

BIODIVERSITY SURVEY AND ENHANCEMENT PLAN

BRIDLEWAY OFF DEEPPDALE LANE, NETTLEHAM

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1 INTRODUCTION

HS Ecology has been commissioned by Nettleham Parish Council to undertake a biodiversity assessment and enhancement plan of a section of bridleway off Deepdale Lane in Nettleham – known as ‘Green Lane’. The survey is required in connection with plans to improve the biodiversity of the site through appropriate management and enhancements.

The site was assessed in June and August in dry and sunny conditions by Helen Scarborough.

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 a green lane which occurs off Deepdale Lane in Nettleham in Lincolnshire - central grid reference TF005755.

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)

3.2 The lane

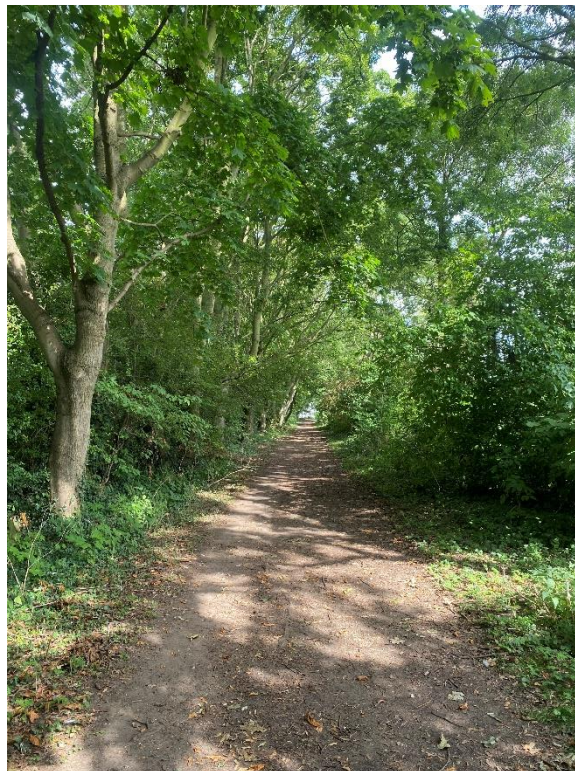
The site comprises a tree and scrub lined track that runs north to south off Deepdale Lane in Nettleham, Lincolnshire.

The track is flanked on both sides by mature and semi-mature trees, scrub and grown out hedgerow species. There are garden/exotic species present from the gardens adjoining the eastern side of the site. Tree species present are ash *Fraxinus excelsior* and sycamore *Acer pseudoplatanus* which are dominant, with some lime species *Tilia spp*, Norway maple *Acer Platanoides*, apple *Malus domestica*, field maple *Acer campestre* and horse-chestnut *Aesculus*

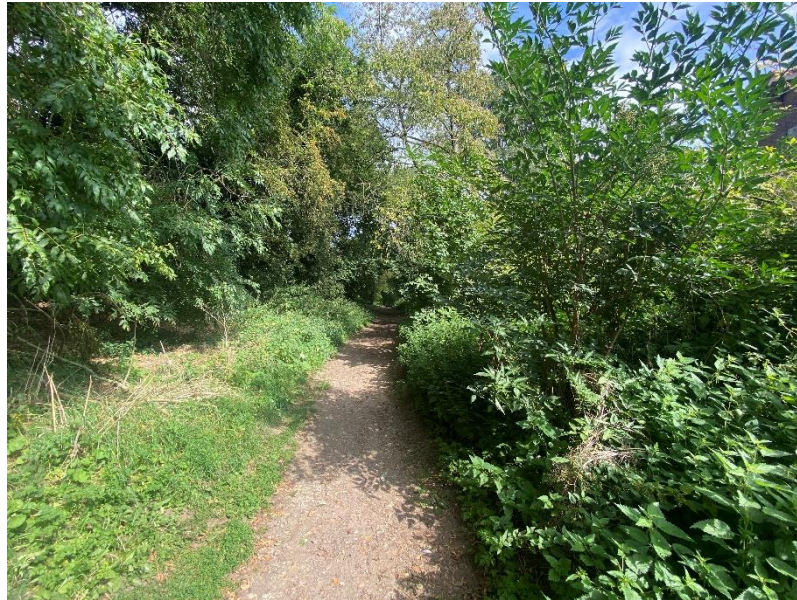
hippocastanum. Many trees have ivy cover. Scrub and understorey species include Hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, cherry species *Prunus spp*, elm *Ulmus spp*, dogwood *Cornus sanguinea*, hazel *Corylus avellana*, blackthorn *Prunus spinosa*, privet *Ligustrum vulgare* and elder *Sambucus nigra*.

The ground flora is generally species poor and dominated by common nettle *Urtica dioica*, ivy *Hedera helix*, with some cow parsley *Anthriscus sylvestris*, ground ivy *Glechoma hederacea*, cleavers *Galium aparine*, false oat-grass *Arrhenatherum elatius*, wood avens *Geum urbanum*, dandelion *Taraxacum agg*, herb Robert *Geranium robertianum*, sow-thistle species *Sonchus spp*, white dead-nettle *Lamium album*, bramble *Rubus fruticosus agg*, hedge woundwort *Stachys sylvatica*, nipplewort *Lapsana communis*, white bryony *Bryonica dioica*, field bindweed *Convolvulus arvensis*, spear thistle *Cirsium vulgare*, and an arum species.

The disturbed edges of the track support species such as greater plantain *Plantago major*, annual meadow grass *Poa annua* and knotgrass *Polygonum aviculare*.



Photograph 1: General view of the green lane



Photograph 2: Further view of the lane – looking north



Photograph 3: General view of the scrub and ground flora



Photograph 4: General view of the lane looking south



Photograph 5: View of the ground flora

3.3 Surrounding habitat

The lane is bounded on the eastern side by houses and gardens – a variety of garden fences form the boundary. This side of the green lane supports some garden/exotic species.

The western side is bounded by a large amenity field associated with the Police headquarters. A post and rail fence forms the boundary features. There are more mature trees on this side of the track.

The lane is likely to be an important green corridor for many species as it links Nettleham Beck to the residential areas of Nettleham.



Photograph 6: Western boundary fence and adjacent field



Photograph 7: Nettleham Beck – south of the lane

4 RESULTS

4.1 Faunal species

The following faunal species were noted:

- speckled wood butterfly *Pararge aegeria* (multiples)
- small tortoiseshell butterfly *Aglais urticae*
- buff tailed bumble bee *Bombus terrestris*
- grey squirrel *Sciurus carolinensis*



Photograph 8: Speckled wood butterfly

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 5 (Stanbury et al, 2021):

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

English name	Scientific name	SPI	BoCC
wood pigeon	<i>Columba palumbus</i>		Amber
collared dove	<i>Streptopelia decaocto</i>		Green
great tit	<i>Parus major</i>		Green
blue tit	<i>Cyanistes caeruleus</i>		Green
blackbird	<i>Turdus merula</i>		Green
robin	<i>Erithacus rubecula</i>		Green
chaffinch	<i>Fringilla coelebs</i>		Green
wren	<i>Troglodytes</i>		Amber
magpie	<i>Pica pica</i>		Green

Other species

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

None of the mature trees flanking the lane were considered to have features which could be used by roosting bats; however the lane is likely to be an important feeding area and commuting corridor.

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.

Many exotic species were noted on the eastern side of the lane – most probably introduced via garden arising's being placed over the boundary fence. Of particular concern is a patch of a variegated yellow archangel (listed on Schedule 9 of the Wildlife and Countryside Act) – this is a very invasive species which spreads quickly and could potentially be detrimental to any future management of the ground flora. This species occurs on the northern end of the lane on the eastern side.



Photograph 9: Invasive variegated yellow archangel

4.3 Summary

At present, the biodiversity of the site is considered to be moderate to low. Of particular note is the amount of speckled wood butterfly species recorded along the lane, the abundance of common birds and the potential for the lane to be used by foraging and commuting bats. The lane is likely to be an important wildlife corridor linking the gardens and residential areas of Nettleham with the Nettleham Beck.

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 management;

- It would be advantageous to retain some of the mature trees, but to thin out some of

them to allow a little more light to penetrate the ground floor area. Also some selective thinning of some of the scrub – particularly along the eastern side of the track to allow for the development of a better ground flora. *Please note that any removal or management of trees 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 trimming could be made into habitat piles and placed around the edges of the lane (either side) in order to provide additional habitats for invertebrates and amphibians.

Habitats:

- Plug plants which favour shade and woodland conditions should be planted under the trees and scrub which flank the lane, particularly in the areas where some thinning has occurred – in particular the areas towards the northern end. The species should include primrose, wild arum, **native** bluebells, red campion, foxglove, wild garlic and bugle.
- In order to retain a mosaic of habitats, and ensure some food plants for speckled wood and small tortoiseshell butterflies, some areas with patches of common nettle and rough grasses should be retained.
- Hand clearance of the variegated yellow archangel is recommended – the arisings should be burned on site or appropriately disposed of. This species cannot legally be allowed to escape into the wider countryside.

Enhancements for faunal species:

- Bat boxes could be installed on some of the mature trees along the lane, 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 boxes would be a benefit to this declining species. This can be placed beneath any area of dense vegetation along the lane 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>.
- The existing compost heap (located at the northern end of the lane) could be managed as a dedicated egg laying feature for grass snakes (which could commute through the site given the proximity to Nettleham Beck). The arisings from the thinning work could also contribute to this. A specification is provided below.



Photograph 10: Compost heap at northern end of lane

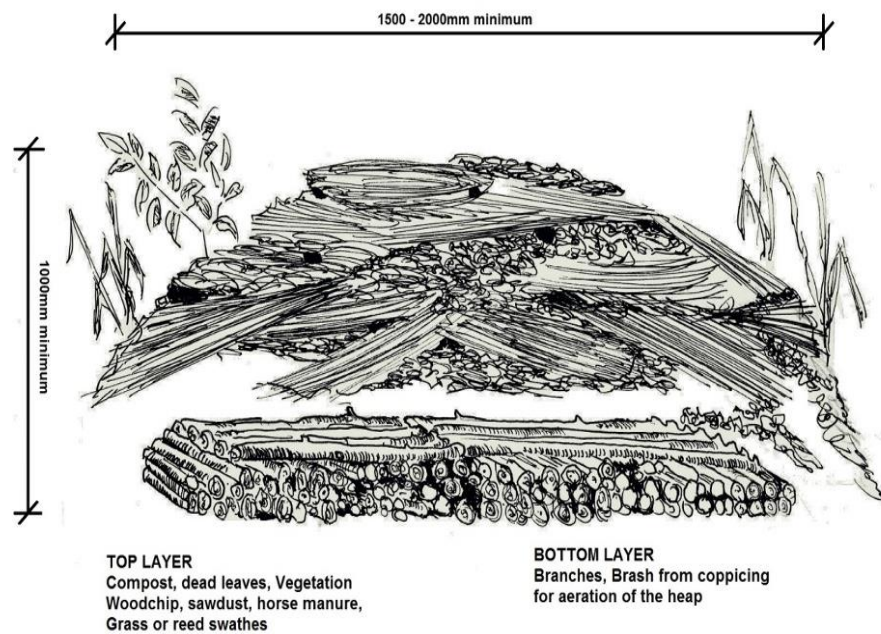


Figure 2: Grass snake egg laying/reptile/amphibian refugia specification

6 REFERENCES

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