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LDP-EBD-STR3B.4.H



## WARREN HALL, BROUGHTON, FLINTSHIRE WATER VOLE & OTTER SURVEY 2018

TEP Ref 7016.009

TEP

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Prepared for	Welsh Assembly Government
Prepared by	TEP Ltd
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### Drawings

#### G7016.001 Phase 1 Habitat Survey

## 1.0 General Details

<b>Site Name</b>	Warren Hall, Broughton, Flintshire		
<b>Job Number</b>	7016	<b>Doc. Ref</b>	7016.009
<b>Site Location</b>	Broughton	<b>Central NGR</b>	SJ 32408 62514
<b>Survey Location</b>	The site is bordered to the north by the A5104, to the east by Lesters Lane, and the west and south by Kinnerton Lane. The latter two are relatively small country lanes. The habitats surrounding the site are arable and grazed fields. The warren hall estate lays encompassed by fields and mature tree lines in the central northern boundary of the site.		
<b>Date(s)</b>	<p>23rd May 2018 (Visit 1 pond within the north of the site)</p> <p>1<sup>st</sup> June 2018 (Visit 1; Watercourse in south of site)</p> <p>Both the pond and watercourse were found to be unsuitable for water vole and therefore a second visit was deemed not to be required</p>		
<b>Seasonal Constraints</b>	No seasonal constraints encountered.		
<b>Drawing Ref:</b>	G7016.001.1-5 Phase 1 Habitat Survey		

## 2.0 Introduction

- 2.1 TEP was commissioned by the Welsh Assembly Government in April 2018, to carry out water vole and otter surveys at Warren Hall, Broughton.
- 2.2 The water vole and otter survey forms part of a wider ecological appraisal which is part of a series of phase 1 and phase 2 ecological surveys at Warren Hall, Broughton, Wales, hereafter referred to as 'the site'.
- 2.3 The site is not currently part of a planning proposal and these surveys are to inform future development of the site.

### Site Description

- 2.4 The site consists of a series of poor semi-improved grassland fields, with an area of plantation mixed woodland in the north of the site and an area of plantation broad-leaved woodland in the south of the site. The plantation broad-leaved woodland has numerous patches of bluebells, an ancient woodland indicator species, in the west with a body of running water running west to east through the centre of the woodland.
- 2.5 A body of standing water lies within the site south of Warren Hall. This standing water is surrounded by plantation broad-leaved woodland and is connected to the mixed plantation woodland by an area of marsh/marshy grassland. Most of the fields are bordered by species-poor intact hedgerows, with some fencing and the site perimeters are bordered mostly by native species-rich intact hedgerow. There are scattered trees across the site, mostly along the field boundaries.
- 2.6 The surrounding landscape is farmland with some small developments, Broughton town lies over the A55.



*Photo 1: Pond in north of site*



*Photo 2: Watercourse in south of site*

## Legislation

- 2.7 Otters are internationally protected under The Conservation of Habitats and Species Regulation 2010 (as amended). In England and Wales, water voles and otters are listed on Schedule 5 of the Wildlife and Countryside Act 1981. The act makes it an offence to:
- Intentionally kill, take or injure these species;
  - Possess or control any live or dead, or any part or derivative;
  - Intentionally or recklessly damage or destroy a place of shelter or protection;
  - Intentionally or recklessly disturb whilst it is occupying a structure or place which it uses for shelter or protection;
  - Intentionally or recklessly obstruct access to a place of shelter or protection;
  - Sell, offer for sale, or possess or transport for the purposes of sale, any live or dead, or any part or derivative, or advertising any of these for buying or selling.
- 2.8 A place of shelter used by water voles for protection or shelter is defined as: “A network of active burrows and/or any nests that have been constructed within the burrow system or above ground amongst dense vegetation”.

## 3.0 Methods

### Desktop Study

- 3.1 Desktop records of protected or notable species recorded within a 1km radius of the site were gathered from the Cofnod North Wales Environmental Information Services in June 2018.

### Field Survey

- 3.2 Water vole and otter surveys were undertaken by TEP ecologist Kim Gallaher on 23rd May 2018 of the pond within the north of the site. The watercourse in the south of the site could not be accessed at this time due to landowner not permitting access. This section of the watercourse was surveyed on 1<sup>st</sup> June 2018 by TEP ecologist Lee Greenhough. Both surveyors were accompanied by a health and safety assistant.
- 3.3 The standard methodology as outlined within the latest guidance by Dean *et al.* (2016) was followed to complete a thorough search for evidence which would indicate the presence of water vole and otter both on the site and locally. Evidence of water vole and otter occupation and activity sought included:
- Burrows;
  - Feeding remains;
  - Droppings;
  - Footprints;
  - Other evidence: including runs in vegetation.

### Survey Constraints

- 3.4 The surveys were undertaken in optimum conditions with no survey constraints encountered.

## 4.0 Results

### Desktop Study

- 4.1 Cofnod did not have any records of water vole within 1km of the site. Cofnod has a record of otter 855 m north west of the site, this record is however 19 years old.

### Field Survey

- 4.2 No evidence of water vole or otter was found along the watercourse or the pond during the survey on 23<sup>rd</sup> May 2018 and 1<sup>st</sup> June 2018. No mammalian footprints were found on exposed sediments or bare ground and no runs through the vegetation were visible. No burrows, latrines, spraints, holts or feeding remains were identified. The banks of the watercourse and the pond were very shallow with no potential to support water vole.
- 4.3 As the banks of the watercourse and pond were found to be unsuitable for water vole a second survey was deemed to not be required.



## 5.0 Evaluation and Recommendations

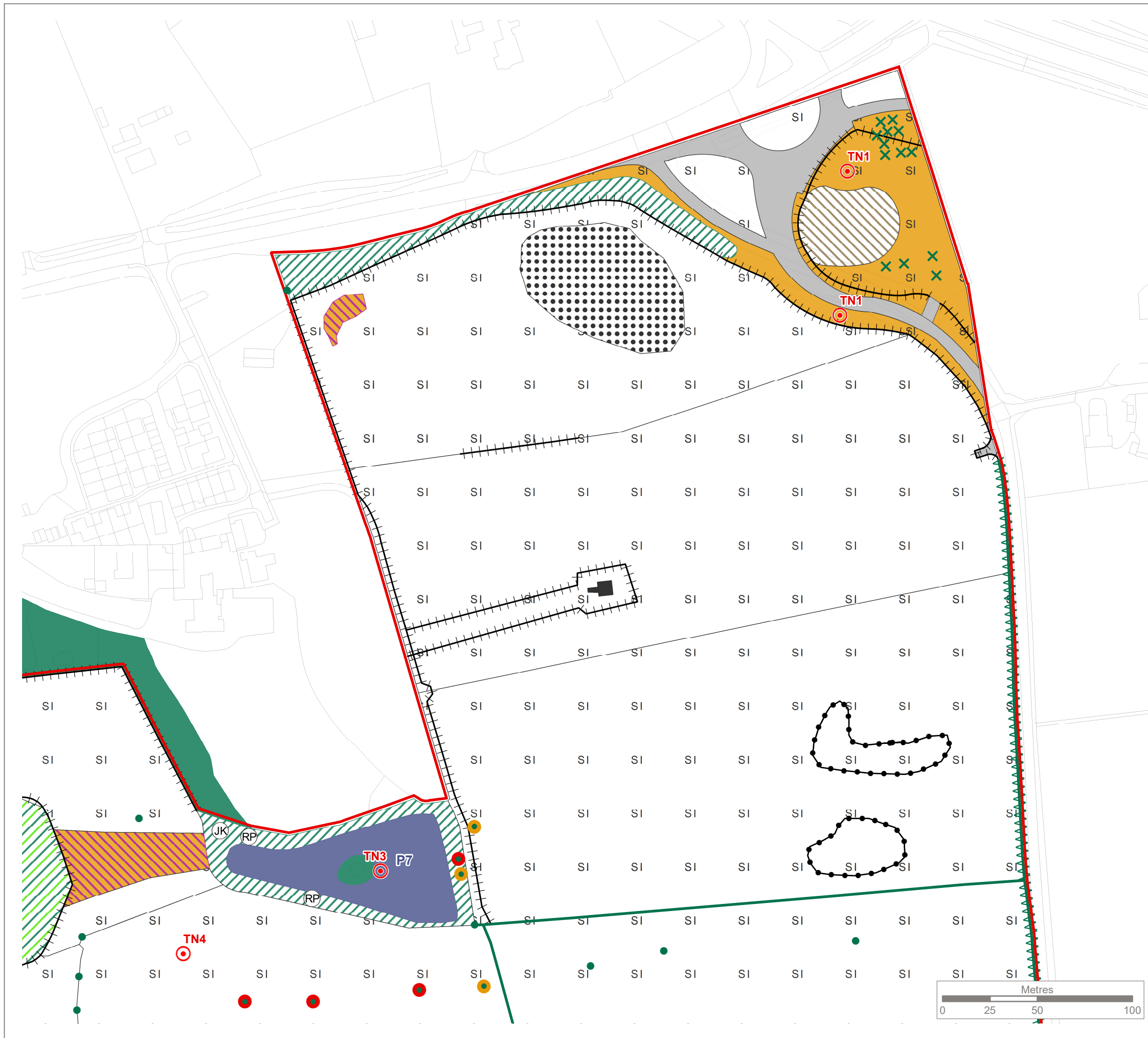
- 5.1 The watercourse in the south of the site and the pond in the north of the site have very shallow banks that are unsuitable to support water vole.
- 5.2 There is no habitat on site suitable for otter. The watercourse in the south of the site had a very shallow water level and lacked potential to support fish as a feeding source for otter. This watercourse was culverted at both ends and isolated from the wider area. The pond in the north of the site was noted to be devoid of feeding source of otter such as fish. No suitable locations for otterholts or resting places were identified within the site boundary.
- 5.3 There are no further recommendations for future development of the site and water vole and otter.

## 6.0 References

Dean, M., Strachan, R., Gow, D. and Andrews, R. The Water Vole Mitigation Handbook (The Mammal Society Guidance Series). Eds Fiona Matthews and Paul Chanin. London : The Mammal Society, 2016.

## **DRAWINGS**

### **G7016.001.1 - 5 Phase 1 Habitat Survey**



**KEY**  

Survey Boundary

Target Note

Scattered Scrub

Scattered Broad-leaved Trees

Broad-leaved Tree with Moderate Bat Potential

Broad-leaved Tree with High Bat Potential

Japanese Knotweed

Rhododendron Ponticum

Native Species-rich Intact Hedge

Species-poor Intact Hedge

Fence

Earth Bank

Semi-natural Broad-leaved Woodland

Plantation Broad-leaved Woodland

Plantation Mixed Woodland

Semi-improved Neutral Grassland

Marsh/Marshy Grassland

Poor Semi-improved Grassland

Tall Ruderal

Standing Water

Buildings

Bare Ground

Hardstanding

**Species Code**  
Qr European Oak

N

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Base mapping provided by client

Site Map

Rev	Description	Drawn	Approved	Date

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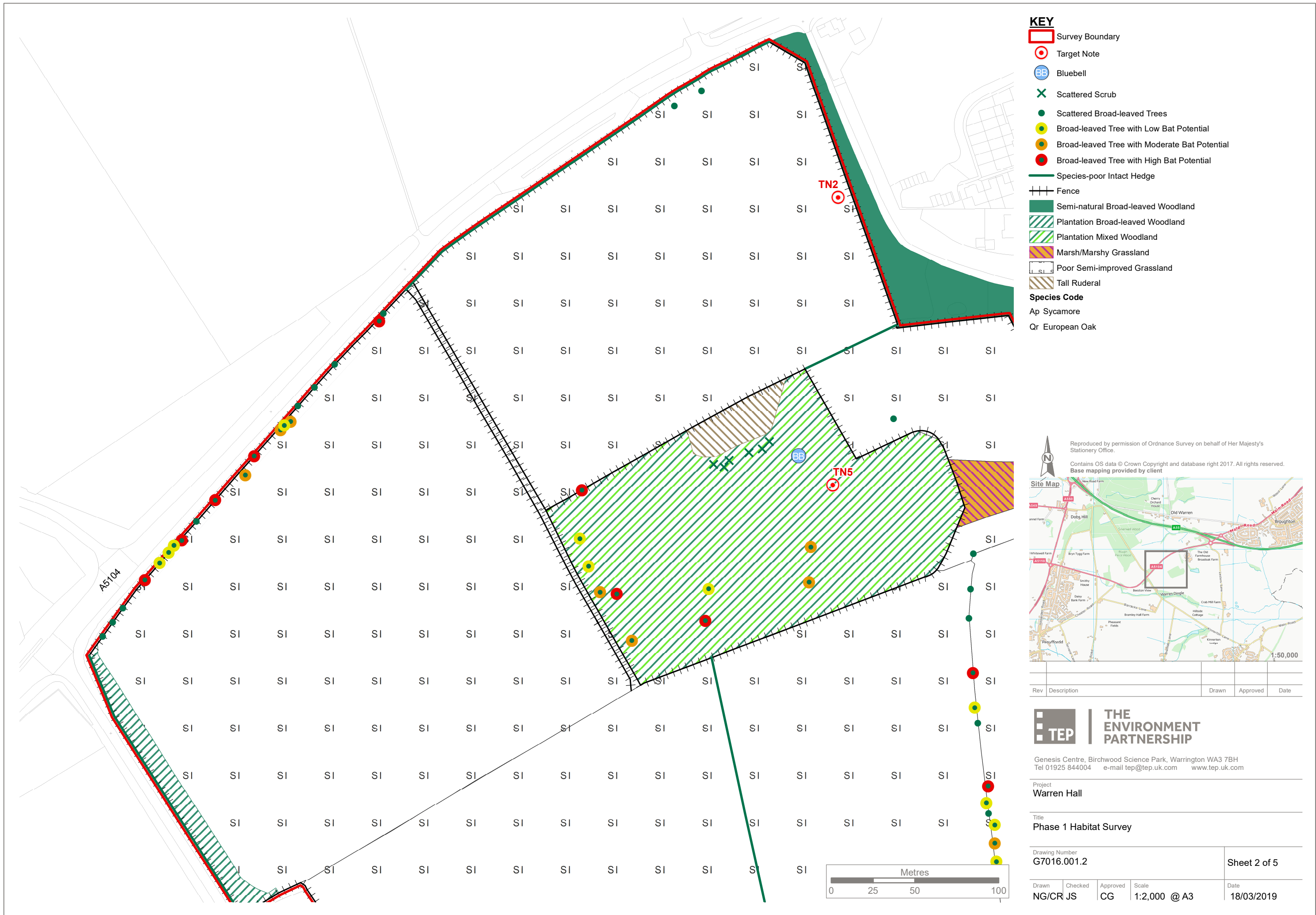
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Project  
**Warren Hall**

Title  
**Phase 1 Habitat Survey**

Drawing Number	Sheet 1 of 5
G7016.001.1	

Drawn	Checked	Approved	Scale	Date
NG/CR	JS	CG	1:2,000 @ A3	18/03/2019

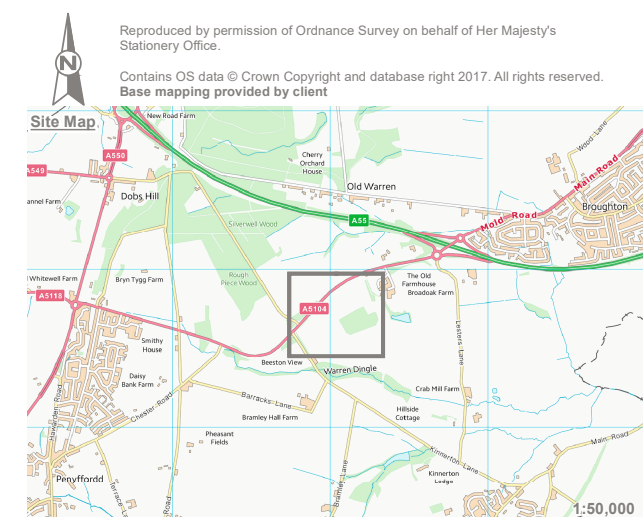


**KEY**

- Survey Boundary
- Target Note
- Bluebell
- Scattered Scrub
- Scattered Broad-leaved Trees
- Broad-leaved Tree with Low Bat Potential
- Broad-leaved Tree with Moderate Bat Potential
- Broad-leaved Tree with High Bat Potential
- Species-poor Intact Hedge
- Fence
- Semi-natural Broad-leaved Woodland
- Plantation Broad-leaved Woodland
- Plantation Mixed Woodland
- Marsh/Marshy Grassland
- Poor Semi-improved Grassland
- Tall Ruderal

**Species Code**

- Ap Sycamore
- Qr European Oak



Rev	Description	Drawn	Approved	Date

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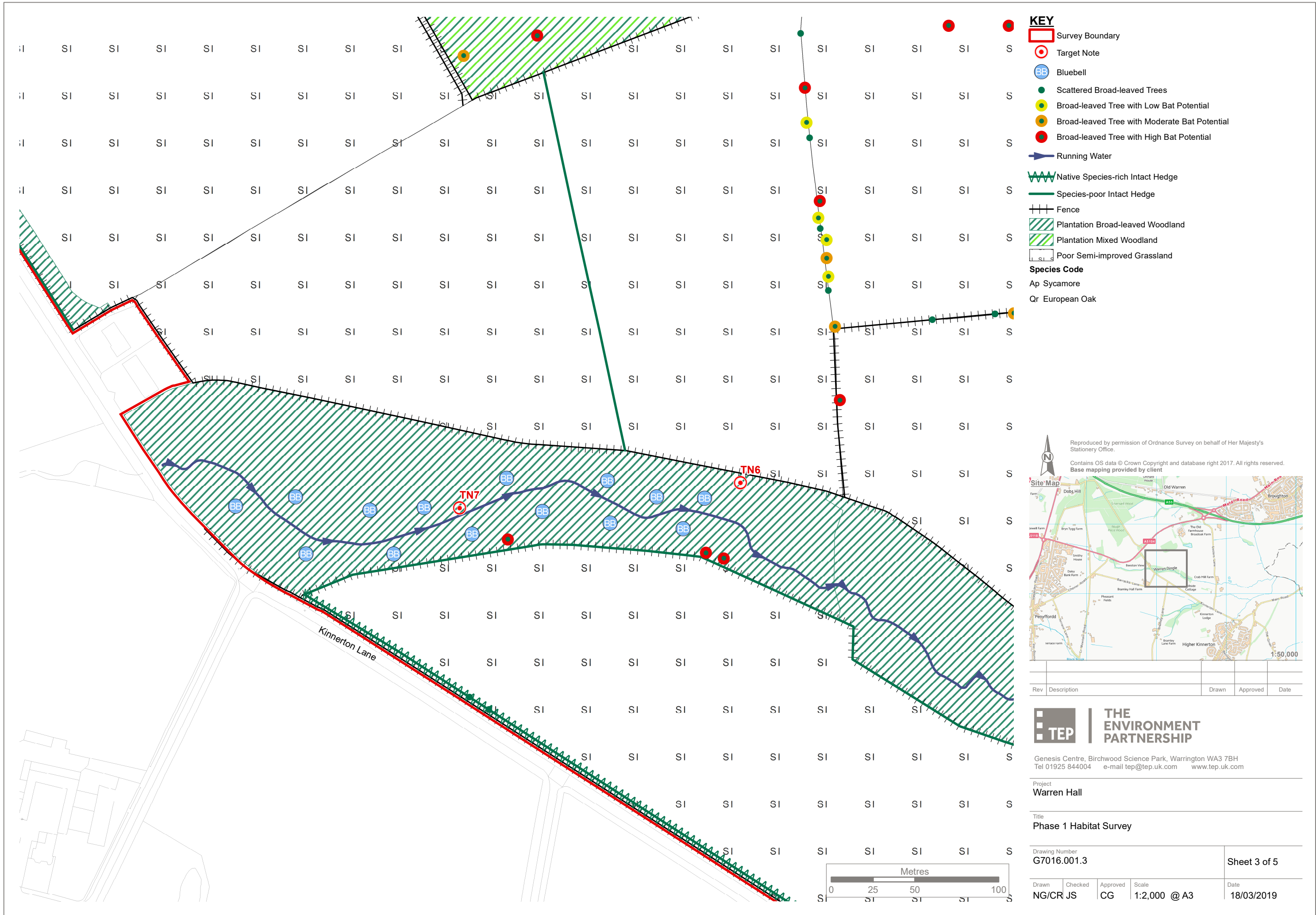
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**Warren Hall**

Title  
**Phase 1 Habitat Survey**

Drawing Number G7016.001.2				Sheet 2 of 5
Drawn NG/CR JS	Checked JS	Approved CG	Scale 1:2,000 @ A3	Date 18/03/2019



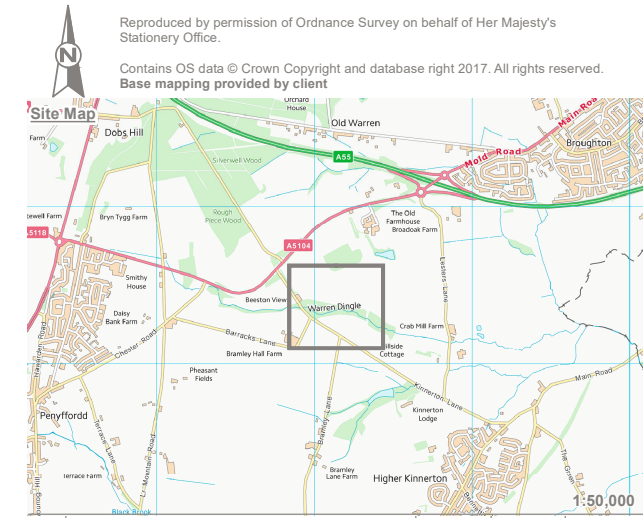


**KEY**

- Survey Boundary
- Target Note
- Bluebell
- Scattered Broad-leaved Trees
- Broad-leaved Tree with Low Bat Potential
- Broad-leaved Tree with Moderate Bat Potential
- Broad-leaved Tree with High Bat Potential
- Running Water
- Native Species-rich Intact Hedge
- Species-poor Intact Hedge
- Fence
- Plantation Broad-leaved Woodland
- Plantation Mixed Woodland
- Poor Semi-improved Grassland

**Species Code**

- Ap Sycamore
- Qr European Oak



Rev	Description	Drawn	Approved	Date



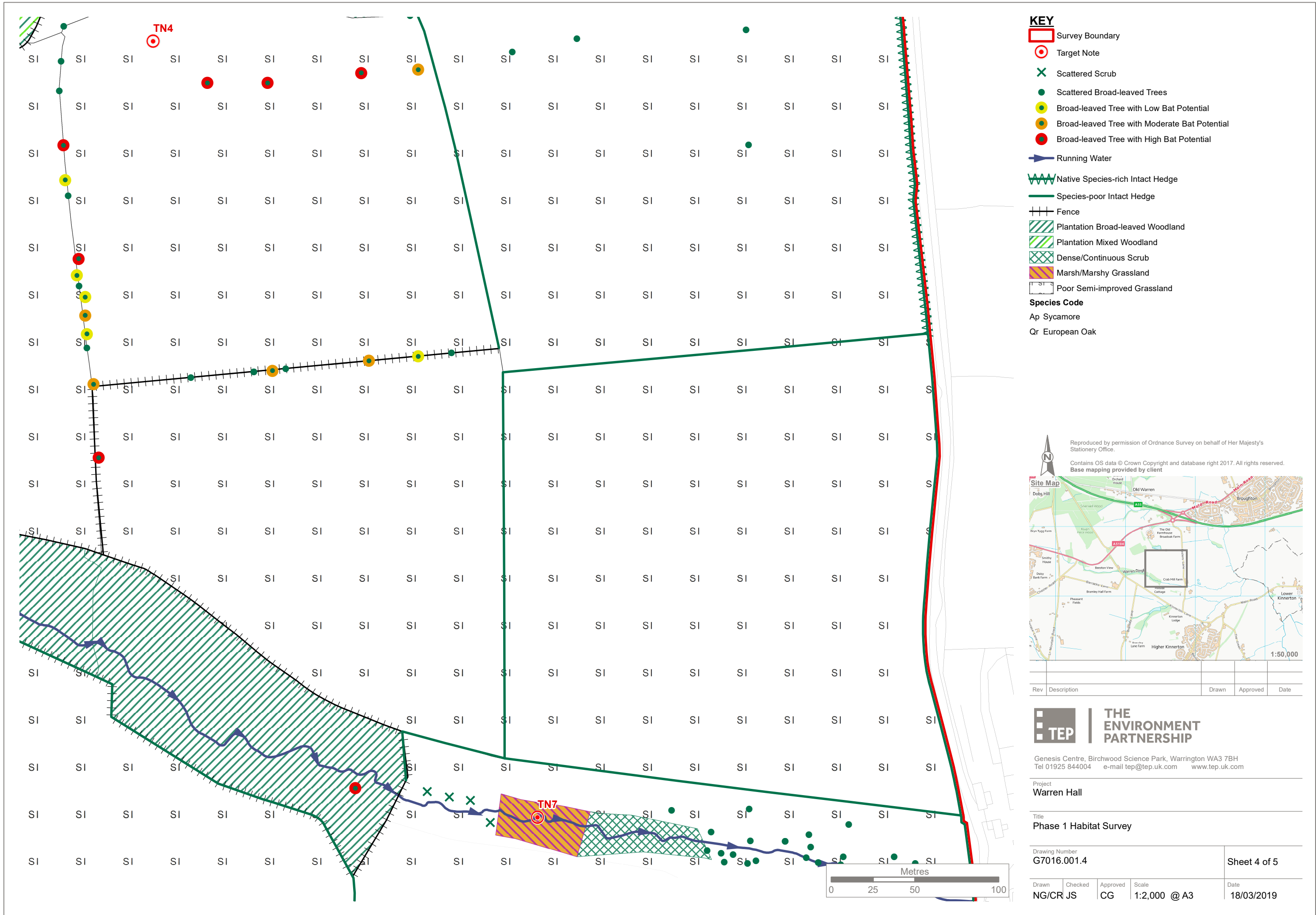
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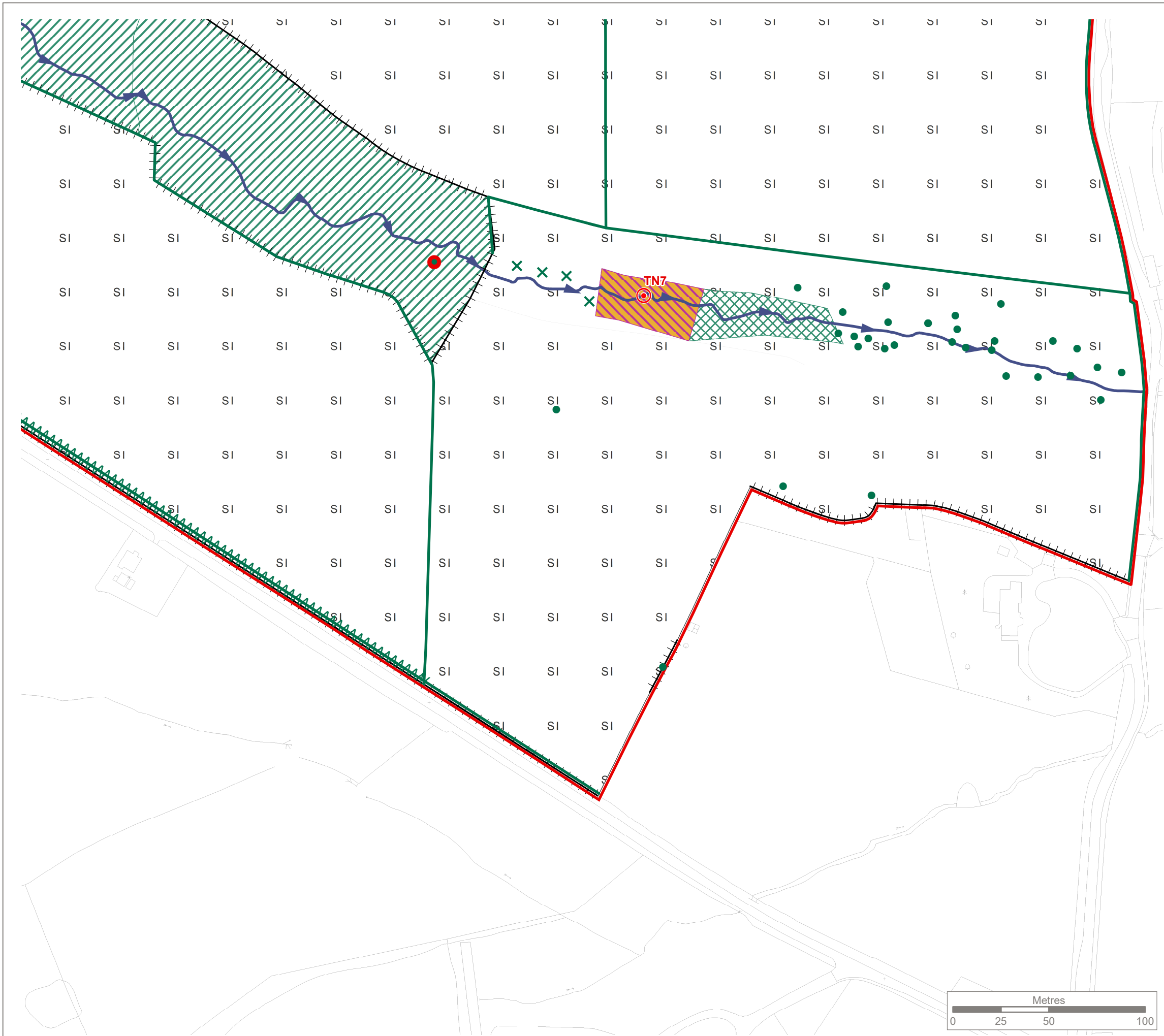
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**Phase 1 Habitat Survey**

Drawing Number G7016.001.3				Sheet 3 of 5
Drawn NG/CR JS	Checked JS	Approved CG	Scale 1:2,000 @ A3	Date 18/03/2019

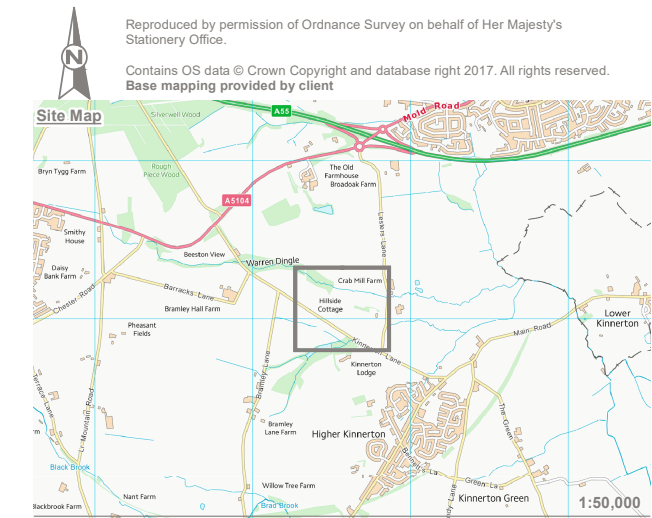




**KEY**

- Survey Boundary
- Target Note
- Scattered Scrub
- Scattered Broad-leaved Trees
- Broad-leaved Tree with High Bat Potential
- Running Water
- Native Species-rich Intact Hedge
- Species-poor Intact Hedge
- Fence
- Plantation Broad-leaved Woodland
- Dense/Continuous Scrub
- Marsh/Marshy Grassland
- Poor Semi-improved Grassland

**Species Code**  
Qr European Oak



Rev	Description	Drawn	Approved	Date



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Title  
**Phase 1 Habitat Survey**

Drawing Number <b>G7016.001.5</b>				Sheet 5 of 5
Drawn <b>NG/CR</b>	Checked <b>JS</b>	Approved <b>CG</b>	Scale <b>1:2,000 @ A3</b>	Date <b>18/03/2019</b>



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