

West Burton Solar Project

Environmental Statement Appendix 9.6: Otter and Water Vole Survey Report

Prepared by: Clarkson & Woods
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OTTER AND WATER VOLE SURVEY REPORT
WEST BURTON SOLAR PROJECT

carried out by



commissioned by

WEST BURTON SOLAR PROJECT LTD.

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OTTER AND WATER VOLE SURVEY REPORT

WEST BURTON SOLAR PROJECT

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The information, data and advice which has been prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report and its contents remain the property of Clarkson and Woods Ltd. until payment has been made in full.



1 INTRODUCTION

- 1.1.1 Clarkson and Woods Ltd. was commissioned by West Burton Solar Project Ltd to carry out otter and water vole surveys for the West Burton Solar Project. The scheme broadly comprised three Sites: West Burton 1, West Burton 2 and West Burton 3, situated in the West Lindsey District of Central Lincolnshire. These parcels are referred to hereafter as 'the Sites', or individually as given above. Proposals comprise the development of an NSIP-scale solar park, containing solar energy production and storage components.
- 1.1.2 Physical investigations of ditches and watercourses at the Sites to look for evidence of riparian mammals and to appraise their suitability to support them were carried out first in September and October 2021 and again in April and May 2022. Surveys followed a scope that was agreed through consultation with Natural England and the Lincolnshire Wildlife Trust following the survey methodology specified in the Water Vole Mitigation Handbook¹.
- 1.1.3 Unless the client indicates to the contrary, information on the presence of species collected during the surveys will be passed to the county biological records centre in order to augment their records for the area. This is in line with the CIEEM code of professional conduct².

1.2 Aims, Scope and Limitations

- 1.2.1 Surveys for otters and water voles were undertaken to establish species presence or likely absence to ensure that the works pertaining to the solar Sites are carried out in line with relevant legislation, and to inform an appropriate approach to mitigation during the construction and operational phases of the Scheme.
- 1.2.2 This report details the methods and results of the surveys and provides an overview of the potential impacts on otters and water voles that could result from the proposals, to inform the layout of the Scheme.
- 1.2.3 This information will be used within the eventual West Burton Solar Project Environmental Statement to:
- Inform the ecological evaluation of the habitats used by water voles and otters;
 - to characterise the impacts on them considered likely to result from the Scheme;
 - to establish any avoidance and mitigation measures required to minimise impacts; and
 - to determine any residual effects on water voles and otters post-mitigation which are considered likely to occur.
- 1.2.4 While the installation of below-ground electrical cabling will be required beyond the boundaries of the Sites in order to connect the disparate land parcels both to one another and to the National Grid, relevant and proportionate ecological baseline information for the cable route element will be presented within a separate document.

1.3 Site Description Summary

- 1.3.1 West Burton 1, 2 and 3 are located within the West Lindsey District, Lincolnshire. They are situated within 8km of each other and close to the settlements of Broxholme (West Burton 1), Ingleby (West Burton 2) and Brampton (West Burton 3). The three Sites have been mapped in Figure 1.
- 1.3.2 West Burton 1, 2 and 3 predominantly comprise large, open and generally flat arable fields characterised by winter-sown cereal crops with some fields of permanent pasture (West Burton 2). Fields in all sites are typically bounded by a network of managed hedgerows and ditches with narrow field margins.
- 1.3.3 On-site habitats are typical of the surrounding landscapes, which are dominated by arable farmland and occasional pasture grassland interspersed with small settlements and farmsteads linked by minor and single-track roads. Although the surrounding landscape is typically flat, the 'Lincoln Cliff' approximately 3km to the east of West Burton 1 is a significant north-south escarpment. The River Trent is located 1.4km west of West Burton 3 and flows north towards the Humber Estuary.

¹ Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).

² Code of Professional Conduct. CIEEM, January 2019.



1.3.4 While no woodland is present within the Sites, several small stands of managed and unmanaged woodland are present adjacent and in the surrounding landscape, often the result of historical game management. Standing water is generally absent from the Sites and their surroundings following the in-filling of traditional livestock drinking ponds. However, a very small number of agricultural pools/pits, decoy ponds or managed recreational fisheries are present. Flowing water occurs occasionally in proximity to the Sites. These include: the River Till adjacent to the eastern boundary of West Burton 2 and 0.4km west of West Burton 1; and the River Trent running 1.4km west of West Burton 3. Various feeder streams for the above watercourses are managed as agricultural drainage ditches within or adjacent to the Sites and regularly dry out.

1.4 Quality Assurance

1.4.1 All ecologists employed by Clarkson and Woods are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow the Institute's Code of Professional Conduct³ when undertaking ecological work.

1.4.2 The competence of all field surveyors has been assessed by Clarkson and Woods with respect to the CIEEM Competencies for Species Survey (CSS)⁴.

1.4.3 This report has been prepared in accordance with the relevant British Standard: *BS42020: 2013 – Biodiversity: Code of Practice for Planning and Development*⁵. It has been prepared by an experienced ecologist who is a member of CIEEM. The report has also been subject to a two stage quality assurance review by appropriately experienced ecologists who are full members of CIEEM.

1.5 Assessment Scope / Consultation

1.5.1 The following statutory bodies were consulted to agree the appropriate scope of the otter and water vole surveys for the project.

- **Natural England** – Advisor assigned at onset of consultation. Paid-for Discretionary Advice Service available outside of statutory consultation process.
- **Lincolnshire Wildlife Trust** – Principal adviser to West Lindsey District Council on ecological matters.

1.5.2 No concerns were raised by these statutory bodies regarding the scope of surveys discussed.

³ CIEEM (2013). *Code of Professional Conduct*. [REDACTED]

⁴ CIEEM (2013). *Competencies for Species Survey (CSS)*. [REDACTED]

⁵ The British Standards Institution (2013). *BS42020: 2013 – Biodiversity: Code of Practice for Planning and Development*. BSI Standards Ltd.

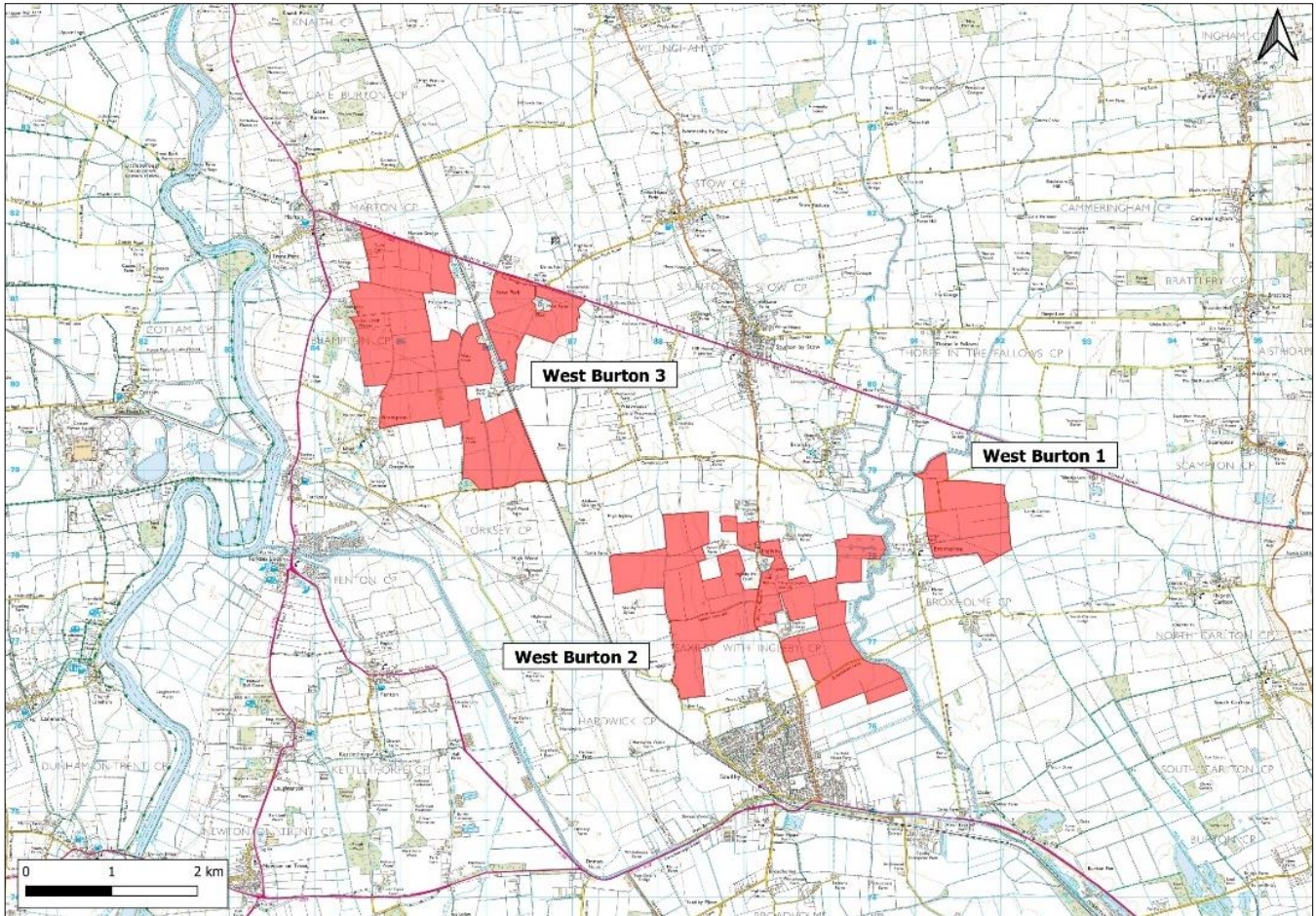


Figure 1. Locations of the Proposed Development Sites West Burton 1-3



2 METHODOLOGY

2.1 Desk Study

- 2.1.1 The Lincolnshire Environmental Records Centre (LERC) was consulted for records of otter and water vole within 2km of the Sites.
- 2.1.2 Clarkson and Woods' own database of ecological records derived from past survey work was also consulted for further locally-relevant data.
- 2.1.3 The Natural England/DEFRA web-based MAGIC map database was also consulted for records of European Protected Species (EPS) licences issued for mitigation projects concerning otter within 5km of the Site.
- 2.1.4 The data presented within this report constitutes a summary of the data obtained from the local records centre. Should additional detail be required on any of the records described within this report Clarkson and Woods Ltd. should be contacted.

2.2 Field Surveys

- 2.2.1 At the time of survey, no specific impacts to watercourses had been identified owing to the stage of Scheme design, therefore it was determined that all ditches across the Sites should be investigated for their habitat suitability to some degree. Surveys comprised the evaluation of habitat suitability for all ditches and watercourses on and adjacent to the Sites, as well as further, detailed 'spot checks' for field signs of the presence of riparian mammals within the channels of those ditches determined to provide a reasonable level of likelihood of presence.
- 2.2.2 All ditches and water courses present at the Sites were inspected during autumn in 2021 (22nd September - 5th October 2021) with a subset of these (containing ditches considered to be of at least poor suitability for riparian mammals) revisited in spring 2022 (26th April - 10th May 2022).
- 2.2.3 Considering the practicalities of surveying an entire ditch network of some 69km, of which at least half of which comprised at least regularly-wetted channels, it was decided that in order to ensure a reasonable effort of survey across the Sites, surveyors completed spot checks between every 50-100m to search for otter and water vole field signs within watercourses. These spot checks involved entering the watercourse to carry out an intensive search of bankside and water-edge habitat for field signs over approximately a 10m length. In this way, an aggregate total of between 3-4km of watercourse was intensively inspected, distributed across the Sites. In addition, particular locations containing features seen to be of potential value to otters for holt-creation or sprainting were searched, such as at the bases of mature trees or at bridges or exposed bankside features.
- 2.2.4 Survey areas also included 200m upstream and downstream beyond Site boundaries where access was available.
- 2.2.5 Surveys followed good practice guidelines contained within Natural England Guidance⁶ (in the case of otters) and Dean et al 2016 in accordance with criteria developed by Strachan et al (2011)⁷ (in the case of water voles). Experienced surveyors assessed watercourses and areas of wetland on Site for their suitability for otters. This included an assessment of water depth, flow-rate, prey availability, water quality, vegetation cover and sheltering opportunities.
- 2.2.6 The presence of water vole droppings (latrines) was the only field sign used to confirm the presence of water voles, although supplemental evidence also included feeding remains, burrows and footprints. Field signs of typical water vole predators such as mink and domestic cats was also recorded. All such field signs were mapped and described when they were recorded.
- 2.2.7 Otter field signs searched for included spraints (droppings), footprints, slides, paths, feeding evidence, holts (underground resting places) or couches (temporary resting places). Mud and sand exposures were searched for spraints and footprints.

⁶ Natural England (updated 15/10/14). *Otters: surveys and mitigation for development projects*.

⁷ Strachan R., Moorhouse T.P. & Gelling M. (2011) *Water Vole Conservation Handbook* 3rd Edition. Wildlife Conservation Research Unit, Oxford.



2.2.8 All information was collected using tablet-based proforma which were georeferenced for later mapping. Each habitat suitability assessment considered the following factors:

- Water quality
- Water-level regime
- Channel dimensions
- Bank type and material
- Vegetation for cover and food sources (water voles)
- Shading and presence of trees/scrub
- Predation (water voles) and competition
- Habitat management

2.2.9 The above criteria were then used to classify the suitability of watercourses separately for water voles and otters as follows:

- Optimal – excellent habitat with good cover, food sources and other elements that would allow a typical water vole population to thrive throughout the year, or form part of an otter core home range/territory.
- Good - habitat with all the essential elements necessary for sustaining a residual water vole or otter population.
- Suitable but poor - habitat with most of the essential features but with some factors likely to prevent suitability throughout the year.
- Negligible - habitat lacking one or more crucial elements for use by water voles or otters. This category does not necessarily preclude the habitat being used for dispersal or occasional occupation/foraging, especially where connected to other suitable habitat, but habitat highly unlikely to sustain a residual population of this species.
- Usually dry – ditches which were considered highly likely to be dry most of the year and as such were not subject to spot checks in autumn 2021 or a second inspection in spring 2022. Again, this does not necessarily preclude their occasional use for dispersal, especially for otters which have large home ranges.

Limitations

2.2.10 Otters have no defined breeding season and the breeding holt is kept deliberately obscure by the female so locating one can be difficult and time consuming.

2.2.11 Where water voles live at low densities or a Site is at the edge of their range, field signs can be difficult to locate. Furthermore, water vole populations may expand over time and consequently may migrate onto Site after surveys are completed.

3 RESULTS

3.1 Desk Study Information

Offer

3.1.1 For **West Burton 1**, fourteen records of otter were present within 2km of the Site, all of which were located along the River Till and its tributaries more than 250m from the Site boundary.

3.1.2 For **West Burton 2**, twenty two records of otters were present within 2km of the Site, four of which were located within the red line boundary and were associated with the River Till and its tributaries. The remaining records were located beyond 250m from the Site boundary.



3.1.3 For **West Burton 3**, seventeen records of otters were present within 2km of the Site, one of which was located 240m west of the Site boundary with the remaining sixteen records located more than 250m from the Site boundary.

3.1.4 Otters are a Species of Principal Importance under the NERC Act (2006).

Water Vole

3.1.5 For **West Burton 1**, 30 records of water vole were present within 2km of the Site, all of which were located more than 250m from the Site boundary.

3.1.6 For **West Burton 2**, 92 records of water vole were present within 2km of the Site, ten of which were located within the red line boundary between 1990 and 2012. 58 records were located beyond 250m of the Site with the exact location of a further 24 records not provided.

3.1.7 For **West Burton 3**, 62 records of water vole were present within 2km of the Site, three of which were located within 250m of the Site boundary and the remaining records location more than 250m from the Site boundary.

3.1.8 Water voles are a Species of Principal Importance under the NERC Act (2006) and listed on the Lincolnshire BAP.

3.2 Field Survey Results

Offer

3.2.1 Watercourses and ditch reference numbers that are referred to in the text below are provided in Appendix B. Results are depicted on Figures 2-4 overleaf. Where no ditch habitat classification is shown, no ditch was present at that location. Table 1, below, shows the breakdown of the ditch network within the Survey Area which were observed as being suitable to otters as well as the presence of observed field signs. This information is discussed in more detail in subsequent paragraphs.

3.2.2 Habitat for otters conducive to forming part of a core territory or sustaining a population was restricted to river corridors, wet ditches and streams present on or adjacent to the Sites. It is considered that otters may use poor or unsuitable habitat for sporadic dispersal, especially where adjacent to more suitable habitat.

Table 1. Offer Field Survey Results Breakdown

Site	Total Length of Ditch Network (m)	%age of Ditch Network 'Suitable but Poor' or Better	%age of Ditch Network Containing Offer Field Signs
West Burton 1	7,971	42.7	6.5
West Burton 2	30,614	45.6	5.4
West Burton 3	31,197	15.1	2.1

West Burton 1

3.2.3 The results of the otter survey for West Burton 1 are presented in Figure 2 below.

3.2.4 West Burton 1 is located approximately 500m east of the River Till and a substantial tributary forms part of the northern boundary of the Site. Several small, wetted ditches were located within the Site of varying suitability for otter.

3.2.5 The tributary of the River Till which forms part of the northern boundary of the Site (D1) was assessed as providing 'good' habitat for otters, although no field signs of otter were recorded along this section of the watercourse.

3.2.6 A number of ditches and ditches associated with hedgerows were assessed as providing suitable but poor habitat for otters including H2, H7, H12, H13, H15, H16, H17, H20. Of these, a cavity with potential to support resting otters was recorded along H16.

3.2.7 Approximately half of the ditches on Site were assessed as being of negligible suitability for otters.

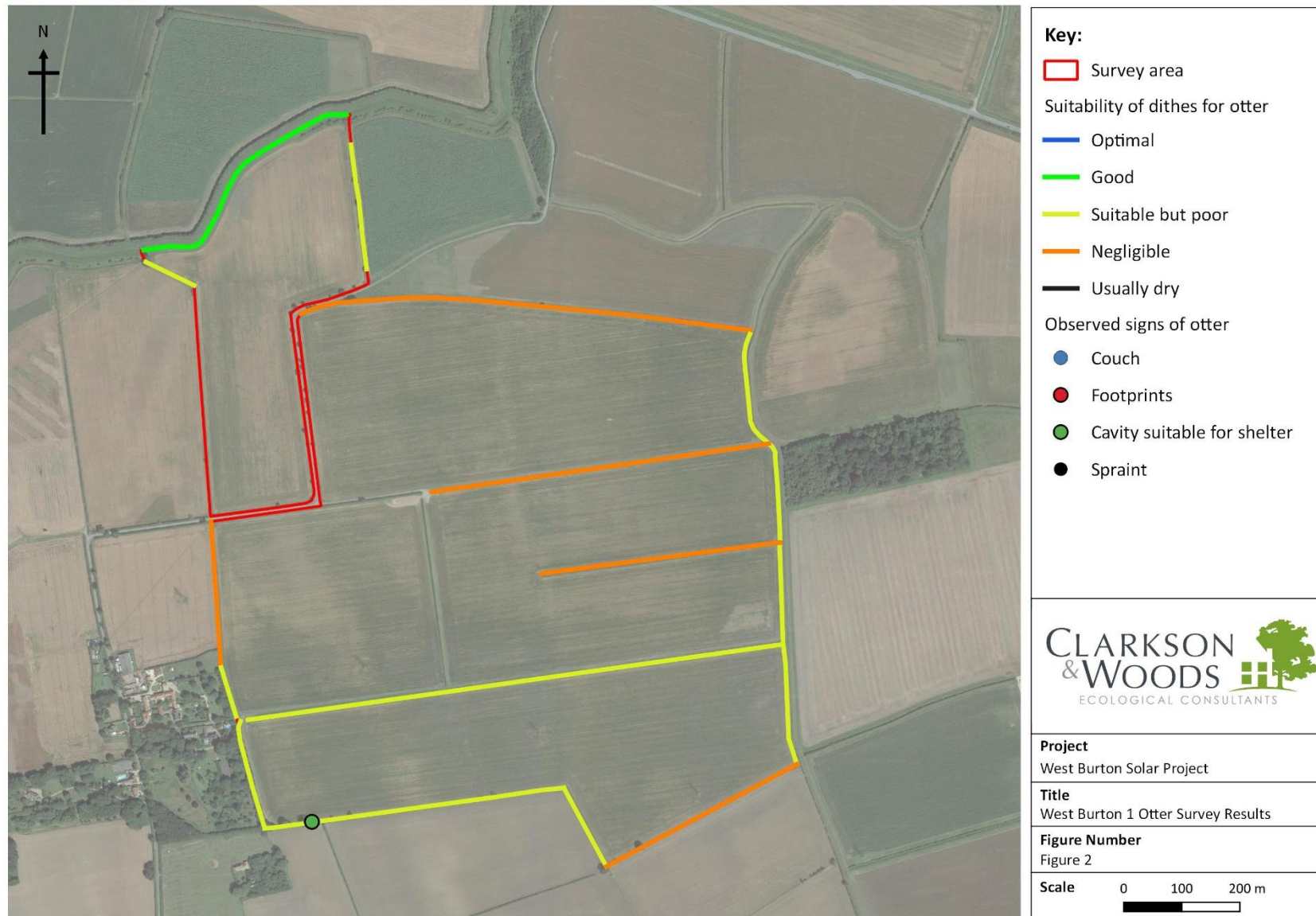


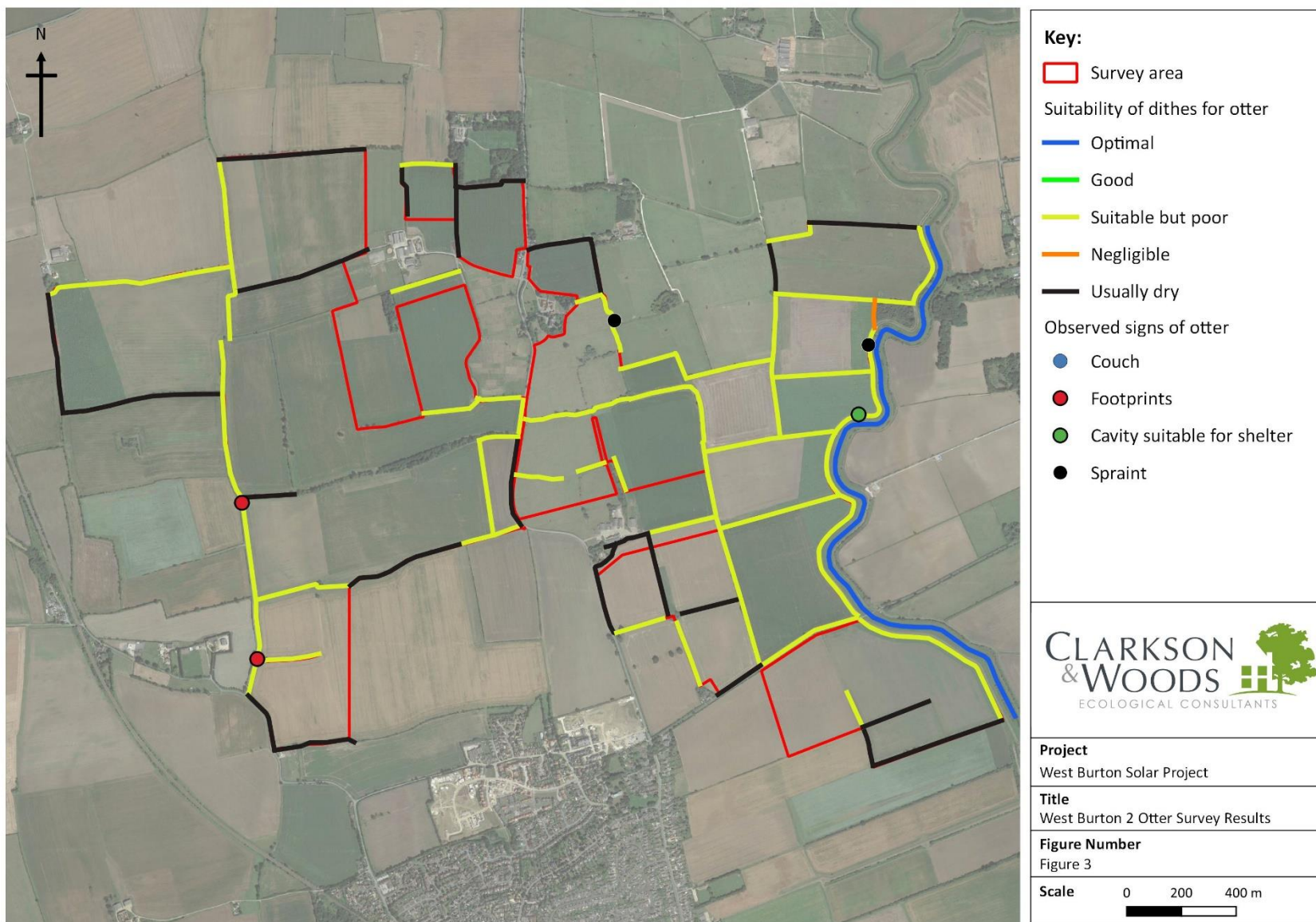
West Burton 2

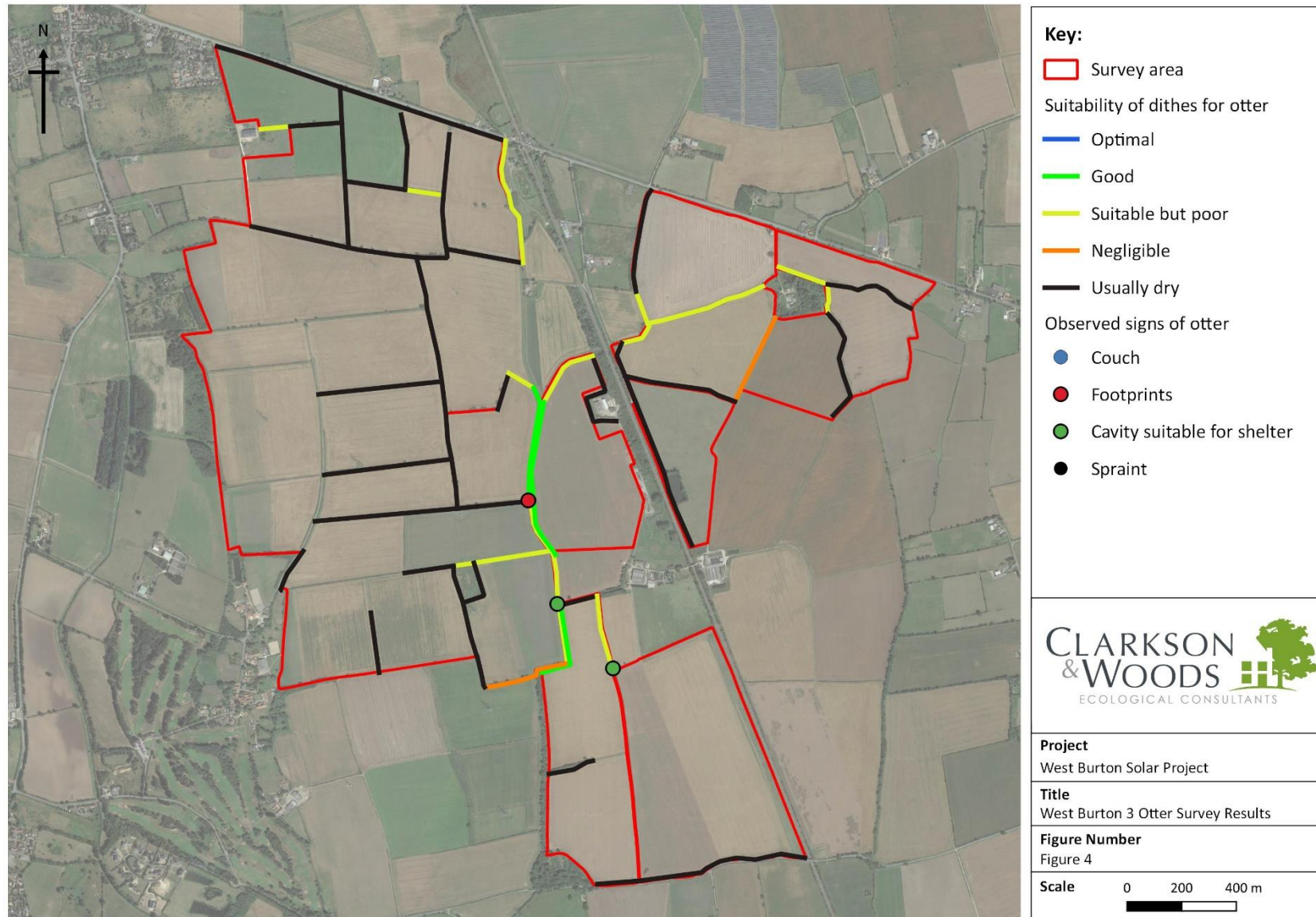
- 3.2.8 The results of the otter survey for West Burton 2 are presented in Figure 3 below.
- 3.2.9 The River Till forms the eastern boundary of the Site and agricultural fields within the Site were generally bounded by moderately wide, wet drainage ditches, typically without hedgerows.
- 3.2.10 The River Till along the eastern boundary was assessed as providing 'optimal' habitat for otter and this stretch was not surveyed for otter field signs as presence was assumed due presence of numerous desk study records.
- 3.2.11 With the exception of the River Till, the remaining ditches were assessed as providing suitable but poor habitat for otters. Of these, otter spraints were recorded along H44 and H57 and footprints were recorded along D2 and D5. A cavity suitable for use by otters was recorded along D17.
- 3.2.12 Approximately a third of the watercourses and ditches were assessed as being either usually dry or of negligible suitability for otters.

West Burton 3

- 3.2.13 The results of the otter survey for West Burton 3 are presented in Figure 4 below.
- 3.2.14 West Burton 3 contained an unnamed tributary of the River Trent which bisected the Site (D2, H26, H27, H41, H42) and a limited number of wetted ditches within field boundaries. T
- 3.2.15 Part of the unnamed tributary of the River Trent which bisected the Site (H26, H27, H41, H42) was assessed as providing 'good' suitability for otter and footprints were recorded along H27 and a cavity suitable for use by otter was recorded along H42.
- 3.2.16 A number of ditches and ditches associated with hedgerows were assessed as providing suitable but poor habitat for otters including H2, H7, D2, D3, D4, D5, D6, D12, D15. Of these, a cavity suitable for use by otter was recorded along D15.
- 3.2.17 The majority of ditches were assessed as being usually dry and the ditches D8 and D13 was assessed as being of negligible suitability.









Water Vole

3.2.18 Watercourses and ditch reference numbers that are referred to in the text below are provided in Appendix B. Results are depicted on Figures 5-7 overleaf. Where no ditch habitat classification is shown, no ditch was present at that location. Table 2, below, shows the breakdown of the ditch network within the Survey Area which were observed as being suitable to water voles as well as the presence of observed field signs. This information is discussed in more detail in subsequent paragraphs.

Table 2. Water Vole Field Survey Results Breakdown

Site	Total Length of Ditch Network (m)	%age of Ditch Network 'Suitable but Poor' or Better	%age of Ditch Network Containing Water Vole Field Signs
West Burton 1	7,971	54.7	5.7
West Burton 2	30,614	42.7	5.2
West Burton 3	31,197	15.2	1.5

West Burton 1

- 3.2.19 The results of the water vole survey for West Burton 1 are presented in Figure 5 below.
- 3.2.20 West Burton 1 is located approximately 500m east of the River Till and a substantial tributary forms part of the northern boundary of the Site. Several small, wetted ditches were located within the Site of varying suitability for water vole.
- 3.2.21 The tributary of the River Till which forms part of the northern boundary of the Site (D1) was assessed as providing 'good' habitat for water voles, and presence of this was confirmed during the survey with numerous latrines, feeding remains and burrows recorded along this stretch. This was the only watercourse within West Burton 1 which was found to have any physical evidence of water vole presence.
- 3.2.22 Ditches associated with H6, H10 and H18 were assessed as being of negligible suitability for water vole as they were usually dry.
- 3.2.23 A number of ditches and ditches associated with hedgerows were assessed as providing suitable but poor habitat for water voles including H2, H7, H12, H13, H14, H15, H16, H17, H20.

West Burton 2

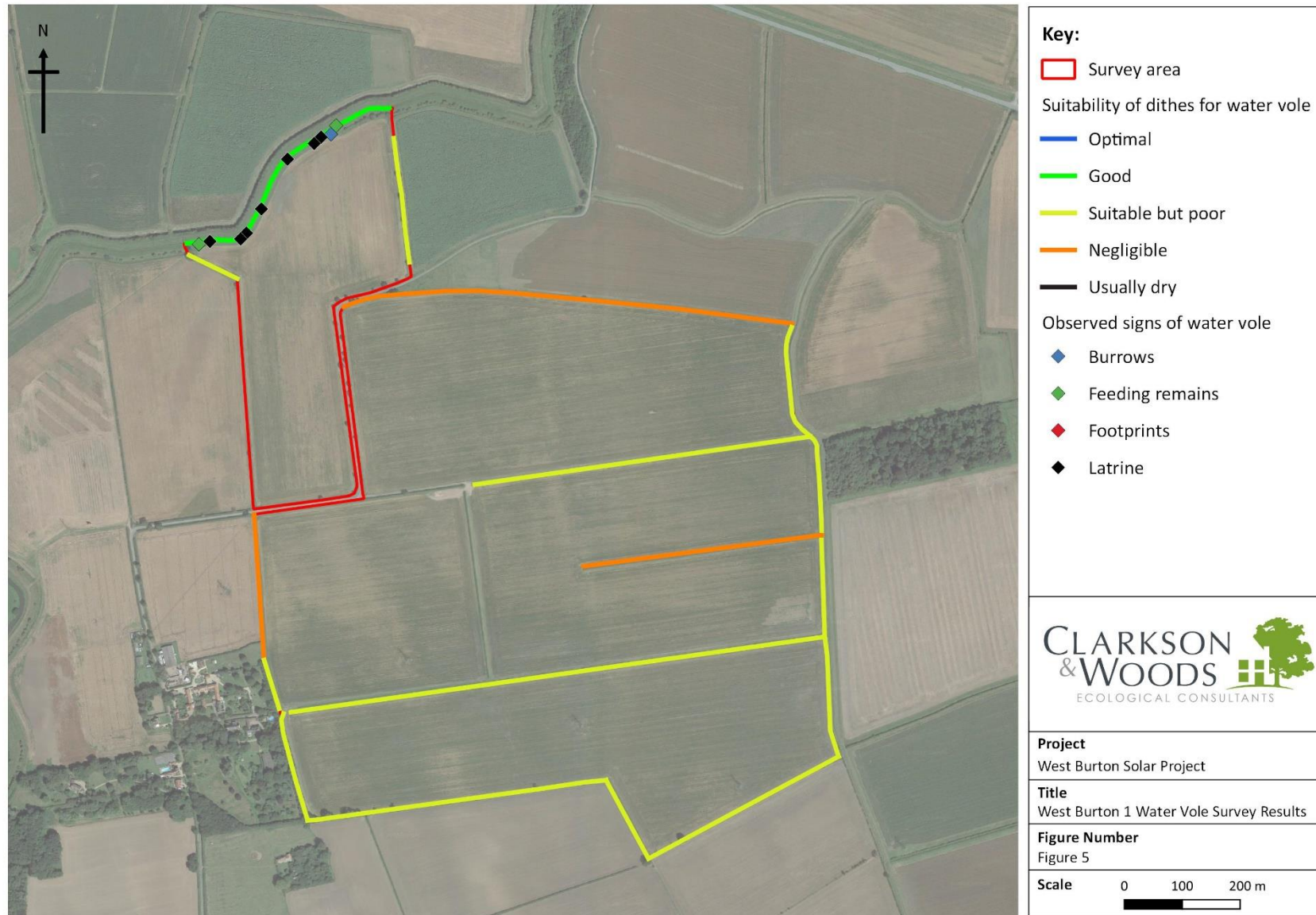
- 3.2.24 The results of the water vole survey for West Burton 2 are presented in Figure 6 below.
- 3.2.25 The River Till forms the eastern boundary of the Site and agricultural fields within the Site were generally bounded by moderately wide, wet drainage ditches, typically without hedgerows. The 5% of the ditch network which contained physical signs of water voles were generally located in the east, associated with the River Till, or along the western boundary along H15 and D16.
- 3.2.26 The River Till was assessed as providing optimal suitability for water voles but was not surveyed for water vole field signs as presence was assumed due presence of numerous desk study records.
- 3.2.27 Ditches D6, D9, D11, D13, D16, D17, H15 were assessed as providing 'good' habitat for water vole. Water vole latrines, feeding remains and burrows were recorded along D16, potential burrows and footprints were recorded along H15 and feeding remains and burrow were recorded along D13.
- 3.2.28 The majority of ditches were assessed as providing suitable but poor habitat for water vole. Of these, feeding remains were recorded along H24 and H43 and potential burrows were recorded along D2 and D2 and potential burrows and footprints were recorded along H29.
- 3.2.29 Approximately a third of the watercourse and ditch network were assessed as either usually dry or of negligible suitability for water voles.

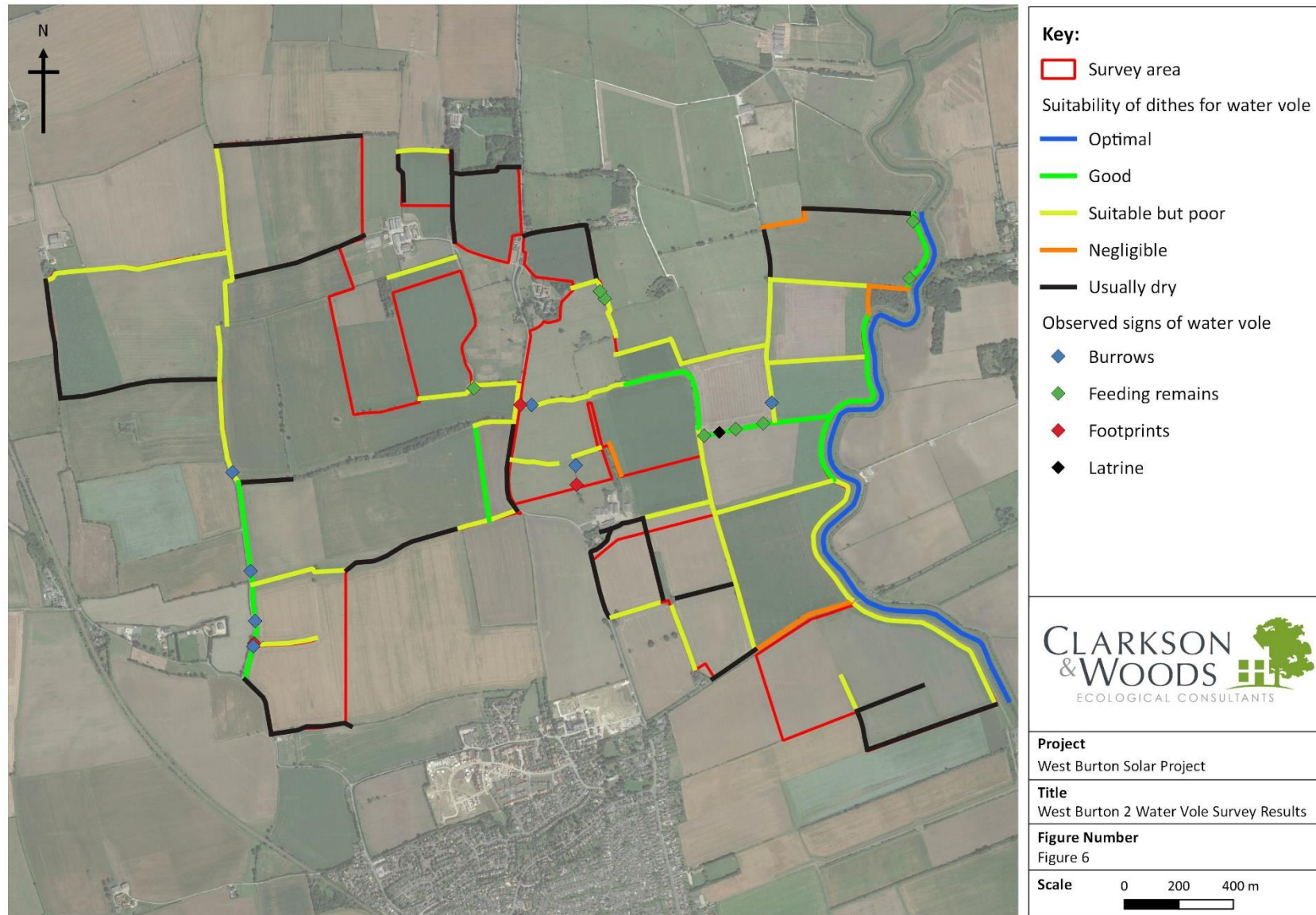
West Burton 3

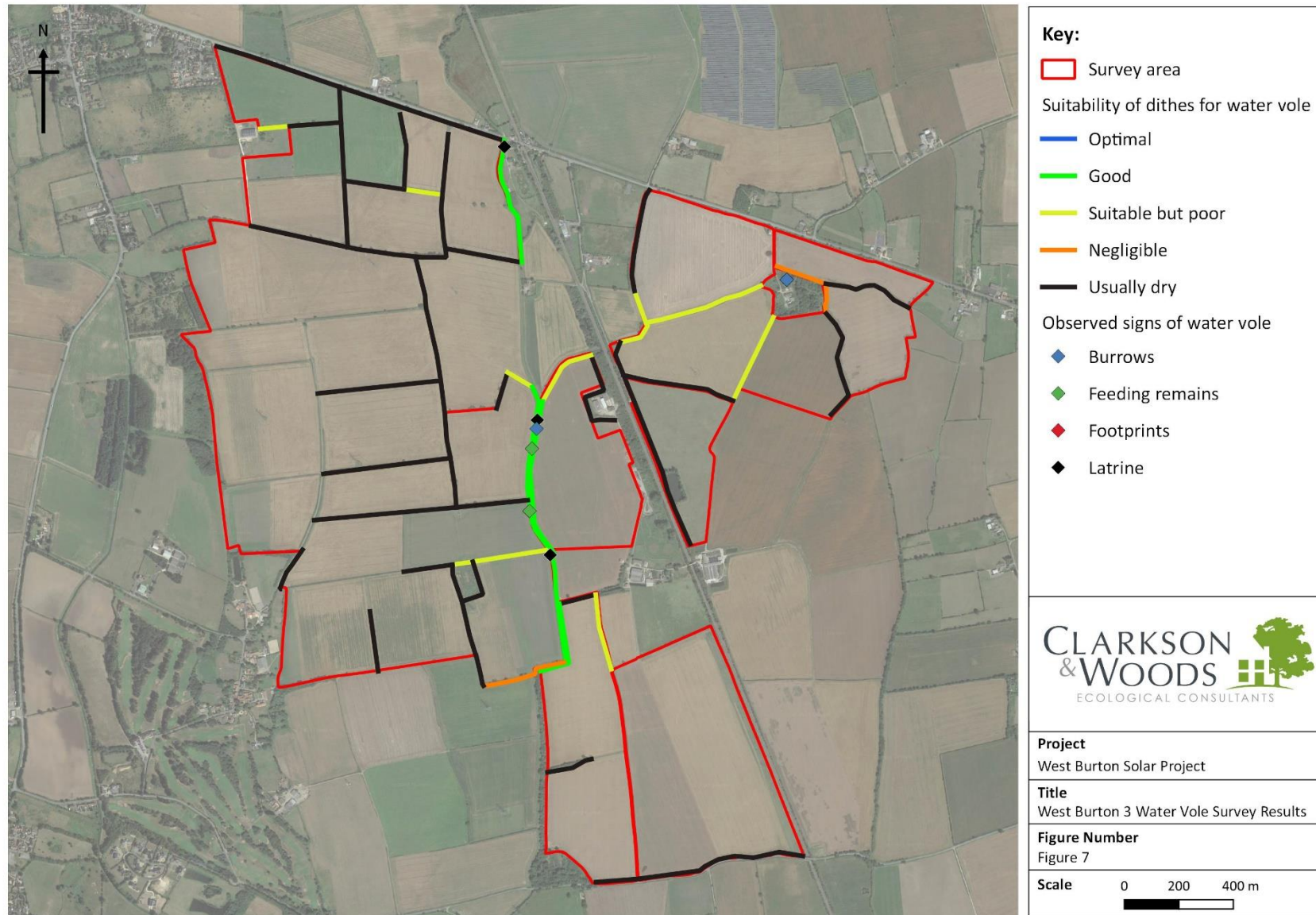
- 3.2.30 The results of the water vole survey for West Burton 3 are presented in Figure 7 below.



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- 3.2.31 West Burton 3 contained an unnamed tributary of the River Trent which bisected the Site north-south (D2, H26, H27, H41, H42) and a limited number of wetted ditches within field boundaries. Water vole signs were concentrated within this central north-south tributary with the only other sign being at the pools associated with the Bishops Palace feature just off site in the north east of the Site.
- 3.2.32 The unnamed tributary of the River Trent which bisected the Site (D2, H26, H27, H41, H42) was assessed as providing 'good' suitability for water vole and latrines and potential burrows were recorded along D2, latrines, feeding remains, burrows and footprints were recorded along H27 and a latrine recorded along H41.
- 3.2.33 A number of ditches and ditches associated with hedgerows were assessed as providing suitable but poor habitat for water vole including D3, D4, D5, D6, D12, D15, H2, H7.
- 3.2.34 Approximately three quarters of ditches were assessed as being either usually dry or of negligible suitability (D6, D13) for water voles.









4 ECOLOGICAL EVALUATION

- 4.1.1 This section provides an analysis of the value of ecological receptors identified as occurring within or in proximity of the site.
- 4.1.2 Otters and water voles are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act 2006. Otters receive their principal legal protection under the 'Habitats Regulations', while water voles are fully protected under the Wildlife and Countryside Act, 1981, and appear on the Lincolnshire Biodiversity Action Plan.
- 4.1.3 Suitable habitat for otter and water vole was restricted to river corridors, wet ditches and streams present on or adjacent to the Sites. Field signs for otter and water vole were recorded along the River Till, tributaries of the River Trent and several wet agricultural drainage ditches within the Site.
- 4.1.4 Considering the presence of otter principally within the larger watercourses at the Sites and relatively limited riparian corridors within the red line boundaries, otters are considered to be of **Local importance** in the context of the Site (see Table 3 below).
- 4.1.5 Water voles were assumed to be present along the Till and field signs confirming presence was recorded along watercourses and agricultural drainage ditches within each of the Sites. Due to the declining population trend nationally and the presence of this species within a number of watercourse / ditches within and adjacent to the Site, this species was considered to be of **District Importance** (see Table 3 below).

Table 3: Ecological Evaluation

Feature	UK status	County status ⁸	Level of activity on site	Ecological Importance
Otter	Scarce and widespread. GB population 11,000 GB IUCN: Least concern. The population has continually increased over the last 25 years and their range is expanding in England following significant declines in population and range in 20 th century.	Otters are present in Lincolnshire and are found on all catchments in the county (except possibly the Ancholme) – including the Rivers Bain, Upper Witham, Welland, Steeping/Lymn, Grantham Canal, Great Eau and Trent Valley. Recent surveys and records suggest that the population in the county is increasing ⁹ .	Recorded present within River Till and several of the larger drainage ditches within West Burton 2 and tributaries of the River Trent within West Burton 3. Not confirmed present within West Burton 1 but good suitability habitat is present. Otters may use less suitable ditches within the Site on occasion for commuting and dispersal.	Local

⁸ Based on information provided by the Lincolnshire Biodiversity Action Plan (2011) <https://www.nelincs.gov.uk/wp-content/uploads/2016/02/201110-LincolnshireBAP-3rd-edition.pdf>



Feature	UK status	County status ⁸	Level of activity on site	Ecological Importance
Water vole	GB population of 132,000. Water voles were formerly widespread and common in England, Wales and Scotland, ranging from Cornwall to the extreme north-east of Scotland. They are still widespread but patchy, and have undergone one of the most serious declines of any mammal in Britain. This long-term decline has continued in the last 10 years. Water voles are vulnerable to extinction in Great Britain, being Endangered in England and Critically endangered in Wales. In Scotland, their status is Near threatened.	The Lincolnshire population is significant to the persistence of the water vole nationally because in Lincolnshire, despite the national trend, they are widespread and the population is one of the most successful in the UK. Recent work on distribution and densities in England has identified two Regional Key Areas in Lincolnshire; one in the Lincolnshire Coastal Grazing Marshes and the other in the Welland and Deeping area.	Assumed presence along River Till and recorded present within a number of more suitable drainage ditches within West Burton 1, 2 and 3.	District

4.2 Potential Sources of Impact

- 4.2.1 Otters and water voles may be impacted through direct harm (to animals or their burrows) or disturbance during any construction activity affecting ditches, watercourses and associated adjacent scrub, hedgerows or woodland habitat.
- 4.2.2 Barriers to movement in the form of severed or blocked/culverted watercourses and linear natural features may cause population fragmentation, however it is not known at this stage how many new ditch/watercourse crossings will be required and the design/form that they will take.
- 4.2.3 Construction activities and, potentially, routine operation and maintenance may cause disturbance to otters and water voles within sheltering locations and accidental harm to their habitat or burrows.
- 4.2.4 Riparian habitat quality is at risk of degradation through pollution resulting from run-off, sediment/dust deposition and contamination are possible during the construction phase.
- 4.2.5 Operational impacts are expected to be minimal as vehicle movements will be infrequent and limited, taking place by and large outside of the installed buffer zones. This will significantly limit the risk of disturbance, pollution and damage impacts.

4.3 Potential Mitigation, Compensation and Enhancement Options

- 4.3.1 The design of the Scheme is such that buffer zones will be installed prior to the onset of the construction phase, limiting movements of construction vehicles, plant, personnel and material within at least 8m (and up to 30m) of every ditch and watercourse.
- 4.3.2 The detail of all protective measures to safeguard the suitability of habitats on Site for otters and water voles would be set out in a Construction Environmental Management Plan (CEMP), or similar. Such protection or mitigation could include pre-construction update surveys, seasonal timing, employment of Horizontal Directional Drilling, an Ecological Clerk of Works and the coverage of a licence from Natural England to permit certain unavoidable works which would directly affect water voles or their burrows.
- 4.3.3 A Landscape and Ecological Management Plan (LEMP) or similar, would secure the favourable management of the Scheme's buffer zones for the duration of the consent, thereby maintaining and potentially enhancing the habitat quality of ditches and watercourses.
- 4.3.4 The opportunity to enhance existing watercourses where otters and/or water voles have been recorded, or those connected to such features which have the potential to support these species, will be explored with advice from local conservation organisations.



APPENDIX A: WILDLIFE LEGISLATION & SPECIES INFORMATION

OTTERS

Otters and their holts are protected in England and Wales under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. This makes it an offence to deliberately kill or injure an otter, or to deliberately disturb an otter such that its ability to breed or rear young, or such that the species' distribution, were significantly affected. It is also an offence to damage or destroy any breeding site or resting place. Intentional or reckless disturbance of otters in their holts, and damage to or obstruction of holts are also offences under the Wildlife and Countryside Act 1981 (as amended). Penalties for offences against otters or their holts include fines of up to £5,000 and/or up to six months in prison.

Any development works which are likely to involve the loss of holts, or which could result in killing of or injury to otters (which are only likely to occur extremely rarely), need to take place under licence. Works which could disturb otters may also be licensable, though this is also rarely the case as the majority of developments on watercourses and coastal areas where otters are present can be carried out in a way which avoids significant disturbance.

Where it is necessary, licences can be obtained from Natural England or the Welsh Government to permit works that would otherwise be illegal, provided it can be demonstrated that the proposed works are needed to protect public health or safety, or for other reasons of overriding public interest including social and economic reasons. It is also necessary to demonstrate that there is no satisfactory alternative to the proposed works, and that the conservation status of otters in the area will be maintained. Appropriate mitigation and post-construction monitoring are therefore a requirement of all licences.

WATER VOLES

Water voles *Arvicola amphibius* receive protection under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to: intentionally kill, injure, or take a water vole; intentionally or recklessly disturb a water vole whilst in its place of shelter; intentionally or recklessly damage, obstruct or destroy a water vole's place of shelter; or intentionally or recklessly obstruct access to a place of shelter. Penalties for offences against water voles include fines of up to £5,000 and/or up to six months in prison.

Works such as watercourse re-profiling, installing culverts, or topsoil stripping close to watercourses and ponds which could result in destruction or obstruction of burrows could be considered reckless, and/or could be considered intentional if water voles are killed or injured, unless measures are taken to minimise the risk of this occurring. Any inadvertent impacts on water voles despite these mitigation measures being in place would be considered an 'incidental result of an otherwise lawful operation' which 'could not reasonably have been avoided' and therefore not an offence.

In practice, mitigation for impacts of development on water voles generally comprise one or more of the following techniques: displacement, in which water voles are encouraged to move to suitable retained habitat by changing the management of areas affected by development; exclusion, where water vole-resistant fencing is provided between a development site and suitable retained habitat allowing animals to be trapped from the development footprint and released elsewhere on the site; and translocation, where animals are trapped from a development site and released on another suitable site nearby. Water vole mitigation proposals, particularly those involving translocation of animals, should be agreed in advance with Natural England or Natural Resources Wales.

PLANNING POLICY IN RELATION TO BIODIVERSITY

The National Planning Policy Framework (NPPF), was published in March 2012 and revised in July 2021. Additional guidance can be found online at <http://planningguidance.planningportal.gov.uk/blog/guidance/>. The NPPF simplifies and collates a number of previous planning documents and outlines the government's objective towards biodiversity.

The NPPF identifies ways in which the planning system should contribute to and enhance the natural and local environment (Paragraph 174), including:

- (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- (b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- (f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. protecting and enhancing valued landscapes, geological conservation interests and soils;

It also emphasises the importance of conserving biodiversity and areas covered by landscape designations (Paragraph 176):



Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

When determining planning applications, the NPPF states that local planning authorities should aim to conserve and enhance biodiversity (Paragraph 175) by applying principles including:

- (a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- (b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- (c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶ and a suitable compensation strategy exists; and
- (d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate..

The following should be given the same protection as habitats sites:

- (a) potential Special Protection Areas and possible Special Areas of Conservation;
- (b) listed or proposed Ramsar sites⁷; and
- (c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

There is a general presumption in favour of sustainable development within the NPPF. It is noted in Paragraph 182 that this presumption does not apply where the plan or project is likely to have a significant effect on a habitat site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

The Natural Environment and Rural Communities Act (2006) states that a public authority must, "in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them".

ECOLOGICAL ENHANCEMENTS

The Natural Environment and Rural Communities Act (2006) states that a public authority must, "in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity can include restoring or enhancing a population or habitat".

In England, the National Planning Policy Framework (NPPF), issued in July 2021, states that the planning system should contribute to "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*;. It also states that "*opportunities to incorporate biodiversity in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*".

UK BIODIVERSITY ACTION PLANS

The UK Biodiversity Action Plan (UK BAP) 2011 is a policy first published in 1994 to protect biodiversity and stems from the 1992 Rio Biodiversity Earth Summit. The policy is continuously revised to combine new and existing conservation initiatives to conserve and enhance species and habitats, promote public awareness and contribute to international conservation efforts. Each plan details the status, threats and unique conservation strategies for the species or habitat concerned, to encourage spread and promote population numbers.

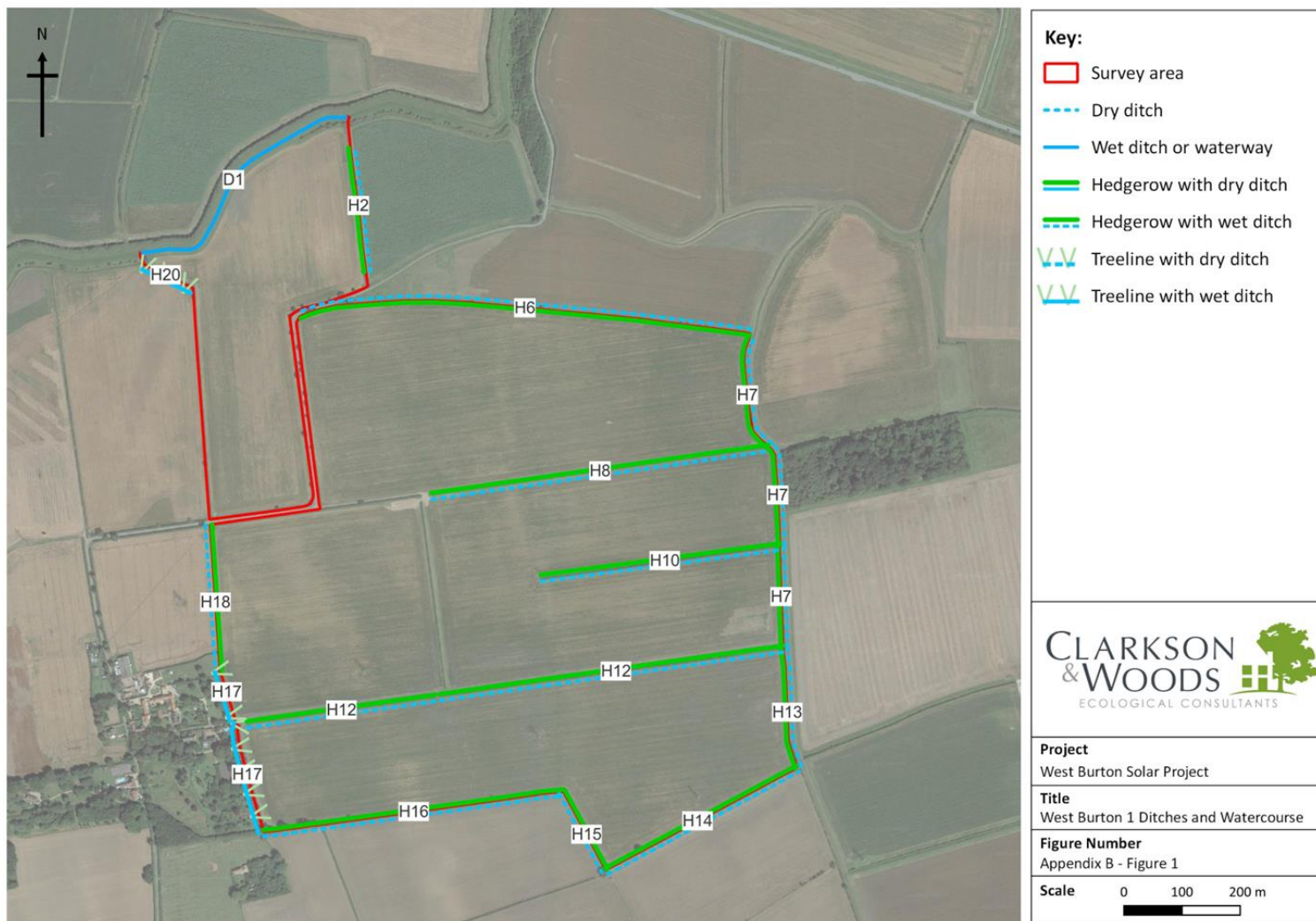
Species or habitats identified as priorities under the UK Biodiversity Action Plan receive some status in the planning process through their identification as Species/Habitats of Principal Importance in England and Wales, under the Natural Environment and Rural Communities (NERC) Act 2006 (as amended).

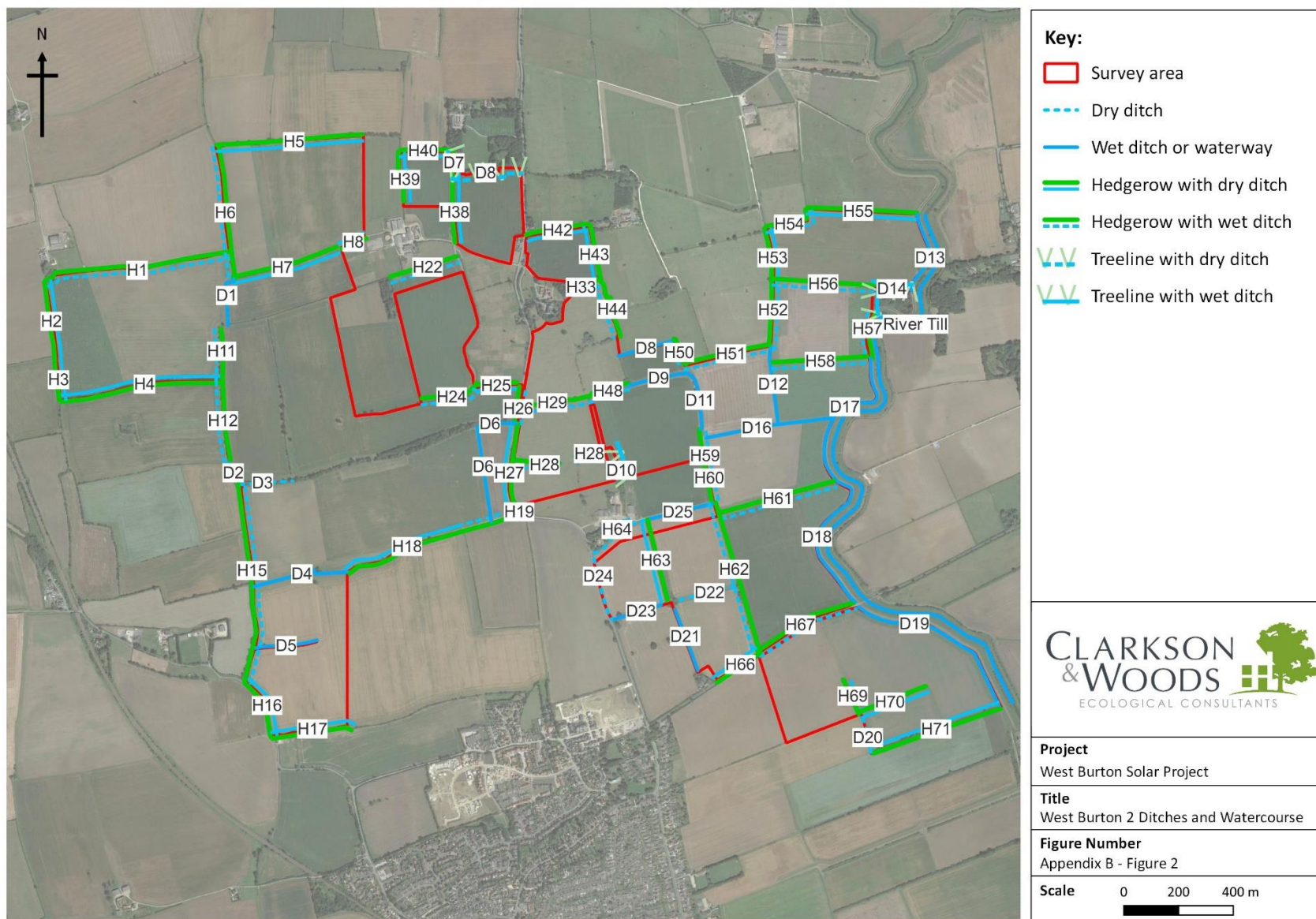


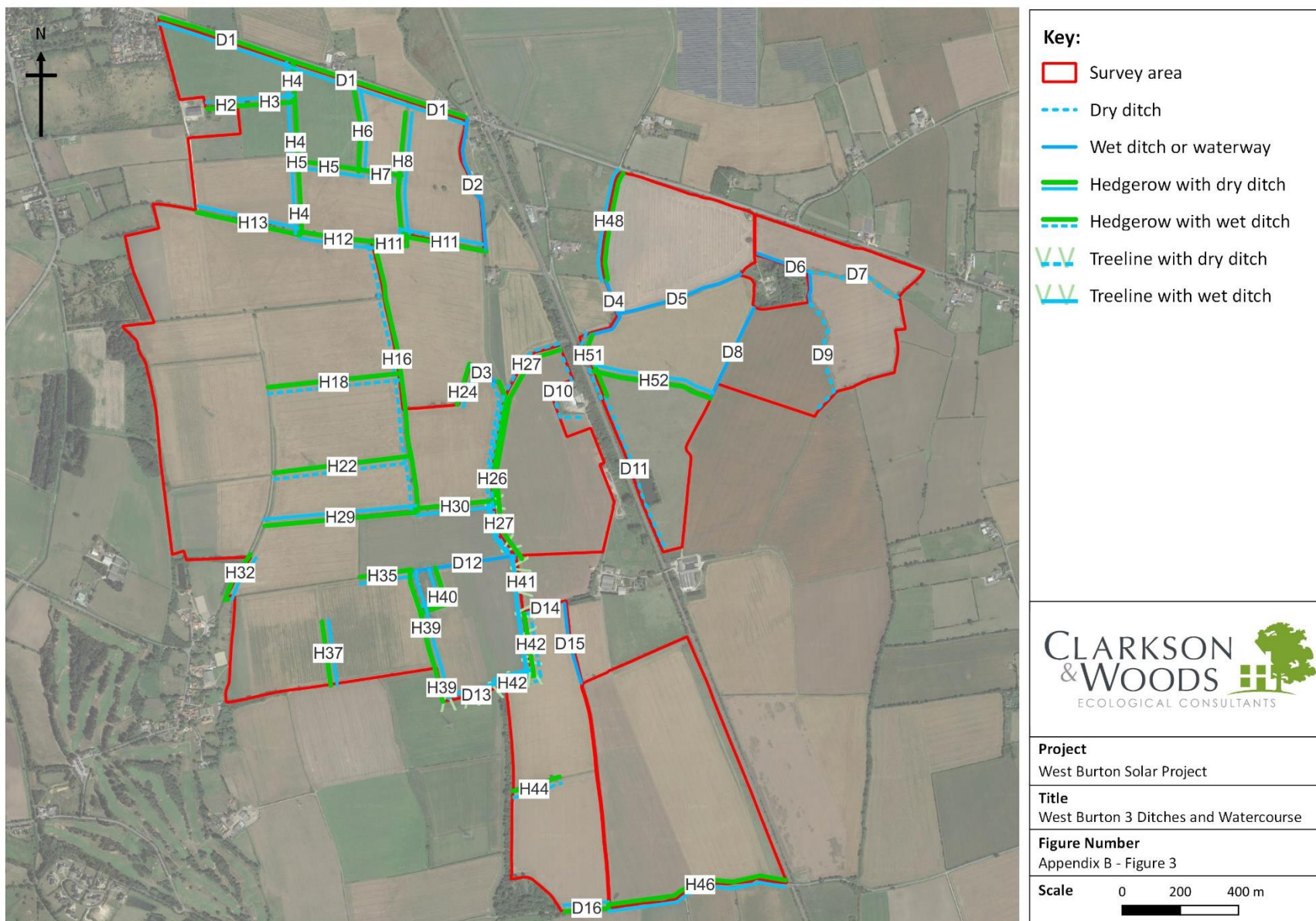
Current planning guidance in England, the National Planning Policy Framework, does not specifically refer to Species or Habitats of Principal Importance, though it includes guidance for conservation of biodiversity in general. Supplementary guidance is available online at <http://planningguidance.planningportal.gov.uk/blog/guidance/> and this guidance indicates that it is 'useful to consider' the potential effects of a development on the habitats or species on the Natural Environment and Rural Communities Act 2006 section 41 list.



APPENDIX B: DITCH AND WATERCOURSE REFERENCE NUMBERS









CLARKSON & WOODS

Clarkson and Woods Ltd.

Overbrook Business Centre,
Poolbridge Road, Blackford,
Somerset BS28 4PA

t: 01934 712500

e: info@clarksonwoods.co.uk

