



PRELIMINARY ECOLOGICAL ASSESSMENT

GREY TOWERS MIDDLESBROUGH

**AMS-22-06
MARCH 2022**



Naturally Wild Consultants Limited
3 Halegrove Court
Cygnet Drive
Bowesfield
Stockton-on-Tees
TS18 3DB

Email: hello@naturallywild.co.uk

PRELIMINARY ECOLOGICAL ASSESSMENT

**GREY TOWERS
COTCLIFFE WAY
NUNTHORPE
MIDDLESBROUGH
TS7 0AY**

**GRID REF
NZ 53617 13805**

**REPORT FOR
FORDY FARMS (INGLEBY) LTD**

Quality Assurance

Version	Prepared by	Date	Checked by	Date	Approved by	Date
R1	Lauren Gibson	15/03/2022	Alistair Wright	15/03/2022	Graeme Skinner	16/03/2022
R2	Lauren Gibson	23/03/2022	Alistair Wright	23/03/2022	Graeme Skinner	23/03/2022

This assessment is intended to provide an accurate description of findings from the desktop study and from survey work undertaken on the date shown; however, it cannot fully account for the reliability of third-party data provided or for any changes to site conditions following the completion of the survey work due to activities carried out on site or the dynamic nature of the natural environment. All work carried out by Naturally Wild Consultants Ltd is subject to our Terms and Conditions.

The report has been produced in accordance with current best practice guidelines.

REPORT CONTENTS	
EXECUTIVE SUMMARY	4
1 INTRODUCTION	5
2 RELEVANT LEGISLATION	6
3 METHODOLOGY	7
3.1 Overview	7
3.2 Survey Area	7
3.3 Survey Constraints	8
3.4 Field Survey	8
3.4.1 Habitat Assessment	8
3.4.2 Protected Species Impact Assessment	9
3.4.3 Biodiversity Baseline	10
4 RESULTS	11
4.1 Desktop Study	11
4.1.1 Designated Sites	11
4.1.2 Biological Records	13
4.2 Site Assessment	14
4.2.1 On-Site Ecological Features	14
4.2.2 Off-Site Ecological Features	15
4.3 Protected Species	16
4.3.1 Badgers	16
4.3.2 Bats	16
4.3.3 Great Crested Newts	16
4.3.4 Nesting Birds	17
4.3.5 Reptiles	17
4.3.6 Other Wildlife	18
4.4 Invasive Species	18
4.5 Biodiversity Baseline	18
5 CONCLUSIONS AND RECOMMENDATIONS	19
5.1 Conclusions	19
5.2 Mitigation Measures	19
5.2 Compensation Measures	20
5.3 Enhancement Measures	20
6 SITE IMAGES	21
7 BIBLIOGRAPHY AND REFERENCES	26
8 APPENDICES	28
8.1 Additional Information for the Legislation of Other Protected Species	28
8.2 Development Plans	30
8.3 Calculation of HSI Score	31
8.4 Biodiversity Baseline	32

EXECUTIVE SUMMARY

Naturally Wild were instructed to undertake a Preliminary Ecological Appraisal (PEA) at Grey Towers, Nunthorpe. The site comprised semi-improved grassland, tall ruderal vegetation, scrub, and scattered trees. The proposals are to construct ten residential houses with associated vegetated gardens and hardstanding. A dry basin which will act as a Sustainable Urban Drainage System (SuDSs) will be constructed to the north western aspect of the site. A hardstanding access road will also be included within the development. To enable the construction all vegetation on-site will be cleared.

The PEA comprised two parts: a desktop study and a survey visit. The desktop study collated available public information regarding the biodiversity of the area, including the habitat structure of the site and surrounding area and the presence of any statutory or non-statutory designated sites. In addition, biological records within 1 km of the site were requested from the Environmental Records Information Centre (ERICNE). The survey visit consisted of an assessment of all habitats on site and in the surrounding area to determine their ecological value and was conducted on 16th February 2022 by ecologists Lauren Gibson MSc, BSc (Hons) and Thomas Richardson BSc (Hons).

Overall, the site was determined to be of low ecological value due to the composition of habitats on-site and lack of evidence of EPS utilising the site. The offers suitable habitat for hedgehogs and rabbits, but no other evidence of mammals was observed during the survey. Nesting birds may utilise the scrub and grassland, however, due to lack of late stage vegetation and disturbance this likelihood is reduced.

Following the site assessment and in review of the findings, a series of ecological mitigation, compensation, and enhancement measures to be incorporated into the works have been outlined. These include clearance works on vegetation should be carried out outside of the nesting season, which is defined as running from March to August, inclusive; work should be carried out in a precautionary manner in relation to rabbits and hedgehogs; works should be carried in a precautionary manner in relation to the buddleia on-site; any excavations should be covered at night to prevent wildlife becoming trapped, or a suitable means of egress such as a plank of wood at 45° (max.) should be provided; any fenced boundaries are to be gapped; a sensitive lighting scheme should be implemented during and after construction; planting within the new development species-rich hedgerow should provide suitable replacement habitat for nesting bird species; landscape planting should use native plant species and/or species of known wildlife value; a series of invertebrate hibernacula should be installed at suitable locations; and a series of bird and bat boxes should be incorporated into the development to provide enhanced roosting and nesting habitat. Full details are provided in Section 5.

Providing the recommendations of this report are implemented in full, Naturally Wild would conclude that there will not be a significant impact to protected species or habitats as a result of the proposed works.

PRELIMINARY ECOLOGICAL APPRAISAL: GREY TOWERS, NUNTHORPE

1 INTRODUCTION

Naturally Wild were instructed to undertake a Preliminary Ecological Appraisal (PEA) at Grey Towers, Nunthorpe (Figure 1). The site comprised semi-improved grassland, tall ruderal vegetation, scrub, and scattered trees. The main objective of the assessment was to determine the suitability of the site to support protected species and to check for any evidence of the presence of protected species, as well as the presence of any protected or notable habitats.

The proposals are to construct ten residential houses with associated vegetated gardens and hardstanding. A dry basin which will act as a Sustainable Urban Drainage System (SuDSs) will be constructed to the north western aspect of the site. A hardstanding access road will also be included within the development. To enable the construction all vegetation on-site will be cleared. As part of the planning process, an ecological assessment is required to determine if any protected or notable species/habitats are likely to be affected by the proposed works, and to show how any negative ecological impacts would be mitigated and compensated.



Figure 1. Site location plan. Red line shows area of the proposed works.
(© Crown Copyright and MAGIC database rights 2022. Ordnance Survey 100022861).

2 RELEVANT LEGISLATION

British wildlife is protected by a range of legislation, the most important being the Wildlife and Countryside Act 1981 (as amended), The Conservation of Habitats and Species Regulations 2017 (as amended), and the Natural Environment and Rural Communities (NERC) Act 2006.

The Wildlife and Countryside Act, as amended mainly by the Countryside Rights of Way (CRoW) Act 2000, protects species listed in Schedules 5 and 8 of the Act (animals and plants respectively) from being killed, injured, and used for trade. For some species, such as great crested newts and all bat species, the provisions of this Act go further to protect animals from being disturbed or taken from the wild and protects aspects of their habitats. The Act also stipulates that offences occur regardless of whether they were committed intentionally or recklessly. The parts of this legislation that apply to most reptile species are in regard to killing, injury and trade only and do not protect their habitat, nor are they protected from disturbance or from being taken from their habitat.

The Conservation of Habitats and Species Regulations is the English enactment of European legislation and provides similar but subtly different protection for species listed on Schedules 2 and 4 of those regulations. Species to which these provisions apply are known as European Protected Species. Activities that might cause offences to be committed can be legitimised by obtaining a licence from the relevant statutory body.

The NERC Act 2006 extends the biodiversity duty set out in the CRoW Act to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity. Section 40 of the Act states: *“every 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.”* Section 41 of the Act sets out a list of habitats and species that are considered to be of principal importance for the conservation of biodiversity in England. These species may be referred to as ‘priority species/habitats’ or ‘UK Biodiversity Action Plan (BAP) priority species/habitats.’

Further details on the legislation protecting species of British wildlife relevant to this assessment can be found in Section 8.1 of this report.

3 METHODOLOGY

3.1 Overview

The PEA comprised a desktop study and a survey visit. All work undertaken has been completed in line with official guidelines produced by Natural England and the Chartered Institute for Ecology and Environmental Management (CIEEM), and British Standard document BS 42020: 2013 '*Biodiversity – Code of practice for planning and development.*'

The desktop study collated available public information regarding the biodiversity of the area, including the habitat structure of the site and surrounding area and the presence of any statutory or non-statutory designated sites, and any records of previously granted European Protected Species (EPS) mitigation licences in relation to certain species, using the Multi-Agency Geographic Information for the Countryside (MAGIC) resource. In addition, biological records within 1 km of the site were requested from the Environmental Records Information Centre (ERICNE), which included records of protected and notable species and any nearby non-statutory designated sites (Middlesbrough Local Wildlife Sites) not available through MAGIC.

The objective of the survey was to ascertain if any protected species may be using the site, document the habitats present and determine any potential ecological impacts during and following the completion of the works. The survey would be completed under suitable weather conditions and by experienced ecologists. Further to this, the results of the desktop study and site survey would be assessed to determine the ecological impacts posed by the work, any additional survey work required, and how such impacts should be mitigated and compensated for.

The survey work and the preparation of this report has been conducted by ecologists Lauren Gibson MSc, BSc (Hons) and Thomas Richardson BSc (Hons). who are experienced in undertaking ecological assessments.

3.2 Survey Area

The application site is located at Grid Reference NZ 53617 13805 and can be accessed via Cotcliffe Way. The assessment focused on the application site, as well as all habitats in the immediate surrounding area (where access was available).



Figure 2. Location of the surveyed area. Site boundary is shown by the red line.

(Image taken from Google Earth Pro: ©2022 Map Data Google)

3.3 Survey Constraints

There were no constraints with regards to site access or completion of the survey objectives across the site. Access to one pond off site was unavailable due to it being a private angling lake, however, due to the presence of coarse fish within the pond it is unlikely that great crested newts (GCN) would be present, and as such this does not impact the findings of this survey.

3.4 Field Survey

3.4.1 Habitat Assessment

The survey was carried out on Wednesday 16th February 2022 and consisted of an assessment and classification of the habitats on and adjacent to the site, based on their structure and the dominant vegetation coverage, where present, following the Phase 1 habitat survey methodology (JNCC, 2010). Following this, the habitats present were assessed for their suitability to support protected species and for the presence of any evidence of protected species. Each habitat present was then assigned a level of value (negligible, low, moderate, or high) on a geographical scale from site level to European/international level, with reference to guidance provided by CIEEM (2018).

The weather conditions on-site were a temperature of 8°; with cloud cover of 8/8 oktas, wind of 3-4 on the Beaufort scale, and no precipitation.

3.4.2 Protected Species Impact Assessment

Based on the habitats present, the site was assessed with particular regard to determine the presence or otherwise of badgers (*Meles meles*), bats, great crested newts (GCN) (*Triturus cristatus*), nesting birds, and reptiles. An overview of the survey methods used is outlined below.

Badgers: An assessment of the site and surrounding habitats (where access was available), with particular focus on any areas of dense vegetation, was carried out in order to identify any evidence of badgers, including:

- the presence of any setts
- well-used runs/tracks
- supplementary evidence, such as hairs or prints
- badgers themselves

Bats: No features on-site were determined to be roosting suitability for bats. As such no assessment of buildings or trees for roosting was conducted.

Great Crested Newts: An assessment of the habitats present on the site was carried out in order to determine their suitability to support foraging and sheltering GCN, and any natural or artificial refugia (such as logs, stones, discarded building materials, etc.) present were also lifted to check for the presence of GCN.

In addition, any ponds on-site or within 500 m¹ of the site boundaries were assessed for their habitat suitability for GCN, utilising the modified Great Crested Newt Habitat Suitability Index (ARG UK 2010; Oldham *et al.* 2000). The Habitat Suitability Index (HSI) provides a means of evaluating habitat quality for the species. It is a numerical index between 0 and 1, where 0 indicates completely unsuitable habitat and 1 represents optimal habitat. The HSI score is then utilised to define the suitability of the pond on a categorical scale (Table 2); however, it should be noted that the system is not precise enough to allow the conclusion that a pond with a high score will definitely support GCN, whilst those with a low score will definitely not.

Table 2. Respective pond suitability categories for each band of HSI scores.

HSI Score	Pond Suitability
< 0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

¹ Typical maximum roaming range of GCN from a pond which they occupy.

The HSI is given by assigning a quantitative figure between 0 and 1 to each of the 10 Suitability Indices assessed during desktop and field assessments, e.g. pond area, water quality, level of shading. The 10 Suitability Indices are multiplied by each other, with the tenth root of the product of the multiplied Indices then calculated, giving a figure for habitat suitability.

An HSI assessment was completed for two ponds. The results of the HSI assessment are discussed within Section 4.3 of this report, with the calculation of the HSI score for the pond provided within the Appendices.

Nesting Birds: Although the survey was conducted outside of the bird nesting season, an assessment of the habitats on site was carried out in order to determine their suitability for nesting birds, including a check for the presence of any existing disused nests.

Reptiles: The assessment for reptiles followed survey guidance provided by Froglife (1999), with an assessment of the habitats present carried out to determine their suitability to support reptiles for shelter, foraging and basking, and with any refugia lifted to check for the presence of reptiles or evidence of reptiles, such as sloughs (shed skins).

Other Wildlife: In accordance with good practice, the site was checked for the presence of any other protected/notable species, with particular regard to any other species highlighted in the desktop study.

Invasive Species: The site was also surveyed for the presence of any invasive, non-native flora or fauna.

3.4.3 Biodiversity Baseline

Following the completion of the desktop study and survey work, a biodiversity baseline has been undertaken to determine the number of 'biodiversity units' present on site prior to the works and demonstrate how these will be enhanced following the completion of the works. The baseline has been determined using the current DEFRA Biodiversity Metric tool. A summary of the results is provided in Section 4.5 and shown in the Appendix. Full results are provided separately.

4 RESULTS

4.1 Desktop Study

4.1.1 Designated Sites

Statutory Designated Sites: There are no statutory sites within 1000 m of the application site. The nearest statutory site is Flatts Lane Woodland Country Park Local Nature Reserve (FLWCP LNR) located approximately 2050 m to the south east of the application site. Flatts Lane is a 40 hectare site comprising broadleaf deciduous woodland, wetland, and meadows.

The proposed development is relatively small scale and contained to areas within the red line boundary. As the site is located approximately 2050 m from FLWCP LNR, any direct or indirect impacts resulting from works during the construction phase (such as direct damage or disturbance, significant noise pollution, light spill, dust deposition, vibration, or other forms of pollution) are expected to be negligible.

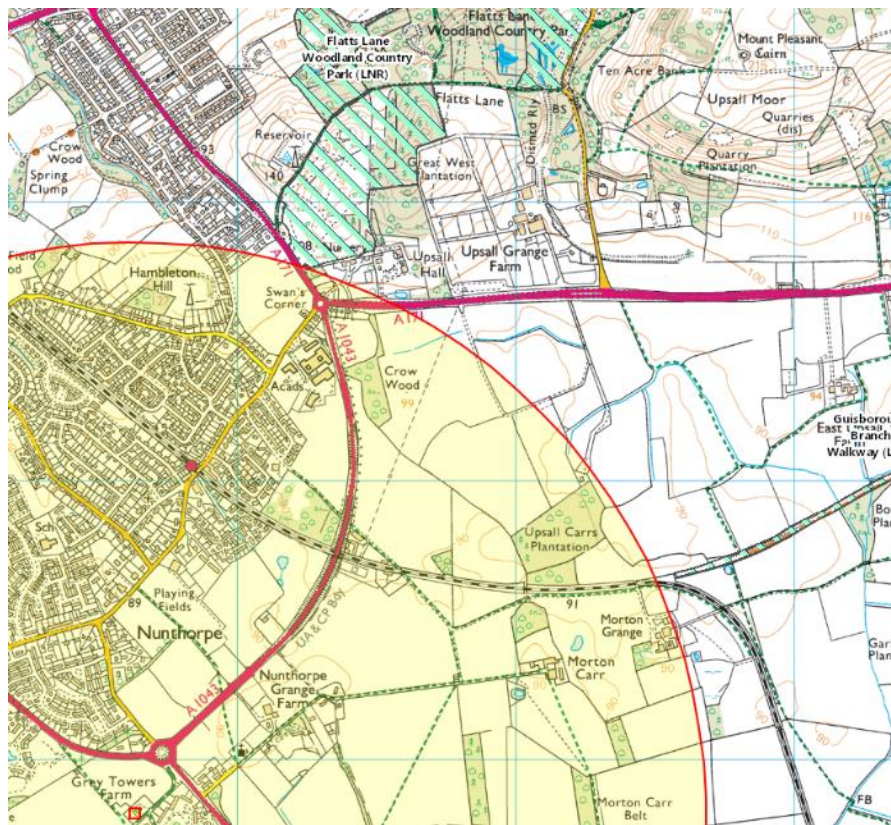


Figure 3. Location of the surveyed site in relation to the surrounding designated sites.

(© Crown Copyright and MAGIC database rights 2022. Ordnance Survey 100022861).

Non-statutory Designated Sites: There are two non-statutory designated sites within 1000 m of the application site. The nearest non-statutory site is Grey Towers Park (formerly Poole Hospital) (Local Wildlife Site (LWS)) located approximately 230 m to the south west of the application site. Bonny Grove (Marton Beck West) LWS located approximately 870 m to the north west (Figure 4).

As above, due to the proposed development being relatively small scale and contained to areas within the red line boundary, any direct or indirect impacts resulting from works during the construction phase (such as direct damage or disturbance, significant noise pollution, light spill, dust deposition, vibration, or other forms of pollution) are expected to be negligible.



Figure 4. Location of the surveyed site in relation to the surrounding non-designated sites.
(© Crown Copyright and MAGIC database rights 2022. Ordnance Survey 100022861).

Notable Habitats: Two notable habitats are present within 1000 m of the application site – deciduous lowland woodland and traditional orchards (Figure 5). The nearest lowland deciduous woodland is located approximately 40 m to the south west of the application site. The nearest traditional orchard is located approximately 300 m to the south of the application site.

Lowland Deciduous Woodland: Lowland Deciduous Woodland qualifies as a HoPI under the NERC Act 2006 due to its ability to support a wide range of wildlife as well as an array of nationally rare and nationally scarce species. Lowland deciduous woodland offers suitable sheltering, foraging, and commuting habitat for a range of UK species. Trees offer suitable nesting and roosting opportunities for birds and bats, and the associated woodland understorey in these habitats provides areas in which small mammals, amphibians and reptiles can commute and forage. In addition, woodland habitats can harbour a diverse array of invertebrates due to the suitable foraging habitat and deadwood present. Any direct impacts and the majority of potential indirect impacts to the notable habitats resulting from the proposed development are expected to be negligible, due to the small-scale, localised nature of the proposed works and consequent lack of disturbance to the designated areas themselves.

Traditional Orchards: Traditional orchard qualifies as a HoPI under the NERC Act 2006 due to its ability to support a wide range of wildlife, contain UK BAP priority habitats and species, as well as an array of Nationally Rare and Nationally Scarce species. The wildlife of orchard sites depends on the mosaic of habitats they encompass, including fruit trees, scrub, hedgerows, hedgerow trees, non-fruit trees within the orchard, the orchard floor habitats, fallen dead wood and associated features such as ponds and streams. A feature of the biodiversity of traditional orchards is the great variety of fruit cultivars that they contain. Any direct impacts and the majority of potential indirect impacts to the notable habitats resulting from the proposed development are expected to be negligible, due to the small-scale, localised nature of the proposed works and consequent lack of disturbance to the designated areas themselves.

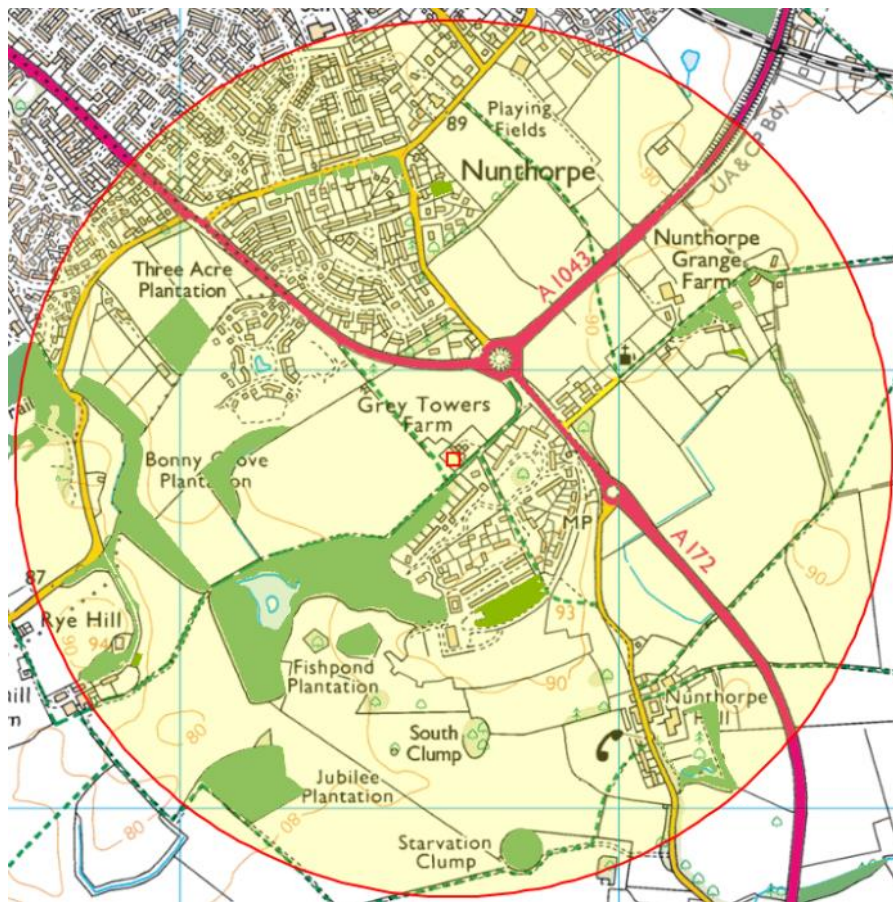


Figure 4. Location of the surveyed site in relation to the surrounding notable habitats. Light green areas are traditional orchards. Darker green areas are deciduous lowland woodland.

(© Crown Copyright and MAGIC database rights 2022. Ordnance Survey 100022861).

4.1.2 Biological Records

A total of 97 records were returned from (ERICNE), which can be separated into the following groups: seven amphibian records (two species - common frog and common toad); 21 bird records (18 species); four conifer records (Scot's pine (*Pinus sylvestris*)); one spurge record (*Euphorbia* sp.); 24 flowering plant records (ten species including four invasive non-native species – Japanese knotweed (*Reynoutria japonica*), Giant hogweed (*Heracleum mantegazzianum*), Himalayan balsam (*Impatiens glandulifera*), and

Rhododendron sp.); and 39 terrestrial mammal records (nine species including one invasive non-native species grey squirrel (*Sciurus carolinensis*), and three bat species). The importance of individual species records in the context of the proposals are discussed in Section 4.3 – Protected Species, where and if appropriate. A full list of received records is available on request with the permission of the records centre, excluding records of sensitive species.

4.2 Site Assessment

4.2.1 On-Site Ecological Features

The site comprised semi-improved grassland, tall ruderal vegetation, vegetation, small areas of scrub, and scattered sapling trees (Images 1 - 4). The ground appears to be semi-natural with spoil heaped in areas throughout the site. The site has urban debris strewn throughout it, creating artificial refugia for wildlife. The general ecological value of each habitat is described in the paragraphs below, with any notable species-specific findings detailed in Section 4.3. A Phase 1 habitat map showing the distribution of the habitats on site is provided at the end of this section, and a series of site photographs giving an overview of the habitats present are provided in Section 6.

Semi-improved grassland

Semi-improved grassland dominated the site, with the commonest species of grasses within the grassland being perennial rye-grass (*Lolium perenne*) Yorkshire fog (*Holcus lanatus*), and cocksfoot grass (*Dactylus glomerata*). Other vegetation species present within the grassland included chickweed (*Stellaria media*), buttercup (*Ranunculus repens*), and dandelion (*Taraxacum officianales*). Within the semi-improved grassland there were areas colonised by mosses, likely *Rhytidiadelphus squarrosus*. The semi-improved grassland would provide suitable habitat for small terrestrial mammals, invertebrates, and amphibians, as well as forming areas of habitat for ground-nesting birds and foraging bats. A rabbit warren was observed to be present to the north west of the site. The semi-improved grassland was assessed as being of low ecological value at a local level due to the relatively small size of the site and lack of connectivity to similar habitats. Whilst on-site a western European hedgehog (*Erinaceus europaeus*) was observed to be utilising the grassland for sleeping (image 5). The presence of a hedgehog on-site is evidence that they are utilising the site. Due to the open nature of its sleeping area, a temporary hedgehog house was installed to protect it (Image 6).

Tall ruderal vegetation

Tall ruderal vegetation was present to the borders of the site. Species comprised nettle (*Urtica dioica*), rosebay willowherb (*Chamaenerion angustifolium*), dock (*Rumex acetosa*), and spear thistle (*Cirsium vulgare*). Normally this type of habitat would offer suitable habitat for small terrestrial mammals, amphibians, and invertebrates, however, due to the small areas of tall ruderal habitat on-site and common plant species present, this habitat was assessed as low ecological value

Scrub and scattered sapling trees.

Small un-connected areas of scrub were present within the red-line boundary. The areas of scrub were dominated by bramble and elder (*Sambucus nigra*), with sapling and semi-mature trees within it. The saplings and semi-mature tree species included elm (*Ulmus procera*), ash (*Fraxinus excelsior*), and

sycamore (*Acer pseudoplatanus*). Due to the trees being immature and all in good health with no cracks, gaps or rot holes, the trees do not offer roosting features for bats; and offer limited opportunities for nesting birds. Invasive non-native butterfly bush (*Buddleia davidii*) was also present on-site to the western border. Within some areas of the scrub there was urban debris, including wire fencing, which offered refugia and sheltering opportunities for wildlife, and nesting opportunities for birds such as wren (*Troglodytes troglodytes*) and robin (*Erithacus rubecula*).

4.2.2 Off-Site Ecological Features

The site is situated in the suburban area of Nunthorpe, on the south-eastern edge of the town of Middlesbrough. Nunthorpe comprises residential areas and their associated gardens and hardstanding. Residential areas are inherently of lower ecological due to the lack of suitable habitat provided by hardstanding and built structures; however, the scattered trees and hedgerows present within gardens could provide some suitable nesting and potential roosting habitat for birds and bats. In addition, vegetated gardens could provide suitable habitat for amphibians and small mammals.

Directly to the south of the application site is a thin strip of deciduous woodland which connects at the west to Fishpond Plantation, a large deciduous woodland which includes a large number of mature beech trees (*Fagus sylvatica*). The woodland and wooded strip offer high ecological value for a range of wildlife including bats, birds, small and mammals including badgers.

Further surrounding habitats to the south and east of the application site consist of arable fields and their associated scattered trees and hedgerows. Arable land is typically of lower ecological value, due to the management cycle it undergoes preventing a mature assemblage of vegetation from developing, which in turn provides sub-optimal conditions for most wildlife. Notwithstanding this, the associated hedgerows and trees can provide suitable nesting, commuting and roosting habitat for birds and bats, as well as commuting and sheltering habitat for small mammals and amphibians.

Two ponds were present within 500 m of the application site. The nearest pond (P1) was located approximately 120 m to the north (grid ref: NZ 53483 13946). P1 has a surface area of approximately 1300 m² and is a Sustainable Urban Drainage System (SuDS) pond. A HSI calculation was completed for P1 and the result was 0.60 (Average suitability). Despite the average suitability score it is unlikely that GCN would be present due to the major road barriers and residential areas surrounding the pond. A further pond (P2) was located approximately 440 m to the south west (grid reference: NZ 53245 13783). This pond was inaccessible due to it being a private angling pond. Due to the nature of the pond, it is highly unlikely to support protected species such as GCN, as the large number of coarse fish would predate the GCN and other amphibians. Notwithstanding this, the residential areas, arable fields, and woodland habitats described above fall outside the redline boundary and as such, will not be impacted by the proposed development.

4.3 Protected Species

4.3.1 Badgers

No badger records have been returned from ERICNE. The site itself was considered largely unsuitable for badger sett creation, with a lack of banked areas for digging. No obvious signs of badger activity were seen on-site. The site would offer suitable foraging habitat for badgers due to the coverage of semi-improved grassland; however, it is unlikely badgers would access the site due to the Heras fencing surrounding the site. Furthermore, the site was situated within a predominately residential landscape. Overall, it is considered that badgers are likely absent from the site and, as such, the impacts of the proposed development will be negligible.

4.3.2 Bats

A MAGIC search for bat presence in the surrounding area was carried out. No bat class survey licence returns or European protected species licences granted in relation to bats were present within 1000 m of the proposed development site. No buildings or suitable trees for roosting were present on-site. The semi-improved grassland forms the most suitable foraging habitat on-site. Off-site the tree line to the south of the application site offers foraging and commuting habitat, and the mature trees may have PRFs. Overall, it is considered that bats are likely absent from the site and, as such, the impacts of the proposed development will be negligible.

4.3.3 Great Crested Newts

No records of GCN were returned from ERIC NE. A MAGIC search for GCN presence in the surrounding area was carried out. No GCN class survey licence returns, positive GCN pond survey results, or European protected species licences granted in relation to GCN were present within 500 m of the proposed development site. Potential hibernacula such as corrugated metal, brash piles, and brick piles were checked while on site, with no evidence of GCN or GCN themselves recorded underneath. The area of semi-improved grassland would offer suitable terrestrial habitat for GCN; however, the likelihood of GCN accessing the site while in their terrestrial phase is considered highly unlikely due to the prevalence of habitat fragmentation in the surrounding area. Within 500 m of the red-line boundary there were two ponds (P1 and P2) (Figure 5). P1 is a SuDS Pond located approximately 120 m to the north. P1 has a HSI score of 0.60 (average suitability), however, due to the major road barriers and residential areas surrounding the pond it is unlikely that GCN would travel to the application site. P2 is a coarse angling pond located approximately 440 m to the south. Due to the nature of the pond, it is highly unlikely to support protected species such as GCN, as the large number of coarse fish would predate the GC. The majority of other habitats in the immediate surrounding area consist of arable land and residential areas with associated hardstanding and roads. These habitats form sub-optimal GCN dispersal habitat due to the lack of a suitably mature assemblage of vegetation through which they can safely forage, shelter, or commute. Overall, for the reasons discussed above, it is considered that GCN are unlikely to be present on site. As such, the impacts of the proposals on GCN are expected to be negligible.

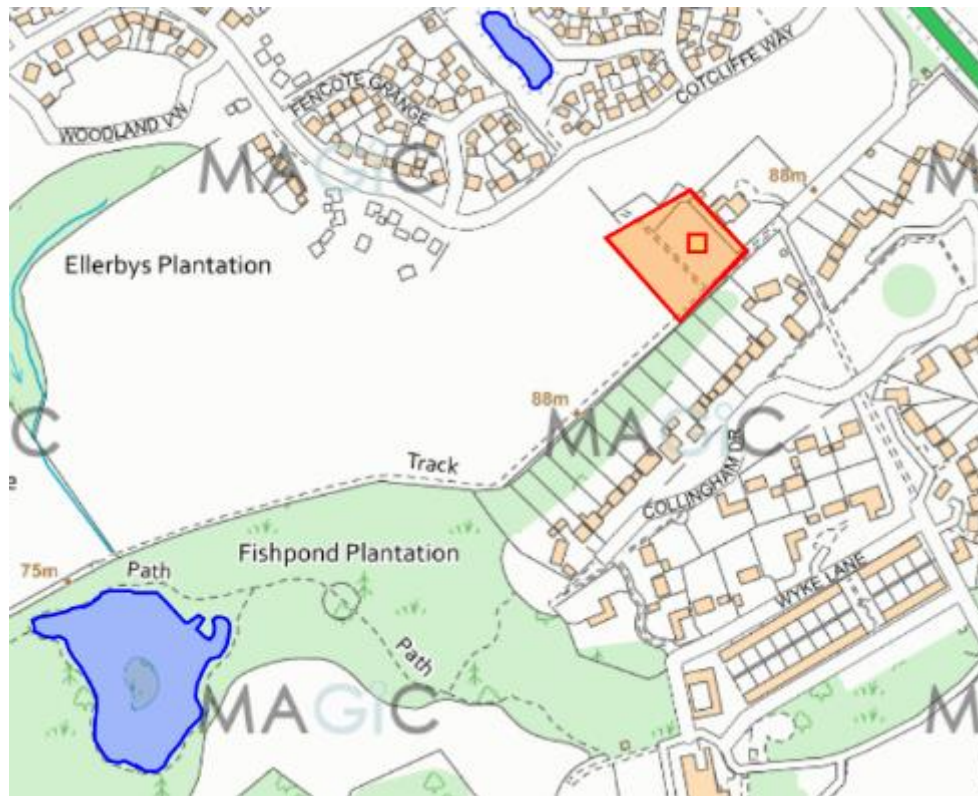


Figure 5. Location of ponds within 500 m of the application site. Ponds highlighted in blue. Application site in red.

(© Crown Copyright and MAGIC database rights 2022. Ordnance Survey 100022861).

4.3.4 Nesting Birds

Birds observed on-site during the survey included robin, magpie (*Pica pica*), wren, and blackbird (*Turdus merula*). 21 bird records of 18 species were returned from ERIC NE. Habitats within the red-line boundary offers limited nesting opportunities for nesting birds. The scrub and urban debris in piles offers nesting opportunities for birds such as wren and robin, and the semi-improved grassland may offer nesting opportunities to meadow pipit (*Anthus pratensis*), however, due to disturbance and lack of late stage vegetation the likelihood of nesting is reduced.

4.3.5 Reptiles

There are no reptile records within 1 km of the proposed development site. The site was deemed to be of low suitability for reptiles due to the lack of suitable transitional habitats all UK reptiles require, needing adequate habitat for foraging, sheltering, and basking. The semi-improved grassland present on site could offer some limited suitable habitat for reptiles; however, the likelihood of reptiles readily accessing the site is significantly reduced due to the prevalence of sub-optimal reptile habitat in the immediate surrounding area and lack of connectivity between the application site and wider areas of suitable reptile habitat.

As with GCN, any potential hibernacula on site were checked for the presence of reptiles, with no reptiles, nor any evidence of reptiles recorded. Overall, due to the above factors it is considered that reptiles are likely absent from the site, and therefore the impacts of the proposed development on them are considered to be negligible.

4.3.6 Other Wildlife

ERIC NE returned 13 records for Western European hedgehog, two for brown hare (*Lepus lepus*), and one European rabbit (*Oryctolagus cuniculus*). Whilst on-site an adult hedgehog was observed to be sheltering under a mound of grass to the western boundary of the site. Hedgehogs are listed as Species of Principal Importance under Section 41 of the NERC Act 2006. As such, a duty of care for these species is required and suitable mitigation measures will need to be adhered to when carrying out the proposed development works. A small rabbit warren was present at the northern aspect, with mammal runs noted adjacent to the entrances, suggesting the warren is still in use.

4.4 Invasive Species

ERIC NE returned records of Eastern grey squirrel (*Sciurus carolinensis*), Japanese knotweed (*Reynoutria japonica*), giant knotweed (*Reynoutria sachalinensis*), Himalayan balsam (*Impatiens glandifera*), and *Rhododendron ponticum*.

No non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) – were recorded within the site extent at the time of the site survey, or within habitats adjacent to the site. However, areas of butterfly bush were observed on the western boundary of the site during the survey. Whilst butterfly bush are not listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), they are still non-native invasive species. Whilst not on Schedule 9, butterfly bush should be treated with caution. As such, precautionary measures will need to be taken during site clearance to ensure that the works do not result in the spread of this plant species.

4.5 Biodiversity Baseline

The overall area of the site has been calculated at 0.65 hectares (ha) with the total habitat units calculated at 2.77. Habitats on-site have been classified in line with the UK Habitat Classification (UKHab) system (UK Habitat Classification Working Group, 2018) to which the Defra Biodiversity Metric relates. The habitats are listed as 'Grassland – other neutral' (0.548); 'heathland and shrub – bramble scrub' (0.08 ha); and 'Sparsely vegetated land – ruderal/ephemeral' (0.018 ha). A biodiversity net gain calculation has not been completed at this stage however, sympathetic landscaping and SuDSs pond will be constructed to the north western aspect of the site. These additional features will be incorporated into the development which should assist towards an overall net gain.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Overall, the site was determined to be of low ecological value due to the composition of habitats on-site and lack of evidence of EPS utilising the site. The offers suitable habitat for hedgehogs and rabbits, but no other evidence of mammals was observed during the survey. Nesting birds may utilise the scrub and grassland, however, due to lack of late stage vegetation and disturbance this likelihood is reduced. Following the site assessment and in review of the findings, the following measures are considered to be required to be incorporated into the works:

5.2 Mitigation Measures

- Due to the suitability of scrub and grassland to support nesting birds, clearance works on these features should be carried out outside of the nesting season, which is defined as running from March to August, inclusive. If this is not feasible for any reason, a nesting bird survey must be carried out by a suitably qualified ecologist shortly prior to the start of works to ensure no active nests are present. In the event that any active nests are found during this survey or at any point during the works, a suitable exclusion zone should be put around the nest, with no work taking place in this area until such time as the nest can be confirmed as no longer active.
- Although rabbits do not receive any specific legal protection in relation to damage or destruction of their habitat or killing or injury of the animals themselves, they still receive basic protection from unnecessary cruelty under the Wild Mammals (Protection) Act 1996. Work should be carried out in a precautionary manner in relation to the rabbit warren on site to prevent undue harm to any rabbits which may be present. Hand digging should be carried out at the rabbit warren, with any rabbits encountered allowed to move off of their own accord.
- Works should be carried out in a precautionary manner in relation to hedgehogs, with any hedgehogs encountered during the works allowed to move off of their own accord. If this is not feasible, they should be carefully moved to a safe location by gloved hand. If clearance works are being carried out during hedgehog hibernation season (defined as November to March), any structures suitable for hedgehog hibernation such as vegetation piles should be checked for hibernating hedgehogs. If a hibernating hedgehog is present, a suitable exclusion zone should be put around the hedgehog, with no works occurring in this area until the hedgehog has moved off of its own accord. If this is not feasible, the hedgehog will be carefully translocated to suitable off-site habitat by a suitably qualified ecologist under appropriate weather conditions. New nesting material and supplementary food safe for hedgehog consumption will be provided at the translocation site.
- Works should be carried in a precautionary manner in relation to the buddleia on-site. If this plant is to be disturbed during development works it should be removed following best practice bio-security protocol, by which the plant is cut to ground level, and the stump treated with glyphosate. Any cuttings should be sent to a landfill licensed to receive invasive plant material.
- Any excavations should be covered at night to prevent wildlife becoming trapped, if feasible. If this is not feasible, a suitable means of egress such as a plank of wood at 45° (max.) should be provided

-
- To prevent a further reduction in ecological connectivity resulting from the development, any fenced boundaries are to be gapped, with a 13 x 13 cm hole cut at ground level to allow small mammals to access and egress gardens.
 - A sensitive lighting scheme should be implemented during and after construction to avoid indirect disturbance to foraging and commuting bats, birds and small mammals that may be using the site, and should include the following elements:
 - Sensitive positioning of lighting to avoid unnecessary spill on site and into the wider surrounding area, and any habitat enhancement features to be incorporated into the development (see below);
 - Angle of lighting: avoidance of direct lighting and light spill onto areas of habitat that are of importance as commuting pathways and/or foraging areas;
 - Type of lighting: studies have shown that light sources emitting higher amounts of UV light have a greater impact to wildlife. Use of narrow-spectrum bulbs that avoid white and blue wavelengths are likely to reduce the number of species impacted by the lighting;
 - Reduce the height of lighting columns to avoid unnecessary light spill.

5.2 Compensation Measures

- Due to the loss of a small area of suitable nesting bird habitat on site by the removal of scrub, any planting within the new development species-rich hedgerow should provide suitable replacement habitat for nesting bird species. Naturally Wild can advise on appropriate species, if required.

5.3 Enhancement Measures

- Any landscape planting should use native plant species and/or species of known wildlife value that will enhance the ecological value of the site for local populations of invertebrates, birds, bats and small mammals. Naturally Wild can advise on appropriate species, if required. Any planting to be carried out should be managed in a way that maintains it in a favourable condition for wildlife in the long term.
- A series of invertebrate hibernacula should be installed at suitable locations on site post-development.
- A series of bird and bat boxes should be incorporated into the development to provide enhanced roosting and nesting habitat.

Providing the recommendations of this report are implemented in full, Naturally Wild would conclude that there will not be a significant impact to protected species or habitats as a result of the proposed works.

6 SITE IMAGES



Image 1. Site from north eastern corner looking south west.



Image 2. Site from north eastern corner looking west.



Image 3. Site from north western corner looking east. Scrub, urban debris and earth piles present behind Heras fencing.



Image 4. Site from south western edge looking north.



Image 5. Hedgehog under pile of grass.



Image 6. Temporary hedgehog house created to protect the hedgehog.



Image 7. Pond 1 (P1)



Image 8. P1.

7 BIBLIOGRAPHY AND REFERENCES

- Amphibian and Reptile Groups of the UK (2010) *ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index*. Available: <http://www.arguk.org/download-document/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5>
- British Standards Institution (2013) *BS 42020:2013. Biodiversity – Code of practice for planning and development*. British Standards Institution, London.
- CIEEM (2016) *Guidelines for Accessing and Using Biodiversity Data*. CIEEM, Winchester.
- CIEEM (2017a) *Guidelines for Preliminary Ecological Appraisal (2nd ed.)*. CIEEM, Winchester.
- CIEEM (2017b) *Guidelines for Ecological Report Writing (2nd ed.)*. CIEEM, Winchester.
- CIEEM (2018) *Guidelines for Preliminary ecological assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*, version 1.1, CIEEM, Winchester.
- Collins, J. (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edn*. Bat Conservation Trust, London.
- The Conservation of Habitats and Species Regulations 2017 (as amended). <https://www.legislation.gov.uk/uksi/2019/579/contents/made>
- Cresswell, W. and Whitworth, R. (2004) *An assessment of the efficiency of capture techniques and the value of different habitats for great crested newts*. English Nature Research Reports 576. English Nature, Peterborough.
- European Commission (no date, a). Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. https://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm
- European Commission (no date, b) Council Directive 2009/147/EC on the conservation of wild birds. https://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm
- Froglife (1999) *Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10*. Froglife, Peterborough.
- Harris, S., Cresswell, P, and Jeffries, D. (1989) *Surveying Badgers*. Occasional Publication No. 9. The Mammal Society, London.
- The Hedgerows Regulations 1997 <https://www.legislation.gov.uk/uksi/1997/1160/contents/made>
- Joint Nature Conservation Committee (JNCC) (2010) *Handbook for Phase 1 Habitat Survey – a technique for environmental audit*. JNCC, Peterborough.
- Ministry of Housing, Communities and Local Government (2022) *National Policy Planning Framework*. Crown Copyright 2022. <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.
- Multi-Agency Geographical Information for the Countryside (MAGIC). Crown Copyright and database rights [2022]. Ordnance Survey 100022861. Available at: <http://www.magic.gov.uk/>
- Natural Environment and Rural Communities (NERC) Act 2006 <https://www.legislation.gov.uk/ukpga/2006/16/contents>
- Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000) Evaluating the suitability of habitat for the Great Crested Newts (*Triturus cristatus*), *Herpetological Journal*, 10: 143-155.
- ODPM Circular 06/2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/14757_0.pdf
- The Protection of Badgers Act (1992).

- Rose, F. and O'Reilly, C. (2006) *The Wild Flower Key*, Revised Edition. Penguin Books, London.
- The UK Biodiversity Action Plan. Available: <http://jncc.defra.gov.uk/page-5155>
- Wildlife and Countryside Act 1981 (as amended).
<https://www.legislation.gov.uk/ukpga/1981/69>

8 APPENDICES

8.1 Additional Information for the Legislation of Other Protected Species

Badgers: The badger is geographically widespread across the UK; however, they are still vulnerable to baiting, hunting and detrimental impacts of development to their habitat. Both the badger and its habitat are protected under The Protection of Badgers Act 1992, Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) an Appendix Three of the Bern Convention; therefore, badgers have legal protection against deliberate harm or injury and it is an offence to:

- Interfere with a badger sett by damaging or destroying it
- Kill, injure, take or possess a badger
- Cruelly ill-treat a badger
- Obstruct access to a badger sett
- Disturb a badger whilst it is in a badger sett

Bats: All British bat species are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore afforded protection under Section 9 of this Act. In addition, all bat species are listed in Schedule 2 of The Conservation of Habitats and Species Regulations and are protected under Regulation 39 of the Regulations. These Regulations make provision for the purpose of implementing European Union Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992, under which bats are included on Annex IV. The Act and Regulations makes it an offence, *inter alia*, to:

- Intentionally kill, injure, take (handle) or capture a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not) - under the Habitats Regulations it is an offence to damage or destroy a breeding site or resting place of any bat; or
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection - under the Habitats Regulations it is an offence to deliberately disturb a bat (this applies anywhere, not just at its roost) in such a way as to be likely to affect its ability to survive, breed, reproduce, rear or nurture their young or hibernate.

Further details of the above legislation, and of the roles and responsibilities of developers and planners in relation to bats, can be found in Natural England's Bat Mitigation Guidelines (Mitchell-Jones, 2004).

Great Crested Newts: Great crested newts are protected under Schedule 2 of The Conservation of Habitats and Species Regulations. This species is also afforded full protection under the Schedule 5 of the Wildlife and Countryside Act 1981. Under such legislation it is an offence to:

- Intentionally or recklessly* kill, injure or capture a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly* damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and
- Intentionally or recklessly* disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.
- Damage or destroy a breeding site or resting place.
- Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.

**Reckless offences were added by the Countryside and Rights of Way Act 2000, which applies only to England and Wales.*

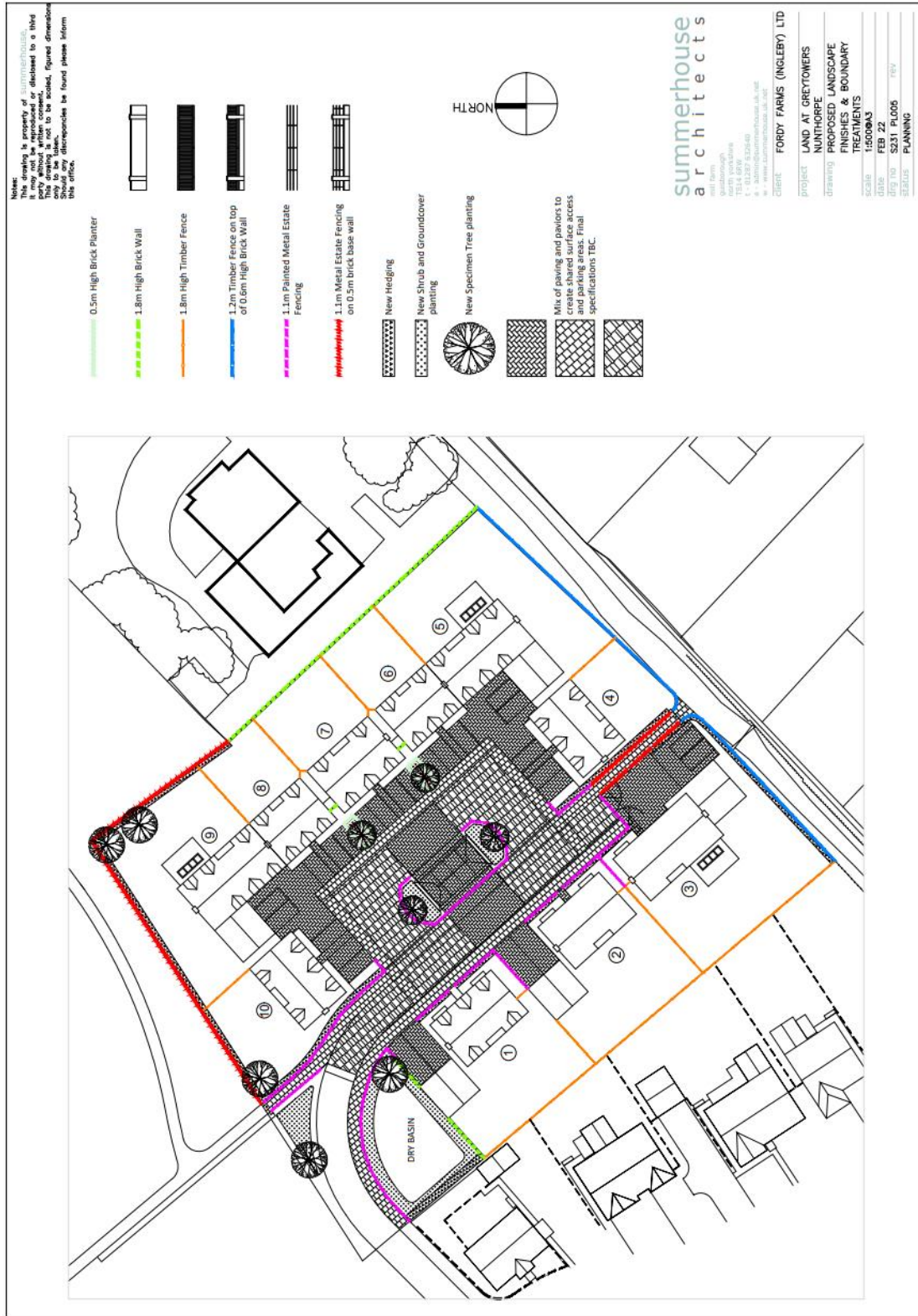
To undertake surveys for great crested newts it is necessary to hold an appropriate licence issued by Natural England.

Nesting Birds: Birds receive protection under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally or recklessly kill, injure or take any wild bird; take, damage or destroy a nest of a wild bird whilst it is in use or being built; or to take, damage or destroy an egg of a wild bird. The bird-nesting season is defined as being from 1st March until 31st August with exceptions and alterations for some species.

Reptiles: All native British species of reptile (of which there are six) are listed on Schedule 5 of the Wildlife and Countryside Act 1981 and, as such, are protected from deliberate killing, injury or trade; therefore, where development is permitted and there will be a significant change in land use, a reasonable effort must be undertaken to remove reptiles off site to avoid committing an offence. The same Act makes the trading of native reptile species a criminal offence without an appropriate licence.

8.2 Development Plans

For reference only. For full details, please see original drawing.



8.3 Calculation of HSI Score

Pond 1: P1 (NZ 53483 13946)

Suitability Index		Value	Score
Sl ₁	Location	Area A	1
Sl ₂	Pond Area	1200 m ²	0.9
Sl ₃	Pond Drying	Never dries	0.9
Sl ₄	Water Quality	Poor	0.33
Sl ₅	Shade	No shade	1
Sl ₆	Fowl	Minor	0.67
Sl ₇	Fish	Possible	0.67
Sl ₈	Ponds	2	0.5
Sl ₉	Terrestrial Habitat	Poor	0.33
Sl ₁₀	Macrophytes	0	0.3
OVERALL HSI SCORE:			0.60 (Average)

8.4 Biodiversity Baseline

Grey Tower		Return to results menu	
Headline Results			
On-site baseline	Habitat units	2.55	
	Hedgerow units	0.00	
	River units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	River units	0.00	
On-site net % change (Including habitat retention, creation & enhancement)	Habitat units	0.00%	
	Hedgerow units	0.00%	
	River units	0.00%	
Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	River units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	River units	0.00	
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-2.55	
	Hedgerow units	0.00	
	River units	0.00	
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-100.00%	
	Hedgerow units	0.00%	
	River units	0.00%	
Trading rules Satisfied?	No - Check Trading Summary		