BIODIVERSITY SURVEY AND ENHANCEMENT PLAN

SWAYFIELD PLAYING FIELD

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BIODIVERSITY SURVEY AND ENHANCEMENT PLAN SWAYFIELD PLAYING FIELD

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1 INTRODUCTION

Helen Scarborough has been commissioned by Swayfield Parish Council to undertake a biodiversity assessment and enhancement plan of the playing field site in Swayfield, Lincolnshire. The survey is required in connection with plans to improve the biodiversity of the site through appropriate management and enhancements.

The site was assessed on the 11th May and 15th July 2021 in dry and sunny conditions by Helen Scarborough (registered to use Natural England Class Licences WML-CL08 to survey great crested newts, registration number 2016-20412-CLS-CLS, and WML-CL19 and WML-CL20 to survey bats, registration numbers 2015-12691-CLS-CLS and 2015-12692-CLS-CLS respectively).

During the biodiversity assessment of the site, the species present were identified, and the potential for protected or priority species to occur on site was also assessed.

This report details the methods used, describes the habitats and species found on the site, discusses the results and makes recommendations for future management.

2 METHODS

2.1 Biodiversity assessment

During the assessment, a walkover of the site was completed, and all flora and fauna noted were recorded. Any plant species listed on Schedule 8 or Schedule 9 of the Wildlife and Countryside Act (1981, reviewed in 2010) were recorded, and the site was assessed against the Local Wildlife Site (LWS) criteria for Lincolnshire. Invertebrates that were easily identifiable and fairly obvious were also included, although it should be made clear that no dedicated invertebrate surveys were carried out.

2.2 Survey constraints and limitations

There are no known constraints related to the survey methodology or the timing.

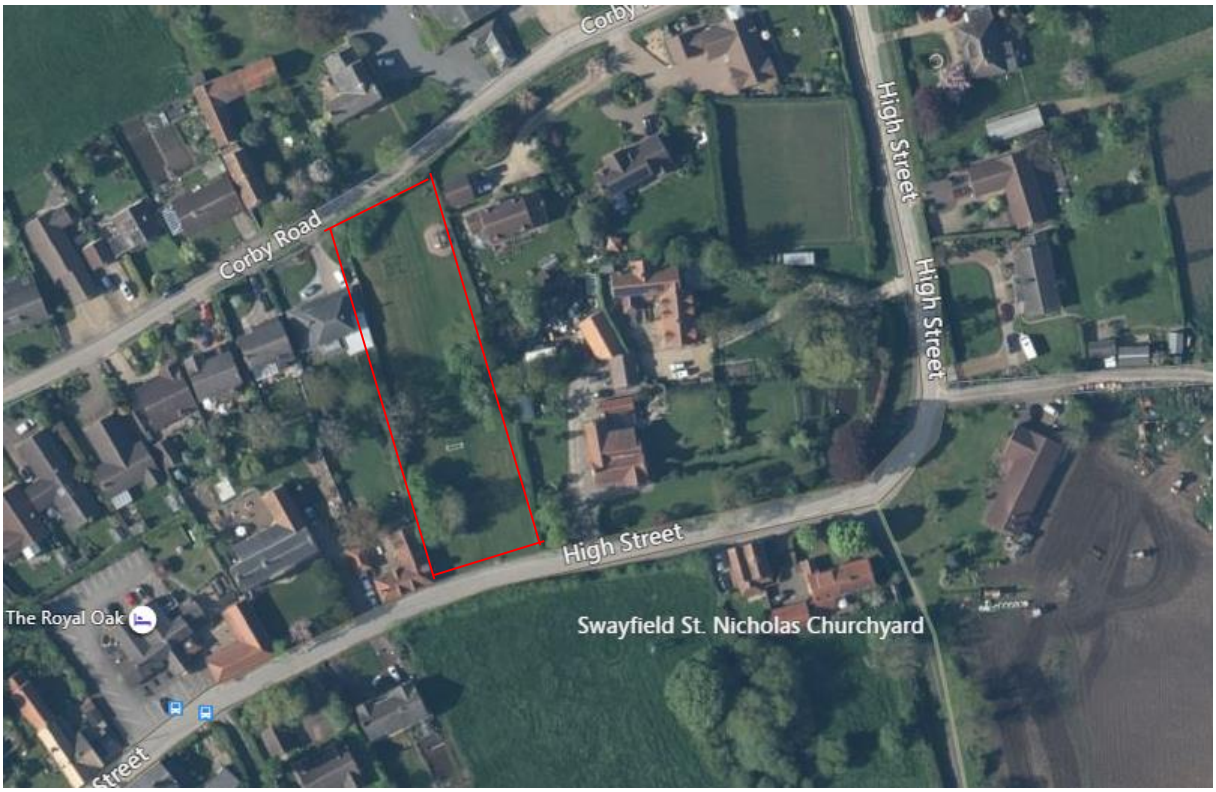
3 SITE ASSESSMENT

3.1 Location and grid reference

The survey site comprises an area of playing field at Swayfield, Lincolnshire - central grid reference SK991228.

The habitats on site are described below and representative photographs are included in the text. An aerial view of the site location is provided as Figure 1.

Figure 1: Aerial view of the survey site outlined in red (Google Maps, 2020)



3.2 The playing field site

The site comprises mainly grassland with some small tree and shrub copses. A wildflower area, and habitat piles have already been created with the assistance of a Lincolnshire County Council Environmental grant.

The grassland is mainly short sward and dominated by perennial ryegrass *Lolium perenne*, white clover *Trifolium repens*, daisy *Bellis perennis*, dandelion *Taraxacum officinale agg*, greater plantain *Plantago major*, creeping buttercup *Ranunculus repens*, common mouse-ear *Cerastium fontanum* and cat's-ear *Hypochaeris radicata* with some smaller amounts of meadow

buttercup *Ranunculus acris*, self-heal *Prunella vulgaris*, hawkbit species *Leontodon spp*, rough hawk's-beard *Crepis biennis*, rough meadow grass *Poa trivialis,* annual meadow grass *Poa annua,* wall speedwell *Veronica arvensis,* germander speedwell *Veronica chamaedrys*, thyme-leaved speedwell *Veronica serpyllifolia*, cock's-foot *Dactylis glomerata*, cut-leaved crane's-bill *Geranium dissectum,* Yorkshire-fog *Holcus lanatus,* creeping jenny *Lysimachia nummularia*, creeping cinquefoil *Potentilla reptans* and ground ivy *Glechoma hederacea*. At the edges of the site, ruderal species such as prickly sow-thistle *Sonchus asper,* cleavers *Galium aparine*, nipplewort *Lapsana communis*, wood avens *Geum urbanum*, willowherb species *Epilobium spp*, chickweed *Stellaria media* and cow parsley *Anthriscus sylvestris* were noted.

The wildflower areas support greater burnet *Sanguisorba officinalis*, oxeye daisy *Leucanthemum vulgare*, black knapweed *Centaurea nigra*, greater knapweed *Centaurea scabiosa*, wild carrot *Daucus carota*, ribwort plantain *Plantago lanceolata* and hedge bedstraw *Galium mollugo* - some ruderal species such as clustered dock *Rumex conglomeratus*, common nettle *Urtica dioica* and white dead nettle *Lamium album* are starting to appear. Areas have also been seeded with annuals such as cornflower *Centuarea cyanus;* these areas were flowering during the July visit.

There are three distinct areas of trees and shrubs within the playing field.

At the north-west corner there is a thicket dominated by hazel *Corylus avellana*, guelder rose *Viburnum opulus*, dogwood *Cornus sanguinea*, currant species *Ribes spp* and bramble *Rubus fruticosus agg* over a ground flora of bramble *Rubus fruticosus agg*, ivy *Hedera helix*, wood avens *Geum urbanum*, hedge woundwort *Stachys sylvaticum*, creeping buttercup *Ranunculus repens*, violet species *Viola spp*, broad-leaved dock *Rumex obtusifolius* and lesser celandine *Ficaria verna*. There are patches of bugle *Ajuga reptans* and cowslip *Primula veris* in this corner of the site. There is a habitat pile and a compost bin in this area.

On the eastern side of the playing field is a patch of trees and scrub comprising apple *Malus pumila*, hazel *Corylus avellana*, silver birch *Betula pendula*, field maple *Acer campestre* and cherry species *Prunus spp* . Habitat piles, log piles and a compost bin have been established in this area. The ground flora is sparse but does include some ivy *Hedera helix*, chickweed *Stellaria media*, and bramble *Rubus fruticosus agg*.

To the south-west corner and western side of the site is another stand of trees and shrubs including whitebeam species *Sorbus aria*, dogwood *Cornus sanguinea*, hazel *Corylus avellana*, field maple *Acer campestre*, guelder rose *Viburnum opulus*, over a ground flora of wood avens *Geum urbanum*, cleavers *Galium aparine*, ivy *Hedera helix*, prickly sow-thistle *Sonchus asper* and cow parsley *Anthriscus sylvestris*.

Photograph 1: General view of the site

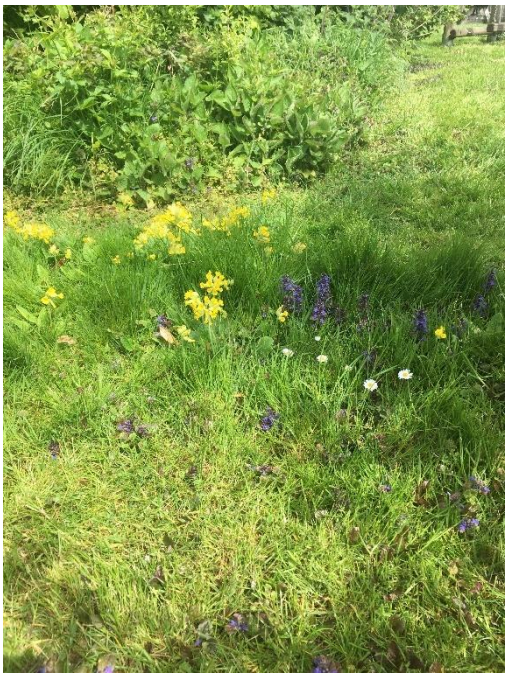
Photograph 2: Further view of the site looking north

Photograph 3: North-west corner of the site

Photograph 4: Habitat pile

Photograph 5: Trees and scrub on the eastern edge

Photograph 6: Wildflower area



Photograph 7: Cowslip and bugle – north-west corner

Photograph 8: Trees and shrubs on the eastern edge

Photograph 9: General view looking south

Photograph 10: Trees and scrub in south-west corner

Photograph 11: Compost bin in north-west corner

3.3 Boundaries and surroundings

The site boundaries comprise garden fencing and hedgerows.

The northern hedgerow comprises beech *Fagus slyvatica* with some ivy *Hedera helix* and bramble *Rubus fruticosus agg*.

The north-east and north-west boundaries are formed by fences.

The south-east boundary is formed by a tall hedgerow with hawthorn *Crataegus monogyna*, privet *Ligustrum ovalifolium*, leyland cypress *Cuprocyparis leylandii* and bramble *Rubus fruticosus agg.*

The southern boundary is defined by a post and rail fence and the south-west boundary is formed by walls/buildings.

The wider area comprises residential areas gardens and roads.

Photograph 12: North-west boundary

Photograph 13: North-east boundary

4 RESULTS

4.1 Faunal species

A number of species were recorded on site during the survey, including the following:

Butterflies

large white *Pieris brassicae*
small white *Pieris rapae*
green veined white *Pieris napi*
peacock *Aglais io*
red admiral *Vanessa atalanta*
orange tip *Anthocharis cardamines*
common blue *Polyommatus icarus*
meadow brown *Maniola jurtina*

Bees

Buff tailed bumble bee *Bombus terrestris*
Cuckoo bee species *Bombus pithier*

Other invertebrates

Footman moth *Manulea urodele*
Two spot ladybird *Adalia bipunctata*
Spider species *Araneae*
Earwig species *Forficula auricularia*
Woodlouse *Oniscus asellus*
Aphid *Aphis*
Cream streak ladybird *Harmonia quadripunctata*

Birds

A number of common birds were seen or heard during the survey. These are listed below along with their current status as species of principle importance, or SPI, (NERC Act, 2006) or Birds of Conservation Concern 4 (Eaton et al, 2015):

Table 1: Bird species recorded on or flying over the site

English name	Scientific name	SPI	BoCC
wood pigeon	*Columba palumbus*		Green
collared dove	*Streptopelia decaocto*		Green
great tit	*Parus major*		Green
starling	*Sturnus vulgaris*	Y	Red
blackbird	*Turdus merula*		Green
robin	*Erithacus rubecula*		Green
house sparrow	*Passer domesticus*	Y	Red
chaffinch	*Fringilla coelebs*		Green
song thrush	*Turdus philomelos*	Y	Red

English name	Scientific name	SPI	BoCC
greenfinch	*Chloris chloris*		Green
red kite	*Milvus milvus*		Green

Other species

The site is considered to offer potential foraging and nesting habitat for hedgehog *Erinaceus europaeus*, and foraging opportunities for common bat species such as common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*, all of which are species of principle importance (NERC Act, 2006).

4.2 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 or Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), and the site does not meet the required criteria to qualify as a Local Wildlife Site at the moment.

The following Local Wildlife Site scoring species were noted:

Oxeye daisy
Common knapweed
Greater knapweed
Wild carrot
Bugle
Cat's-ear
Cowslip

4.3 Summary

At present, the biodiversity of the site is considered to be moderate. The area has already been improved with the addition of a wildflower area, habitat piles and log piles. The implementation of enhancements aiming to improve the abundance and diversity of invertebrates on the site would lead to an increase in overall biodiversity, as other animal species such as amphibians, birds and bats become attracted to this food source. The recommendations include management prescriptions for the existing habitats, ideas for creating additional habitat and increasing the structural diversity of the site and also recommendations for improving the site for faunal species such as bats and hedgehogs.

5 ENHANCEMENT RECOMMENDATIONS

The following recommendations would lead to biodiversity gains on the site.

Tree and shrub planting;

- It would be advantageous to plant some additional tree species along the southern boundary of the site – berry/fruit/nut bearing species such wild cherry, plum, apple, pear species or walnut, should be considered; these species provide foraging opportunities for invertebrates, birds and bats.

- The hedgerow along the northern boundary should be managed appropriately to maximise its potential to support wildlife, by trimming every 2 to 3 years and in sections so that not all parts of the hedgerow are cut at the same time (for example, trim the northern side in year 2, and the southern side in year 3). This ensures there are always some flowers and fruits available each year. Flailing must be avoided. *Please note that any removal or management of trees, hedgerows or shrubs should be carried out outside of the bird nesting season (so carried out between mid-September and early March) to avoid breaching the legislation that protects nesting birds.*

- Any plant material removed as a result of the hedge trimming could be made into habitat piles and placed around the edges of the site or added to the existing habitat piles on the site to provide additional habitats for invertebrates and amphibians.

- Wildflower planters and trellises could be attached to the eastern and western boundary fences. These should be seeded with cornfield annual wildflower mixes, which will provide a source of nectar and pollen for bees and butterflies and will provide an attractive floral display, and also some honeysuckle plants which can, in time, cover the fences and provide a further opportunities for invertebrates along previously uninteresting boundary features. Suitable annual mixtures can be sourced from https://wildseed.co.uk/home.

Habitats:

- The wildflower meadow area must be cut regularly in spring and autumn in the first year

(2022) and the arisings removed, to avoid dominant weed species outcompeting the wildflowers. Thereafter, these areas should be cut once in late summer/early autumn and the arisings removed. From spring onwards, dock species, thistle species and nettle species (and all other weeds which may appear) should be removed by hand throughout the season - the application of herbicides must be avoided.

- The area in the south-east corner between the access gate the existing wildflower meadow should be left unmown from now onwards. From late summer 2022, this area should be subject to a late summer mow and the arisings removed.

- Plug plants which favour shade and woodland conditions should be planted under the trees and shrub areas found on the site – in particular the areas on the eastern side and the south-west side. The species should include primrose, native bluebells, wild garlic, bugle, and campion species.

- If possible and practical, a wildlife bog garden could be created. The damp area does not need to be large to attract an abundance of wildlife; rocks and logs can be added to provide additional habitats for amphibians, invertebrates and small mammals. A possible location for this would be the north-east corner.

- The site must have some short sward grassland to allow for play and informal recreation; at the start of the growing season it is recommended that mowing is undertaken infrequently in order to allow dandelions and clovers to flower and provide an early source of nectar. Later on in the summer months a regular mowing regime can be established as the wildflower meadow areas and planters will provide an alternative source of nectar.

Enhancements for faunal species:

- Bat boxes could be installed on some of the mature trees on the site, in order to maximise opportunities for bat species in the local area. The bat boxes should be positioned at least 4 metres above ground level on the northern or southern elevations of the trees. A suitable style of bat box would be the tanglewood box, available at www.nhbs.co.uk. Alternatively, they can be hand-made using instructions found at https://www.wildlifetrusts.org/actions/how-build-bat-box.

- Nesting features could be installed on suitable trees, at a minimum height of 3 metres. Details of nest boxes suitable for use by a range of common bird species can be obtained from www.nhbs.co.uk or www.wildcareshop.co.uk.

- The addition of a hedgehog nest box would be a benefit to this declining species. This can be placed beneath any area of dense vegetation on site, such as the trees and scrub in the north-west corner and can be purchased from www.nhbs.co.uk or www.wildcareshop.co.uk. Note: due to recent concerns with some hedgehog nest box designs, those constructed from timber, recycled plastic or wood Crete are recommended, as there is no risk of entanglement.

- Insect houses and bee hotels would encourage invertebrates on the site - these are available to buy from www.nhbs.co.uk or www.wildcareshop.co.uk, or can be hand-made using recycled and natural materials, with more information available at https://www.wildlifetrusts.org/actions/how-build-bug-mansion.

- Speaking to adjacent residents about creating hedgehog highways (a 13cm x 13cm hole at ground level) through any solid fences on the east and west boundaries would enable this species to access the gardens surrounding the site without having to cross any roads. More information can be found at https://www.hedgehogstreet.org/.

6 REFERENCES

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SWAYFIELD PLAYING FIELD

Appendix 1 – Site plan and enhancement measures

Woodland Plug Planting

Bog Garden

Bat boxes and bird boxes

Wildflower planters and honeysuckle against fence

Site boundary

Existing Wildflower meadow

area to be left unmown and managed as wildflower meadow

Newly planted fruit/nut trees