t4 ecology Ltd

Ecology Consultancy Services

Extended Phase 1 Habitat Survey (Preliminary Ecological Appraisal)

Land South of West Street

Site B

Tollesbury

Essex

Prepared for:

Tollesbury Parish Council

March 2017

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1. Survey Finding and Recommendations Summary

In summary, site B comprises three arable, agricultural fields, which are largely ecologically poor given previous and current land use of intensive agriculture. Main ecological features comprise the boundary tree lines/hedgerows, associated ditch lines, mature trees and a pond.

The statutory and non-statutory designation search undertaken as part of the desk study identified that the site is not situated within nor bounds any statutory or non-statutory designated locations. However, given the presence of National/International statutory designations within a 2km radius of the site, it is advised that in the context of developing a Neighbourhood Plan, it is worth considering in advance how 'leisure' related impacts to offsite designated locations as a result of a future development proposal can be limited and controlled through provision of onsite open spaces/linkages to existing footpath networks.

With particular regard to potential future developments, it is advised that where possible, any proposal should seek to retain and enhance existing tree lines, hedgerows, ditch lines and pond on site. In addition, any new development should seek to provide significant planting and enhancements through infill planting of existing hedgerows/tree lines, creation of woodland strips/buffer zones and installation of ecological enhancements. Enhancements could also include installation of habitat boxes throughout a development site. Such a requirement for the retention of features and ecological enhancements could be written into a Neighbourhood Plan to ensure implementation in a new development, and guide future design layouts accordingly.

Whilst this report has not assessed a specific proposed layout and it should be noted that any future planning application would need to be accompanied by 'development specific' surveys, reports and mitigation strategies, as a guide this report has sought to identify likely presence of protected species where appropriate. Therefore, based upon the results of the survey undertaken, it is concluded that further surveys would be recommended and appropriate in respect of bat, reptile, great crested newt and badger should the site/sections of site be subject to a proposal. In addition, further surveys may be required if over time the land use of the site changes and the site becomes neglected. The need for specific surveys would be determined as part of a 'development specific' Preliminary Ecological Appraisal that would accompany any future application.

Contents

2. Introduction

2.1. Phase 1 Brief

T4 Ecology Ltd was commissioned by Tollesbury Parish Council (TPC) to undertake an ecological assessment of land located to the south of West Street, Tollesbury and is land referred to by TPC as 'Site B'.

This report contains the findings of a Preliminary Ecological Appraisal-PEA (Extended Phase 1 Habitat Survey). The Purpose of a PEA is to identify the potential for presence of protected species on a site, in line with European legislation, UK law and the requirements of The National Planning Policy Framework (NPPF)(2012). The brief of the ecological survey was to assess the habitats found on site and identify the potential for presence on site of protected species.

The site based element is supported by a desktop study undertaken to identify presence of Statutory/National/Local designations or protected species within the vicinity (up to a 2KM radius) of the site. The final part of the project brief was to identify and make recommendations as appropriate for any further surveys required to determine presence/absence of protected species on site if the survey determined that presence of a protected species on site was considered to be reasonably likely.

2.2. Development Proposals & Planning Context

No development proposals are currently available, and this report does not assess any particular scheme or layout. The purpose of this PEA is to assist TPC in their development of a Neighbourhood Plan (NP).

As such, this report will discuss the site and identify ecological issues that should be taken into account, with the purposes of assisting development of the NP. Whilst this report has not assessed a proposed layout and any future planning application would need to be accompanied by 'development specific' surveys, reports and mitigation strategies, as a guide, this report has sought to identify likely presence of protected species where appropriate, and the scope of surveys that might be required were the site/section of the site be subject to a development proposal.

2.3. Scope of Survey

The purpose of this report is to provide an independent opinion of the likely presence of protected species on a site to inform the client of their obligations, and to assist TPC in their development of a NP.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. This PEA does not constitute a full botanical survey or a Phase 2 preconstruction survey for Japanese Knotweed. In this regard, this survey provides a preliminary view of the likelihood of protected species occurring on site, based on the suitability of the habitat and any

direct evidence on site. Additional surveys may be required if it is considered reasonably likely a protected species may be present.

The survey presents a snapshot in time, and therefore makes an assessment purely of what was seen at the time the survey was undertaken. The PEA does not therefore make any retrospective analyses.

3. Methodology

3.1. Phase 1 Habitat Survey

Habitats on site were recorded in accordance with the general principles and methods provided in the Handbook for Phase 1 Habitat Survey, JNCC 1993. The survey methodology involves undertaking a site visit to gain an understanding of the site ecology and surrounding characteristics. During the site visit the recording and mapping of habitat types and ecological features present on site is undertaken, including the identification of the main species present. The potential for presence of protected species is assessed as part of the overall methodology, and further advice/surveys recommended as considered appropriate based on the evidence obtained.

The survey works were undertaken in accordance with Guidelines for Preliminary Ecological Appraisal produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) in April 2013.

Methods are also in accordance to the general principles contained within British Standards Institute (BSI) BS42020 – Biodiversity-Code of Practice for Planning & Development.

A Phase 1 Habitat Survey Plan is included as Annex 3. Photographs are included within Annex 2.

3.1.1. Phase 1 Survey Timings and Conditions

The Extended Phase 1 Habitat Survey was undertaken by Consultant Ecologist Peter Harris BSc (hons) MCIEEM on the 10th March 2017. The conditions were 50% cloud cover, 7°C with a light breeze.

Peter Harris is a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM) and subject to the CIEEM Professional Code of Conduct. The surveyor is licensed by Natural England for surveying great crested newts. The surveyor is an ecologist with over 12 years of experience, and has been involved in a wide range of projects from single dwelling developments to large strategic urban renewal schemes subject to full Environmental Impact Assessment (EIA).

3.2. Desktop Study & Records Search

To gain an understanding of any designations on/around the site in addition to the historical presence of protected species, desktop data has been obtained from the following sources:

3.2.1. Historical Protected Species Data

Records were requested from the Essex Field Club (EFC) Essex Recorders Partnership data search service. The information supplied by EFC is compiled using county records held by the County Recorders of the Essex Field Club, Butterfly Conservation, Essex Amphibian & Reptile Group, Essex Bat Group and provide information upon the records that were available at the time the search was undertaken. Therefore, a protected species records data search was undertaken for records of protected

species for a minimum of 1km and a maximum of a 2km radius of the site grid reference, in addition to any other pertinent information relevant to the site.

Use of data is in accordance with CIEEM Guidelines for Accessing & Using Biodiversity Data, March 2016.

3.2.2. Designations

A desktop study was undertaken through MAGIC (Multi-Agency Geographic Information System for Countryside). The search looked to identify the presence of statutory designated sites within a 2km radius (e.g. Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

3.2.3 Additional Information

Freely available on-line mapping information and Ordnance Survey Maps were consulted as part of the background assessment.

4. Results

4.1. Desk study Results.

Record searches are by no means exhaustive, and certain species including reptiles and great crested newt are under recorded nationally. In addition, many of the records can be considered too old or may be unverified. However, the records provide an indication of the species of note historically found.

Site Details

- The site is located at Central Grid Reference: TL 95083 10240
- Postcode: CM9 8RJ

4.1.1. Magic-Statutory Designations

The site is not located within, nor bounding a statutory designated location.

The following designations are situated within a 2km radius of the site:

- Blackwater Estuary (Mid Essex Coast) Ramsar Site & Special Protection Area (SPA) is situated approximately 1.8km east, north east and south east.
- Blackwater Estuary Site of Special Scientific Interest (SSSI) 1.8km north east.

Impact Assessment/Management

Both designations are of National / International Importance as a result of the habitat provided for migratory bird life.

At the time of writing, no proposal plans are available, and the volume of proposed future development is not known.

Whilst it is acknowledged that the village of Tollesbury is situated between the site and the offsite designations, it is likely that any development proposal would need to take into consideration the potential impact that additional residents (and therefore potential visitors/leisure users) in a medium to large development would have upon the offsite designations, with particular reference to the SPA. Research has shown that additional visitor numbers/leisure users can have an adverse impact upon nesting bird assemblages and behaviours.

Under Regulations 61 and 62 of the Habitats Regulations, Local Planning Authorities as the 'competent authority' must have regard for any potential impact that a plan or project might have on European designated sites. As such, a Habitat Regulations Assessment (HRA) is likely to be required should a proposed development be considered to be of a sufficient size such that risk of additional visitor impact is a possibility. The HRA is an exercise undertaken by the LPA.

However, in the context of developing a NP, it is worth considering early on how impacts as a result of a future development proposal can be limited and controlled.

Certainly, research has identified that the provision of usable open space and linkages to existing footpaths, dog walking area and trails with interpretation can have a significant effect in reducing the impacts upon statutory designations by ensuring that new residents have access to open space and leisure etc., and therefore would not need to visit the designated locations to undertake such pursuits. Therefore, within the context of developing a NP, a requirement related to provision of quality open space, access to footpaths and leisure be an important aspiration for Tollesbury, such that potential impacts upon important ecological locations are minimised as far as is reasonably possible within future developments.

Early identification and pre-planning for such actions will assist the LPA in their determination, and ensure that future developments are location appropriate.

4.1.2. Local Wildlife Sites-Non Statutory Designations

Local Wildlife Sites (LWS) are used in the planning system to protect areas that have substantive nature conservation value at a local level. The site is not situated within, nor bounds any LWS locations.

The nearest such location comprises St Mary's Churchyard LWS. At its closest point, the LWS is situated approximately 0.25km north east of the site.

4.1.3. Biological Records

A search of the protected species records data was undertaken via the EFC. A summary of records identified is provided below:

Great Crested Newt/Amphibian Species & Reptile Species

No records were identified in respect of great crested newt within the search radius.

Reptile

2 records for grass snake dating from 2012 were identified for a location situated approximately 0.2km from site to the east.

Terrestrial Mammal Species

Badger

1 record was identified from 2012 for a location 0.3km from site.

Bat

The search identified the following records in respect of bat species:

Species	No. Records	Date(s)	closest to site
Natterers	1x Record	2013	1.6 km from site
Daubenton	1x Record	2010	1.2km from site
Noctule	1x Record	2013	1.6km from site

C. Pipistrelle	12x Records	1995-2014	0.2km from site
S. Pipistrelle	2x Records	2011/12	0.3km from site
B. Long eared	3x Records	1998-2014	0.2km from site

Brown Hare

6 records were identified between 1995 and 2008. The closest to the site was situated 0.7km from site.

Western Hedgehog

6 records were identified within the search radius, dating from 1995 to 2013, the closest of which was 0.2km from site.

European Water Vole

Evidence of presence of this species was recorded in 2008 in Walsham-Le-Willows region approximately 0.7km away from site.

Harvest Mouse

1 record was identified 1.1km from site, dating from 1999.

Bird Species

Records were available for a range of birds to with the search radius. A list is included as Annex 1a.

4.2. Survey Results & Analysis

4.2.1 Site & Surroundings Description & Habitats

The location of Target Notes (TN) identified within this section are illustrated on the plan contained within Annex 3.

Site B is situated on the western side of Tollesbury village, approximately 0.5km west of the village centre.

To the north, the site is bounded by West Street, with arable agricultural land, farm buildings and scattered residential development situated on the opposing side of the road. In addition, central sections of the northern perimeter are bounded by residential dwellings, associated gardens and an area of semi improved grassland.

To the west, the site is bounded by Prentice Hall Lane, with a farm track and further arable, agricultural land located to the south. An amenity park with active play and sports pitches etc. is situated to the east.

Within the survey area, site B is formed by 3 neighbouring agricultural fields. Field 1 is the largest, and comprises the western section. Field 2 is the central field, with Field 3 forming the eastern extent of the site.

Field 1

Field 1 comprises a large arable agricultural field. The main body of the site area is largely devoid of features as a result of land use. The field is intensively farmed, with minimal field margins.

The northern boundary of Field 1 with West Street is defined by a staggered native hedgerow/tree line (Target Note TN1) comprising ash, small horse chestnut, blackthorn, hawthorn, goat willow and bramble set over a narrow grass margin.

The western boundary is defined by a drainage ditch alongside the road. A small, staggered, partially flailed ditch is situated adjacent to the ditch and contains goat willow, English elm and occasional blackthorn and bramble (TN2). Common nettle and tall ruderal colonisation is also present along the western boundary in a narrow strip adjacent to the field.

The southern boundary of the field is defined by a deep drainage ditch (TN3), lined with reed colonisation, in addition to a small planted native hedgerow comprising saplings and young trees.

The south-eastern boundary adjoining Field 2 is formed by a more established blackthorn dominated hedgerow set over a drainage ditch (TN4), with hawthorn, blackthorn, goat willow, ivy, bramble and common nettle also present.

The north-western boundary section of Field 1 bounds Tollesbury Cemetery. Whilst not formed by any feature, a small hedgerow/tree line is situated within the southern and south western section of the cemetery close to the site perimeter.

A pond bounded by an area of unmanaged semi-improved grassland is situated at in the central western section of Field 1 (TN5). The pond contains water, and is also bounded by saplings and young examples of goat willow.

Field 2

Field 2 comprises a slightly smaller field that had, at the time of survey, been subject to recent ploughing. As such, the vast majority of the site area was dominated by ploughed soil. Again, the field appears to have been subject to intensive arable practices, and as such, the field margins are minimal.

The south-western boundary is formed by hedgerow TN4, bounding Field 1. The southern boundary is defined by a tree line and hedgerow comprising blackthorn, hawthorn, goat willow, poplar, ivy, bramble and elder set over a drainage ditch (TN6), and is identical in composition to TN4.

The south eastern and eastern boundary is defined by a shallower drainage ditch (TN7) with dense common nettle, bramble and elder colonisation. A small, blackthorn dominated ditch is situated on the eastern side of the ditch (TN8).

The north eastern and northern boundary is a continuation of hedgerow TN8, with 3 larger mature oak trees (TN9) situated on the northern boundary, on the opposing side of which are gardens of dwellings located along West Street.

A large cypress hedgerow (TN10) forms the north-western perimeter of Field 2.

Field 3

Field 3 is the smallest of the 3 constituent parts of site B. The main body of the site is identically comprised to that of Field 1, again with narrow, minimal margins.

The southern boundary is defined by a continuation of the hedgerow/ditch TN6. The eastern boundary with the adjacent park is defined by a tree line (TN11) set adjacent to a further drainage ditch (TN12). The tree line is set adjacent to a hedgerow with species including ash, hawthorn, blackthorn, English elm and oak present. Whilst the majority of the tree line comprised early mature species, a cluster of mature oak trees (TN13) are situated in the northern section of the tree line.

The northern perimeter of Field 3 is defined by a residential apartment block, with a small hedgerow comprised of blackthorn and hawthorn (TN14), in the north-western corner. The western boundary of Field 3 is defined by a hedgerow/ditch TN7/8. A further mature oak (TN9) is situated in the north-western corner of the field.

Summary

In summary, site B comprises arable, agricultural fields, which are largely ecologically poor given previous and current land use of intensive agriculture. Main ecological features comprise the boundary tree lines/hedgerows, associated ditch lines, mature trees and a pond. With particular regard to potential future developments, it is advised that layouts should seek to retain and enhance existing tree lines and

hedgerows, ditch lines and should provide significant new planting and enhancement through infill planting of existing hedgerows/tree lines, creation of woodland strips/buffer zones and installation of significant new planting and ecological enhancements throughout a development site. Further recommendations are identified in Section 5.2.

4.3. Potential for Protected Species Impact with Proposals

The site was assessed for the potential presence of protected species that may have a material impact upon any future development proposals.

The ecological value of the site in respect of the potential presence of and impact upon protected species is considered further in the following sections:

4.3.1. Bats

All bat species are strictly protected under the Wildlife and Countryside Act 1981 and the Conservation Regulations (Habitat Regulations).

Trees/Hedgerows/Foraging/Commuting

As identified in section 4.1, the main body of the site is dominated by 3 arable, agricultural fields. As such, there are no trees/hedgerows within the main body of the site, with the exception of boundary hedgerows that divide the 3 composite fields that make up site B. However, hedgerows and tree lines are situated at site boundaries and have linkages to similar such hedgerows and tree lines in the wider countryside beyond the boundaries of site B. As such, it is likely that hedgerows/tree lines form part of a wider bat commuting and foraging network, though this may be partially reduced given the surrounding site context of a largely arable landscape to the south, west and north.

The majority of trees on/bounding the 3 constituent fields are considered to offer at most, low roosting potential, so whilst likely to be part of a commuting/foraging network, would not be considered to offer roosting potential and no further investigation would be necessary. However, as identified in section 4.1, there mature oak trees (TN9/TN13) located along the northern/north eastern boundary within Field 2, and the north-eastern/north western boundary of Field 3. From ground up analysis, these trees would be considered to present moderate levels of bat roosting potential. It is considered that survey effort consummate with a moderate level of potential roosting would present a proportionate and reasonable course of action.

Impact Assessment

Whilst a specific proposal is not being assessed, it is considered likely and would be strongly recommended that hedgerow/tree lines be retained where possible in a layout, and enhancement planting undertaken. Given the positioning of tree lines/hedgerows on boundaries, it is considered that this would be a reasonable, and largely achievable aspiration.

Nevertheless, it is considered that any future emerging planning application for a proposed development of reasonable size would need to be supported by appropriate survey information in order to identify the presence of roosts on site, and to identify how the site is used by bats as part of a wider network. This data would then be used to inform design and appropriate mitigation and enhancement strategies. Therefore, further surveys would be advisable in order to:

- Identify location of any roosts on site, with particular attention to large trees identified as TN9 & TN13.

- Identify patterns of usage/species present on site and identify the function of tree lines/hedgerows in the wider landscape in respect of hedgerows/tree lines bounding the site.

Such actions will enable the specific design of mitigation to be tailored, based upon the results of the survey data, and for the requirement for any Protected Species licenses to be determined as applicable. The full scope of advisable works is identified in section 5.2.

4.3.2. Badgers

Badgers and active setts are afforded protection under the Protection of Badgers Act 1992.

No evidence of any badger activity (active or inactive setts, droppings or latrines) was identified during the survey of the site. Given the arable location, it is considered reasonable and possible that badgers may have a transitory foraging presence on and around the site.

Impact Assessment

No active/inactive setts/badger activity was identified on site. However, given the active, highly transient and territorial nature of the species, it is advisable that once any proposals are outlined, and a future planning application emerges, that a further walkover be undertaken to confirm absence of active setts/identify active setts and advise upon appropriate actions. Such a survey would be undertaken as part of a project specific PEA.

In addition, given the amount of rabbit and fox activity identified across the site, appropriate precautionary recommendations have been made in section 5.2 to protect badger and other radiating mammals during a construction phase.

4.3.3. Nesting Birds

Nesting birds and their eggs are broadly protected under the Wildlife & Countryside Act 1981.

Given the arable land use of the main body of the site, short sward margins with little vegetation, it is not considered that the main body of the site presents any significant or notable habitat for nesting.

It is acknowledged that the record search undertaken via EFC identified presence of species of conservation concern including skylark within a 2km radius of the site.

It should be noted that the existing hedgerows/tree line/ditch scrub are likely to present some nesting bird habitat. However, these are features that are situated on boundaries, and ideally, should be largely retainable in the context of possible future development layouts.

As a general point, it should be noted that the main breeding season for birds is between the months of March to September inclusive. Therefore, activities such as ground clearance, hedgerow maintenance/tree works should ideally be avoided during the bird breeding season if possible. If this is not possible a breeding search should be undertaken to confirm presence/absence of nesting prior to works being undertaken.

Impact Assessment

Given that the site is largely active, arable agriculture and the majority of the site area is not considered to present notable or significant habitat. In addition, principal boundary features should be largely retainable in the development of a layout. Any new development should present the opportunity to reinforce existing boundary tree lines with infill planting, in addition to planting of hedgerows/tree lines on boundaries where such features currently do not currently exist, such as the interior of the site that is currently dominated by agriculture. Consequently, it is logical to conclude the inclusion of such features would provide additional nesting/foraging habitat for birds over and above the existing situation.

In addition, as part of considering future landscaping proposals, it is advised that appropriate features be included for species such a skylark, including provision of winter feeding opportunities for the species (weed and seed areas) within a landscaping scheme. Falls in skylark numbers is resultant of loss of foraging habitat, and as such, provision of such habitat within a layout would be advantageous to this and other species.

Recommendations in respect of appropriate enhancements and provision of new nesting/foraging opportunities for birds through new planting on site boundaries/within the main body of the site and habitat box provision have been made in section 5.2 of the report. In addition, creation of grass meadow habitats as part of any future proposals would provide additional opportunities for ground utilising species.

4.3.4. Reptiles

Reptiles are afforded protection under the Wildlife & Countryside Act 1981, with smooth snake and sand lizard afforded full protection under the same act and the Conservation Regulations (European Habitat Regulations). The record search undertaken via EFC identified 2 records for grass snake at a location situated approximately 0.2km east of the site.

As described in section 4.1, the majority of the site area is dominated by agricultural fields with narrow margins. As such, given the most recent land use of the site and absence of potentially suitable habitat, it is not considered that the site provides potentially suitable reptile habitat. Whilst there are patches of semi-improved grassland, such as around pond TN5 that would present potentially suitable habitat, the area is a very small 'island' surrounded by intensive arable land use, both in the field within which the pond is located, and the surrounding landscape. Consequently, in the current conditions these areas are not considered to be of a size, nor have connectivity to suitable habitats in order to sustain a population.

However, boundary ditches and associated vegetation, particularly the ditch along the southern boundary does present some small scale, localised potential reptile habitat for species such as grass snake.

Impact Assessment

Based upon the evidence above, taking into account the land use of the site and surrounding arable land uses, the vast majority of the site area is not considered suitable to potentially support the species, no surveys are necessary, and the risk to the species is considered to be negligible.

However, it should be noted that there are records of grass snake in the area, and with particular regard to the ditch along the southern boundary, ditch networks may present some small scale, localised potentially suitable reptile habitat. Therefore, should any future proposal affect the ditch network on site, it is advised that a precautionary survey of these areas be undertaken to demonstrate presence/absence and inform mitigation as may be necessary.

Whilst the majority of the site is unsuitable, in respect of the NP, it is worth considering that if land uses change/the fields become disused and neglected, habitat may develop in the future. As such, it is advised that 'development specific' PEA surveys be undertaken once future defined planning applications emerge to identify whether conditions on site have materially altered.

4.3.5. Great Crested Newt

Great crested newt is strictly protected under the Wildlife and Countryside Act 1981 and the Conservation Regulations (Habitat Regulations). No records of the species were identified in the search undertaken via EFC.

Given the lack of potentially suitable terrestrial habitat due to existing arable land uses on and surrounding the site, the majority of site B is not considered to provide potential terrestrial dispersal habitat.

As identified in section 4.1, a small, water filled pond TN5 is located within Field 1, and bounded by unmanaged semi-improved grassland around the margins. Taking into account the surrounding arable land uses, as with reptiles, it is not considered likely that the pond has connectivity to offsite habitat, or other ponds/ditches sufficient to sustain a population.

Whilst it is acknowledged that small numbers of GCN have been known to range significant distances (1km) to colonise new ponds, sometimes over a number of years if connective habitat is suitable, research undertaken by English Nature[1] (now Natural England) indicates that it is most common to encounter them within 50m of a breeding pond, with few moving further than 100m unless significant linear features or suitable terrestrial habitat is involved, when great rested newts can be encountered at distances of between150m – 200m. At distances greater than 200-250m great crested newts are hardly ever encountered. This valuation of habitats according to distance from great crested newt breeding ponds has also been adopted as part of Natural England's European Protected Species application form, with specific reference to the guidance provided by Natural England in WMLa14-2.

Given that the main body of the site is not in a condition suitable to terrestrially support the species, it is of considerably reduced likelihood that the species would be adversely affected by any future proposals. However, given the levels of protection afforded to the species, it is advised that some further investigation is undertaken as a precaution to definitively confirm absence of the species in Pond TN5, or to inform an appropriate mitigation/enhancement strategy if the species is found to be present in the offsite ponds.

A total of 3 ponds are situated offsite, within a 500m radius. However, given the large swathes of arable land between the site and these offsite ponds, it is not considered that these ponds would have ecological connectivity with the site. 2 ponds located to the north of West Street have been discounted, as the road would act as a significant dispersal barrier to potential species migration. It is acknowledged that there is no way of identifying whether there are other small ponds that may be hidden within any nearby dwellings/field margins and not shown on maps. None were immediately visible from site/analysis of mapping data. Identification of such ponds located on private property and not shown on maps cannot be reasonably expected as part of this survey/desk study.

Impact Assessment

Based upon the evidence above, it is not considered likely that great crested newt would be affected by any future emerging development proposals given lack of suitable aquatic/terrestrial habitat on site given the current condition of the site and surrounding land uses.

However, it is advised that some further investigation is undertaken as a precaution to confirm absence of the species in the pond on site TN5, to inform an appropriate mitigation/enhancement strategy in the unlikely event that the species is found to be present.

[1]English Nature, 2006. An Assessment of the Efficiency of Capture Techniques and the value of different habitats for the great crested newt *Triturus cristatus*, Report Number 576

As a first step, it is advised that a springtime Habitat Suitability Index (HSI) assessment be carried out, in addition to eDNA testing with supplementary torch/egg searching of pond TN5. Full recommendations are included in section 5.2.

However, in respect of the NP, it is worth considering that if land uses change/the fields become disused and neglected, habitat may develop in the future. As such, it is advised that 'development specific' PEA surveys be undertaken once future defined planning applications emerge.

4.3.6 Invertebrates

Given current land use/management of the proposed development site as an arable agricultural field and the lack of vegetative variety of habitats, the main body of the site is not considered to provide notable or potentially significant invertebrate habitat. It is not considered that the vegetative diversity would be significantly more diverse in the late spring/summer months given land use and management.

However, the retention/enhancement of the boundary hedgerows, standing deadwood, installation of new boundary hedgerows/trees and the inclusion of nectar rich plants in the landscaping design, coupled with the installation of 'insect hotels/bugs boxes,' could provide good invertebrate habitat on the site post-development. Night scented plant species such as evening primrose, honeysuckle and jasmine would also attract moths in the evening, which would in turn attract foraging bats.

Taking into account the above, no further specific consideration in respect of invertebrates is considered necessary. However, it is considered that the site could be enhanced as part of a future development proposal.

4.3.7 Other Species

The site is not situated in a location, nor provides potentially suitable habitat where other protected species such as hazel dormouse, water vole and otter would be considered at risk. No further surveys/precautions are considered necessary or appropriate.

4.3.8 General Wildlife & Biodiversity

It is acknowledged that the wider site and development area may be utilised by a range of wildlife species including rabbit, fox, hedgehog, deer etc. The boundaries of the development area and wider site are currently open and as such animals are able to forage across the site to lakes and the wider countryside.

In consideration of brown hare, the site would present as potential habitat. However, development on the site would not isolate the species from arable habitat areas in the wider arable landscape to the north and west. As such, the species viability would not be compromised. However, as a general precaution, covering of trenches and fencing off construction compounds would be advisable during the construction phase.

Impact Assessment

As part of appropriate due diligence, it is advised that the full range of recommendations identified in section 5.2 be fully implemented, and all reasonable enhancements incorporated into a development proposal such that biodiversity is maximised as part of a future development.

In addition, to enable wildlife to continue using the development area, it is advised that garden boundaries remain relatively open as per the current situation such that wildlife can continue to radiate in the area. This includes the use of permeable boundaries such as tree lines and hedgerows, in addition to leaving hedgehog gaps in any new fencing proposals.

5. Conclusion & Recommendations

5.1 Conclusion

In summary, site B comprises three arable, agricultural fields, which are largely ecologically poor given previous and current land use of intensive agriculture. Main ecological features comprise the boundary tree lines/hedgerows, associated ditch lines, mature trees and a pond.

The statutory and non-statutory designation search undertaken as part of the desk study identified that the site is not situated within nor bounds any statutory or non-statutory designated locations. However, given the presence of National/International statutory designations within a 2km radius of the site, it is advised that in the context of developing a Neighbourhood Plan, it is worth considering in advance how 'leisure' related impacts to offsite designated locations as a result of a future development proposal can be limited and controlled through provision of onsite open spaces/linkages to existing footpath networks.

With particular regard to potential future developments, it is advised that where possible, any proposal should seek to retain and enhance existing tree lines, hedgerows, ditch lines and pond on site. In addition, any new development should seek to provide significant planting and enhancements through infill planting of existing hedgerows/tree lines, creation of woodland strips/buffer zones and installation of ecological enhancements. Enhancements could also include installation of habitat boxes throughout a development site. Such a requirement for the retention of features and ecological enhancements could be written into a Neighbourhood Plan to ensure implementation in a new development, and guide future design layouts accordingly.

Whilst this report has not assessed a specific proposed layout and it should be noted that any future planning application would need to be accompanied by 'development specific' surveys, reports and mitigation strategies, as a guide this report has sought to identify likely presence of protected species where appropriate. Therefore, based upon the results of the survey undertaken, it is concluded that further surveys would be recommended and appropriate in respect of bat, reptile, great crested newt and badger should the site/sections of site be subject to a proposal. In addition, further surveys may be required if over time the land use of the site changes and the site becomes neglected. The need for specific surveys would be determined as part of a 'development specific' Preliminary Ecological Appraisal that would accompany any future application.

5.2 Recommendations and Further Action

Following the survey, the following recommendations/actions have been identified in respect of emerging NP:

Impacts Upon Statutory Designations

- It is likely that any development proposal would need to take into consideration the impact that additional residents (and therefore potential visitors/leisure users) in a medium to large development would have upon the offsite designations, with particular reference to the SPA.

- As such, a Habitat Regulations Assessment (HRA) is likely to be required should a proposed development be considered to be of a sufficient size such that risk of additional visitor impact is a possibility. The HRA is an exercise undertaken by the LPA.

- However, in the context of developing a NP, it is worth considering early on how impacts as a result of a future development proposal can be limited and controlled through provision of open space, linkages to existing footpaths, dog walking areas and interpretation. Such actions can have a significant effect in reducing the impacts upon statutory designations by ensuring that new residents have access to open space and leisure etc., and therefore would not need to visit the designated locations to undertake such pursuits.

- Early identification and pre-planning for such actions will assist the LPA in their determination, and ensure that future developments are location appropriate.

Retention of ecological features

- It is advised that where at all possible, any future developments of site B should seek to retain the following:

    - Existing tree lines and hedgerows on boundaries, with particular regard to the southern boundary hedgerow and tree line on the far eastern boundary of Field 3 (TN11/TN13)

    - Existing ditch networks, with particular regard to the ditches running along the far western boundary of Field 1 and the deep ditch running alongside the southern boundary of the site.

    - The pond situated in the central west area of Field 1 (TN5).

    - Mature trees situated on site boundaries (TN9/TN13)

Scope of Recommended Ecological Surveys for future Proposals

Bat Surveys

Further surveys would be advisable in order to:

- Identify location of any roosts on site, with particular attention to large trees identified as TN9 & TN13.

- Identify patterns of usage/species present on site and identify the function of tree lines/hedgerows in the wider landscape in respect of hedgerows/tree lines bounding the site.

- Such actions will enable the specific design of mitigation to be tailored based upon the results of the survey data, and for the requirement for any Protected Species licenses to be determined as applicable.

- Whilst the ecologist undertaking the site-specific surveys and reports relating to a specific application would define the exact scope of surveys (depending on layout/location), the following scope of works would be generally in line with Bat Conservation Trust (BCT) guidelines:

    - In respect of oak trees TN9/TN13, one dusk emergence and a separate dawn emergence should be undertaken during May to Sept, with at least one survey undertaken between May and Aug.

    - In respect of forage/commuting, transect surveys comprising one survey visit per season (spring-April/May), (summer-June/July/August) (autumn-September/October).

Great Crested Newt Survey

- It is advised that the Pond TN5 should be subject to a springtime Habitat Suitability Index (HSI) assessment in addition to eDNA testing. eDNA testing would require water samples to be taken from the pond and tested by an independent laboratory to identify whether great crested newt DNA is present in the water. The samples and testing can only be carried out between mid-April and late June, as no other time of year is acceptable. Ideally, samples would be obtained between mid-April and mid-May.

- It is advised that the collection of samples be supplemented by egg searching a torch survey during the same period.

Reptile

- The majority of the site is not suitable to support reptiles. However, if ditches are affected by a future proposal, a reptile survey is advised.
- Reptile surveys should be undertaken to identify the presence / likely absence of reptile species present on site and inform whether mitigation is required. The survey methodology should comprise a minimum of 7 initial monitoring visits using artificial refugia matts. If reptiles are found, up to 15 further visits may be required to establish population size. Surveys can be undertaken between March and early October in suitable conditions, with optimum survey periods comprising late March, April, May and September.

Badger Survey

- No active/inactive setts/badger activity was identified on site. However, given the active, highly transient and territorial nature of the species, as a precaution and given the relatively rural location, it is advisable that once any proposals are outlined and a future planning application emerges that a further walkover be undertaken to confirm absence of active setts/identify active setts and advise upon appropriate actions.

Nesting Birds

- As a general point for ongoing tree works/ongoing care/maintenance, it should be noted that the main bird breeding season is between the months of March to September inclusive. Ground clearance, and any maintenance works to trees/hedgerows should ideally be avoided during the bird breeding season if possible. If this is not possible a search should be undertaken to confirm presence/absence of nesting prior to works being undertaken.

Ecological Enhancements for Future Proposals to consider

Bats & Lighting

- To minimise the risk of disturbance to potential foraging bats (both during and post development), external lighting should be minimised as follows:
    - Brightness of lights should be as low as possible, and in accordance with British Standard Institute (BSI) and Bat Conservation Trust (BCT) guidance. Where possible, low pressure sodium lights are advised.

- Lighting should not be directed at features that may be utilised by bats such as tree lines, hedgerows and water bodies/water courses.

- Directional lighting and/or fittings with hoods and cowls should be utilised.

- Where possible, security lighting should be motion sensitive and timers to minimise the amount of time that lights are on.

- Where possible, directional low impact solar bollard lighting should be used to illuminate roads, paths and parking areas.

- Increased opportunities for bat commuting/foraging could be created by undertaking infill planting to enhance existing boundary hedgerows, planting of new hedgerows and through the inclusion of significant new planting within the main body of the site.

- The opportunity exists to reinforce existing boundary tree lines with infill planting, creation of a buffer strips, in addition to the planting of hedgerows/tree where no such features currently exists. In addition, proposals may present an opportunity for new tree and hedgerow planting within the site interior. Consequently, it is logical to conclude the inclusion of such features would provide additional nesting/foraging habitat for birds over and above the existing situation currently presented.
- In addition, as part of the wider landscaping proposals, it is advised that appropriate features be included for species such a skylark, including provision of winter feeding opportunities for the species (weed and seed areas) within the landscaping scheme.

- Proposals could include a range of enhancements including wild grass and flower meadows, in addition to creations of new ponds/suds and swales as part of future drainage requirements.

- As part of the proposals, there are opportunities to enhance the proposals through provision of habitat boxes (bird/bat) on trees and integral boxes within buildings. Suggested habitat boxes/plant species are provided within Annex 4.

- To enable wildlife to continue using a future development, it is advised that boundaries remain relatively open as per the current situation such that wildlife can continue to radiate in the area. This includes the use of permeable boundaries such as tree lines and hedgerows, in addition to leaving hedgehog gaps in any new fencing proposals.

1. Annex 1 – Legislation & Planning Policy

1.1. Habitat Regulations

The Conservation of Habitats and Species Regulations transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

1.2. Wildlife & Countryside Act

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1to the Act, (which includes Cirl Bunting) or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

Special Protection Areas (SPA) are strictly protected sites, designated under the Birds Directive, for rare and vulnerable birds and for regularly occurring migratory species.

1.3. Natural Environment & Rural Communities Act

The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

1.4. National Planning Policy Framework (NPPF)

The NPPF has replaced PPS9 with paragraphs 163-170 in respect of conservation and biodiversity. ODPM 06/2005 remains in place. NPPF places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications, with a focus upon sustainable development.

1.5. Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A list of

national priority species and habitats has been produced with all listed species/habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.

1.6. Local Development Plans

County, District and Local Councils have Development Plans and other policy documents that include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions.

1.7. Natural England Standing Advice

Natural England has adopted national standing advice for protected species. It provides a consistent level of basic advice which can be applied to any planning application that could affect protected species. It replaces some of the individual comments that Natural England has provided in the past to local authorities.

Annex 1a – List of Bird Records

Red-legged Partridge	Water Pipit	Canada Goose	Cetti's Warbler	Common Cuckoo	Eurasian Hobby	Whimbrel	Sand Martin		
Northern Pintail	Tree Pipit	Barnacle Goose	Little Ringed Plover	Blue Tit	Common Kestrel	Whimbrel	Black-legged Kittiwake		
Northern Shoveler	Common Swift	Common Goldeneye	Common Ringed Plover	Tundra Swan	Bramblling	Leach's Storm Petrel	Whinchat		
Eurasian Teal	Great Egret	Common Buzzard	Black Tern	Mute Swan	Common Coot	Wheatear	Whinchat		
Eurasian Wigeon	Grey Heron	Sanderling	Common Black-headed	Common House Martin	Common Snipe	Ruddy Duck	Eurasian Woodcock		
Mallard	Ruddy Turnstone	Dunlin	Western Marsh Harrier	Common House Martin	Common Moorhen	Osprey	Common Eider		
Garganey	Short-eared Owl	Red Knot	Northern Harrier	Great Spotted Woodpecker	Eurasian Jay	Bearded Reedling	Common Tern		
Garganey	Little Owl	Curlew Sandpiper	Long-tailed Duck	Little Egret	Black-throated Loon	Great Tit	Arctic Tern		
Gadwall	Common Pochard	Purple Sandpiper	Common Pigeon	Corn Bunting	Great Northern Loon	House Sparrow	Sandwich Tern		
Greater White-fronted Goose	Tufted Duck	Pectoral Sandpiper	Stock Dove	Yellowhammer	Red-throated Loon	Coal Tit	Little Tern		
Greylag Goose	Greater Scaup	Little Stint	Common Wood Pigeon	Common Reed Bunting	Eurasian Oystercatcher	European Honey-buz	Eurasian Collared Dove		
Pink-footed Goose	Bohemian Waxwing	Little Stint	Carrion Crow	European Robin	Black-winged Stilt	European Shag	European Turtle Dove		
Eurasian Rock Pipit	Eurasian Bittern	Temminck's Stint	Rook	Merlin	Barn Swallow	Great Cormorant	Tawny Owl		
Meadow Pipit	Brant Goose	Common Linnet	Western Jackdaw	Peregrine Falcon	Eurasian Wryneck	Great Cormorant	Common Starling		
Great Grey Shrike	Yellow-legged Gull	Jack Snipe	Pied Wagtail	Glossy Ibis	Pied Avocet	Red Phalarope	Little Grebe		
Herring Gull	Bar-tailed Godwit	Velvet Scoter	Grey Wagtail	European Golden Plover	Goldcrest	Ruff	Common Shelduck		
Mew Gull	Black-tailed Godwit	Black Scoter	Yellow Wagtail	Grey Plover	Eurasian Bullfinch	Ruff	Spotted Redshank		
Lesser Black-backed Gull	Common Grasshopper Warbler	Smew	Spotted Flycatcher	Horned Grebe	Water Rail	Willow Warbler	Wood Sandpiper		
Great Black-backed Gull	Common Grasshopper Warbler	Red-breasted Merga	Eurasian Curlew	Great Crested Grebe	Snow Bunting	Eurasian Magpie	Common Greenshank		
Mediterranean Gull	Wood Lark	Red Kite	Common Sandpiper	Black-necked Grebe	Northern Lapwing	European Green Woo	Green Sandpiper		
Common Kingfisher	Sky Lark	Northern Gannet	Eurasian Sparrowhawk	Dunnock	Grey Dagger	Eurasian Spoonbill	Green Sandpiper		
Common Redshank	Redwing	Song Thrush	Ring Ouzel	Barn Owl					
Winter Wren	Common Blackbird	Fieldfare	Mistle Thrush	Common Murre					

2. Annex 2 – Photographs

Northern Boundary Field 1

Northern Boundary Field 1

Field 1, Western boundary

Field 1, Western boundary ditch

View across main body of Field 1 looking north east

Pond (TN5) Within Field 1

Unmanaged Grassland around Pond within Field 1

Sapling planting on southern boundary of Field 1

View across Field 1 looking north east

Ditch along southern boundary of Field 1

Southern boundary of Field 1 looking west

Eastern boundary ditch/hedge of Field 1

Eastern boundary of Field 1 with Cemetery

Main body of Field 2 Looking North

Cypress hedgerow on north western boundary of Field 2

Western boundary of Field 2

Southern boundary of Field 2

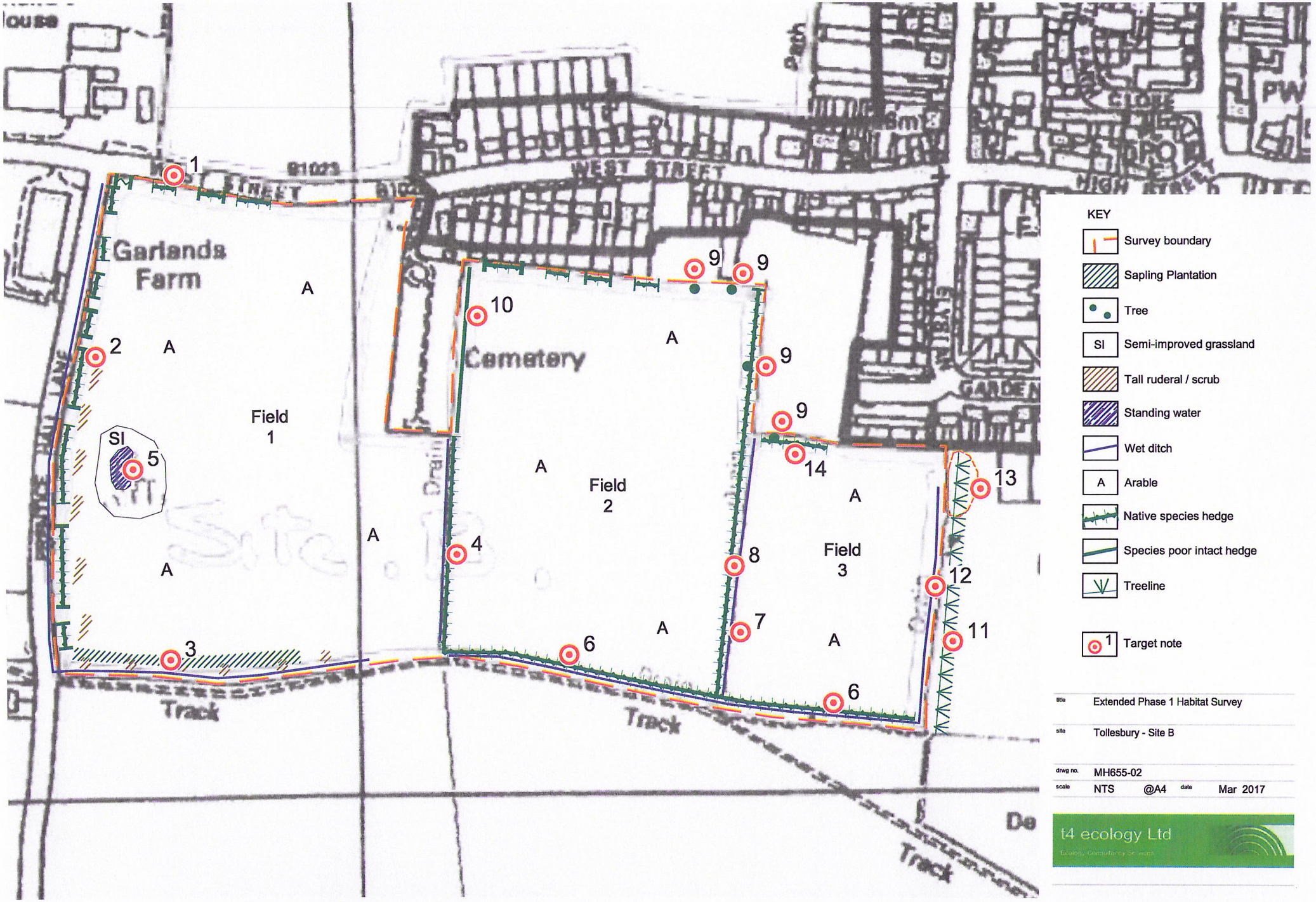
Western boundary hedge/ditch line Field 2

Field 3, Looking North

Tree line on eastern boundary of Field 3

Field 3, Northern boundary

3. Annex 3 – Phase 1 Habitat Map



title	Extended Phase 1 Habitat Survey
site	Tollesbury - Site B
drwg no.	MH655-02
scale	NTS @A4
date	Mar 2017

t4 ecology Ltd
Ecology Consultancy Services

4. Annex 4 – Recommended Enhancements

Recommended enhancements/suitable planting species.

The following hedgerows/shrub and smaller tree species could be utilised accordingly:

- Hawthorn *Crataegus monogyna*
- Ash *Fraxinus excelsior*
- English Elm *Ulmus procera*
- Field Maple *Acer campestre*
- Hazel *Corylus avellana*
- Dog Rose *Rosa canina*
- Elderberry *Sambucus nigra*
- Holly *Illex aquifolium*
- Blackthorn *Prunus spinosa*
- Rowan Sorbus *aucuparia*
- Guelder Rose *Viburnum opulus*
- Silver Birch *Betula pendula*
- Alder *Alnus glutinosa*
- Cotoneaster *Cotoneaster spp.*
- Spindle *Euonymous europaeus*

The following species could also be considered within the landscaping scheme as appropriate, given their wildlife friendly/native characteristics:

- Viburnum *Viburnum sp.*
- Californian Lilac *Ceanothus sp.*
- Lavander *Lavandula angustifolia*
- Hebe *Hebe Sp.*
- Privet *Ligustrum vulgare*
- Dogwood *Cornus sanguinea*

In addition, vertical areas on sides of buildings and/or boundary fences could be utilised to provide additional habitat. Suitable species to grow on vertical habitats could include:

- Ivy *Hedera helix*
- Clematis *Clematis vetalba*
- Honeysuckle *Lonicera periclymenum*

Bulbs and small, wildlife friendly annuals and biennials can also be utilised within wildlife friendly and garden planting where considered appropriate by the landscape architect. Suitable species could include:

- Hypericum *Hypericum perforatum*
- Wood Anemone *Anemone nemorosa*
- Tustan *Hypericum androsaemum*
- Foxglove *Digitalis grandiflora*
- Bluebell *Hyacinthoides non-scripta*

Dependant on soil condition, British Seed House RE1 mix (or similar product) is recommended for installation of the species rich grass areas where required. Alternatively, turf already seeded with wild flower seed could be utilised.

Recommend species are likely to include:

- Slender Creeping Red *Fescue Festuca rubra ssp litoralis*
- Crested Dogs Tail *Cynosurus cristatus*
- Common Bent *Agrostis capillaris*
- Cocksfoot *Dactylis glomerata*
- Meadow Fescue *Festuca pratensis*
- Golden Oat Grass *Trisetum Flavascence*
- Sweet Vernal Grass *Anthoxanthum odoratum*
- Ribwort Plantain *Plantago lanceolata*
- Yarrow *Achillea millefolium*
- Common Knapweed *Centaurea nigra*
- Meadow Sweet *Filipendula ulmaria*
- Lady's Bedstraw *Galium verum*
- Ox eye daisy *Leucanthemum vulgare*
- Self Heal *Prunella vulgaris*
- Meadow Buttercup *Ranunculus acris*
- Bulbous Buttercup *Ranunculus bulbosus*
- Agrimony *Agrimona eupatorium*
- Rough Hawkbit *Leontodon hispidus*
- Yellow Rattle *Rhinanthus minor*
- Common Birdsfoot Trefoil *Lotus corniculatus*
- Salad Burnett *Sanguisorba minor*
- Harebell *Campanula rotundifolia*
- Cowslip *Primula deorum*
- Field Poppy *Papaver Rhoeas*
- Wild Thyme *Thymus Serpyllum*
- Quaking Grass *Brizia Media*
- Pignut *Conopdium majus*

Using Seeds

Seed Bed Preparation

Whilst seeds can be sown at any time, the best time to prepare the meadow bed is summer. The top grass, and top inch of top soil should be removed if possible. The most important factor is to ensure that the seed bed is weed free, and level using roller/rake. Also, remove stones in areas of seedbed, Wildflower meadows from seed are most successful when soil fertility is low and weeds can be less vigorous.

Sowing Seed

The best time to sow the seeds is in spring or early autumn. Spread seeds in a sand mix using a spreader for even distribution at a density of approx. 4 grams per sq. metre.

Using Plugs

Use of wildflower plugs is generally more reliable, and gives quicker results than using seed. However, over large areas, density of plugs can be reduced, with 1 or 2 plugs per square metre. Generally, plugs can be installed at any time but spring/autumn are optimum months.

Using Turf Impregnated with seeds

Use of turf less dependent on soil conditions as the seed are already in place. This enables more variety of species. However, to be successful, it should be installed in free draining areas that do not become water logged.

Wildflower Plugs and seeds are available from a number of online suppliers:

www.wigglywigglers.co.uk

www.bostonseeds.co.uk

www.wildflowershop.co.uk

www.reallywildflowers.co.uk

www.wildflower.org.uk

www.meadowmania.co.uk

Sections of turf already seeded are also available from the following suppliers:

www.meadowmat.co.uk

www.wildflowerturf.co.uk

www.wigglywigglers.co.uk

Habitat Boxes.

The use of bird and bat boxes has been recommend. Suitable products include:

Standard Bird Box-Suitable for a wide variety of species. Can be installed in trees and buildings.

Schwegler 2F Bat box. Suitable for attachment to trees.

Boxes are available from www.wildbirdfood.uk.com

www.arkwildlife.co.uk
www.theowlbox.co.uk
www.nhbs.com