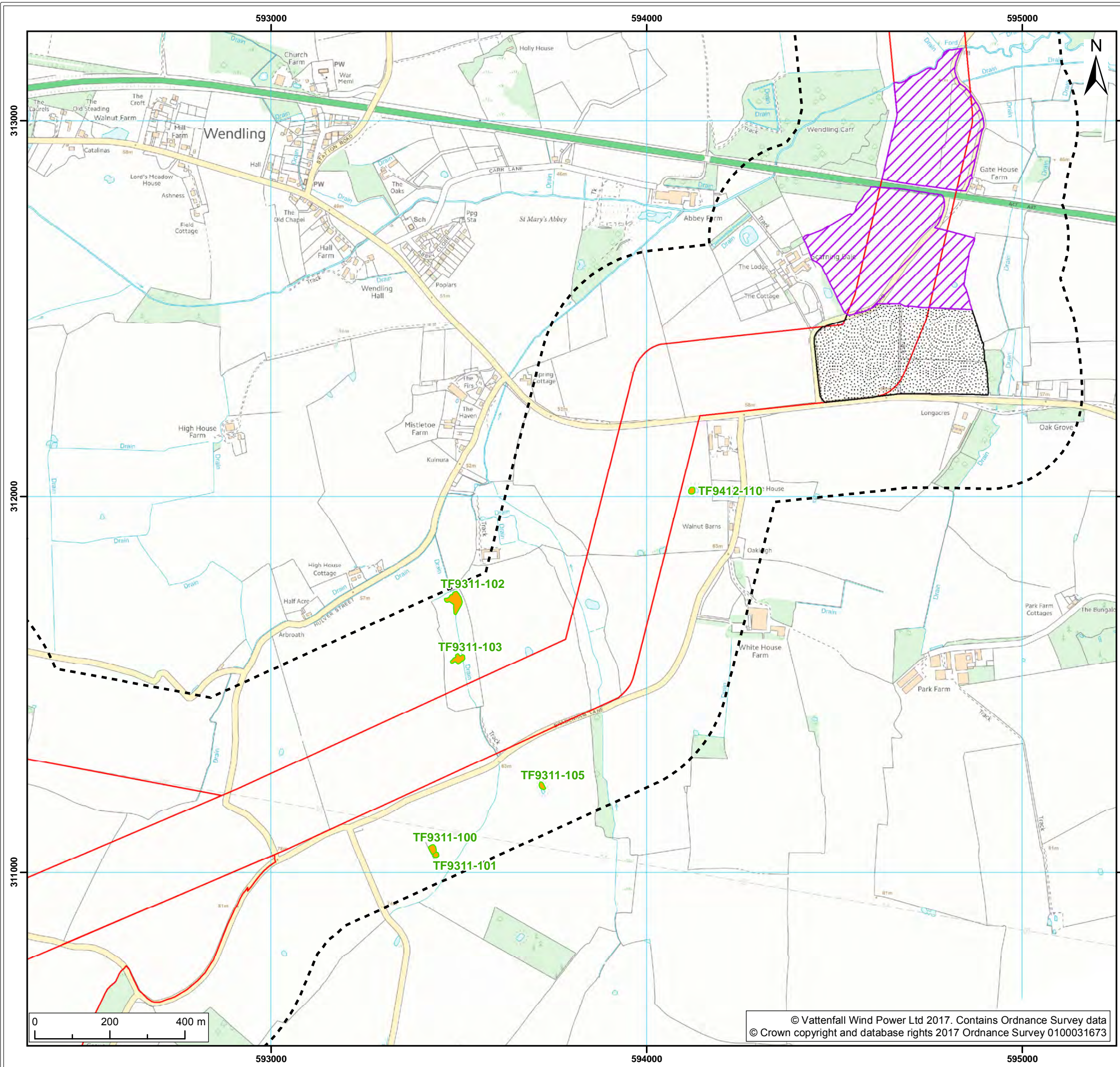
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Horizontal Directional Drilling (HDD) Zone
 - Mobilisation Zone
- Presence/absence survey results**
- GCN absent
- Habitat Suitability Index Results**
- HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Presence / Absence Survey Results
(map 22 of 25)

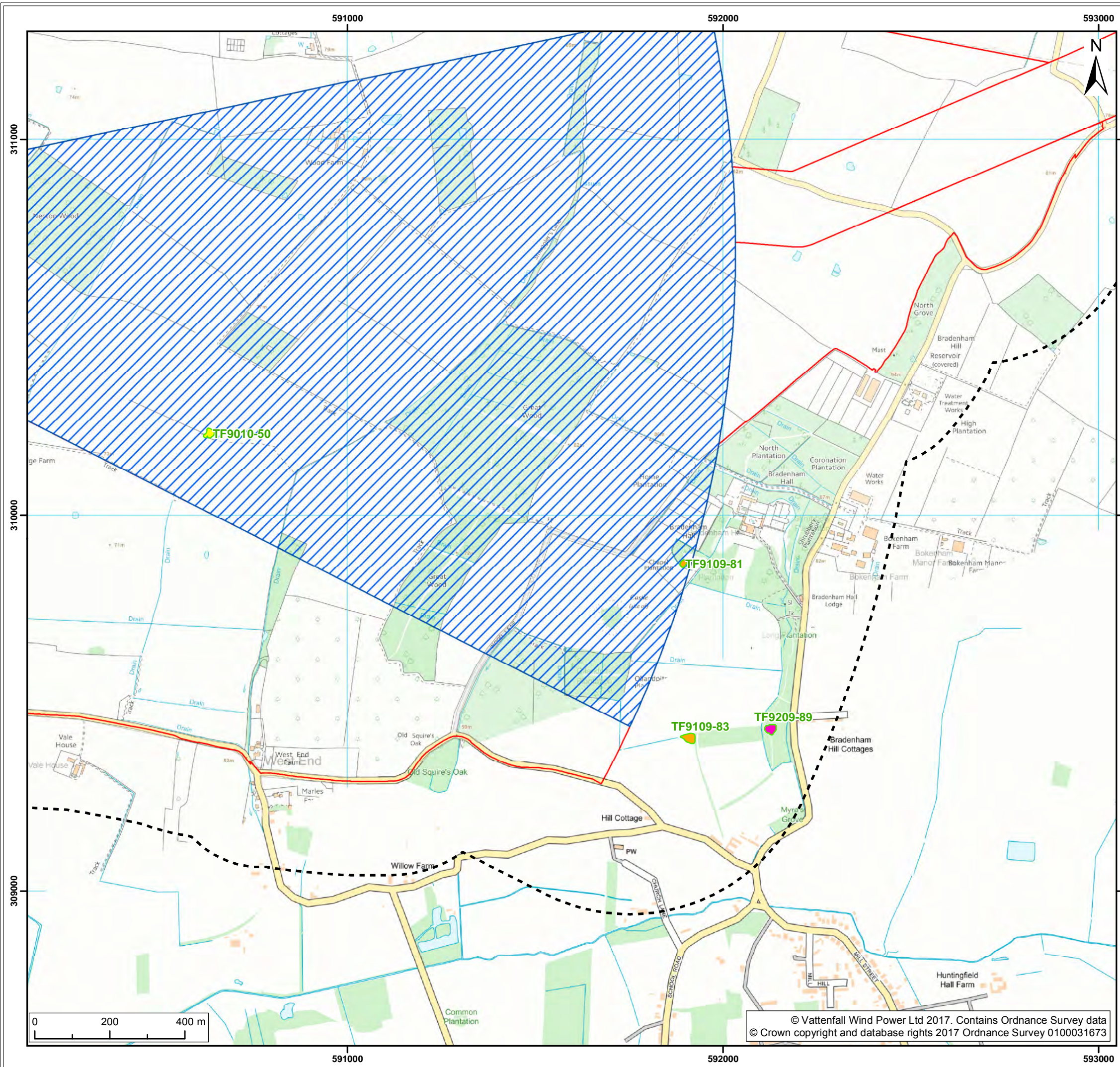
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Project Substation Search Zone

Presence/absence survey results

- Not surveyed
- GCN absent
- GCN present

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project:	Report:
Norfolk Vanguard	Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey

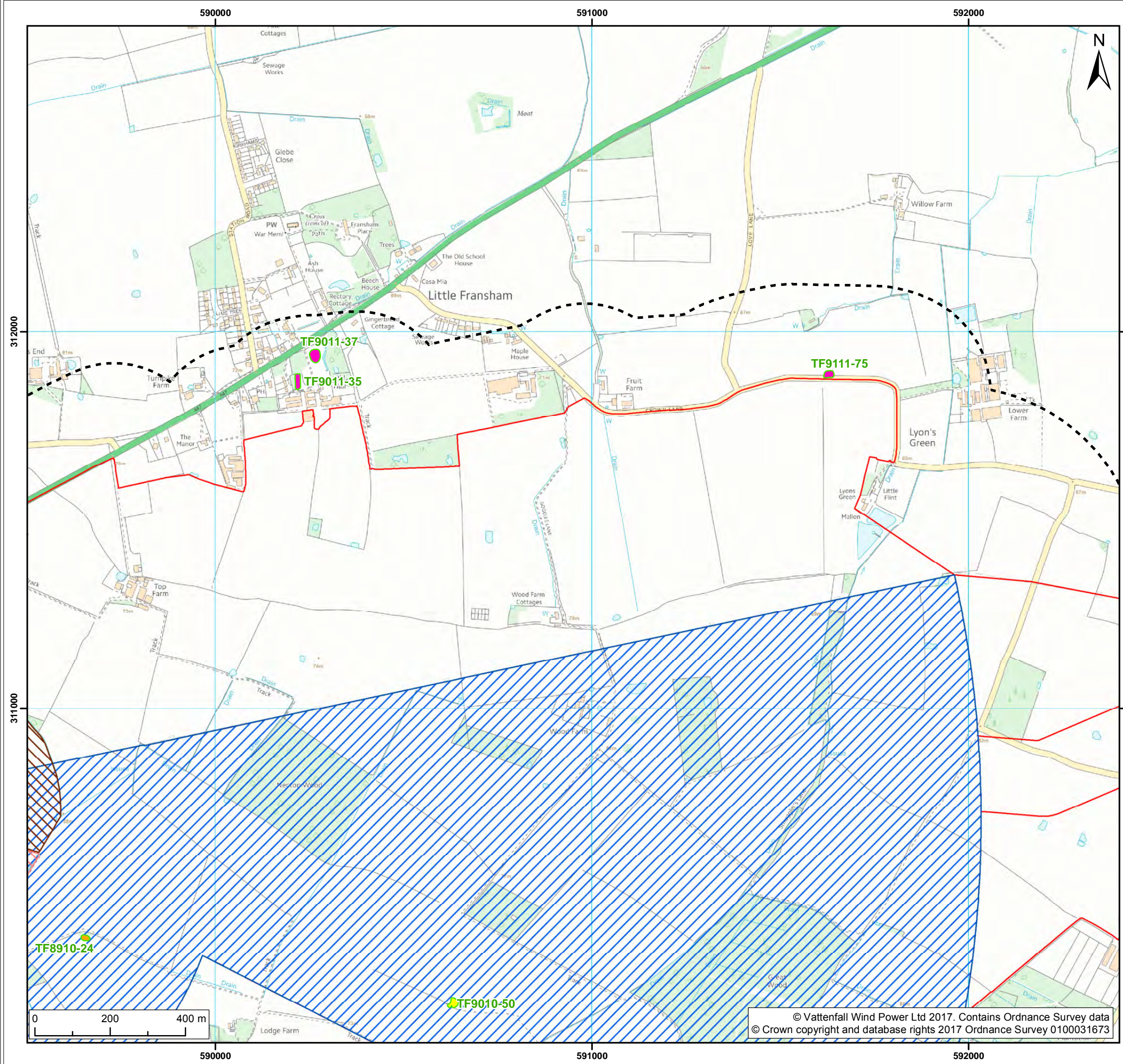
Title:
Presence / Absence Survey Results (map 23 of 25)

Figure:	3	Drawing No:	PB4476-004-0222-003			
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02	01/09/2017	LB	GC	A3	1:10,000	

Co-ordinate system: British National Grid EPSG: 27700




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- Legend:
- Norfolk Vanguard Onshore Infrastructure**
- Onshore Cable Corridor
 - Project Substation Search Zone
 - National Grid Substation Extension Zone
 - Overhead Line Modification Zone
- Presence/absence survey results**
- Not surveyed
 - GCN absent
 - GCN present
- Habitat Suitability Index Results**
- HSI score of 0.6 or above – scoped into further surveys
 - Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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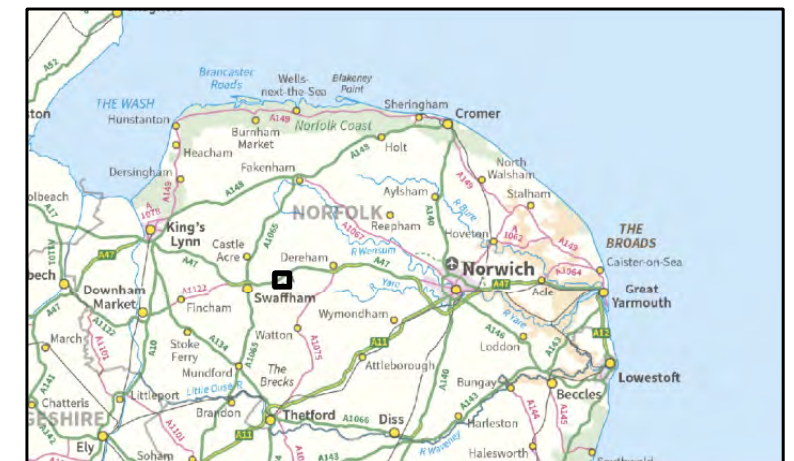
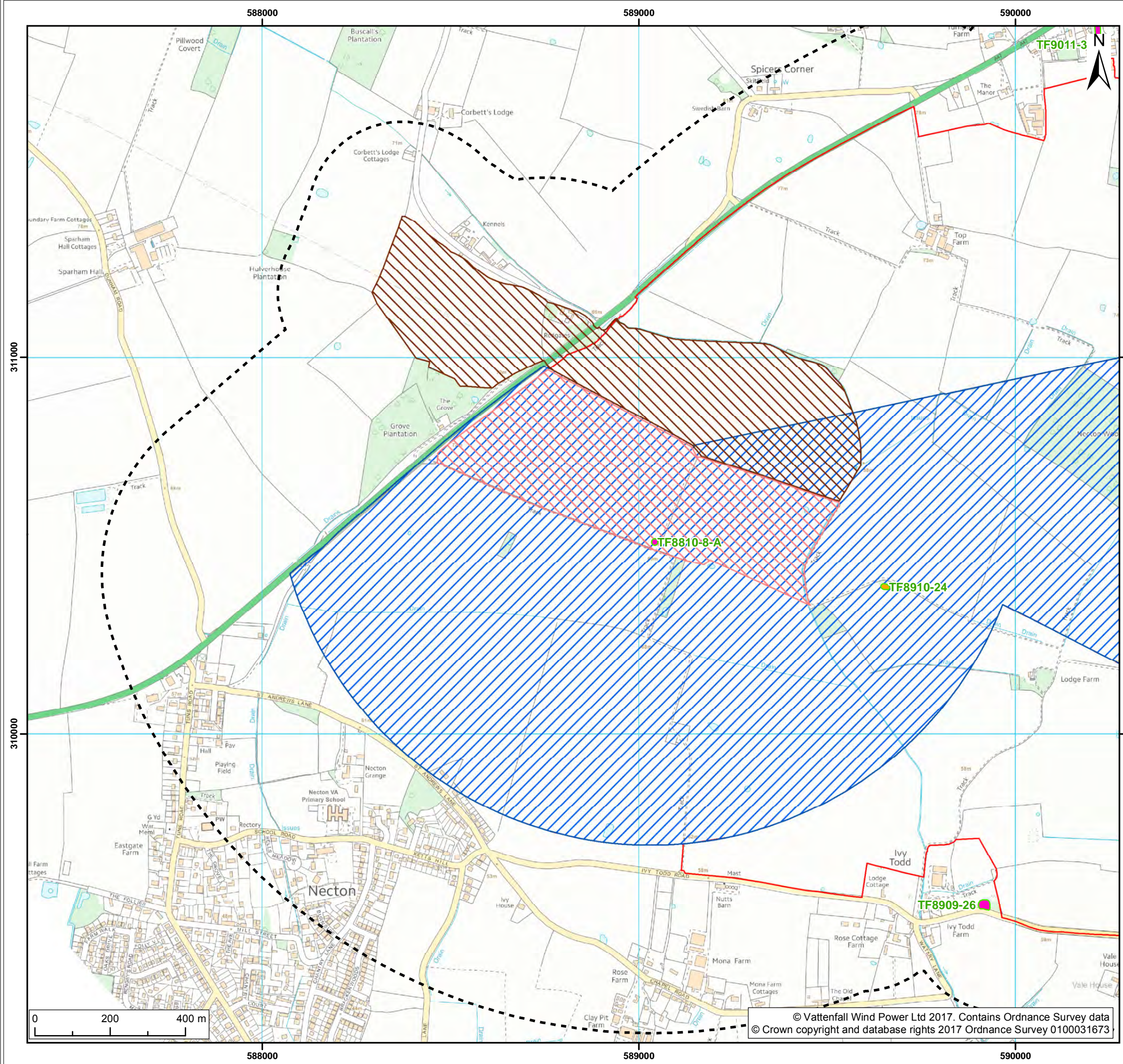
Title:
Presence / Absence Survey Results (map 24 of 25)

Figure: 3	Drawing No: PB4476-004-0222-003				
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700



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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Project Substation Search Zone
- National Grid Substation Extension Zone
- Overhead Line Modification Zone

Presence/absence survey results

- Not surveyed
- GCN absent

Habitat Suitability Index Results

- HSI score of 0.6 or above – scoped into further surveys
- Survey Area

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
Presence / Absence Survey Results (map 25 of 25)

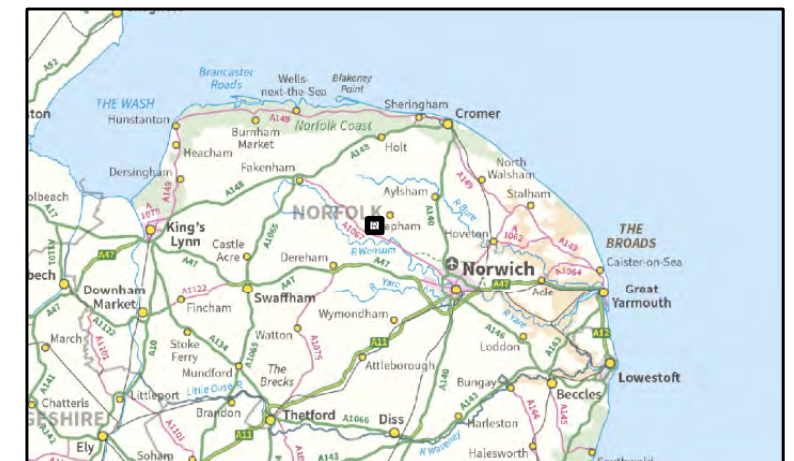
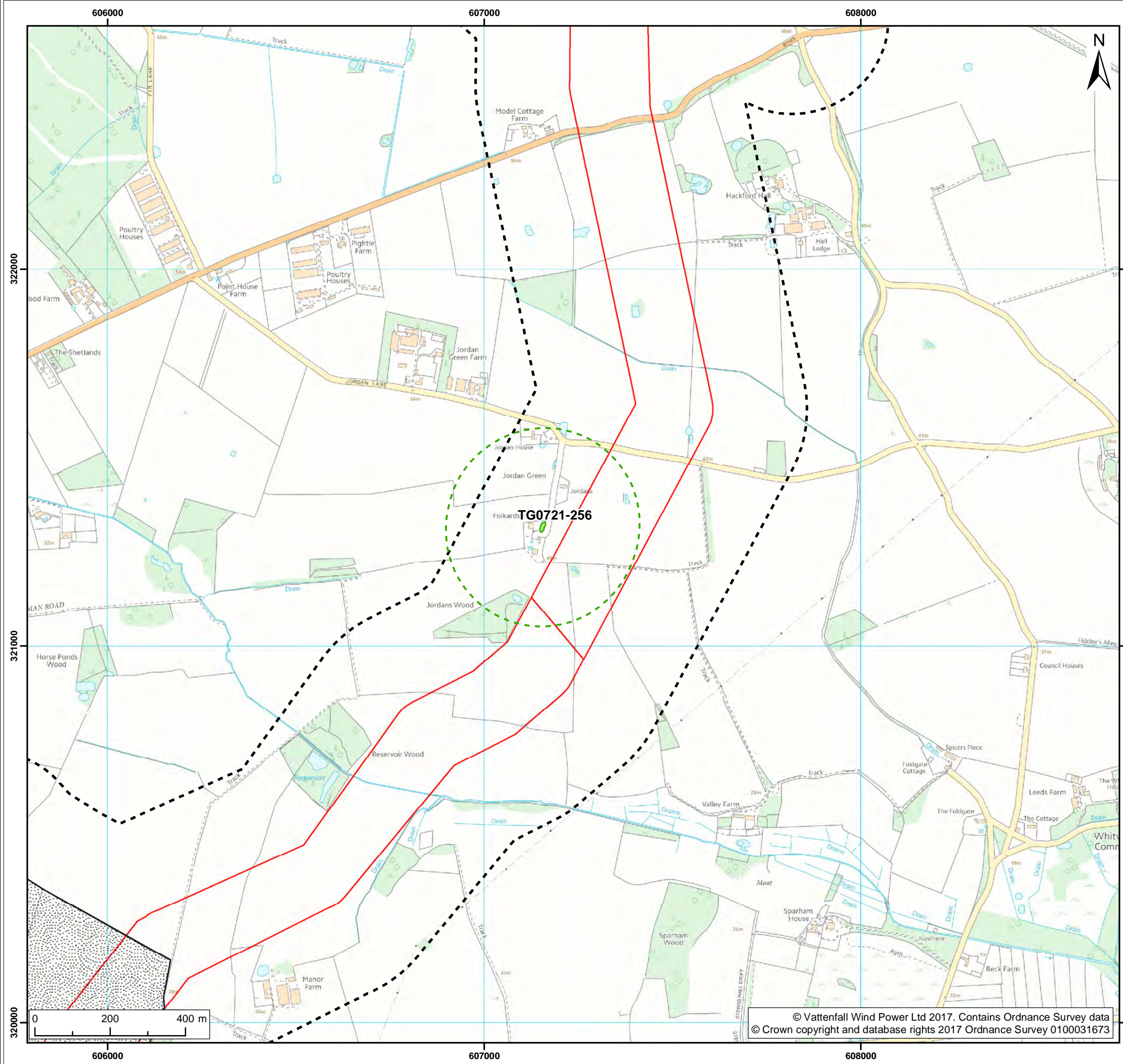
Figure:	3	Drawing No:	PB4476-004-0222-003		
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
02	11/09/2017	GC	GC	A3	1:10,000
02	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Mobilisation Zone
- Survey Area
- GCN Presence
- Metapopulations (250m buffer)

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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Title:
**Metapopulations
(map 1 of 3)**

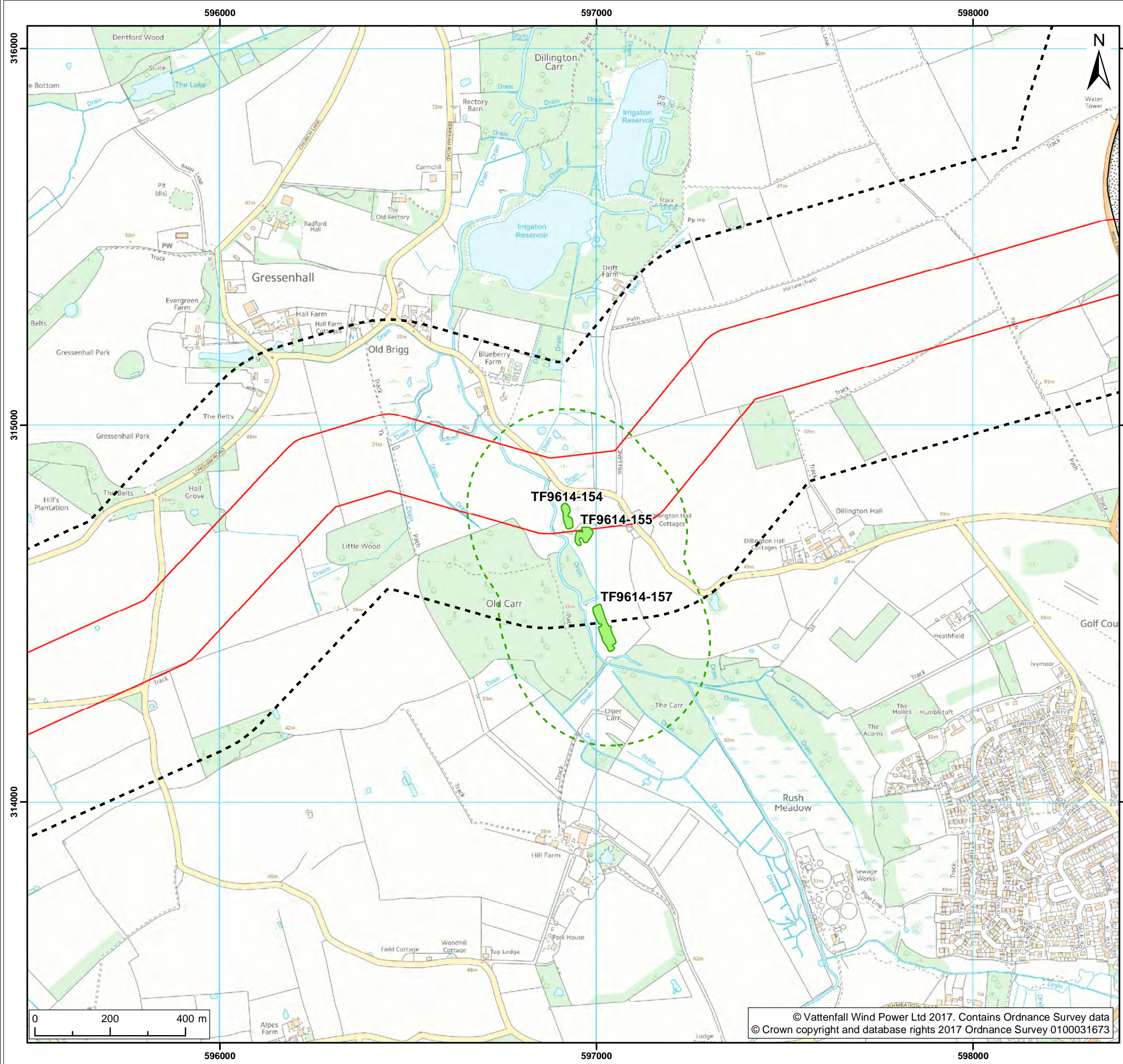
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01	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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- Legend:
- Norfolk Vanguard Onshore Infrastructure
 - Onshore Cable Corridor
 - Mobilisation Zone
 - Survey Area
 - GCN Presence
 - Metapopulations (250m buffer)

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
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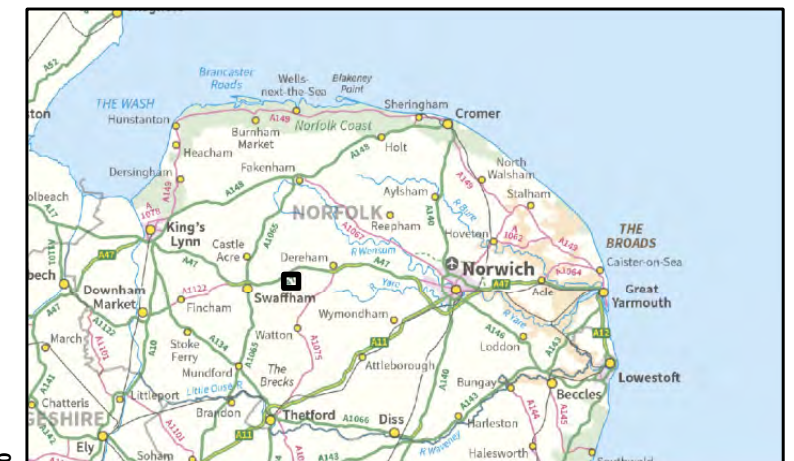
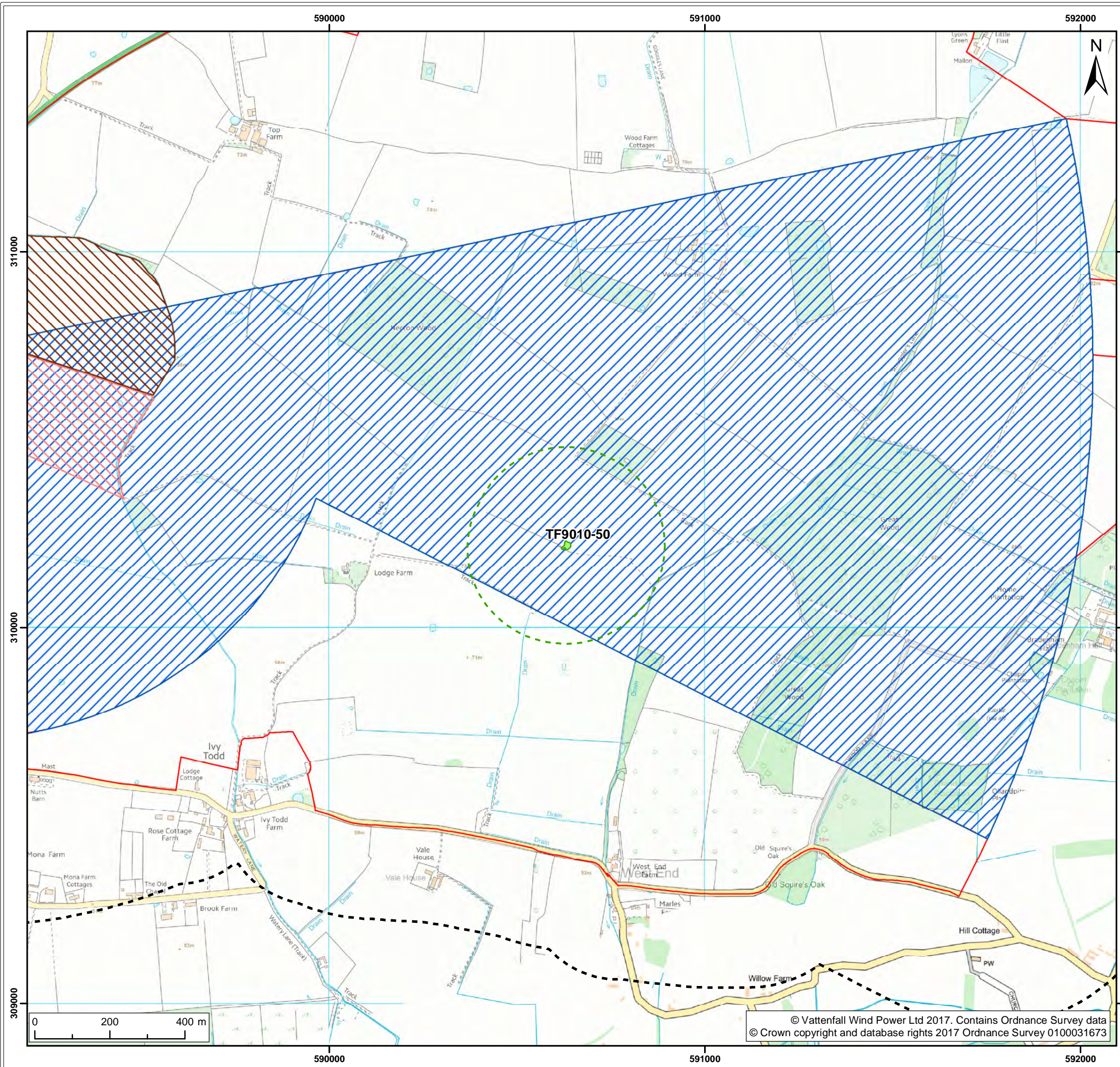
Title:
Metapopulations (map 2 of 3)

Figure: 4	Drawing No: PB4476-004-0222-004				
Revision: 02	Date: 07/09/2017	Drawn: LB	Checked: GC	Size: A3	Scale: 1:10,000
01	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700



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Legend:

Norfolk Vanguard Onshore Infrastructure

- Onshore Cable Corridor
- Project Substation Search Zone
- National Grid Substation Extension Zone
- Overhead Line Modification Zone
- Survey Area
- GCN Presence
- Metapopulations (250m buffer)

Project: Norfolk Vanguard	Report: Preliminary Environmental Information Report: Great Crested Newt Presence / Absence Survey
------------------------------	--

Title: Metapopulations (map 3 of 3)
--

Figure: 4	Drawing No: PB4476-004-0222-004				
Revision: 02	Date: 07/09/2017	Drawn: LB	Checked: GC	Size: A3	Scale: 1:10,000
01	01/09/2017	LB	GC	A3	1:10,000

Co-ordinate system: British National Grid EPSG: 27700

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22.9 Annex B: Great Crested Newt Survey: Full Survey Results

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF8910-24					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			10							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0		N	
18.04.17	6.4	3	0	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N	N	
02.05.17	6.7	3	0	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N	N	
15.05.17	15.4	3	0	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N	N	
30.05.17	14.9	3	0	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								
Comments and constraints:				1- water shallow enough to walk out to bottle trap											

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										
	palmate	1									
	common frog										
	common toad						20+				
	other_____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
3	smooth				1F						
	palmate										
	common frog										
	common toad										
	other_____										
4	smooth				1M						
	palmate										
	common frog										
	common toad										
	other_____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae found? (any method)
TF9010-50					Torch power: 500,000			No. of traps used in pond: 2							
No. of survey visits to this pond:		6		Sex/life stage:											
					Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	N	N
18.04.17	6.4	3	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	N	N
02.05.17	6.7	3	3	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	1	1	0	0	1	0	N	N
15.05.17	15.4	3	3	Adult totals:	0			2			1				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	N	N
30.05.17	14.9	3	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	N	N
12.06.12	14.9	3	3	Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity		0	0	0	1	0	0	0	0	0	N	N
19.06.17	18.1	3	3	Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								2							

Comments and constraints: 1- access to pond only at one location. Minimal circum. of pond surveyed.
2- further entry points discovered, 6 bottle traps set

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
2	smooth	1M 1F									
	palmate										
	common frog										
	common toad										
	other_____										
3	smooth	2M			4F						
	palmate										
	common frog										
	common toad										
	other_____										
4	smooth	1M						1M			
	palmate										
	common frog										
	common toad										
	other_____										
5	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
6	smooth										
	palmate										
	common frog										
	common toad										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
Tf9109-81					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			8							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
18.04.17	6.4	2	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
02.05.17	10.5	2	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
15.05.17	15.4	2	2	Adult totals:	0			0			0				
(4) Date:	Air temp		Turbidity		0	0	0	0	0	0	0	0	N		
30.05.17	16.4	3	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: 1- access from south.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate	1									
	common frog										
	common toad										
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth						1				
	palmate										
	common frog										
	common toad										
	other _____										
4	smooth				1M						
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9109-83					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			4							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
18.04.17	6.4	1	4	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
02.05.17	10.5	1	4	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
15.05.17	15.4	1	4	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
30.05.17	16.4	1	4	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: 1 - access from north through hedge, banks steep and heavily vegetated.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate																	
	common frog																	
	common toad																	
	other _____																	
2	smooth																	
	palmate																	
	common frog																	
	common toad																	
	other _____																	
3	smooth																	
	palmate																	
	common frog																	
	common toad																	
	other _____																	
4	smooth																	
	palmate																	
	common frog																	
	common toad																	
	other _____																	

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG0417-228					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			16							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
20.04.17	7.5	2	0	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
03.05.17	10.3	2	0	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
16.05.17	20.2	2	0	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
31.05.17	13.5	2	0	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: 1 - netted vegetation and egg search. BT spaced around edges where substrate soft enough to penetrate

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth				3 (F)						

	palmate											
	common frog			20+			20+					
	common toad			20+			20+					
	other _____											
2	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
3	smooth	1F										
	palmate											
	common frog											
	common toad											
	other _____											
4	smooth											
	palmate											
	common frog											
	common toad											
	other _____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG0417-229					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			16							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
20.04.17	7.5	3	1	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
03.05.17	10.3	3	1	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
16.05.17	20.2	3	1	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	n		
31.05.17	13.5	3	1	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: 1 - 16 fish caught in bottle traps

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate										
	common frog	1		20+			20+				
	common toad			20+			20+				
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG0518-244					Torch power:	No. of traps used in pond:										
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
20.04.17	7.5	1	3	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
03.05.17	9.9	1	3	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
16.05.17	20.2	1	3	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
31.05.17	11.4	1	2	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									0							

Comments and constraints: 1 - to be netted next time. Spoke to fisherman had caught several large fish (carp). Gamekeeper mentioned shallower, more vegetated further round

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate												
	common frog												
	common toad												
	other _____												
2	smooth												
	palmate												
	common frog												
	common toad												
	other _____												
3	smooth												
	palmate												
	common frog												
	common toad												
	other _____												
4	smooth												
	palmate												
	common frog												
	common toad												
	other _____												

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG0721-256					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		6			500,000			14							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	1	0	0	0	0	0	N	
20.04.17	7.5	4	3	Adult totals:	0			1			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
03.05.17	10.4	4	3	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	1	0	0	0	0	N		
16.05.17	18.4	4	3	Adult totals:	0			1			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
31.05.17	13.4	4	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity		0	1	0	1	2	0	0	0	0		
13.06.17	18.4	3	3	Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity		0	0	0	1	1	0	0	0	0		
19.06.17	26	3	3	Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								1							

Comments and constraints: Visit 1: 8 bottle traps used only
Visit 5 - less duckweed cover at southern end of pond

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate																			
	common frog																			
	common toad																			
	other_____																			
2	smooth																			
	palmate	2F																		
	common frog																			
	common toad																			
	other_____																			
3	smooth	6M 1F				6M 3F														
	palmate																			
	common frog																			
	common toad																			
	other_____																			
4	smooth	1F																		
	palmate																			
	common frog																			
	common toad																			
	other_____																			
5	smooth	1M																		
	palmate																			
	common frog																			
	common toad																			
	other_____																			
6	smooth	2M																		
	palmate																			
	common frog																			
	common toad																			
	other_____																			

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)		
TG0721-264					Torch power:	No. of traps used in pond:											
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
(1) Date:	Air temp	Veg cover	Turbidity														
20.04.17	7.5	5	5	Adult totals:			0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity														
03.05.17	10.4	5		Adult totals:			0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity														
*	*	*	*	Adult totals:			0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity														
*	*	*	*	Adult totals:			0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:			0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:			0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:			0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:			0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):									0								

Comments and constraints: 1 -- unable to torch, net or bottle trap due to insufficient water depth. Pond comprises only mud.
2 -- no water, overgrown with nettles – no survey

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate																			
	common frog																			
	common toad																			
	other _____																			
2	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			
3	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			
4	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG0316-223					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			12							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
20.04.17	7.5	2	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
03.05.17	9.9	W	4	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N		
16.05.17	16.4	2	4	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	n		
31.05.17	9.9	1	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: 1 - Lots of algae covering pond surface, difficult to torch
4 - No algae present, pond drying

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth				1						

	palmate											
	common frog											
	common toad											
	other _____											
2	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
3	smooth				1M 1F							
	palmate											
	common frog											
	common toad											
	other _____											
4	smooth											
	palmate											
	common frog											
	common toad											
	other _____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG1324-288					Torch power:	500,000			No. of traps used in pond:			0				
No. of survey visits to this pond:				4	Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0									N
02.05.17	11.5	3	1	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0									N
16.05.17	20.2	3	1	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0									N
31.05.17	15.5	3	1	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0									N
13.06.17	19.4	3	1	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):								0								

Comments and constraints: 1 - small ornamental pond in private garden. Lined and shallow no BT. No netting because of damage to plants/pond

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth	8M	6F								

	palmate												
	common frog												
	common toad												
	other _____												
2	smooth	10M 2F											
	palmate												
	common frog												
	common toad												
	other _____												
3	smooth	6M 4F											
	palmate												
	common frog	1											
	common toad												
	other _____												
4	smooth	2M 2F											
	palmate												
	common frog	1											
	common toad												
	other _____												

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2130-314					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		4					500,000			0					
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No
19/04/2017	5.1	3	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	N	N
04.05.17	9.8	3	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	N	N
22.05.17	16.7	3	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	N	N
05.06.17	13.7	4	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: Banks too steep - BT not possible.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate											
	common frog											
	common toad											
	Stickleback							1				
2	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
3	smooth											
	palmate	1										
	common frog											
	common toad											
	other _____											
4	smooth											
	palmate											
	common frog											
	common toad											
	other _____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2130-316					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			8							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
19/04/2017	5.1	2	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N	N	
04/05/2017	9.8	2	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N	N	
22.05.17	16.7	2	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	N	N	
05.06.17	13.7	2	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: Majority of perimeter not accessible. BTs set out adjacent to bridge.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate											
	common frog											
	common toad											
	Stickleback	8										
2	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
3	smooth					1M 1F						
	palmate					1F						
	common frog											
	common toad											
	other _____											
4	smooth											
	palmate	1F										
	common frog											
	common toad											
	other _____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2230-322					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			N/A			13							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity				0	0	0	0	0	0	No	No	
19/04/2017	4	5	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity				0	0	0	0	0	0	No	No	
04/05/2017	9.1	5	3	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity				0	0	0	0	0	0	No	No	
22.05.17	14.7	5	3	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity				0	0	0	0	0	0	No	No	
05.06.17	14.5	5	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: 1 - Cover completely with duckweed. Torching not possible.
4 - Pond dry, consisting of solely mud, duckweed and vegetation.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate																			
	common frog																			
	common toad																			
	other _____																			
2	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			
3	smooth																			
	palmate																			
	common frog									20+										
	common toad																			
	other _____																			
4	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2230-321					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			16 - visit 1 only							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
19/04/2017	4	3	1	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0			0	0	0	No	No	
04/05/2017	9.1	3	1	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0			0	0	0	No	No	
22.05.17	14.7	3	1	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0			0	0	0	N	N	
05.06.17	14.5	3	1	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: Dead water shrew found during visit 1. Do NOT use BTs on future visits.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate												
	common frog												
	common toad												
	Great diving beetle				1								
	Stickleback	2											
2	smooth												
	palmate												
	common frog												
	common toad												
	other_____												
3	smooth												
	palmate												
	common frog												
	common toad												
	other_____												
4	smooth												
	palmate												
	common frog												
	common toad												
	other_____												

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG2230-320					Torch power:			No. of traps used in pond:								
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	No	
19/04/2017	4	3	1	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	No	
04/05/2017	9.1	3	1	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	No	
22.05.17	14.7	3	1	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
05.06.17	14.5	3	1	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									0							

Comments and constraints: Most of margin too shallow to BT.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate												
	common frog					1							
	common toad												
	Stickleback	2											
2	smooth												
	palmate												
	common frog												
	common toad												
	other _____												
3	smooth												
	palmate												
	common frog												
	common toad												
	other _____												
4	smooth												
	palmate												
	common frog					50							
	common toad												
	other _____												

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG2932-348					Torch power:	No. of traps used in pond:										
No. of survey visits to this pond:		0		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity													
24.04.17	7.8			Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									0							

Comments and constraints: 1- pond has dried, no further surveys

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate																			
	common frog																			
	common toad																			
	other _____																			
2	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			
3	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			
4	smooth																			
	palmate																			
	common frog																			
	common toad																			
	other _____																			

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG2932-350					Torch power:			No. of traps used in pond:								
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	No	
24.04.17	7.8	4	1	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	No	
08.05.17	9.9	4	1	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	No	
23.05.17	19	4	1	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	No	
08.06.17	15.1	4	1	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									0							

Comments and constraints: 1 - 3 stickleback recorded in bottle traps

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate										
	common frog					100+					
	common toad					100+					
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth	1M			1M	20+					
	palmate				1M						
	common frog										
	common toad										
	other _____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG2932-351					Torch power:	No. of traps used in pond:										
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
24.04.17	7.8	3	3	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
08.05.17	9.9	4	3	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
23.05.17	19	4	3	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N	
08.06.17	15.1	5	3	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):								0								

Comments and constraints: 1 - 2 stickleback recorded in bottle trap.
4 - 5 BT only due to increased vegetation cover and nearby nesting swan.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate										
	common frog										
	common toad					2					
	other _____										
2	smooth	1M									
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
4	smooth										
	palmate										
	common frog					5+					
	common toad					20+					
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2932-352					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N
24.04.17	7.8	2	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N
08.05.17	9.9	3	4	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N
23.05.17	19	3	4	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	0	N
08.06.17	15.1	3	4	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):									0						

Comments and constraints: 1 - 1 stickleback recorded in bottle trap

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate										
	common frog										
	common toad					2			10+		
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth					20+					
	palmate										
	common frog										
	common toad										
	other _____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG2931-353					Torch power:			No. of traps used in pond:								
No. of survey visits to this pond:		0		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity													
24.04.17	7.8			Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									0							

Comments and constraints: 1 - pond inaccessible due to dense marginal vegetation not allowing access to water body. No further surveys

Visit No.	Species	adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	(Y/N)
1	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
3	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other_____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
Tf9311-100					Torch power:	500,000			No. of traps used in pond:			12				
No. of survey visits to this pond:				4	Sex/life stage:	Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
19.04.17		1	3	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No	
02/05/2017	7	1	3	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No	
15/05/2017	16	1	3	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
30/05/2017	16	1	3	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):								0								

Comments and constraints:

1 - access from edge closest to pylon3 3-- water levels dropped sharply since visit 2

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
2	smooth	2(f)									
	palmate										
	common frog										
	common toad										
	Great diving beetle		1								
3	smooth										
	palmate										
	common frog										
	common toad										
	other_____										
4	smooth				10(m)						
	palmate										
	common frog										
	common toad										
	other_____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9311-101						Torch power: 500,000			No. of traps used in pond: 10						
No. of survey visits to this pond:				4											
Sex/life stage:					Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	N	No
19.04.17		3	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
02/05/2017	7	3	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
15/05/2017	16	4	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
30/05/2017	16	3	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							
Comments and constraints:				Visit 3: veg cover greater - netting also undertaken. Water levels dropped sharply since previous visit.											

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										
	palmate										
	common frog			3+			3				
	common toad			3+							
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	Great diving beetle				1						
3	smooth										
	palmate										
	common frog										
	common toad						2				
	other _____				1						
4	smooth										
	palmate										
	common frog						4				
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TF9311-102						Torch power: 500,000			No. of traps used in pond: 0							
No. of survey visits to this pond:				4		Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Sex/life stage:					Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0							No	No	
19.04.17		1	3	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0							No	No	
02/05/2017	5.6	1	2	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0							No	No	
15/05/2017	15	1	2	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0							No	No	
30/05/2017	17	1	2	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):								0								

Comments and constraints:

Visit 1 - pond looks to be drying, currently just mud with shallow water. No netting as water v clear, water too shallow to bottle trap. Minimal vegetation for egg search. Visit 3: water levels dropped, but survey still possible. Visit 4: water levels dropped further, but survey still possible.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth										
	palmate										
	common frog										
	common toad	1									
	other _____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9311-103						Torch power: 500,000			No. of traps used in pond: 16						
No. of survey visits to this pond:				2											
Sex/life stage:					Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	N	No
19.04.17		3	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
02/05/2017	5.6	4	4	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity											No	
15/05/2017	*	*	*	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity											no	
30/05/2017	*	*	*	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints:

Visit 2: water level low. BTs sat in v shallow water. Leeches found. Visit 3: pond now complete dry. No survey possible. Egg search was conducted on previously submerged vegetation. Visit 4: same as previous.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										
	palmate										
	common frog						5			5+	
	common toad						3			5+	
	other _____										
2	smooth										
	palmate										
	common frog			50			25				
	common toad						25				
	Dragonfly larvae					1					
3	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TF9311-105						Torch power: 500,000			No. of traps used in pond: 5							
No. of survey visits to this pond:				4		Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
Sex/life stage:					Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
19.04.17		2	1	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
02/05/2017	5.6	2	2	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
15/05/2017	14.2	3	2	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
30/05/2017	16	4	2	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):								0								

1 - limited access due to dense veg and steep banks. No egg search as limited suitable submerged veg available

Comments and constraints:

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth										
	palmate										
	common frog										
	common toad						1				
	other _____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9412-110					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			6							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No
24/04/2017	2.9	2	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No
02/05/2017	5.2	2	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No
15/05/2017	14.2	2	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
30/05/2017	16	2	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: Only small section (in two separate areas) of pond can be surveyed due to dense vegetation.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate											
	common frog											
	common toad											
	Great diving beetle				1							
2	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
3	smooth				2 (M) 1 (F)							
	palmate											
	common frog											
	common toad											
	other _____				5							
4	smooth											
	palmate											
	common frog	1										
	common toad											
	other _____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9615-145					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		4		500,000			16								
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
20/04/2017	6.8	3	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
03/05/2017	8.2	3	3	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
16/05/2017	16.5	4	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
31/05/2017	13	3	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: Vegetation dense in places therefore netting also used. Visit 3: veg cover now very denser, some part of pond not accessible.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	(Y/N)
1	smooth				2 (M)						

		palmate								
		common frog		50		5				
		common toad		200		200		200		
		Stickleback			5					
2		smooth								
		palmate								
		common frog	1			15				
		common toad		100						
		other_____								
3		smooth	1 (F)			1 (F)				
		palmate				3 (M)				
		common frog				25				
		common toad	1	200						
		Stickleback				1				
4		smooth			1					
		palmate								
		common frog	1				2			
		common toad								
		Stickleback				1				

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9614-154					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		6			500,000			16							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			Yes	No	
24/04/2017	5.1	2	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			N/A	No	
03/05/2017	7.8	2	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			N/A	No	
16/05/2017	14.4	2	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			N/a	No	
31/05/2017	12	2	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			N/a	No	
12/06/2017	14.9	2	2	Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity		0	1	0	0	1	0			N/a	No	
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: Aggressive cows in field - call before visit to ensure the have been moved out of survey area.
Visit 4 - water lower

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth				2 (M)						

	palmate										
	common frog			50			30				
	common toad	1									
	Great diving beetle					1					
2	smooth	1 (F)									
	palmate										
	common frog			50			20				
	common toad										
	Dragonfly larvae						1				
	Great diving beetle			3							
3	smooth	1 (F)									
	palmate										
	common frog		1	20			15				
	common toad	3									
	Dragonfly larvae						1				
	Stickleback	20					10				
	Great diving beetle	5									
4	smooth										
	palmate										
	common frog	1					25				
	common toad										
	Stickleback					4					
5	smooth	1									
	palmate										
	common frog	2									
	common toad	1	1								
6	smooth	1(F)									
	palmate										
	common frog	9									
	common toad										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TF9614-155					Torch power:	500,000			No. of traps used in pond:			16				
No. of survey visits to this pond:		6		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	1	1	0	0				Yes	No	
24/04/2017	5.1	2	2	Adult totals:	0			1			0					
(2) Date:	Air temp	Veg cover	Turbidity		2	3	0	0	0	0				N/A	No	
03/05/2017	7.8	2	2	Adult totals:	5			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		6	6	0	3	3	0				N/A	No	
16/05/2017	14.6	2	2	Adult totals:	12			6			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	2	0	1	0	0				N/a	No	
31/05/2017	12	2	2	Adult totals:	2			1			0					
(5) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				N/a	No	
12.06.17	14.9	2	2	Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				N/a	No	
19.06.17	20	2	2	Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									12							

Comments and constraints: Aggressive cows in field - call before visit to ensure they have been moved out of survey area.
 Visit 1: Partial sighting of GCN - sex indeterminate. Small, so recorded as immature (although unlikely to be a 2017 juvenile).
 Visit 2: Male GCN spotted during torching had unusual coloration - orange pattern extended right up its flanks to the crest.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										Y

	palmate																			
	common frog																			
	common toad																			
	other _____																			
2	smooth	2 (F)																		
	palmate																			
	common frog																			
	common toad																			
	Dragonfly larvae					2														
Great diving beetle	1				1															
3	smooth	4 (F)																		
	palmate																			
	common frog	1																		
	common toad																			
	Dragonfly larvae					1														
Great diving beetle	4						1													
4	smooth	2f																		
	palmate																			
	common frog	4																		
	common toad	1																		
	Stickleback							1												
5	smooth																			
	palmate																			
	common frog					4														
	common toad	1																		
6	smooth																			
	palmate																			
	common frog																			
	common toad																			

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9614-156					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			10							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
20/04/2017	6.5	3	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
03/05/2017	8	3	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
16/05/2017	13.2	3	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
31/05/2017	12	3	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: 6 BT only used during visit 1. Need to climb barbed wire fence to access. Dense vegetation in some areas, so netting also used.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	(Y/N)
1	smooth	1 (F)									

	palmate											
	common frog						3					
	common toad											
	Stickleback				3			1				
2	smooth											
	palmate											
	common frog											
	common toad											
	Great diving beetle				3	3						
	Stickleback				2							
3	smooth											
	palmate											
	common frog						5					
	common toad											
	Stickleback	15										
4	smooth				2							
	palmate											
	common frog	1										
	common toad											
	other_____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TF9614-157					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		6		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No
20/04/2017	6.5	4	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				Yes	No
03/05/2017	8	4	3	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0							N/A	No
16/05/2017	13	4	3	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
31/05/2017	12	3	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
12.06.17	14.9	3	3	Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
19.06.17	20	3	3	Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: Visit 2: GCN eggs found at southern end of pond. Visit 3: water vole observed.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate												
	common frog					5							
	common toad												
	Stickleback	5			5								
2	smooth												
	palmate												
	common frog					10							
	common toad												
	Great diving beetle						3						
	Stickleback	2			1								
3	smooth				2 (M) 1 (F)								
	palmate												
	common frog	1		20	30								
	common toad					5							
	Dragonfly larvae					1							
	Stickleback	50			4								
4	smooth												
	palmate												
	common frog	2		30+									
	common toad						30+						
	Stickleback	1											
5	smooth												
	palmate												
	common frog		30+										
	common toad												
6	smooth												
	palmate												
	common frog			10+									
	common toad												

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG0115-193					Torch power:			No. of traps used in pond:								
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No	
24/04/2017	4.2	1	3	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
03/05/2017	8.2	4	3	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
16/05/2017	13.9	4	3	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No	
31/05/2017	12	4	3	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									0							

Comments and constraints: Only 1/4 of pond can be surveyed due to dense vegetation. Netting used due to dense sedge cover along accessible section of pond.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	

1	smooth										
	palmate										
	common frog										
	common toad										
	Great diving beetle		2								
2	smooth			1(F)							
	palmate										
	common frog								1		
	common toad										
	Great diving beetle							5			
3	smooth										
	palmate						1(F)				
	common frog			5		2					
	common toad										
	other_____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other_____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2130-313					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		0		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.
(1) Date:	Air temp	Veg cover	Turbidity												
19/04/2017				Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):									0						

Comments and constraints: Pond NOT accessible. No surveys undertaken. eDNA not possible as can't take sample.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate											
	common frog											
	common toad											
	other _____											
2	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
3	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
4	smooth											
	palmate											
	common frog											
	common toad											
	other _____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2631-336					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0				No	No
18/04/2017	5.2	3	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
04/05/2017	8.2	4	3	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	0	No	No
22/05/2017	7.5	4	3	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No
05/06/2017		4	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):									0						

Comments and constraints: Visit 2: netting also used due to density of vegetation.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate								
	common frog		500		25				
	common toad								
	Great diving beetle			5	2				
	stickleback	5		5					
2	smooth								
	palmate								
	common frog		100	40				20	
	common toad								
	Damselfly nymph					2			
	stickleback			15			5		
3	smooth								
	palmate								
	common frog		100			30		50	
	common toad								
	stickleback	50					10		
4	smooth								
	palmate								
	common frog	1	15			2			
	common toad								
	stickleback				2				

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae found? (any method)
TG2631-337					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			16							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
18/04/2017	5.2	3	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
04/05/2017	8.2	4	4	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
22/05/2017	9.3	4	4	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No
05/06/2017		4	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):								0							

Comments and constraints: Visit 2: netting also used due to density of vegetation. Visit 4 - veg grown sig

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth	1(F)									

	palmate								
	common frog								
	common toad								
	Great diving beetle			5					
	Stickleback	3		8					
2	smooth								
	palmate								
	common frog					3		10	
	common toad								
	Great diving beetle			3					
	stickleback			1					
3	smooth	1 (M) 2 (F)		7 (M) 1 (F)			1 (M)		Y
	palmate								
	common frog	1	10			3		5	
	common toad								
	Stickleback	5					10		
	Great diving beetle	1		1			1		
4	smooth	3							
	palmate								
	common frog	1	20+		2				
	common toad								
	stickleback	20+		3					

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2631-338					Torch power:	No. of traps used in pond:									
No. of survey visits to this pond:		4			500,000			16							
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
18/04/2017	5.4	2	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
04/05/2017	8.2	3	4	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
22/05/2017	10.2	3	4	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
05/06/2017		3	4	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints:

Visit No.	Species	Torch			Bottle-trap			Net			Egg search
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	(Y/N)
1	smooth										

	palmate												
	common frog												
	common toad												
	Roach	3											
2	smooth												
	palmate												
	common frog												
	common toad												
	Roach	50											
3	smooth												
	palmate												
	common frog												
	common toad												
	Roach	25											
4	smooth												
	palmate												
	common frog												
	common toad												
	other _____												

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG2631-339					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		4		500,000			16								
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
18/04/2017	5.2	3	3	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
04/05/2017	8.2	3	3	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
22/05/2017	11.6	4	3	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0			0	0	0	No	No	
05/06/2017		4	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: Visit 4 - veg grown significantly

Visit No.	Species	Torch			Bottle-trap			Net			Egg search
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	(Y/N)
1	smooth										

	palmate									
	common frog			10						
	common toad					3				
	Great diving beetle			4	2					
	Stickleback	3		5						
2	smooth									
	palmate									
	common frog					2				
	common toad					15				
	Stickleback	2		3			2			
3	smooth									
	palmate									
	common frog					15			2	
	common toad									
	Stickleback			5						
4	smooth									
	palmate									
	common frog				2					
	common toad									
	Stickleback	3		2						

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG3630-410					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		4		500,000			4								
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
18/04/2017	4.5	4	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
04/05/2017	7.1	4	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
22/05/2017	9.2	4	2	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
05/06/2017		4	2	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: Only accessible from southern end. Dense reeds obscure the rest. Accessed via field from south. Torching limited at this pond, netting not possible. Visit 4 - pond is shallower than previously.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	(Y/N)
1	smooth										

	palmate												
	common frog												
	common toad												
	other _____												
2	smooth												
	palmate												
	common frog												
	common toad												
	other _____												
3	smooth												
	palmate												
	common frog												
	common toad												
	other _____												
4	smooth												
	palmate												
	common frog												
	common toad												
	other _____												

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)
TG1928-297					Torch power:			No. of traps used in pond:							
No. of survey visits to this pond:		4		500,000			16								
Sex/life stage:				Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.			
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
25/05/2017	2	2	2	Adult totals:	0			0			0				
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
08/05/2017	8	2	2	Adult totals:	0			0			0				
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0			No	No	
23/05/2017	15.1	2	3	Adult totals:	0			0			0				
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0	0	0	0	0	0	No	No	
06/06/2017	12	2	3	Adult totals:	0			0			0				
(5) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(6) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(7) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
(8) Date:	Air temp	Veg cover	Turbidity												
				Adult totals:	0			0			0				
Peak adult count for this pond in any one visit (by torch, trap or net):							0								

Comments and constraints: Visit 1: only 15 traps used. Visit 4 - pond has dried significantly, only 4 traps used

Visit No.	Species	Torch			Bottle-trap			Net			Egg search
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	(Y/N)
1	smooth										

	palmate										
	common frog										
	common toad										
	Great diving beetle	3			2	2					
2	smooth	1 (F)			2 (M)						
	palmate										
	common frog										
	common toad										
	Great diving beetle	8									
3	smooth				2 (M)						
	palmate										
	common frog										
	common toad										
	Great diving beetle				2		1				
4	smooth										
	palmate										
	common frog	1									
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG1928-298					Torch power:			No. of traps used in pond:								
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No	
25/05/2017	3	4	3	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No	
08/05/2017	8.2	4	3	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No	
23/05/2017	17.8	4	3	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No	
06/06/2017	12	2	3	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):									0							

Comments and constraints: Visit 1: No bottle-trapping due cattle in the field. Visit 2: too shallow to BT. Active mallard nest with chicks observed in centre of pond. Be careful to avoid disturbance on future visits.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	

1	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
2	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
3	smooth										
	palmate										
	common frog										
	common toad										
	other _____										
4	smooth										
	palmate										
	common frog										
	common toad										
	other _____										

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)		
TG1928-293					Torch power:	No. of traps used in pond:											
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.		
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No		
25/05/2017	1.8	3	3	Adult totals:	0			0			0						
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No		
08/05/2017	8	3	3	Adult totals:	0			0			0						
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No		
23/05/2017	15	3	4	Adult totals:	0			0			0						
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0	No	No		
06/06/2017	12	3	4	Adult totals:	0			0			0						
(5) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:	0			0			0						
(6) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:	0			0			0						
(7) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:	0			0			0						
(8) Date:	Air temp	Veg cover	Turbidity														
				Adult totals:	0			0			0						
Peak adult count for this pond in any one visit (by torch, trap or net):									0								

Comments and constraints: No bottle-trapping due cattle in the field. Rushes obscuring 80% of pond margin. NB: take care with standing on rushes - water very deep underneath.

Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										

	palmate											
	common frog											
	common toad											
	other _____											
2	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
3	smooth											
	palmate											
	common frog											
	common toad											
	other _____											
4	smooth											
	palmate											
	common frog											
	common toad											
	other _____											

Pond reference - enter in box below:				Method:	Torch			Bottle-trap			Net			Egg search eggs found?	Larvae larvae found? (any method)	
TG2631-335					Torch power:			No. of traps used in pond:								
No. of survey visits to this pond:		4		Sex/life stage:			Male	Female	Imm.	Male	Female	Imm.	Male	Female	Imm.	
(1) Date:	Air temp	Veg cover	Turbidity		0	0	0								No	No
04/05/2017	8.2	1	1	Adult totals:	0			0			0					
(2) Date:	Air temp	Veg cover	Turbidity		0	0	0								No	No
22/05/2017	15.5	3	1	Adult totals:	0			0			0					
(3) Date:	Air temp	Veg cover	Turbidity		0	0	0								No	No
05/06/2017		3	3	Adult totals:	0			0			0					
(4) Date:	Air temp	Veg cover	Turbidity		0	0	0				0	0	0		No	No
13/06/2017	16.4	4	3	Adult totals:	0			0			0					
(5) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(6) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(7) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
(8) Date:	Air temp	Veg cover	Turbidity													
				Adult totals:	0			0			0					
Peak adult count for this pond in any one visit (by torch, trap or net):					0											

Comments and constraints: BT not possible as pond is lined. Netting not necessary as pond is very clear and vegetation free (therefore two techniques used only).
Visit 4 - layer of thick algae covering pond surface; netting undertaken in these areas.



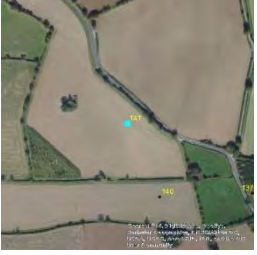
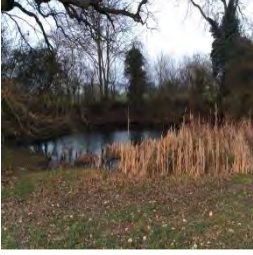

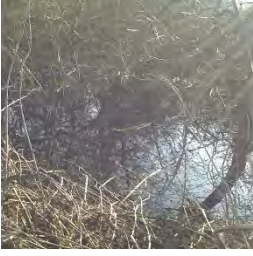
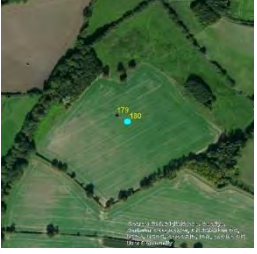





Visit No.	Species	Torch			Bottle-trap			Net			Egg search (Y/N)
		adult	juvenile	tadpole	adult	juvenile	tadpole	adult	juvenile	tadpole	
1	smooth										Y





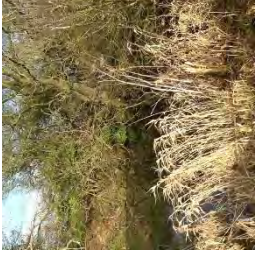



	palmate										
	common frog			200							
	common toad										
	other _____										
2	smooth										Y
	palmate										
	common frog	2		200							
	common toad										
	other _____										
3	smooth										
	palmate										
	common frog	3		20+							
	common toad										
	other _____										
4	smooth										
	palmate										
	common frog	1		10+							
	common toad										
	other _____										











22.10 Annex C: Plates

Table 22.5 Plates







Pond	Map Thumbnail	Photo
TF9109-81		
		
TF9011-145		
TF9010-50		
TF9614-156		

Pond	Map Thumbnail	Photo
TF9614-157		
TG0115-193		
TF9412-110		
TG0316-223		
TG0417-228		
TG0518-244		

Pond	Map Thumbnail	Photo
TG0721-256		
Tf9010-24		
		
TG2932-352		
		

Pond	Map Thumbnail	Photo
TG2932-350		
TG2932-351		
TG2932-348		
TG2931-353		
TG3630-410		
TG2130-313		

Pond	Map Thumbnail	Photo
TG2130-316		
TG2130-314		
TG2230-322		
TG2230-321		
TG2230-320		

Pond	Map Thumbnail	Photo
TG2632-336		
TG2632-337		
TG2731-339	 <p data-bbox="496 1126 619 1155">ID_393.jpg</p>	
TG2731-338		
TG2631-335		

Pond	Map Thumbnail	Photo
TG0721-264	