Southern Ecological Solutions

Ecological Conservation Management Plan

Holland Park – Phase 2,
Spalding, Lincolnshire

On Behalf of:

Broadgate Homes Ltd

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A	Final	03/06/2025	Amy Tose (Principal Ecologist)	Phillipa Mahalski (Principal Ecologist)	Rob Harrison-Lacey (Ecology Director)

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Site assessments / surveys (where required) have been restricted to a level of detail required to achieve the stated objectives of the work.

Due to the temporal nature of ecology, the findings of this report should not be relied upon if a significant amount of time has passed, as defined by the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines.

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1.0 Introduction

1.1 Southern Ecological Solutions Ltd. (SES) were commissioned by Broadgate Homes Ltd. (the client) to produce an Ecological Conservation Management Plan (ECMP) associated with Phase 2 – Holland Park, Spalding, Lincolnshire (hereafter referred to as 'the site'). The site is approximately 8.9ha in extent and located at central point Ordnance Survey (OS) Grid Reference TF 23207 21132.

1.2 The purpose of this report is to address Section 7.6 of the Deed of Variation S106 Agreement (March 2025) at Holland Park, Spalding. The following requirements are detailed within Section 7.6:

"Prior to the commencement of the development of Phase 2 an ecological conservation management plan shall be submitted to and approved by the Council. The plan shall accord with and give effect to the principles for such a plan proposed in the environment statement submitted with the application for the Outline Permission and the plan shall set out an objective of enhancing the net biodiversity of the Phase 2 Development and shall include the following (unless otherwise agreed in writing with the council):

- *Contractor responsibilities, procedures and requirements;*
- *Full details of appropriate habitat and species surveys (pre and post construction) and reviews, where necessary, to identify areas of importance to biodiversity;*
- *Full details of measure to ensure protection and suitable mitigation to all legally protected species and those habitat and species identified as being of importance to biodiversity both during construction and post-development, including consideration and avoidance of sensitive stages of species life cycles, such as the bird breeding season, protective fencing and phasing of work to ensure the provision of advanced habitat areas and minimise disturbance of existing features;*
- *Identification of habitats and species worthy of management and enhancement together with the setting of appropriate conservation objectives for the site. Prescriptions shall be provided to detail how habitat and species management and enhancement shall be provided alongside measures to provide habitat restoration and creation such as: the provision of bat and bird boxes on buildings and on trees around the site, the provision of other nesting feature for bird species such as bird ledges, reptile hibernacula including small log and rubble piles, the creation of new aquatic habitat where possible within permanent area of open water of minimum depth of 0.5m, the provision of wetland margins and habitat islands, the management of grassland, enhancement to improve the value to wildlife such as water vole.*

The ecological conservation management plan approved pursuant to clause 7.8 shall be implement in full included all species and habitat protection, enhancement, restoration and creation measures as approved under the plan."

1.3 The information given in this report is based on the findings of previous surveys and reports. Therefore, this report should be read in conjunction with the reports listed below:

- Ecological Conservation Management Plan Holland Park, Spalding, Lincolnshire (Scarborough Nixon Associates Limited, 2013).
- Ecology and Protected Species Surveys of the Lake at Holland Park, Spalding, Lincolnshire (Scarborough Nixon Associates Limited, 2013).

2.0 Current Baseline Ecological Conditions

2.1 The current conditions on site are considered to be an active construction site, with a lake and grassland adjacent to the north-west boundary.

2.2 The lake adjacent to the north-west boundary was subject to specific ecological survey effort during 2013. The lake was initially created as part of the residential development to the north of the site. The lake consisted of two narrow channels at the time of the survey and was set within an area of grassland. It was considered to support nesting species of common birds at the time of the survey. During an updated site visit in May 2025, the lake was dry in places, with extensive common reed *Phragmites australis* / reedmace *Typha latifolia* noted, both litter and other signs of pollution were present. The surrounding grassland had managed, mown pathways throughout, with some areas left tussocky. Limited species diversity was noted within the sward.

2.3 One statutory designated site for nature conservation was located within 2km of the site boundary, Cowbit Wash Site of Special Scientific Interest (SSSI) located 2km to the south-east.

2.4 Based on the information above, it is considered that the site has limited suitability to currently support protected / notable species due to lack of suitable habitat and active construction works. However, the adjacent lake and grassland habitat has some suitability to support breeding birds, amphibians, bats and common reptiles species.

3.0 Evaluation and Objectives

Description of Proposals

3.1 It is understood that the proposed works comprise the erection of approximately 150 residential units with associated pavements and roads. In addition, creation of a Sustainable Drainage System (SuDS), grassland and shrub planting is proposed within the north west corner and around the peripheries of the site.

Conservation Objectives

3.2 The proposed conservation objectives for the site are as follows:

1. Enhance the biodiversity of the site through appropriate habitat management, protection and enhancement post construction.
2. Increase nesting and foraging opportunities for a range of common farmland and urban birds.
3. Increase roosting and foraging opportunities for bat species.
4. Retain and enhance habitats for common reptiles.
5. Enhance the site for amphibians.
6. Review the management plan after five years.

4.0 Detailed Scheme Prescriptions

4.1 The planning layout (Drawing 1, Ref: 2101-RM-P2-PL D) includes the provision of a SuDS feature, grassland seeding and shrub / individual tree planting.

Soft Landscaping Features

Grassland Seeding

4.2 Areas of grassland will be created across the site, significant areas will be created to the north-west of the site, with other isolated patches scattered across the development.

4.3 The proposed seed mix for the grassland areas is Emoresgate Seeds EM1 Basic General Purpose Meadow Mix, or similar equivalent.

4.4 Prior to seeding, it is recommended that any weeds are removed from the area, and the soils are raked to provide a medium tilth and then tread to produce a firm surface. The seed is best sown in the autumn or spring but can be sown at other times of the year providing there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand. Even distribution of the seed is recommended, overlapping sections to avoid patches of bare ground. The seed should not be covered, but should be rolled or treaded in to achieve soil / seed contact.

4.5 Management strategies are detailed in section 5.0.

Shrub / Individual Tree Planting

4.6 The planning layout shows areas of shrub and individual tree planting across the site. The planting areas will be from planting stock only with the following species are recommended:

- Silver birch *Betula pendula*
- Common hornbeam *Carpinus betulus*
- Common beech *Fagus sylcatica*
- Crab apple *Malus sylvestris*
- Mulberry *Morus alba*
- Wild cherry *Prunus avium*
- Holly *Ilex aquifolium*
- Field maple *Acer campestre*

4.7 Any planting stock should be responsibly sources to ensure that they adhere to national standards such as the Plant Health Management Standard (Plant Health Biosecurity Steering Group, 2019), or have a robust biosecurity policy in place to ensure no diseases are present.

4.8 It is encouraged that alternatives to conventional plastic tree guards are used. If this is not possible and plastic tree guards are deployed, it is recommended that these are removed at the end of the aftercare period.

4.9 Management strategies are detailed in section 5.0.

Tree Protection

4.10 Retained trees within the site will be protected from damage until works are complete, through measures such as scaffold tube tree protection fencing around the woodland, in accordance with

measures prescribed in 'BS:5837:2012' (British Standards Institution, 2012). Root Protection Areas (RPAs) will be calculated and fencing installed to ensure the RPAs are not impacted.

4.11 Tree surgery and tree removal to be carried out outside the nesting bird season (March to August inclusive).

4.12 In accordance with 'BS:5837:2012', if any of the retained trees within the site are incidentally damaged as a result of the proposed works, replacement planting on a like-for-like basis based on the status of the tree at the time of the damage will be required. Where the damaged tree species is disease prone, a suitable alternative species should be selected from the recommended species list above.

SuDS Creation

4.13 The planning layout shows a SuDS feature towards the north-west corner of the site. To maximise the wildlife value of the proposed SuDS feature, it is recommended that the following design features are incorporated during construction (Dorset Council, 2021):

- All above-ground SuDS structures and run-off collectors, pipes and sumps should be evaluated for risk to wildlife;
- Entry and exit from shallow water must be straightforward and unhindered for example, a series of 'benches' or; gently sloping edges; and
- Any planting should focus on ecological valuable aquatic grasses which provide good invertebrate habitats. Invasive non-native species such as New Zealand Pigmyweed *Crassula helmsii*, water fern *Azolla filiculoides*, floating pennywort *Hydrocotyle ranunculoides* and parrot feather *Myriophyllum aquaticum* should be avoided.

4.14 Management strategies are detailed in section 5.0.

Hard Landscaping Features

4.15 In addition to the soft landscaping features outlined above, hard landscaping features are proposed in this document which will act as dedicated enhancement features and target the following species:

- Bats – 6 bat boxes;
- Birds – 4 nest boxes;
- Amphibians and reptiles –Hibernacula creation

4.16 A suitability qualified ecologist (SQE) will provide advice and supervise the installation of hard landscaping features.

Bats - Roosting

4.17 The proposed development provides the opportunity to enhance the area for bats through the provision of additional roosting areas on retained trees and new buildings. Bat boxes should be integrated into new buildings and installed upon suitable retained trees. A variety of bat boxes that can integrate seamlessly into the design of new buildings are available, such as the Habibat Bat Box, which can be supplied plain for a rendered finish, or faced with brick (see Figure 1). Additionally, there are a wide range of woodcrete bat boxes with a long lifespan that are suitable for installation on trees

(see Figure 2). Ongoing tree management also has potential to deliver favourable habitats for roosting bats, through new natural roost feature creation (e.g. deliberate cutting of crevices).



Figure 1: Habibat Bat Box faced with red brick, incorporated within wall at gable end.



Figure 2: Schwegler 1FD bat box erected on a tree.

4.18 On trees, boxes should be sited at a minimum 3m height, with a clear uncluttered flight path to the box. Integrated boxes in buildings should be sited in properties close to the boundaries of the development and retained established vegetation. Ideally, the boxes would be installed with a variety of orientations, including south-facing, high up on gable ends or directly under the eaves.

Birds

4.19 If any nesting bird habitat is to be lost or disturbed through construction (i.e. trees, scrub, tussocky grassland), then these areas should be cleared outside of the main nesting bird season (March to August inclusive) where possible. If works on these habitats are required during the nesting bird season, then a nesting bird check / habitat inspection should be undertaken to ensure that there is no nest disturbance within the site by an ecologist within 24 hours prior to clearance to confirm the absence of active nests. Any active nests located during inspections will be protected with a suitable buffer of retained vegetation around the nest (of appropriate size to the species) and monitored until the nest is no longer active / all chicks have fledged, when the ecologist will provide sign off for clearance to be undertaken.

4.20 To enhance the site for nesting birds, artificial nesting opportunities are recommended to be integrated into properties and installed on trees. Boxes are recommended to be included on buildings or retained trees to attract species known to occur locally, in particular house sparrow *Passer domesticus* and swift *Apus apus* (swift boxes are suitable for both species, Figure 3). Nest boxes should be installed with a northerly orientation to create a cool nesting environment and minimise the risk of chicks overheating. Swift boxes should be installed on buildings at 4-5m with a clear flight line directly below the eaves of properties. The locations of boxes should be grouped within the scheme due to the colonial nesting nature of these species, to facilitate likelihood of uptake.



Figure 3: Manthorpe Swift box (integrated).



Figure 4: Schwegler 1B bird box for erection on trees.

4.21 Further measures to maintain and enhance the site post-development and provide feeding resources include the planting of new scrub, and trees (in excess of any losses), and reinforcement of existing vegetation, with native species that are attractive to invertebrates and also provide suitable plant-based food sources (buds and berries) for birds.

Reptiles and Amphibians

4.22 To improve the site for reptiles and amphibians, log piles and hibernacula should also be created within the open space close to SuDS / tree shrub planting.

4.23 The hibernacula should be constructed based on the following design principles (Langton, TES., Beckett C.L., and Foster, J.P., 2001(Figure 5)):

- Hibernacula will be positioned in sheltered locations, above the water table, in areas that will not flood or regularly freeze in winter (e.g. frost hollows), and where they will remain undisturbed;
- Minimum dimensions will be 2m length x 1m width x 1m height. The optimum dimensions are 4m length x 2m width x 1m height;
- Where constructed on free-draining soils, hibernacula will be located below ground level by excavating an area c.50cm deep and infilling with appropriate material;
- A mixture of inert materials such as topsoil, rubble / hardcore, bricks (engineering bricks are very good), timber / logs, etc. will be used. Contaminated soil / materials will be avoided. Materials that will decompose will not be placed below heavier materials, to reduce the risk of collapse. Materials will be combined so that the larger spaces are filled with finer materials; and
- Hibernacula will be capped with soil and turfed, leaving gaps at ground level so that reptiles can easily access the hibernacula.

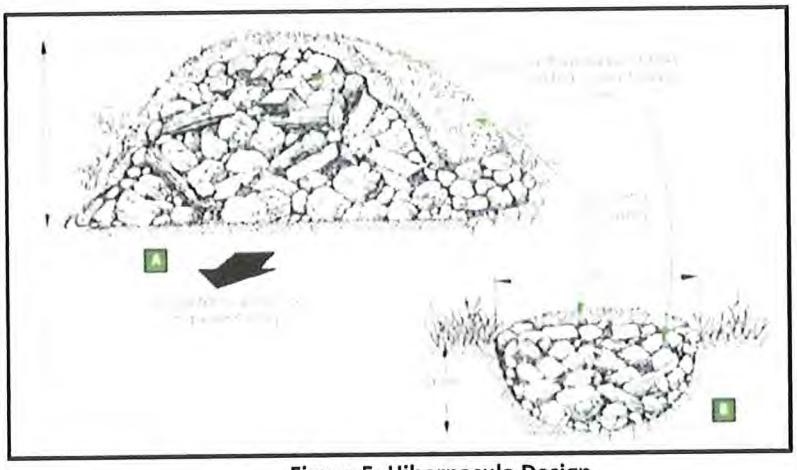


Figure 5: Hibernacula Design.

4.24 The installation can be carried out at any time of year. However, it is recommended that they are constructed before autumn / late summer when amphibians seek a hibernation spot.

4.25 For additional enhancement, any logs or brash removed due to management is recommended to be left in piles to provide additional refugia sites, not only for amphibians and reptiles but also other fauna, such as invertebrates and small mammals.

5.0 Management and Monitoring

Grassland Management

5.1 The grassland will be managed as follows:

Table 1: Grassland management

Timeline	Management / monitoring required
Year 1	Soon after sowing there will be a flush on annual weeds arising from the soil bank. These should not be cut until mid-late summer, then removed and composted off site with an appropriately licenced waste handler. A young meadow will then be revealed which should be kept short by mowing through to the end of March the following year. Any residual perennial weeds such as docks should be dug out by hand.
Year 2 onwards	Year 2 onwards, cuts should be undertaken in August, October and if required, March. During the August cut, the grassland should be strimmed and left to dry and shed seed for 1- 7 days prior to removal. All arisings should then be removed and composted off site, with an appropriately licenced waste handler, to prevent damage to grassland.

5.2 Spot treatment of weeds may be required, the herbicide used must be suitable for use near amphibians, for example glyphosate. Where areas of grassland have failed, reseeding is recommended and should be undertaken in line with the methods outlined in Section 4.4.

Shrub / Individual Tree Management

5.3 The following management of scrub / tree planting is recommended:

- Blackthorn *Prunus spinosa* and other shrub species must be managed to ensure no one species becomes overly dominant;
- Tree support and guards will be removed 2 to 3 years after establishment; and
- Newly planted trees and shrubs will be inspected for pests and disease annually. All failed trees will be replaced each planting season.

SuDS Management

5.4 The waterbodies on site will be inspected annually by a SQE for invasive aquatic species. If found, an invasive species management plan will be implemented on site, which will overwrite the below management.

5.5 Where invasive aquatic species are not found, every three years silt and vegetation will be removed, as required, from the waterbodies. Due to the potential for amphibians, this should be undertaken in late autumn or winter. Vegetation management / removal will only be carried out in limited areas at any one time (25% to 30% of the pond area on one occasion each year), to minimise impacts on biodiversity. Material will be left on the waterbody edge for 24 hours before disposal, so wildlife can return to the water.

Bat Box Management

5.6 Most bat boxes are self-cleaning and require little maintenance. Once a bat box is thought to be occupied, only a bat licensed ecologist can disturb it.

5.7 Once installed under the supervision of an SQE, the bat boxes will be checked on year 3 and year 5, to confirm that the bat boxes have been installed appropriately and are in a suitable condition. Where this has not been achieved, they will either be replaced if damaged, or checked to ensure the box is not occupied, and relocated to a more appropriate location.

Nesting Box Management

5.8 It must be noted that during the nesting bird season (March to August inclusive), if occupied, the boxes cannot be removed or disturbed.

5.9 After the end of each breeding season (September to late February), all removable nestboxes should be taken down, old nesting materials removed, and the box should be scalded with boiling water to kill any parasites. No chemicals should be used during this process. Under the terms of the Wildlife and Countryside Act 1981, if abandoned or unsuccessful eggs are found in the box, they can only legally be removed from September to January, inclusive, and they must be destroyed.

5.10 Fixings / attachments of all boxes will be checked for safety and effectiveness on an annual basis and can be undertaken concurrently with cleaning the boxes.

5.11 Once installed under the supervision of an SQE, the nestboxes will be checked on year 3 and year 5, to confirm that they have been installed appropriately and are in a suitable condition. Where this has not been achieved, they will either be replaced if damaged, or checked to ensure the box is not occupied, and relocated to a more appropriate location

Hibernacula Management

5.12 There is no requirement to maintain the reptile hibernacula as they are self-sustaining if built correctly. If in the future they become damaged by machinery, livestock or have rotted down then they will need to be replenished with new material.

6.0 Roles and Responsibilities

6.1 The applicant will be responsible for ensuring this strategy is implemented and that suitably experienced and qualified contractors are employed to carry out the work.

7.0 References

British Standards Institution (2012). *BS 5837: 2012 Trees in relation to design, demolition and construction – Recommendations*. British Standards Institution: London.

Dorset Council (2021). *Natural Environment Team Advice Note for ecological consultants and developers: Sustainable Drainage Systems.*

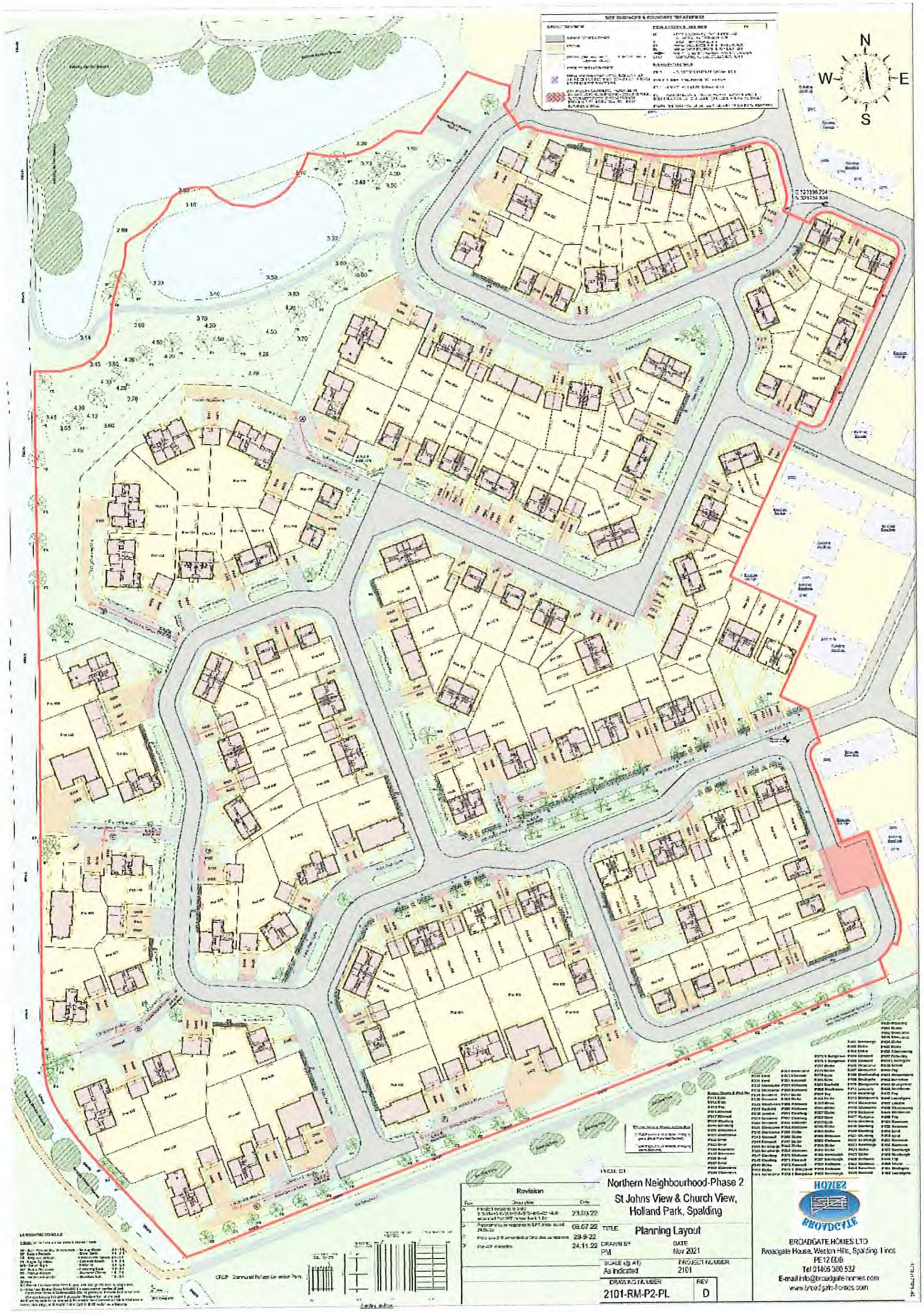
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Plant Health Biosecurity Steering Group (2019) *Plant Health Management Standard, General Requirements for Plant Growers and suppliers*

Scarborough Nixon Associates Limited (2013). *Ecological Conservation Management Plan, Holland Park, Spalding, Lincolnshire*.

Scarborough Nixon Associates Limited (2013). *Ecology and Protected Species Surveys of the Lake at Holland Park, Spalding, Lincolnshire*.

Drawing 1: Planning Layout



ECOLOGICAL CONSERVATION MANAGEMENT PLAN
HOLLAND PARK, SPALDING, LINCOLNSHIRE

SEPTEMBER 2013



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ECOLOGICAL CONSERVATION MANAGEMENT PLAN
HOLLAND PARK, SPALDING, LINCOLNSHIRE

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ECOLOGICAL CONSERVATION MANAGEMENT PLAN HOLLAND PARK, SPALDING, LINCOLNSHIRE

1 INTRODUCTION

Full planning permission has been granted by South Holland District Council to develop an area of land on the outskirts of Spalding, Lincolnshire as a residential site. The site is known as Holland Park and is a continuation of an existing residential development.

A protected species, ecology and Phase 2 survey was undertaken as part of the planning process; a small number of statutorily protected species were recorded. Overall the ecological value of the site was considered to be low. As part of this work suggestions were made for habitat creation and enhancement.

As part of the planning process, a condition (number 75) was attached which required the preparation of a Conservation and Ecological management Plan in order to ensure that suggestions for enhancing and protecting the ecological resource on site were fulfilled. The following document aims to address the requirement of the condition by providing a management plan which details and prescriptions required in order to fully implement the concepts and ideas provided in the original ecology survey report.

2 SCOPE OF THE MANAGEMENT PLAN

This Management Plan refers to the site referred to as 'Holland Park' – it covers the area included in the original 2008 ecology surveys.

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It provides a management plan for the area with prescriptions and a table for ensuring delivery. It is intended to cover a five year period after which it will be necessary to re-survey the site and update the management plan. The implementation of the plan required the appointment of a project ecologist who will provide three monthly updates and ensure that the objectives and prescriptions of the plan are signed off. A full time 'clerks of works' is not considered necessary – however a suitably qualified ecologist will be required in order to undertake the necessary checks and provide advice relating to habitat creation and enhancement.

3 CURRENT ECOLOGICAL RESOURCE

A description of the current site, together with an outline of the species found on site is given in the original protected species and Phase two ecology report which was undertaken in 2008 by EDP (The Environmental Dimension Partnership).

The site comprises arable fields intersected by drainage ditches. There is a brown field area in the northern section (a former nursery), occasional scattered scrub along the drain banks, hedgerows (with and without trees) and a railway embankment which traverses the southern section of the site. The majority of the hedgerows, trees and scrub occur in the southern section of the site.

There are three main drains on the site; South Drove Drain (former SNCI) which forms the western boundary, Fantail Drain which occurs in the central area of the southern section and Hill Drain which forms the northern boundary of the southern section of the site.

Overall the habitats, plant species and species recorded on site were common and widespread. The only statutorily protected species recorded were water voles, grass snakes and bats; the bats were using areas of the site for commuting and foraging – there are few habitats suitable for use by roosting bats.

A walkover survey of the site was undertaken by Clare Schofield on the 27th August 2013. The purpose of this survey was to ascertain that the site had not altered significantly since the original Phase 2 and ecology survey was undertaken and also to characterise the site.

Representative photographs (taken during this walkover) are provided below.



Photograph 1: Representative views of the site



Photograph 2: Further representative views of the site

4 EVALUATION AND OBJECTIVES

4.1 Ideal Management Objectives and Rationale

The ideal management objectives for the site are as follows:

1. Enhance the biodiversity of the site through appropriate habitat management, protection and enhancement post construction
2. Increase nesting and foraging opportunities for a range of common farmland and urban birds
3. Increase roosting and foraging opportunities for bat species
4. Retain and enhance habitats for water voles
5. Retain and enhance habitats for common reptiles (particularly grass snakes)
6. Increase the sites value for invertebrate species through appropriate landscaping and planting
7. Protect statutorily protected species during construction (particularly common reptile

species, water voles and nesting birds)

8. Review the management plan after five years

4.2 Rationale for Management Objectives

4.2.1 Objective 1: Enhance the biodiversity of the site through appropriate habitat management, protection and enhancement post construction

The habitats at present are predominately arable. Overall the site has low conservation interest. The proposed development has potential to deliver positive benefits for the habitats on site via appropriate management and enhancement.

Enhancement of the habitats could increase the structure and ecological diversity of the site and in turn increase foraging opportunities for species which feed on invertebrates and also those species which forage for berries/fruits

Owing to the requirement for flood attenuation, a number of water bodies will be created on site in areas of Public Open Space (POS). This creates an ideal opportunity to create additional habitats such as reed bed, wet/marshy grassland and open water.

The drainage network across the site is a habitat which has local value for biodiversity – it creates habitats for a range of species and creates good connectivity across the arable landscape. Habitat management and protection should focus on these key linear features.

As part of the development, 1.4km of new hedgerows will be planted. This also creates opportunities to create new habitat and link existing habitats.

4.2.2 Objective 2: Increase nesting and foraging opportunities for a range of common farmland and urban birds

A number of common farmland and urban birds were recorded during the post construction surveys. Management which increases foraging opportunities i.e. provision of berry bearing/catkin species within landscape proposals and increasing invertebrate biomass across the area will in turn benefit a range of birds. The provision of some berry/fruit bearing species will increase the diversity of the woody species on site and therefore create opportunities for species which feed on berries and fruit. Many thrush species value fallen fruit and berries in the autumn and early winter.

The provision of berry/fruit bearing species will also increase the number and range of invertebrates using the site which in turn offers another food source for bird species which forage for invertebrates.

Many species recorded are BAP (Biodiversity Action Plan) species (dunnock, house sparrow, and yellowhammer) and management to benefit these species would assist in meeting local BAP targets and assist in halting the decline of these species. Many species recorded (including house sparrows) are included on the UK Biodiversity Action Plan and on the Red List under the criteria set out in Birds of Conservation Concern 3, as their breeding populations have suffered greatly in the last 25 years.

4.2.3 Objective 3: Increase roosting opportunities for bat species

Bat populations in the UK have experienced declines in recent years mainly as a result of roost destruction and loss and fragmentation of foraging habitat. Three species of bat were recorded using the site pre development on a transient/occasional basis. It is considered that provision for bats within the new dwellings, together with habitat enhancement of the surrounding area to improve the shelter on the site and increase foraging opportunities, will improve the site for bats.

A small number of bats were recorded commuting and feeding over the site (particularly in the southern section). Improving connectivity across the site and implementing habitat management which will increase the abundance of their invertebrate prey will assist local bat populations.

4.2.4 Objective 4: Retain and enhance habitats for water voles

Water voles have undergone a national decline due to habitat loss and predation pressure from American mink. The legal protection extends to both the animals themselves and their habitats. Areas of Lincolnshire are a stronghold for this species and efforts must be made to retain and enhance the populations.

4.2.5 Objective 5: Retain and enhance habitats for common reptiles (particularly grass snakes)

During the reptile surveys grass snakes were recorded on site. The grass snake is classified as Least Concern (LC) on the IUCN Red List, is protected in the UK by Schedule 5 of the Wildlife and Countryside Act, 1981, and is listed under Appendix III of the Bern Convention. It

is a UK BAP priority species. Reptiles are a much maligned group of animals. Grass snakes are often an unwelcome visitor to gardens and potential basking and egg laying sites have been reduced. There is potential to assist the conservation of these animals by implementing some very simple measures as part of the development.

4.2.6 Objective 6: Increase the sites value for invertebrate species through appropriate landscaping and planting

The habitat structure at present is very limited; therefore the habitat niches which invertebrates can occupy are also limited. Increasing the habitat diversity and structure will offer a greater range of opportunities for a wider range of invertebrates. The fruit trees/berry bearing species are likely to attract a greater range of flies; the habitat piles/brash piles are likely to attract species which prefer dead and dying wood. Attracting a greater invertebrate assemblage will increase foraging opportunities for other species such as bats and birds.

Many of the other species found on site forage on invertebrate prey and increasing opportunities for insects on site will improve the overall value of the site for these species. Appropriate native planting and landscaping can contribute to improving invertebrate diversity and density.

4.2.7 Objective 7: Protect statutorily protected species during construction (particularly common reptile species, water voles and nesting birds)

A small number of statutorily protected species were recorded during the ecology surveys undertaken by EDP in 2008. These were common reptiles, water voles, foraging/commuting bats and nesting birds. The legal protection afforded to these species is provided below;

Common reptiles

All four of the common species of native reptile, that is common lizard, grass snake, slow worm and adder, are given partial protection under the Wildlife and Countryside Act (1981 and as amended) which prohibits the intentional killing, injury or taking of these species. There is no provision in the Act for licensing works which could give rise to an offence, but it does provide a defence where the otherwise unlawful act can be shown to be the incidental result of an otherwise lawful activity and could not reasonably have been avoided. Permitted development or a development which has received planning permission is clearly a lawful activity but the law does require that a reasonable effort is made to avoid killing or injury of these animals during the implementation of this permission.

Water voles

As of 6th April 2008 water vole *Arvicola amphibius* is now fully protected under section 9 of the Wildlife and Countryside Act 1981 (as amended). Legal protection makes it an offence to:

- Intentionally kill, injure or take (capture) a water vole
- Possess or control a live or dead water vole, or any part of a water vole
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place
- Sell, offer for sale or advertise for live or dead water voles

Bats

Studies have shown that populations of bat species in both Britain and continental Europe have seriously declined in recent times as the result of the reduction in habitats providing their insect food and the disturbance to, exclusion from, or total loss of their roosting and hibernation sites. For this reason, in England, Scotland and Wales, all bats are strictly protected under the Wildlife and Countryside Act 1981 (and as amended); in England and Wales this legislation has been amended and strengthened by the Countryside and Rights of Way (CRoW) Act 2000. Bats are also protected by European legislation; the EC Habitats Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 – often referred to as 'The Habitat Regs'. Taken together, all this legislation makes it an offence to:

- Deliberately capture (or take), injure or kill a bat
- Intentionally or recklessly disturb a group of bats where the disturbance is likely to significantly affect the ability of the animals to survive, breed, or nurture their young or likely to significantly affect the local distribution or abundance of the species whether in a roost or not.
- Damage or destroy the breeding or resting place of a bat
- Possess a bat (alive or dead) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost
- Sell (or offer for sale) or exchange bats (alive or dead) or parts of bats

A bat roost is defined as being 'any structure or place that is used for shelter or protection', and since bats regularly move roost site throughout the year, a roost retains such designation whether or not bats are present at the time.

Breeding birds (common species)

All common wild birds are protected under The Wildlife and Countryside Act 1981 (and as

amended). Under this legislation it is an offence to:

- Kill, injure or take any wild bird
- Take, damage or destroy the nest of any wild bird while it is in use or being built
- Take or destroy the egg of any wild bird

4.2.8 Objective 8: Review the management plan after five years

During the final year of the term of this plan a site visit by an ecologist will be required in order to assess whether the desired effects have been obtained, and the results of this assessment should be used to direct the new plan. The delivery mechanism table will have been completely signed off by the project ecologist by this point and a new plan will be required which focuses on the on-going management and monitoring of the newly created habitats and evaluates the success of the measures designed to protect and safeguard certain species and habitats.

5 MANAGEMENT PRESCRIPTIONS

5.1 Habitat management and creation

The main area for habitat creation will be within South Drove Park, an area of POS (over 20 Ha) which will occur adjacent to the South Drove former SNCI. This area will contain newly created water bodies, grasslands, trees and scrub. The following prescriptions are required as part of the development of the POS.

- All shrub and amenity planting on site should comprise locally appropriate and berry bearing species – species should include hawthorn *Crataegus monogyna*, midland hawthorn *Crataegus laevitaga*, rowan *Sorbus aucuparia*, native willow species *Salix spp.*, whitebeam *Sorbus aria* and cherry species *Prunus spp*. In the long term this will improve foraging opportunities on site for the target species. These species are also berry bearing and therefore will be of benefit to foraging birds.

- Plant flower borders within the landscaped areas of the site which will include night scented flowers in order to attract moths and other night flying insects (which will provide foraging opportunities for bats). Species should include evening primrose, sweet rocket, honeysuckle species, lavender, white jasmine, sweetbriar, night-scented catchfly, night-scented stock and soapwort. The landscaped area of the POS

will incorporate some flower borders.

- All water bodies created should have a varied profile, gently sloping banks (with some steeper areas for water voles), a depth of >1m in the centre and be planted with local appropriate native species. A suggested specification (with appropriate species) is provided as Appendix 1. This specification is for guidance only - some variation is expected with ground conditions, spatial restraints etc.

- At least one area of the POS should include a 'marsh garden' with some woody debris and rubble piles adjacent to it. This creates ideal conditions for a range of species including invertebrates, amphibians and reptiles. A specification for a 'marsh/bog garden' is given as Appendix 2.

- One area of the POS and the grassy bunds in the north of the site will be seeded with a locally appropriate wildflower mix. A local supplier of wild flower seed (i.e. Growing wild in Boston, Lincolnshire) is recommended.

- The railway embankment which traverses the site will be planted with trees and scrub (including berry and catkin bearing species) to create a corridor for wildlife and a refuge area for nesting and foraging birds, commuting bats and a range of other species.

- Newly planted hedgerow will comprise locally appropriate species and include berry/catkin/nut bearing species such as holly, guelder rose and hazel.

- One area of the POS should be developed as a dedicated butterfly and bee garden. the following species should be planted: Butterfly bush *Buddleia davidii,* mallow species *Malva species,* Lavender *Lavandula app.,* evening primrose species *Oenothera spp.,* comfrey *Symphytum officinalis,* vipers bugloss *Echium vulgare* , honeysuckle *Lonicera periclymenum,* foxglove *Digitalis purpurea,* kidney vetch *Anthyllis vulneraria,* heather *Calluna vulgaris* (or other *Calluna/ericaceous* species, Herbs: thyme, chives, mints, rosemary, garden species: goldenrod, honesty, forget-me-not species, wall flower species, stock species, hellebore species and globe thistle.

5.2 Installation of bird nest boxes and bat boxes

- Erect four terrace boxes for use by sparrow species. These should be placed at the eaves of buildings out of direct sunlight.

- Erect eight close hole nest boxes (four 28 and four 32mm) within the development on garages/sub stations and other suitable buildings. These should be erected at a height of over 3 metres.

- Erect one pole mounted barn owl nest box or kestrel nest box on the edge of the POS facing out over open countryside. Specifications for kestrel and barn owl boxes are provided in Appendix 3.

- Install twelve roost units suitable for use by pipistrelle bats within the fabric of the new dwellings. The design and installation of these features will be finalised by the project ecologist and the site contractor; however it is likely that Ibstock or Weinberger integral designs will be used dependent on the brick sizes and colours. Suitable locations for these roost units would be on the northern and southern elevations of the new buildings; these should be positioned away from windows and doors where the resultant droppings may become an issue. The specifications for these roost units are provided in Appendix 4.

5.3 Provision for reptile species

- A dedicated egg laying site for grass snakes should be installed near Hills Drain where most records of these species occurred. A specification for an egg laying site is given as Appendix 5.
- Provision of refugia and woody debris around the marsh/bog garden area will enhance the site for reptiles (and other species)
- Creation of wetland with areas of a steeper bank profile suitable for use by water voles

6 SAFEGUARDING PROTECTED SPECIES AND HABITATS

6.1 Pre-construction surveys and checks

The checks and surveys required ahead of construction mainly relate to breeding birds and water voles. Vigilance for the presence of bats was recommended in the original ecology report – however it is considered that the potential for roosting bats to occur on site is very low.

Details of the protective measures required are given below:

- In order to protect nesting birds, work which directly impacts drains, drain banks, brown field areas, trees, scrub and hedgerows should commence outside the active nesting season which typically runs from March through to late August. If work commences during the bird breeding season, a search for nests should be carried out before they begin, and active nests should be cordoned off and protected until the young fledge. It will be the responsibility of the contractor, through the project ecologist, to ensure that appropriate checks are undertaken.

- In order to protect water voles, dedicated surveys shall be undertaken in the active season (April to September) on water courses where direct impacts on the bank tops and sides will occur. The proposed development scheme does include a small amount of impact/culverting work on the seasonally wet drainage ditches on site. Appropriate advice and mitigation will be put in place in order to ensure legal compliance with respect to this species. It will be the responsibility of the contractor, through the project ecologist, to ensure that appropriate checks are undertaken.

- As a precaution, all contractors working on site will be informed of the procedure to follow in the event of discovering bats on site. The procedure to follow in the event of discovering bats on site is provided as Appendix 6. The risk is considered to be very low; mature trees and bridges are the only likely roosting places for bats.

6.2 Precautions during construction

Immediately ahead of construction commencing, a walkover survey of the site will be undertaken by the project ecologist. Searches will be undertaken in areas where reptiles, water voles and nesting birds have been recorded. The results of this walkover will be passed onto the site manager and an informal 'tool box talk' will be arranged for all personnel working on the site in order that all personnel are fully informed about the potential ecological constraint on the site.

During construction, protective hi-viz fencing will be placed alongside the drain banks to maintain a ten metre buffer zone along these habitats, particularly the Hills Drain, Fantail Drain and South Drove Drain.

During construction the project ecologist will undertake a site visit every three months in order to ensure that protective fencing is functional and that appropriate checks for nesting birds, water voles and common reptiles are being undertaken. The project ecologist will produce a short report following these visits; this report will provide further advice and measures required to protect habitats and species as the work progresses. It is the responsibility of the contractor to ensure that they have engaged the services of a project ecologist to keep a 'watching brief' and implement the ECMP throughout the development.

6.3 Post construction

Post construction measures concern the development of a bat sensitive lighting scheme on the site and also ensuring that buffer zones are maintained adjacent to drains and that POS is managed appropriately to ensure on-going benefits to local wildlife.

Areas along drains and where the railway traverses the site should not be lit by streetlights. These areas should be retained as dark, unlit habitat corridors for bats and other wildlife. Where streetlights are used in POS, they should be hooded where appropriate to reduce light spill behind them. Minimal lighting requirements will be implemented in areas of POS.

The drainage ditches, where possible, will be managed in accordance with best practice to ensure the water vole population is not adversely affected by management/cutting operations. The scope to control this is limited as the main drainage ditches fall under the remit of the local Internal Drainage Board (IDB). Where possible liaison with the local IDB (through the project ecologist) may assist in ensuring that linear water bodies are managed in a way that assists biodiversity.

Post construction, the ECMP will require updating and reviewing. It is recommended that the POS (South Drove Park) is assessed against the Local Wildlife Site (LWS) criteria in order to assess its success as an area of importance for local wildlife.

7 DELIVERY MECHANISM

The following table details the actions required to implement this Conservation management plan at the pre, during and post stages of construction. In order to fully comply, all elements of the table must be signed off by the project ecologist. Where applicable this requires photographic evidence to be submitted to the LPA.

Table 1 – Delivery mechanism table for the ECMP (Ecology and Conservation Management Plan)

*** denotes that photographic evidence is required**

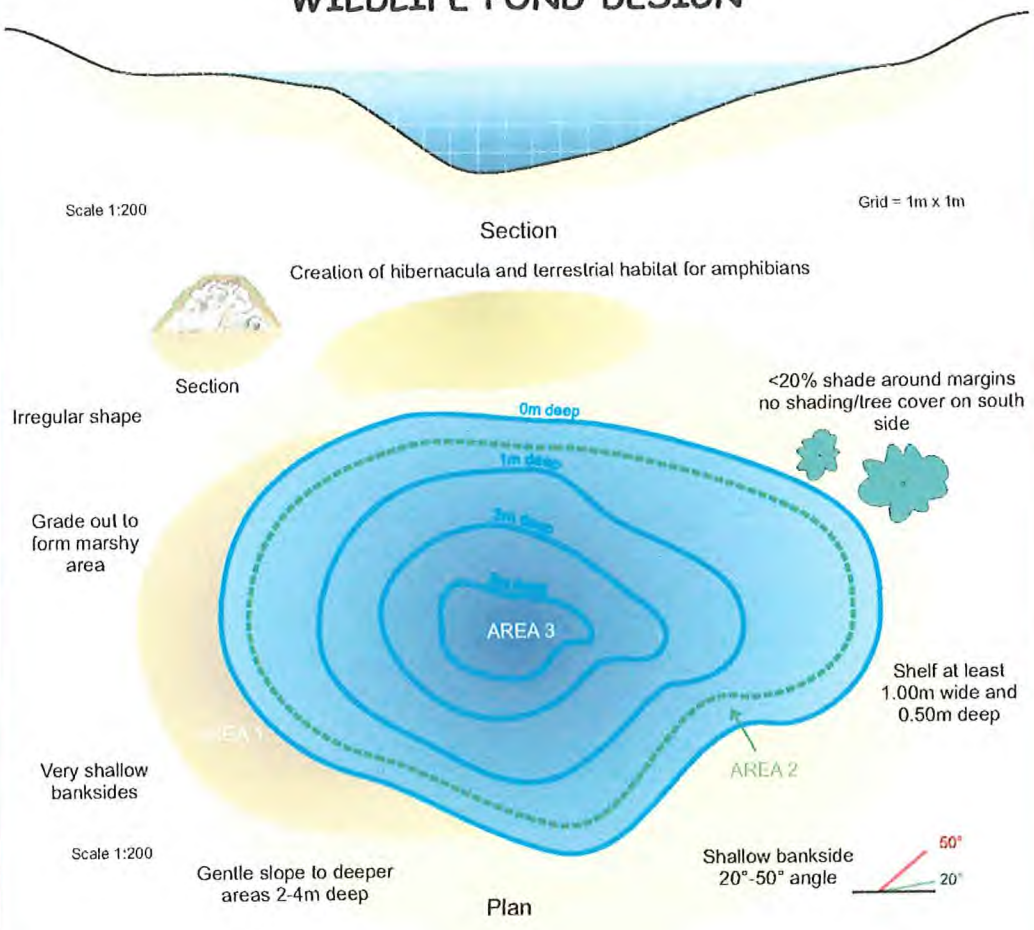
Pre-Construction		
Objective	*Action*	*Signed off and date*
Protection of statutorily protected species	Walkover survey and update on status of water voles on site	
	Walkover survey and update on status of common reptiles on site	
	Walkover survey and update on status of nesting birds on site	
During Construction		
Protection of species and habitats	Tool box talk to key personnel	
Habitat enhancement	Creation of wetlands (including habitats for water voles)*	
	Creation of marsh garden/grassland*	
	Planting of scrub/trees on POS and railway embankment*	
	Wildflower seeding on bunds and within POS*	
	Dedicated butterfly/bumble area within POS*	
Bat/bird boxes	Installation of bird boxes*	
	Installation of integral bat boxes*	
Grass snake enhancements	Creation of an egg laying site on banks of Hill Drain*	
Protection of reptiles, water voles and nesting birds	Appropriate checks and three monthly walkover surveys – including nest checks in the breeding season	
	Maintenance of high-viz fencing to protect ten metre buffer zone around drainage ditches	

	Provision of three monthly reports with appropriate advice relating to protection of statutorily protected species	
Post construction		
Protection of bats	Appropriate lighting scheme	
Habitat management and monitoring	Update survey after five years and preparation of a new management plan for the POS and other areas of open space (including linear corridors)	

ECOLOGICAL CONSERVATION MANAGEMENT PLAN
HOLLAND PARK, SPALDING, LINCOLNSHIRE

Appendix 1
Guideline specification for newly created water bodies

WILDLIFE POND DESIGN



PLANTING SCHEDULE

(ideally between April and September)

AREA 1	
Cuckoo flower	*Cardamine pratensis*
Marsh marigold	*Caltha palustris*
Ragged robin	*Lychnis Flos-cueuli*
Creeping Jenny	*Lysimachia numularia*
Gipsywort	*Lycopus europaeus*
Purple loose strife	*Lythrum salicaria*

AREA 2	
Water mint	*Mentha aquatica*
Water plantain	*Alisma plantago-aquatica*
Water forget-me-not	*Myotis scorpioides*
Water speedwell	*Veronica aquatica*
Amphibious bistort	*Persicaria amphibia*
Soft rush	*Juncus effusus*
Hard rush	*Juncus inflexus*
Yellow iris	*Iris psuedocorus*
Brooklime	*Veronica beccabunga*

AREA 3	
Rigid Hornwort	*Ceratophyllum demersum*
Water starwort	*Callitriche* spp.
Curled pondweed	*Potamageton crispus*
Spiked water milfoil	*Myriophyllum spicatum*

PLANTS TO AVOID	
New Zealand pygmy weed/stonecrop	*Crassula helmsii*
Water fern	*Azolla filiculoides*
Parrots feather	*Mynophyllum aquaticum*
Floating pennywort	*Hydrocotyle rununculoides*
Bulrush	*Typha latifolia*
Himalayan balsam	*Impatiens glandulifera*
Curly pondweed	*Lagarosiphan major*

ECOLOGICAL CONSERVATION MANAGEMENT PLAN
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Appendix 2
Specification for bog/marsh garden

Create your own bog garden

Pond Alert!

Put yourself in the frog's shoes
The bog garden provides a crucial link between the pond and the surrounding dry land for many animal and plant species, as well as being a natural visual feast for humans. If you think about your garden from the perspective of a frog (or a dragonfly, or a shrew) you will start to work out whether you have enough feeding, travelling and hiding places for the varied wildlife. The colourful and attractive flowers of the bog garden plants will also prove popular with more traditional terrestrial invertebrates such as butterflies and bumblebees.

Common frog (*Rana temporaria*)

Heritage Lottery Funded

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Create your own bog garden

Common Valerian (*Valeriana officinalis*)
Description: A medium height plant of around 1m, with clusters of small pink flowers produced from June to August.
Growing conditions: Happy in sunny or shady spots and from the edge of the water through to damp grassland.
Native range: Throughout Scotland.

Pendulous Sedge (*Carex pendula*)
Description: An architectural treat, with the long sedge flowers forming a delicate arch at the pond side, up to 2m tall.
Growing conditions: Widely available as a plug plant or larger for direct planting into the bog garden. Prefers clay soils.
Native range: Across the Central Belt and scattered locations along the north east coast.

Keeping control
Many bog garden plants will establish quickly, and you might find that one or two species start to take over. Thin out, gently, if necessary during the summer and autumn, and then have a good clearance session early the following spring. Add these thinnings to your compost heap. This will allow room for the less dominant species to keep growing, and give you space to add new species if you fancy a bit more variety.

Pendulous Sedge (*Carex pendula*)



A pond on its own is good, but making a bog garden alongside your pond can really add to the appeal your garden has for local wildlife.

When to start your bog garden
The best time of year to start creating a bog garden is in the autumn. Most of the animals that live in and around the pond should have left for the winter and the soil will still have some warmth but not too much water in it, so will be easier to work. The new bog garden area will then have the winter to settle down and water can collect before the growing season begins in the spring.

Where to put your bog garden
Choose which side of the pond you would like to develop for your bog garden. This will depend on your garden layout, taking into account the location of flower beds and paths. It is sensible, and makes life easier, to pick an area where water generally lies during rainy periods. You can also decide whether to have a little island area between the pond and bog garden or a smooth gradient from the water out to the dryer area.

Dig shallow
Mark out the area for the bog garden and lift off the soil to a depth of 20cm. Make sure the edges of the area are level, using pegs and a spirit level. Prepare the ground as you would for the pond itself, removing any stones or other debris and, ideally, pre-lining the area with sand and old carpet or newspapers as a protective underlay. Then add your standard butyl liner, making sure it overlaps with the pond liner so that any overflow water from the pond can soak into the bog garden. Puncture the liner a few times with a garden fork, to allow some very slow drainage to take place, as this will mimic natural bog conditions.

Refill the area with soil (not topsoil), and some more sand if possible. As with the pond itself, you don't want too many nutrients in the bog area or it will soon become overgrown with nettles and docken. With the liner in place, the area should become waterlogged naturally over the winter, ready for some moisture loving plants to be added in the spring.

Good bog species to use
The really fun part of a bog garden is choosing the species to plant. Many native species for this habitat have colourful flowers or interesting architectural structure. As well as being great for wildlife, your bog can be an eye-catching part of the garden for human visitors too.

Some species to consider using are:

▼ **Marsh Marigold** *(Caltha palustris)*
Description: Clusters of yellow flowers, in April and May, giving strong spring colour, attractive leaves – hand sized and heart shaped. Grows in manageable clumps, 30-40cm high.
Growing conditions: Plant in a clump at the side of the pond. Grows in sun or shade and doesn't need to be contained in a basket. This is a well-behaved plant, but if there is too much you can pull some out during the summer.
Native range: Widespread throughout Scotland.



▲ **Great Willowherb** *(Epilobium hirsutum)*
Description: Produces spikes of pink flowers, in July and August, with long and pointed leaves. The plant can reach a stately 1.5m tall.
Growing conditions: Plant one or two plants in the mud at the side of the pond. Grows very quickly and thinning out by dividing into clumps in spring or autumn may be necessary. Prefers neutral or slightly alkali soils.
Native range: Throughout central and southern Scotland.

▼ **Purple Loosestrife** *(Lythrum salicaria)*
Description: Another striking plant, up to 1.2m tall with spikes of stunning purple flowers in July and August. A real attraction for many insect species.
Growing conditions: Grows in sun or partial shade and doesn't mind if the ground dries out a bit.
Native range: Argyll, the Central Belt and south-west Scotland.

▶ **Ragged Robin** *(Lychnis flos-cuculi)*
Description: Growing to 50cm in height, this plant produces delightfully tattered looking pink-purple flowers from May to August.
Growing conditions: Will grow from seed or as a plug plant, in sun or semi-shade. Can also grow on damp grassland and be cut as part of a summer meadow, so gives an option for extending the bog garden into a grassland habitat, or even wet woodland areas.
Native range: Widespread throughout southern and central Scotland, and all but the highest ground in the north.



▼**Cuckooflower** *(Cardamine pratensis)*
Description: A dainty harbinger of the new growing season, with pale pink flowers (March to June) which attract the orange-tip butterfly. Grows up to 60cm tall.
Growing conditions: Grows well in sun or partial shade and can also be part of a damp spring meadow.
Native range: Throughout Scotland.







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Appendix 3
Specifications for barn owl and kestrel pole mounted boxes

The Barn Owl Trust
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Nestboxes for use on vertical tree trunks

LEAFLET No 2

Reg. Charity No 299 835

This leaflet describes how to make and erect a Barn Owl nestbox suitable for erection on a vertical tree trunk. This box design can also be used on the outside wall of a building or on a tall pole, but this is not recommended unless there is no other option available.

The information includes plans, dimensions, materials and safety advice.

Suitability of the area

The Barn Owl is not a woodland bird. It hunts mainly by flying over areas of rough grassland, ditches, hedgerows, young tree plantations etc. that support a high population of small mammals. In areas with an abundance of food but a shortage of suitable sites, nestboxes can be of great benefit. They should always be placed in areas with some good Barn Owl habitat or they are unlikely to be used. For further information, see *Habitat Management* (leaflet no.1).

Most nestboxes for Barn Owls are provided within buildings; see *Nestboxes for use in Barns and other Buildings* (leaflet no.3). However, where a suitable location for an indoor box is not available, outdoor nestboxes are often the next-best option.

Construction

The basic box should be built using rot-resistant or treated sheet material. The Barn Owl Trust uses 9 or 12mm tanalised (⅜"-½") softwood ply, 25 x 50mm (2" x 1") tanalised batten and 30mm (1¼") rust resistant screws. Please avoid using hardwood ply, unless it is stamped "FSC Approved". You may use any type of preservative on the box where tanalised ply is not available, but always follow the product instructions and always ensure the box is completely dry before erection. The dimensions are given as a guide, variations of + or - 10% are quite acceptable.

The front of the box should have an access panel to enable nest debris to be cleared out periodically. Under the Wildlife and Countryside Act 1981, it is an offence to disturb breeding Barn Owls so nestboxes should only be cleaned out between November and January. The top of the box should be covered with heavy duty roofing felt and it is advisable to use a waterproof sealant in all the wood joints to increase weather protection. Do ensure that large drainage holes (20mm - ¾" - diameter) are drilled in the floor of the box. The front, back and sides **MUST** overhang the floor of the box.

Selecting a suitable tree

Having found a suitable area and gained the landowner's consent, you should carefully select the most suitable tree. Do not rush this. The success of your nestbox will depend partly on the size and shape of the tree, its position, and the position of the box when erected.

An isolated tree near an area of good habitat is ideal. Whenever possible, choose a tree with rough bark to enable owlets to climb back up to the box should they fall out. A tree on the outside of a copse is acceptable but avoid trees within woodland. Avoid siting your box within 1km (½ mile) of a dual-carriageway, motorway or similar modern road. If possible, choose a deciduous tree or a Scots Pine. Often there is no choice, but do have a good look around. Time spent in reconnaissance is seldom wasted.

The ideal tree is old and very big. Pick a tree where the box will be visible below the crown (twigs/leaves) of the tree so that Barn Owls can see it and can fly in and out from various directions without having to negotiate small branches in the dark. Old Oak trees and Scots Pines are particularly accommodating in this respect.

If ivy is growing on the tree, it will probably obscure the entrance hole to the box within a few years. Anything that makes the hole less visible will reduce the chances of the box being used.

Old-style boxes with a low entrance (such as that shown in leaflet no. 4) must be situated within the branches of the tree. The box design in this leaflet (with the entrance hole high above the nest level) has a number of advantages over the low entrance boxes, as they can be attached either within the tree branches or on the side of a vertical tree trunk.

The main advantage of the box described in this leaflet is that it's fairly difficult for the young to get out. This reduces the chances of them falling from the box before they can fly and dying as a result of neglect or predation.

Another advantage of this style of box over some other designs, is that it provides an exercise area outside the box for the young and the flat roof allows the young to hop from the tray to the roof and then to the tree to exercise, and the reverse if they fall and need to climb back up. Many nestbox designs are impossible for the young to get back into unless they are already able to fly.

Siting the nestbox

Having found an area of good habitat and a suitable tree for your box, again take your time in deciding where in the tree you are going to put it. Several factors need to be considered. The box must face open ground so that the entrance hole is obvious to a passing owl. Do not hide it behind the tree - if the hole cannot be seen the box is unlikely to be used. Try to avoid facing the entrance into the prevailing wind and rain. Generally this means avoiding the west or south-west. South-east is generally a good direction. If you have no option but to face the entrance to the west/south-west, try to find another tree!

Barn Owls have used hollows entered from the top of the trunk down to ground level, so from the owl's point of view height may not be very important. However, an important consideration is that the nestbox is safe from interference by man. If a ladder is required in order to reach the box this will help deter the inquisitive passer-by. A height in the region of 4.5-7 metres (14'-24') may be achieved depending on the tree concerned. It is a good idea to ensure that, when erected, the box is slightly lower at the front. This will help prevent rain water splashing in through the entrance hole.

Although young Barn Owls do not start to fly until eight weeks old, they begin to walk at only three weeks. There is often an age difference of two weeks between the oldest and the youngest owlet. As the oldest ones become more and more mobile they emerge from the nestbox to stretch, flap their wings and attempt short flights within the tree. It is at this stage that an owlet is most likely to fall to the ground. The chances of this can be reduced by positioning the box so that the owlet can jump easily from the tray or roof of the box into nearby branches The box may need to be inspected or cleaned out in future so position the box so that this can be done safely.

Erecting the box

An outdoor box is quite heavy to lift single-handed and using ladders is potentially dangerous. The most important thing when erecting the box is your own safety (for which you are responsible). Please do not work alone and consider using two ladders. Tanalised 50mm x 50mm (2"x 2") timber and galvanised nails can be used to secure the box; often this is the only practical option. Alternatively you can drill holes and use nylon bolts.

A piece of tanalised timber 50mm x 50mm x 750mm (2" x 2" x 30") should be attached to the trunk of the tree, making sure that it is level and VERY secure. This should have 'hooks' made out of 25mm x 50mm (1"x 2") tanalised timber attached to each end. These should be approximately 75mm (3") long and the top 25mm (1") will protrude above the top of the ends of the 50mm x 50mm timber (see diagram). The purpose of this is to enable the box to be placed so that it is held in place by the hooks, allowing the person erecting the box to have both hands free whilst attaching it.

A second piece of 50mm x 50mm tanalised timber should be attached firmly to the back of the box approximately 200mm (8") from the top (see diagram). This should be attached from the inside of the box through to the timber, not through the timber into the box! This joint will take all the weight of the box so it needs to be very secure. The piece that is attached to the box will rest on the piece that is attached to the tree. Holes should be drilled to enable the two pieces to be nailed or screwed together when the box is in position. Bear in mind that it will be difficult to get at some parts of the timber to hammer or screw once the box is in position so drill the holes close to each end.

Safety

Before you erect your nestbox take time to consider the hazards you might face and what steps you could take to minimise the risks. Hazards might include an injury at a remote location; falling from a ladder; injury from heavy lifting; dropping a nestbox onto another person; or poor positioning of a box resulting in additional hazards for anyone monitoring the box at a later date. The following are examples of precautions you should take to reduce the risks.

1. Ideally take a companion. If erecting your nestbox at an isolated site alone, let someone know where you are going and when you expect to be back before you set off. Carry a mobile phone if you have one.
2. Time spent in reconnaissance and preparation is seldom wasted. Never carry a box up into position until all preparatory work is complete. Double-check your measuring to confirm that the box will fit.
3. Ensure that your ladder is secure before climbing it. If possible tie it off at the top and bottom before climbing up with a nestbox.
4. Avoid over-reaching - never attempt to carry out any task up a ladder if you cannot reach comfortably.
5. When planning how to position, support and fix a nestbox, try to create a situation where the box can rest in position without being held. This will allow you to have both hands free to fix it safely.
6. When carrying a nestbox up a ladder, ensure that it is kept low relative to your body (ideally not above waist height). This will keep your centre of gravity down. Try to keep the box in front of both you and the ladder so that it pulls you towards the ladder - never hold a nestbox behind or above you.
7. You are responsible for your own safety - assess all the risks and be careful.

Nestboxes on poles

In areas with plenty of good habitat but no suitable trees or buildings it is possible to provide boxes on poles. It is illegal (and dangerous) to erect a box on an operational telegraph/electricity pole without the express permission of the pole owner. Erecting your own pole is a lot of work and can be expensive. With this type of project the boxes used are normally much bigger and of an entirely different design incorporating two separate cavities in one box.

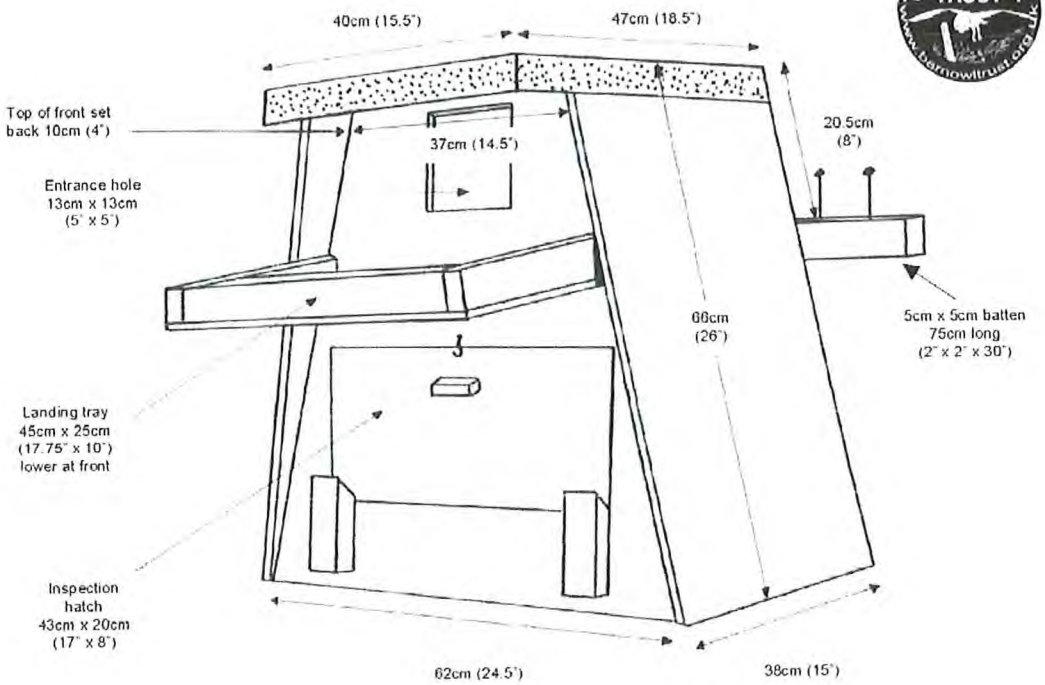
Occupation by other species

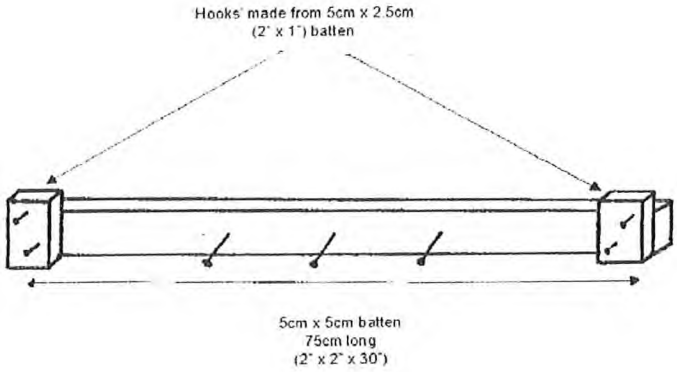
The outdoor box described in this leaflet is designed specifically for Barn Owls but it is possible that jackdaws, stock doves, tawny owls, little owls or some other species could use it. Jackdaws can be a problem in some areas as they tend to take over all available sites, and can fill boxes with sticks. These should be cleaned out before the following February.

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web-site www.barnowltrust.org.uk

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40cm (15.5")
47cm (18.5")
Top of front set back 10cm (4")
37cm (14.5")
20.5cm (8")
Entrance hole 13cm x 13cm (5" x 5")
66cm (26")
5cm x 5cm batten 75cm long (2" x 2" x 30")
Landing tray 45cm x 25cm (17.75" x 10") lower at front
Inspection hatch 43cm x 20cm (17" x 8")
62cm (24.5")
38cm (15")


Hooks made from 5cm x 2.5cm (2" x 1") batten
5cm x 5cm batten 75cm long (2" x 2" x 30")

2/3

The Barn Owl Trust
Waterleat, Ashburton
Devon TQ13 7HU
Tel 01364 653026
email info@barnowltrust.org.uk

Erecting your nestbox

LEAFLET No 45

Reg. Charity No 299835

This leaflet provides information on how and where to place Barn Owl nestboxes, including advice on trees, buildings and safety.

Good Barn Owl habitat

Nestboxes are best placed close to areas of good habitat. Food supply and therefore habitat is one of the main factors governing Barn Owl numbers. The best habitat for Barn Owls is rough grassland supporting a high Field Vole population. Damp, tussocky grassland in fallow or lightly grazed pasture is ideal. Ditch sides, hedge banks, young tree plantations, forest rides and (unfortunately) roadside verges and railway embankments are often good hunting grounds. Some areas are good at certain times of year, such as hay meadows in summer.

The creation of new woodlands is beneficial to Barn Owls in the short term due to the rough grass which develops between the new plantings. However, some benefit is lost as the trees grow. The Barn Owl is not a woodland bird, so don't put your box in a wood.

Where do Barn Owls roost and breed?

Barn Owls will use both isolated buildings and barns in busy yards. The ideal building will have access high above the ground, have a level place for egg-laying and afford good shelter. Most modern barns are unsuitable for Barn Owls unless a nestbox is installed. Many traditional barns are also far from ideal and Barn Owls will benefit from a nestbox.

Tree hollows are also used by Barn Owls. Boxes can be placed in trees, but outdoor boxes are more likely to be used by other species than those in buildings. Barn Owls look for holes not boxes - when making an entry into a building or positioning a nestbox in a tree, make sure the hole is visible to any passing owl.

Privacy

Barn Owls like to roost out of sight of humans and are much less inclined to be flushed from a building if they have a box to hide in (it is amazing how much "disturbance" Barn Owls will tolerate at sites with a suitable nestbox). Almost any tall rural building can become an ideal roosting and nesting site when a nestbox is provided.

PLEASE NOTE that it is illegal to disturb wild Barn Owls whilst they are breeding. It is not even permitted for the provider of the nestbox or the site owner to look in a nest unless they have a current nest inspection licence (see *Safeguarding Wild Sites* leaflet no 28).

Positioning an indoor nestbox

1. Fix it up as high as possible; however, remember that fully enclosed modern barns with little ventilation can become very hot in fine weather - in this type of building the box should be placed below the apex but at least 3 metres above ground level. Bear in mind that you also need to place the box to allow removal of the lid.
2. Position the box so that an owl coming into the building using the most likely entrance will see the entrance hole and have an easy flight path to it.
3. If possible, position the box so that emerging nestlings can walk on beams or other flat surfaces.
4. Consider your own safety (for which you are responsible). Try to position the box where it can be easily and safely inspected at a later date.
5. The box must stay totally dry if it is to last for years.
6. It is generally best to avoid placing boxes within 1 km (½ mile) of a motorway, dual-carriageway or other modern A road with rough grass verges (due to the high risk of road mortality).
7. Avoid buildings subject to irregular loud disturbance, for example sheds used for night-time lambing in January/February are less favoured. Bales stores, covered yards, silage stores are normally OK.
8. For hygiene reasons avoid buildings used for grain storage.

There is no need to line the nestbox. The eggs are normally laid on a layer of the birds' own pellet debris which is a wonderfully absorbent material - much better than anything people can provide!

Permenant access into the building for the owls is obviously essential. If there is no hole you can create one using the following guidelines:

1. Make the entrance hole about 12cm (5") wide x 25cm (10") high (minimum 4" x 6").
2. The hole should be at least 3 metres (10 feet) up and as visible as possible to any passing owl rather than screened by trees or other buildings
3. When making access into an attic of an occupied dwelling or barn undergoing conversion please refer to *Barn Conversions* (leaflet no. 22) or our booklet *Barn Owls On Site - A Guide for Developers and Planners*
4. In the case of an occupied house, converted barn or busy farmyard, the entrance hole into the building should, if possible, be situated on the side of the building with the least disturbance, with direct access to an open area of good habitat. Avoid facing the entrance hole into the prevailing wind.

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Positioning an outdoor nestbox

1. Carefully select the best tree. A large, old and isolated tree near an area of good habitat is ideal. Choose a tree that has little or no foliage in the lower part so that the box entrance is very likely to be noticed by any passing owl (rather than screened by foliage).
2. Try to avoid facing the box west or southwest (avoiding the prevailing wind and rain).
3. Place the box so as to deter interference by inquisitive passers-by. A height of 4.5-7 metres (14'-24') may be achieved depending on the tree concerned.
4. Ensure that, when erected, the box is slightly lower at the front. This will help prevent rain water running or splashing in through the entrance hole.
5. It is preferable for the nestbox to be within the body of a rough-barked tree so that any nestlings that fall down have a better chance of being able to climb up and get back inside. Bear in mind that the box may need to be inspected or cleaned out in future so position the box so that this can be done safely.
6. It is generally best to avoid placing boxes within 1km (½ mile) of a motorway, dual-carriageway or other modern A road.
7. Tanalised 50 x 50mm (2" x 2") timber and galvanised nails can be used to secure the box. If you don't wish to nail into the tree you can try lashing timber onto the tree using rot-proof cord and nailing the box to that. Alternatively, you can drill holes and use nylon bolts.

What are the chances of my box being used?

This depends upon what is limiting the species in your area. If there is an ample food supply but a shortage of suitable roosting and breeding sites then your box could be occupied very quickly. Conversely, if there are plenty of potential sites but a severe shortage of food then your box may never be used. Providing that habitat in your area is reasonably good or there is potential for improvement in the future it is always worth erecting a box. If you own land, think about creating Barn Owl habitat yourself. Habitat in any area may well improve in years to come as public demand leads to more wildlife-friendly food production.

Safety

Before you erect your nestbox take time to consider the hazards you might face and what steps you could take to minimise the risks. Hazards might include an injury at a remote location; falling from a ladder; masonry falling from unsound buildings; injury from heavy lifting; dropping a nestbox onto another person; or poor positioning of a box resulting in additional hazards for others using the building or monitoring the box at a later date.

The following are examples of precautions you should take to reduce the risk of accident.

1. If possible take a companion. However if erecting your nestbox at an isolated site on your own, let someone know where you are going and when you expect to be back before you set off. Carry a mobile phone if you have one
2. Time spent in preparation is seldom wasted. Never carry a box up into position until all necessary preparatory work is complete. Double-check your measuring to confirm that the box will fit
3. Ensure that your ladder is secure before climbing it. If possible tie it off at the bottom and always tie the top before ascending with your nestbox
4. Avoid over-reaching - never attempt to carry out any task up a ladder if you cannot reach comfortably
5. When planning how to position, support and fix a nestbox, try to create a situation where the box can rest in position without being held. This will allow you to have both hands free to fix it safely
6. When carrying a nestbox up a ladder, ensure that it is kept low relative to your body (ideally not above waist height). This will keep your centre of gravity down. Try to keep the box in front of both you and the ladder so that it pulls you towards the ladder - never hold a nestbox behind or above you
7. You are responsible for your own safety - assess the risks and be careful.

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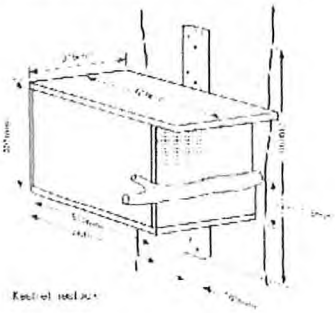
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KESTREL NEST BOX

Kestrels are falcons that usually eat voles, mice and beetles, although town kestrels may live mostly on small birds. These are pigeon-sized but longer-winged, with long, narrow tails that may be broadly fanned as they hover in mid-air, looking for prey.



They may nest in tree holes, on cliff ledges or on buildings. The box should be large and solid, of 19mm or 22mm or 9mm exterior ply, with a perch across the entrance made from a small branch. It can be fixed directly to the side of a tree or in a large fork, at least 6m high, or on top of a tall, secure pole. It must be free from disturbance, in an area where nobody will interfere with the young birds. The entrance must have a wide, open space for good visibility and easy access for the birds. Drill some 5mm drainage holes in the floor and spread wood chips or straw over it. Check the box once the breeding season is over and replace the floor if it shows signs of rotting. Clean out the accumulated debris to open up the drainage holes.

© The Raptor Foundation



Some examples of Kestrel boxes

Kestrels do not construct nests of their own, but lay their eggs either in the old nests of crows, or in cavities in trees, or ledges on cliffs and buildings.

A nestbox of the following design is best sited about 20 feet (6 m) high on a solitary tree in farmland, using a stout batten, firmly screwed to the box, attached directly to the trunk by means of galvanized nails, 4 inches (100mm) or longer. The entrance should face east, and the box tilted back slightly to keep the eggs and young to the rear.

It may be possible to wire the box to a branch, or to use a horizontal batten and wedge it into the fork of two branches. If there is dense foliage, prune away a few branches to give a clear flight-path to the box.

The nestbox should be constructed from 0.75 inch (19mm) thick timber or resin-bonded exterior ply, and the dimensions below will produce a box of minimum acceptable size:

2 sides :-	12 x 20 inches	300 x 500mm
1 floor :-	12 x 21.5 inches	300 x 537.5mm
1 roof :-	12 x 26 inches	300 x 650mm
1 back :-	12 x 12 inches	300 x 300mm
1 front :-	12 x 4.5 inches	300 x 112.5mm

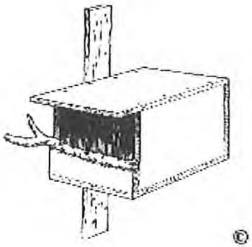
Thicker timber can be used, but adjust the sizes to give the same internal dimensions.

The box is assembled using waterproof glue and 2 inch (50mm) screws or galvanized nails. The fixing batten should be about 28 inches (700mm) long, or 4 x 1 inch (100 x 25mm) timber.

A small branch about 1 inch (25mm) diameter should be fixed at the front as a perch, since both young and adult Kestrels spend a large amount of time perching at the nest entrance.

About a dozen drainage holes should be drilled in the floor, about 0.25 inch (6mm) diameter, and a layer of wood shavings or straw scattered over the floor.

This is a heavy nestbox and will require at least two people to erect it, using ropes and a ladder.



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ECOLOGICAL CONSERVATION MANAGEMENT PLAN
HOLLAND PARK, SPALDING, LINCOLNSHIRE

Appendix 4
Specifications for integral bat boxes

IBSTOCK
innovators in clay
ideas into action
eco habitats for bats
A
B
C
IBSTOCK
innovators in clay
ideas into action
eco habitats for bats
B
Features & Benefits
Enclosed bat box (A & B)
Free Access Option (C)
contact numbers
www.ibstock.com

BAT ACCESS PANEL 1FE

This maintenance-free access panel can be installed in the outer skin of most cavity wall constructions due to its slim 80mm depth. The open rear also allows access into the building cavity so that bats can continue to use an existing roost space.

Size: 300x300x80mm
Weight: 7.8kg





BAT TUBE 1FR

The Bat Tube 1FR requires no maintenance or cleaning, the sloping entrance area allows droppings to simply fall out of the chamber. The 1FR mimics the cavities that species such as the pipistrelles favour and the wooden back panel helps maintain the optimum climatic conditions and also provides surface on which the bats can cling. The depth of this box (125mm) makes it ideal for use in 9" solid walls or where the outer skin of a property is of stone. The box can also be recessed into the wall and rendered over, just leaving the access section clear.

Size: 470x200x125mm
Weight: 9.5kg

BAT TUBE 2FR

This is a slightly updated version of the 1FR and several can be installed next to each other to create a larger roost. The tubes include an internal panel to increase the roost space and also an optional passage at the rear allowing access into existing cavities.

Size: 470x200x125mm
Weight: 9.5kg





BAT BRICK TYPE 27

The Type 27 Bat Brick is designed to be built into the structure of buildings and includes a removable front panel for monitoring purposes. An internal roughened wood panel increases the available roost space.

Size: 265x180x240
Weight: 9.5kg



BAT ROOST 1FQ

This is the latest in bat boxes. Designed to fit to the outside of buildings, the shape and design of the box make it equally attractive as a roost or nursery.

Size: 600x350x90mm
Weight: 15kgs

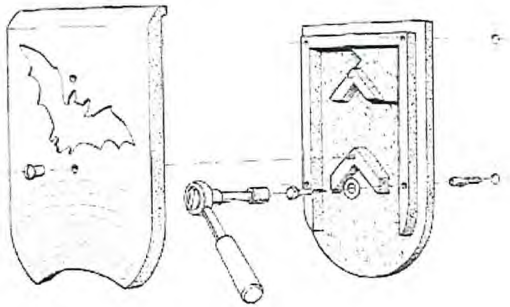


WINTER BAT ROOST 1WQ

Based on the successful 1FQ, this box has better insulation properties for use as a winter roost by bats

Size: 580x380x115
Weight: 21kg

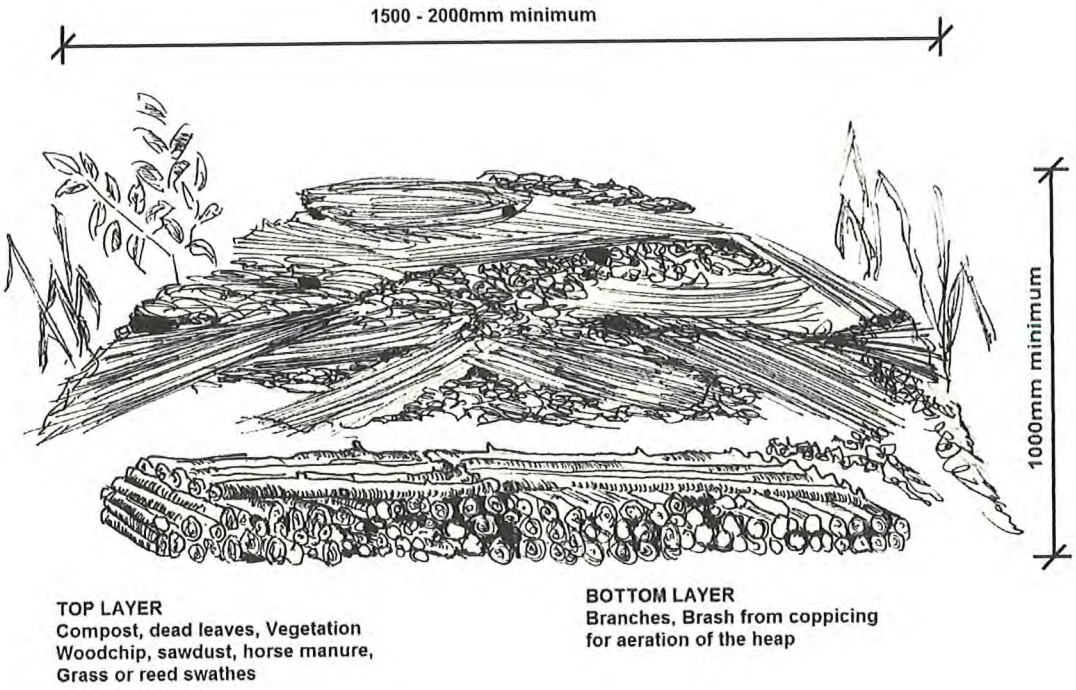
Both of the above boxes are easily fixed to the outside of a building with two screws and a galvanised bracket as shown below.



CAVITY BAT ROOST
Wild-X
Dimensions
Weight:
12kg
Material:
Internal:
Distributor:
KEY FEATURES
Wienerberger
Bat Boxes
To protect
and conserve.
75mm
min
cavity

ECOLOGICAL CONSERVATION MANAGEMENT PLAN
HOLLAND PARK, SPALDING, LINCOLNSHIRE

Appendix 5
Specifications for a grass snake egg laying site



Example of an 'egg-laying pile' for grass snakes

ECOLOGICAL CONSERVATION MANAGEMENT PLAN
HOLLAND PARK, SPALDING, LINCOLNSHIRE

Appendix 6
Procedure to follow in the event of finding bats on site

ECOLOGICAL CONSERVATION MANAGEMENT PLAN
HOLLAND PARK, SPALDING, LINCOLNSHIRE

Procedure to follow if bats are discovered during works

- If at any point during the works, bats are discovered then contractors must stop work immediately and telephone Scarborough Nixon Associates Ltd either Helen Scarborough on 01526 344726 or 07979833524 or Ian Nixon on 01205 723342 or 07833 674500.

- Scarborough Nixon Associates Ltd will either provide an appropriately licensed bat worker to the site or provide a member of staff who will liaise directly with Natural England. Actions will then be taken following advice given. This may include removal of bats, but only where direct written or verbal permission is gained from Natural England.

- Only when Natural England is satisfied that there is no further risk to bats will works recommence.

- Should it transpire that the operation being carried out is of more risk to bats than was originally thought, then works will be stopped until they can be supervised by an appropriately licensed bat worker.

- If a bat is found under a tile or any other aperture, works will stop immediately (as above). If the bat does not voluntarily fly out, then the aperture will be carefully covered over to protect the bat(s) from the elements, leaving a small gap for the bat to escape voluntarily. Any covering should be free from grease or other contaminants, and should not be a fibreglass-based material.

- Any injured bats should be gently placed in a secure ventilated box in a cool, quiet dark place (e.g. cardboard box with a sealed lid) by the contractor for the bat's protection whilst awaiting the arrival of the licensed person.

ECOLOGY AND PROTECTED SPECIES SURVEY OF THE LAKE AT HOLLAND PARK, SPALDING, LINCOLNSHIRE

SEPTEMBER 2013



Scarborough Nixon Associates Limited

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ECOLOGY AND PROTECTED SPECIES SURVEY OF THE LAKE AT HOLLAND PARK, SPALDING, LINCOLNSHIRE

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ECOLOGY AND PROTECTED SPECIES SURVEY OF THE LAKE AT HOLLAND PARK, SPALDING, LINCOLNSHIRE

1 INTRODUCTION

Scarborough Nixon Associates Ltd has been commissioned by Broadgate Homes Limited to undertake an ecology and protected species survey of the lake at Holland Park, Spalding, Lincolnshire. The survey is required in connection with a future planning application which relates to the extension of this water body.

This report details the methods used, describes the species found on the site, discusses the results and makes recommendations for further work. English names of higher plants are used throughout the text. Plant names are those used by Stace (1995).

2 BACKGROUND AND LEGAL PROTECTION

2.1 Water voles

As of 6th April 2008 the water vole is now fully protected under section 9 of the Wildlife and Countryside Act 1981 (as amended). Legal protection makes it an offence to:

- Intentionally kill, injure or take (capture) a water vole
- Possess or control a live or dead water vole, or any part of a water vole
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place
- Sell, offer for sale or advertise for live or dead water voles

2.2 Birds

All common wild birds are protected under The Wildlife and Countryside Act 1981 (and as amended). Under this legislation it is an offence to:

- Kill, injure or take any wild bird
- Take, damage or destroy the nest of any wild bird while it is in use or being built
- Take or destroy the egg of any wild bird

Certain rare breeding birds are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (and as amended). Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs/unfledged young.

2.3 Biodiversity and government policy

In addition to the legislation described above, which is in place to safeguard species such as bats (and their roosts) and birds, there is also legislation and policy which imposes duties to take account of statutorily protected species and also to undertake action to prevent loss of biodiversity and species/habitats which have been identified as priorities for the UK. In England and Wales, the Natural Environment and Rural Communities (NERC) Act 2006, imposes a duty on all public bodies (including Local Authorities and statutory bodies) to conserve biodiversity – including restoring and enhancing a population or habitat. In addition, government planning policy guidance throughout the UK, provided in the National Planning Policy Framework and OPDM Circular 06/2005, requires local planning authorities to take account of protected species issues prior to determination of planning applications.

3 SITE DESCRIPTION

3.1 Site communities and habitats

The survey area occurs at the end of a cul-de-sac on the south west edge of Spalding, Lincolnshire – Grid Reference TF231212. The lake and surrounding grassland is described below. Representative photographs are included in the text.

3.1.1 The lake

The lake, which was created within the last few years as part of the residential development to the north of the site and consists of two areas joined by a narrow channel approximately 25m long by 7m wide. One area to the west, on a north south axis, which measures approximately 80m x 30m and another to the east, on an east west axis, which measures approximately 25m x 80m. The lake is set within an area of grassland.

Dense growth of bulrush *Typha latifolia* and common reed *Phragmites australis* occurs at the edges of the lake, leaving a small amount of open water at the centre of each area. Willow sp *Salix sp* grow around the edges and on the banksides grow great willowherb *Epilobium hirsutum*, cock's-foot *Dactylis glomerata*, Yorkshire-fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius*, crested dog's-tail *Cynosurus cristatus*, perennial rye-grass *Lolium perenne,* fescue sp *Festuca sp*, hedge bindweed *Calystegia sepium*, ribwort plantain *Plantago*

lanceolata, common nettle *Urtica dioica*, bramble *Rubus fruticosus*, bird's-foot trefoil *Lotus corniculatus*, campion *Silene sp*, horseradish *Armoracia rusticana*, horsetail *Equisetum sp*, perennial sow-thistle *Sonchus arvensis*, mayweed *Tripleurospermum sp*, field scabious *Knautia arvensis*, common knapweed *Centaurea nigra*, lady's bedstraw *Galium verum*, mugwort *Artemisia vulgaris*, creeping buttercup *Ranunculus repens*, mint *Mentha sp*, tufted vetch *Vicia cracca*, common fleabane *Pulicaria dysenterica*, selfheal *Prunella vulgaris*, yarrow *Achillea millefolium*, colt's-foot *Tussilago farfara*, red clover *Trifolium pratense* and Geranium spp. *Geranium sp.*



Photograph 1: Various views of the lake and surrounding grassland

3.1.2 **Grassland**

The closely mown amenity grass around the lake consists of perennial rye-grass, white clover *Trifolium repens*, dandelion *Taraxacum officinale*, ragwort *Jacobaea vulgaris*, thistle *Cirsium sp*, bristly ox-tongue *Picris echioides*, dock sp *Rumex sp*, daisy *Bellis perennis* and black medick *Medicago lupulina*.

To the north of the site areas of grassland have been left uncut; species include meadow grass species, common knapweed, field scabious, bird's-foot trefoil, lady's bedstraw, wild carrot *Daucus carota*, tufted vetch and red clover. These grassland areas are likely to been

seeded when the lake was constructed.

A footpath runs around the north, east and west banks of the lake. The site is used for informal recreation.

3.2 Surrounding habitats and boundaries

The site is situated in the southern most corner of a residential development and is bounded to the north by post and rail fencing. The gardens of residential properties back on to the site. The east, south and west are bounded by temporary site fencing beyond which are arable fields.



Photograph 2: Various views of the grassland and surrounding habitat

4 METHODS

The site was surveyed on 20th September 2013 by Clare Schofield.

During the initial appraisal of the site the protected species considered likely to occur on site were identified. These were:

- Water voles
- Common bird species

The methods used for surveying for these species are given below;

The trees on the banksides/banktops of the lake did not have features which would have potential for use by roosting bats; most were considered to be too immature.

The site was also surveyed and assessed for the habitats and plant species present; this

included an assessment against the Local Wildlife Site Criteria (LWS).

4.1 Data search

The NBN (National Biodiversity Network) Gateway website was consulted in order to check for records of protected species from the area.

4.2 Water voles

The lake was assessed for its potential to support water vole *Arvicola amphibius* and a search was made for signs of use by water voles including feeding stations, burrows, latrine sites, runs through the vegetation and cropped grass around burrow entrances.

4.3 Common bird species

The survey site was searched for signs of use by nesting birds, typically old nests and concentrations of faecal deposits associated with a breeding site.

5 RESULTS

5.1 Data search

The NBN Gateway has records for water voles from the 10km grid square TF22.

5.2 Water voles

No signs of use by water voles were recorded on the lake margins. No further work for this species is considered necessary.

5.3 Common bird species

A small number of common birds were recorded on or adjacent to the site; these are listed below:

woodpigeon	*Columba palumbus*

The trees growing on the banks of the lake should be considered to have potential for use by nesting birds. The reeds and marginal vegetation would also have potential to support nesting attempts by birds such as coot *Fulica atra*, moorhen *Gallinula chloropus* and mallard *Anas platyrhynchos* which use the margins of water bodies for breeding.

5.4 Habitats and plant species

The habitats and plant species recorded on the site are common and widespread in the local area and in the country.

The plant species recorded on the site are not listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). No nationally rare or scarce plants as defined by Wiggington (1999) and Stewart *et al* (1994) respectively were found.

The grassland area and the water body would not meet the criteria required to qualify as a Local Wildlife Site (LWS). The banksides and adjacent grasslands did support some species which are 'scoring species' on the LWS criteria – however it is likely that these areas have been seeded as part of the work to create the lake.

6 DISCUSSION AND RECOMMENDATIONS

6.1 Common bird species

Since the habitats associated with the lake have potential to be used for nesting by species of common bird, any work to extend the lake should commence outside the active nesting season which typically runs from March through to late August. If work commences during the bird breeding season, a search for nests should be carried out before they begin, and active nests should be protected until the young fledge.

7 REFERENCES

Stace C. 1995. New Flora of the British Isles. CUP, Cambridge.

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Wigginton M J. 1999. British Red Data Books, 1 Vascular Plants. 3rd Edition. JNCC Peterborough.