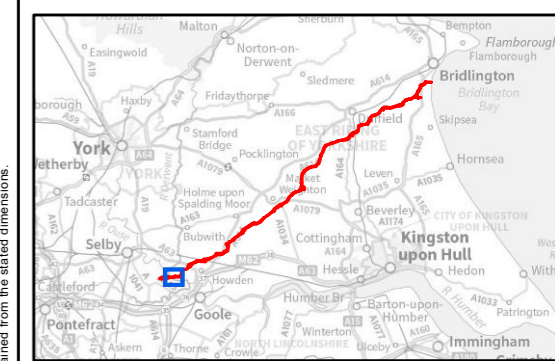
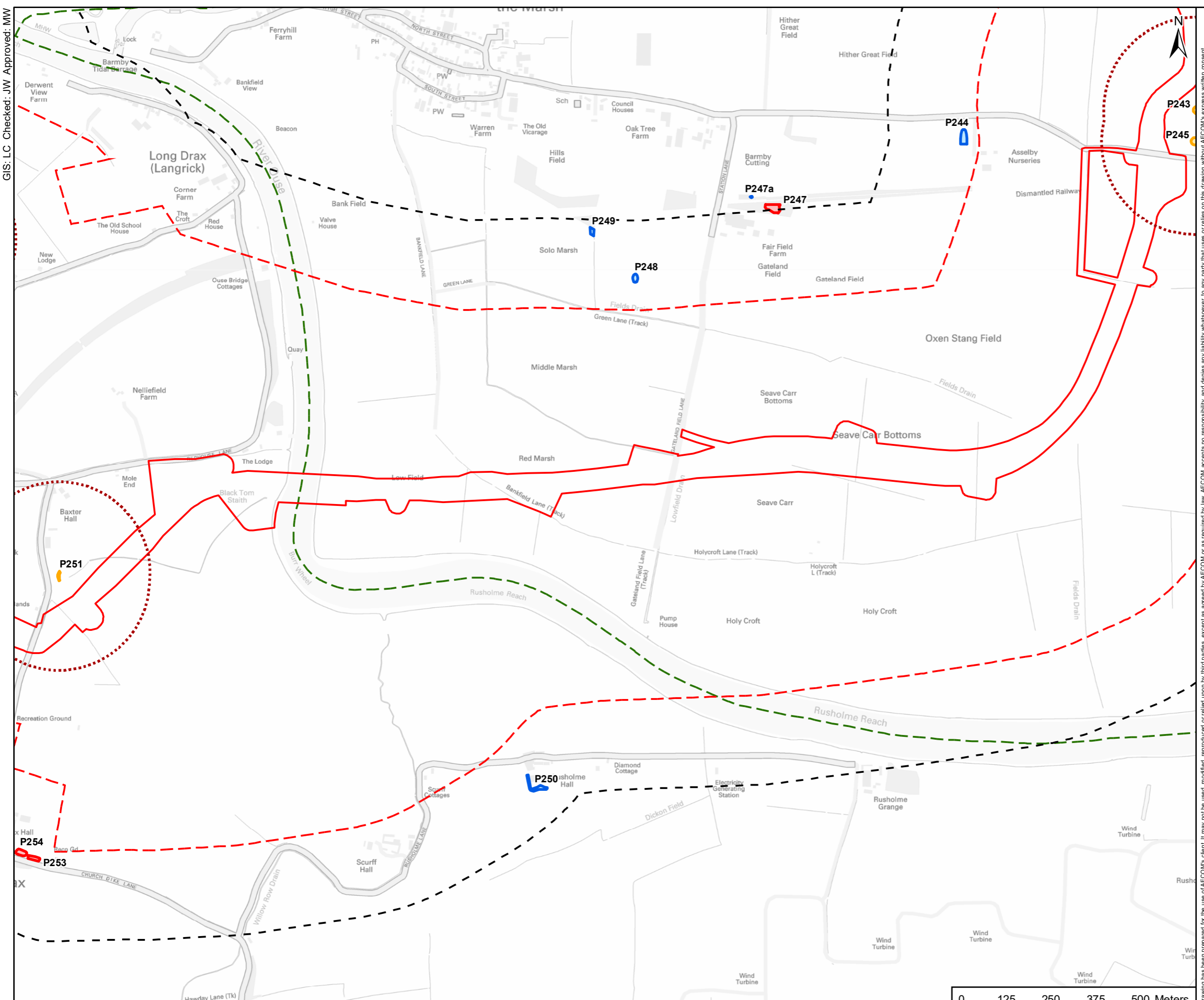


PROJECT
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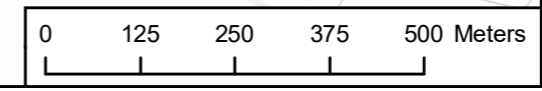
- KEY**
- English Onshore Scheme Scoping Boundary
 - 250m Study Area
 - Indicative Planning Application Boundary
 - District Borough Unitary Boundary
- GCN Pond - Status**
- GCN Assumed Present
 - GCN Absent
 - Scoped Out
 - 250m Buffer - GCN Assumed



TITLE
Figure 3-1
GCN Survey Plan

REFERENCE
SEGL2_T_GC_N_3-1_v2_20220209

SHEET NUMBER 25 of 26 **DATE** 09/02/2022

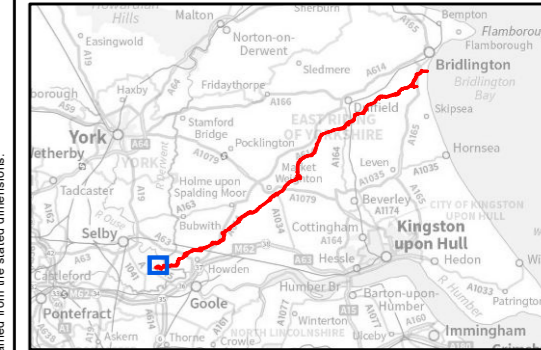
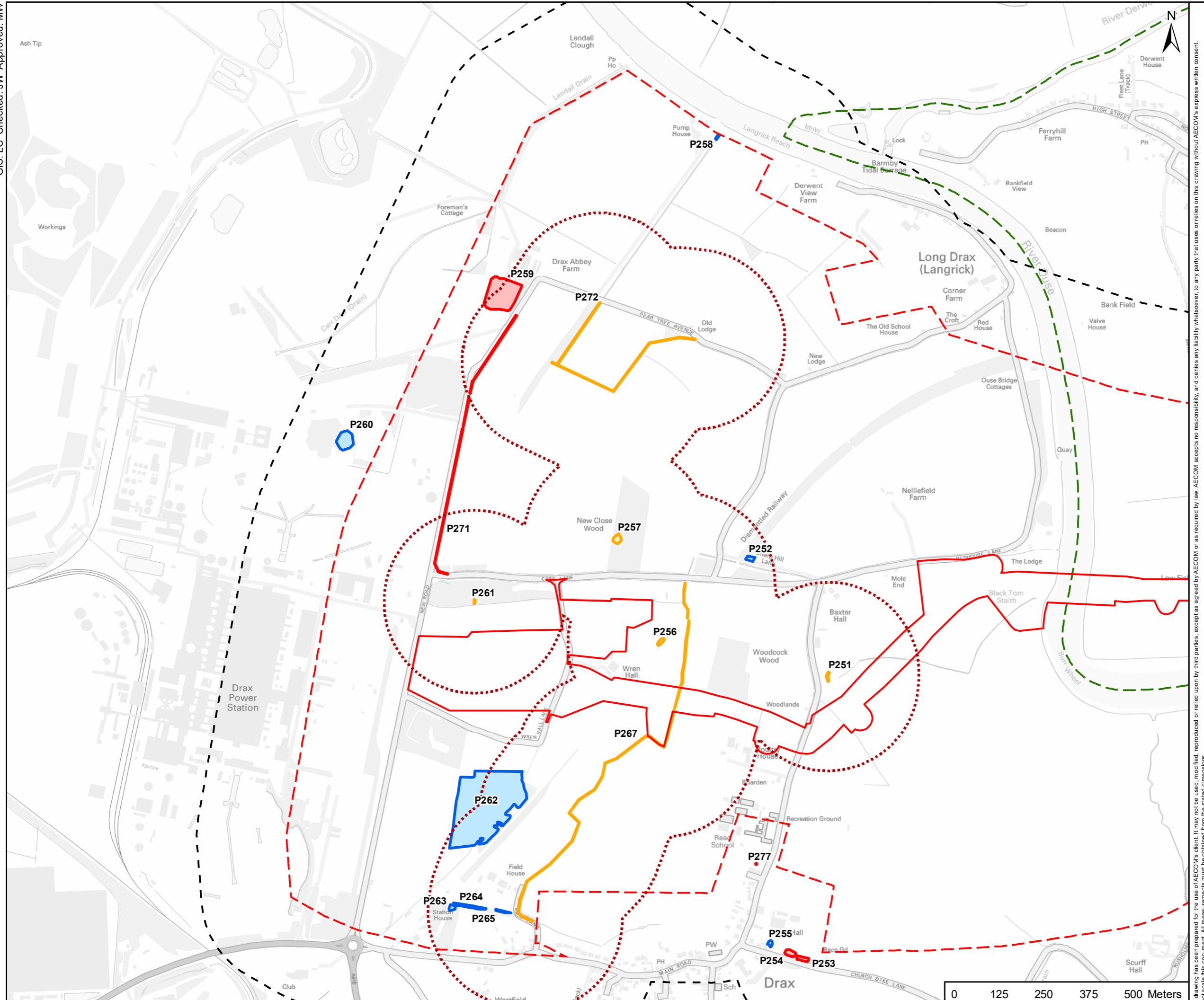


GIS: LC Checked: JW Approved: MW

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PROJECT
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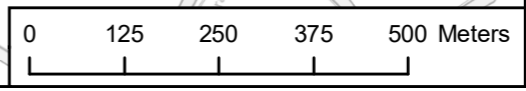
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TITLE
**Figure 3-1
GCN Survey Plan**

REFERENCE
SEGL2_T_GC_N-3-1_v2_20220209

SHEET NUMBER 26 of 26 DATE 09/02/2022



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Annex 1 Legislation and Planning Policy

Relevant Legislation

The UK is no longer a member of the European Union (EU). EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation. EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'.

The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the *Conservation of Habitats and Species Regulations 2017* (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The decline in great crested newt conservation status across Europe has led to its listing on Annex IV ('European Protected Species') of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, adopted in 1992. The Habitats Directive is transposed into English Law through the *Conservation of Habitats and Species Regulations 2017* (as amended) (henceforth referred to as the 'Habitats Regulations'). Schedule 2 of the Habitats Regulations lists the European Protected Species of animals, including great crested newt.

Great crested newts are protected under Regulation 43 of the 2017 Regulations as amended by the 2019 Regulations. This makes it an offence to deliberately capture, injure or kill an animal; deliberately disturb an animal; or damage or destroy a breeding site or resting place used by an animal.

Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing. Deliberate disturbance of animals includes in particular any disturbance which is likely a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of hibernating or migratory species, to hibernate or migrate; or b) to affect significantly the local distribution or abundance of the species to which they belong.

Where development works are at risk of causing one or more of the offences listed above, a mitigation licence from Natural England can be obtained to facilitate the works that would otherwise be illegal.

Great crested newts are also protected under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended). This makes it an offence to intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb an animal in such a place.

Lower levels of disturbance not covered by the *Conservation of Habitats and Species Regulations 2017* remain an offence under the *Wildlife and Countryside Act 1981* although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided.

NERC Act, 2006

The Natural Environment and Rural Communities (NERC) Act (2006), as amended, put an obligation on public bodies to have regard, so far as is consistent with the proper exercise of their functions, to the purpose of conserving biodiversity. Under the terms of the Act, conserving biodiversity includes restoring or enhancing populations and/or habitats. The local planning authority (LPA) or other determining authority must therefore consider the effects of planning applications upon biodiversity and how it can be mitigated for or enhanced.

A list of species and habitats 'of principal importance for the purpose of conserving biodiversity' is published under Section 41 of the NERC Act (2006). The list which includes 56 habitats and 943 species has been drawn up in consultation with Natural England and draws upon the previous UK Biodiversity Action Plan (BAP) List of Priority Species and Habitats which is now obsolete. Great crested newt is listed as priority species on the NERC Act, 2006.

Planning Policy

The revised National Planning Policy Framework (NPPF), published on 21st July 2021 (Ref 2), sets out the government's planning policies for nature conservation in England and how these are expected to be applied. This revised Framework replaces the previous NPPF published on 24th July 2018.

The NPPF states the commitment of the UK Government to minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. It specifies the obligations that the Local Authorities and the UK Government have regarding statutory designated sites and protected species under UK and international legislation and how this is to be delivered in the planning system. Protected or notable habitats and species can be a material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development, or if development is permitted, mitigation measures may be required to avoid or minimise impacts on certain habitats and species, or where impact is unavoidable, compensation may be required.

Local Biodiversity Action Plan (LBAP)

The East Riding of Yorkshire Biodiversity Action Plan (Ref 3) is a group of documents drafted by the East Riding of Yorkshire Biodiversity Partnership, who are responsible for drafting habitat and species action plans and ensuring biodiversity targets are met and specific conservation objectives are achieved with respect to these taxa. Great crested newt is listed as a priority species and an action plan has been in place since 2010.

Selby Biodiversity Action Plan (Ref 4) was drafted in 2004 by North Yorkshire County Council, Selby District Council and the Selby BAP Partnership and details a species action plan for great crested newt, which is a priority species in the area. Actions include appropriate mitigation to be included for developments likely to impact on the species, promoting favourable habitat management and creation, developing a trained volunteer survey force to gather data on under-recorded areas and overall increase the distribution of the species.

Annex 2 Great Crested Newt Ecology and Methodology

Ecology

Great crested newt is the largest of the three native newt species. Great crested newts are like all British amphibians in that they rely on still water bodies for breeding but otherwise spend much of their lives on land. They are ectotherms and have permeable skins, so most terrestrial movement occurs when the air temperature is above 5°C and there is, or has recently been, rain (Ref 7).

The peak courtship and egg-laying period is normally from mid-March to mid-May. The female folds the leaves of aquatic plants around individual eggs – hence the need for still aquatic conditions. The larvae hatch out after about three weeks, and then take another two to three months to complete larval development. The larvae emerge from the pond upon completion of metamorphosis, which usually begins in early August and lasts for about two months. Adult newts generally leave the breeding ponds from late May onwards.

Adults and immature newts spend the winter in places where they will be protected from frost and flooding. Whilst on land outside the hibernation period, great crested newts require refuge from extremes of weather, hence during the day, they will often rest in dense vegetation, under refuges or underground.

Great crested newts in a given area often form a meta-population (a series of sub-populations that are linked by dispersal of individuals). Newts function in this way since they depend on habitats that vary in quality over time, and where the distribution of suitable habitats often changes. This meta-population concept complicates the study and conservation of this species since impacts to a single pond may have knock-on effects on newts in nearby ponds. Great crested newts commonly move between ponds that are within around 250-500 m of each other.

English Nature (Ref 7) now Natural England, considers the following pond characteristics as being favourable for breeding great crested newt populations:

- Small to medium sized breeding ponds (100-300 m²);
- variable depth, but preferably not so deep that aquatic and emergent vegetation is unable to take root;
- a maximum depth around four metres is acceptable;
- substantial cover of submerged and marginal vegetation;
- open areas to facilitate courtship behaviour;
- good populations of invertebrates and other amphibians as prey;
- ponds in clusters rather than in isolation;
- absence of shading on the south side;
- absence of fish; and
- absence or low density of waterfowl.

Survey teams comprised at least one licensed great crested newt surveyor with an additional surveyor (on most occasions also a great crested newt licence holder) on each visit.

Survey Technique – Habitat Suitability Index (HSI)

The HSI assessment was devised to quantitatively assess the suitability of water bodies to support great crested newt. The HSI for great crested newts was developed by Oldham et al. (Ref 1) and is a numerical index between 0 (indicating unsuitable habitat) and 1 (representing optimal habitat). The HSI incorporates ten suitability factors, all of which are thought to affect great crested newts. These factors are:

- Geographical location (SI1). The UK is divided into three zones A, B and C which illustrate decreasing potential for great crested newt in regard to their geographical range. The majority of England, including the East Riding of Yorkshire is located within zone A; representing the most temperate climate and therefore highest potential zone.
- Pond area (SI2). In general pond sizes between 500 m² and 750 m² are optimal for great crested newt.
- Pond drying per decade (SI3). The occasional drying of a pond (once per decade) is optimal as this reduces numbers of predatory fish. However permanent water retention is preferable to annual drying up.
- Water quality (SI4). Good water quality is optimal and is measured through invertebrate diversity and the condition of the pond.
- Shade cover (SI5). Represented as a percentage of the bank. Unshaded ponds are preferred to those with heavily shaded ponds.
- Waterfowl (SI6). Heavy use by waterfowl can deteriorate the suitability of a pond for great crested newts, although minor use e.g., by moorhens is likely to have a negligible impact.
- Fish (SI7). In general, greater numbers of fish result in a higher level of predation upon great crested newt eggs and larvae and thus fewer numbers of fish in a pond increases the potential viability of a great crested newt population.
- Density of ponds within km² (SI8). The presence of ponds within the local area increases the chances of newts becoming established from nearby ponds. (and also the suitability of the local area to support a meta-population).
- Terrestrial habitat (SI9). A higher proportion of suitable terrestrial habitat located within 500 m of a breeding site (waterbody), increases the likelihood of great crested newt presence within a particular area.
- Macrophyte cover (SI10). The greater the proportion of the pond that is covered by aquatic vegetation, the opportunities for shelter and egg laying by great crested newt increases. Where macrophyte cover reaches 80% or above, the effect of a reduction in light and oxygen reaching the deeper water can adversely reduce the suitability of the pond for great crested newt.

The ten field scores are converted into suitability index scores which are multiplied together then calculated to the power of 0.1, to give a HSI score between 0 and 1.

HSI scores are categorised in terms of pond suitability for great crested newt as below:

- <0.5 = poor
- 0.5 – 0.59 = below average
- 0.60 – 0.69 = average
- 0.7 – 0.79 = good
- >0.8 = excellent

The system is not sufficiently precise enough to conclude that any particular waterbody with a high score will support great crested newt or that a waterbody with a low score will not support great crested newt. Oldham et al. (Ref 6-1) reported that the lowest scoring pond supporting great crested newts in their study was 0.43. Survey Technique – eDNA Sampling

Thirty 15 ml samples of water are taken from locations equally spaced around the margin of a waterbody and homogenised before being pipetted into six sampling tubes containing ethanol and a buffer solution. These samples are sent to a laboratory for Polymerase Chain Reaction (PCR) analysis against a control and assay of known GCN DNA, which can identify trace DNA left behind by GCN in the waterbody and thereby informing of the species presence in the sampled waterbody.

Evaluation Methodology

The method of evaluation that has been utilised has been developed with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Impact