

Throop SANG Ecological Baseline Report



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Introduction

This report aims to deliver an insight into the species currently present at the planned new SANG at Hicks Farm so that a baseline may be established to compare future data with. Several formal species surveys were carried out by local ecological consultancies covering bats, birds and otter. Other species were surveyed by local experts, BCP Council Rangers or observed by ad hoc sightings.

Bats

Abbas Ecology carried out a Preliminary Ecological Assessment (PEA) in 2019, revised in 2021 at the SANG. In the PEA report, the site was described as having a potentially low value for foraging bats due to the lack of linear features, such as hedgerows, which the proposed planting of should enhance the site as a resource for foraging bats.

Bat surveys were carried out in 2022 by Tetra Tech. These included walked transect surveys, automated detector surveys and tree roost assessment surveys. The tree roost assessments showed negligible suitability for bats, therefore their removal for the car park or disturbance by site users will not impact local bat populations.

The walked transect survey in June found four species of bat, which were Soprano pipistrelle, Common pipistrelle, Noctule and Daubenton's bat. The pipistrelles were the dominant species, with only occasional passes of the other species. Most bats were found foraging near trees along the river stour, which provide shelter and invertebrates to eat.

The automated detector surveys were positioned in the east and west of the site in June and showed significantly higher levels of activity in the east, which was near a stream leading to the Stour. Two additional species were recorded, which were Brown Long-eared bat and Serotine.

Other surveys carried out by Nick Dobbs showed an additional species Nathusius' pipistrelle is present on site.

The value for the foraging and commuting bats present has been assessed as Local or Parish level by Tetra Tech based on the Wray et al. method (see Appendix 1), supporting Abbas Ecology's prediction.

The recommended actions to support bat populations in the future include planting more native trees and installing bat boxes on suitable existing trees.

Birds

Winter bird surveys and breeding bird surveys were carried out in 2021 and 2022 by Tetra Tech to assess the bird species present in the SANG area.

Four winter bird surveys were undertaken between November 2021 and February 2022 and yielded a total of 38 bird species, of which two were introduced species (Pheasant and Egyptian goose), two Schedule 1 species (Cetti's Warbler and Kingfisher) and 17 notable Red and Amber Listed species.

The breeding bird surveys were carried out between March and July 2022 and yielded a total of 32 species, of which included the introduced Pheasant, Schedule 1 Cetti's Warbler and Kingfisher, and 14 notable Red and Amber listed species.

Birds were generally recorded in low numbers with the occasional larger flock, such as the 200 Starlings seen in the winter bird survey. Some more common green listed species such as Great Tit, Robin and Magpie were considered widespread and common on site.

Key species:

- Kingfisher
- Buzzard
- Kestrel
- Bullfinch
- Reed bunting
- Willow warbler
- Cetti's warbler

Actions to improve habitat:

- Planting native trees and hedgerows

Invertebrates

The data available for invertebrates is currently incomplete. Presence or absence surveys of Odonata were carried out in June to September 2021 and recorded seven species of damselfly and seven species of dragonfly.

No formal data was found for Lepidoptera at the SANG, but records of 16 species of butterfly were taken by Guy Finucane in 2021/22. They include Small Tortoiseshell, Common blue, Small heath, Brown argus, Brimstone, Speckled wood, Holly blue and Red admiral.

Guy Finucane also observed several other kinds of invertebrate, including four species of Hymenoptera, three species of moth, four species of spider, two species of grasshopper and one beetle. Some of the Odonata species were recorded during this time.

No data for riverflies has been collected to date. Records of riverflies including Blue Winged Olive mayfly and Narrow-Bodied Stoneflies were found at two sites upstream of the Stour at the SANG.

Key species:

- Roesel's bush cricket
- Scarce chaser
- Small heath

Actions to improve habitat:

- Plant native trees and shrubs
- Encourage wildflowers to re-establish
- Sensitive management of river corridor

Mammals

Formal surveys of Otter and Water Vole have been carried out at the SANG, though Roe deer and Weasel have been observed ad hoc. There has been no conclusive evidence of Water Vole yet, but they have been reported seen there (Guy Finucane, 22). Current activity at the Throop Mill area by visitors may lead to a detrimental impact on Water Vole due to bird feeding, which attracts predatory rats, and dogs jumping into the mill stream.

Effective mitigation will have to be considered, along with further surveys to assess the current population of Water Vole.

Guy Finucane regularly surveys for Otter and Water Vole for the Dorset Mammal Group and has evidence of activity nearby the boundaries of the SANG, including spraints, a couch and photographs of Otter at Hicks Farm. There is also a holt nearby, so it is likely that Otter utilise the river corridor along the SANG as part of a wider territory (Finucane, 2022).

This data has been supported by surveys carried out in 2022 and 2023 by ECOSA Ltd. The final report has not been published yet, but the final survey was observed by BCP staff and found clear evidence of spraints and feeding remains on the bank opposite the SANG area. In four visits, one spraint was found on the bank within the SANG area. Discussion with the ecologist indicated that Otter use the area, with the most evidence found on the opposite bank to the SANG and around the fishing areas near Throop Mill (ECOSA Ltd, 2023). The lack of shelter from trees and the height and steepness of the bank at the SANG area were suggested to be barriers to Otter usage, and no further mitigation recommendations than the fence were made regarding controlling dog access to the river bank.

Abbas Ecology's PEA report stated that the vegetation structure was simple and lacked tussocks, without any underlying thatch of dead grass. This is less suitable for small mammals, which require such features for cover. No surveys for Dormouse were recommended, but a survey was carried out at an unknown time by an unknown person and this data has not been accessed.

There is a badger sett to the West of the proposed new car park. The PEA survey assessed the proposed car park would not directly impact the sett.

Key species:

- Otter
- Water vole

Actions to improve habitat:

- Sensitive management of river corridor
- Grazing grassland areas
- Planting native trees and shrubs

Reptiles and Amphibians

Reptile surveys were carried out by BCP staff but didn't record any animals. It is possible that low numbers of reptiles used the site due to lack of suitable vegetation structure. Grass snakes have been seen ad hoc by locals and BCP staff. No amphibian surveys have been carried out.

Key species:

- Grass snake
- Slow worm

Actions to improve habitat:

- Ditch restoration
- Grazing grassland areas
- Creation of a wildlife pond

- Creating brash piles for refugia, basking and hibernation

Plants

A comprehensive vegetation survey was carried out by Felicity Woodhead at Hick's Farm in 2018, which included the SANG area. A list of the 177 species found at the SANG site can be seen in appendix 2. The notable species were Corky-fruited water-dropwort, Common meadow-rue, Nettle-leaved goosefoot, and Vervain.

Abbas Ecology's PEA, taking place after flowering season, noted only the dominant presence of False Oat Grass within the horse paddocks, with some Yarrow, Autumn hawkbit and Red clover in the sward. There were patches of Marsh Cudweed in poached bare soil, Amphibious Bistort on the river margins and Purple Loosestrife in the reed swamp. The open grassland at the SANG was described as having low ecological value, being dominated by coarse grasses and lacking good structure. Another field was dominated by bramble patches and ruderals including Teasel, thistles and Burdock.

Existing hedgerows and areas of young woodland adjacent to the proposed car park were considered a good habitat for birds and should be protected during works, with a 2m buffer between them and the car park (Abbas Ecology, 2021).

Key species:

General MG4 NVC community species, such as:

- Great burnet
- Common sorrel
- Meadow vetchling
- Red fescue
- Meadow buttercup

Specialist MG4 species such as:

- Snake's head fritillary
- Cuckoo flower
- Meadowsweet
- Amphibious bistort

Actions to improve habitat:

- Grazing grassland areas
- Topping ruderals followed by grazing
- Hay cut, followed by grazing
- Green hay cut from suitable donor site, followed by grazing

Baseline

There is a pool of data (see appendix 2) that can be used to compare with future data, particularly for birds and bats. Further formal surveys will need to be undertaken for vegetation, invertebrates, mammals and herpetofauna to establish a robust baseline for future comparisons.

The habitats present on site, which are mature woodland, developing planted woodland, bramble scrub, reedbed and swamp, riverbank and wet margins and native hedgerow, were described as good resources for wildlife such as birds, bats and invertebrates. The open grassland was assessed to be of low ecological value, and the overall biodiversity of the site was found to be modest (Abbas Ecology, 2021).

Tetra Tech's bat survey report stated that more native tree planting would boost bat populations, and Abbas Ecology's PEA report stated that the plans to replant native hedgerows and copses would help achieve this goal. Other recommendations for vegetation management include increased grazing, which is in the plans for parts of the SANG, and cutting the ruderal vegetation back to encourage diversity.

No further protected species surveys were recommended by Abbas Ecology except for Otter, which ECOSA Ltd finished on January 31st 2023, with a report to follow. This implies that other than Otter and bats, the site has low potential for protected species. The construction of the SANG is assessed as having little ecological impact beyond some increased disturbance from dog walkers which can be effectively mitigated through site management, such as fencing off the riverbank with a 10m buffer.

The creation of the car park is also assessed as having little impact beyond the removal of several trees, which have negligible potential for roosting bats, and the possible damage to old hedgerows which can be prevented by protective fences and buffer zones during works (Abbas Ecology, 2021). Any tree work will be carried outside of bird nesting season or supervised by a trained ecologist.

Future Survey Schedule

A yearly survey schedule (figure 1) has been drafted to monitor particular groups of species over time. Surveys will follow standard survey methodology by trained surveyors to create a comparable data set. Bird, bat and Otter surveys will use the same method as the baseline surveys. Actual Odonata numbers will be recorded, while using the same methodology as the baseline survey.

Vegetation surveys will follow the Rapid Condition Assessment method to streamline the data, focussing on key indicator species to quickly assess changes in habitat quality. There is scope for a good botanist to record all plant species present to prove changes in biodiversity at greater intervals of time.

Otter surveys can be carried once a year during spring before high vegetation cover, and Water Vole during the summer. Badger surveys will be carried once per year to look for signs for activity during the winter months, when vegetation cover is low. Reptile and amphibian surveys will follow standard methods employed by ecological consultancies which follow best practice guidelines. Butterfly surveys will follow UK Butterfly Monitoring Scheme method, picking up day flying moths at the same time. Night time moths can be monitored by regular moth traps. Regular bioblitzes could help fill any gaps in biodiversity data not included in routine surveying.

Task	Description	January	February	March	April	May	June	July	August	September	October	November	December
Breeding Bird Surveys	Once per month, between 6am and 11am												
Winter Bird Surveys	Once per month, between one hour after sunrise and one hour before sunset, taking 2 - 4 hours												
Butterfly Transect	UKBMS Method; 1 per week, between 10:45 and 15:45 in good weather												
Moths	Occasional moth trap, Daytime moths recorded with butterfly transect												
Odonata Surveys	Once per month												
Riverfly Surveys	Once per month												
Amphibian Surveys	Visual inspection for frog & toad spawn, torch searches and net sweeping where accessible, carpet felts placed and checked												
Reptile Surveys	Once per month, between 10 and 18c												
Vegetation Surveys	Once per year, following RCA Method												
Badgers	Once a year, survey total site for badger activity												
Bat Transect	Once per month at sunset for two hours												
Otter	Best in spring, once per year												
Water vole	Two per year, once between mid-April and June, other between July and September												

Figure 1: Proposed yearly survey schedule. Red boxes show the surveying window for each species group.

The above table (figure 1) shows the list of species currently proposed to be surveyed each year from when the SANG opens, and at what time of year the surveys can take place. The description offers a brief overview of frequency and/or methodology. The schedule would start rolling once the SANG opens, with the extra surveys being set up and trialled in the meantime. An annual report will be produced to display the results from each survey year.

Appendices

Appendix 1: Scoring system for valuing commuting and foraging bats

Geographic reference	Number of bats
International	> 50
National	41-50
Regional	31-40
County	21-30
District, local or parish	11-20
Not important	1-10

(Wrey et al., 2010)

Appendix 2: Species survey list

These numbers are taken from a mixture of sources and have been compiled into a list. The highest number for each species recorded has been noted here. Some groups were only recorded as present, and future data will have numerical value. Except for plants, which will remain as presence or absence data. As more data is collected, an average for most species groups can be calculated.

Baseline Species	Peak Count
Soprano pipistrelle	829
Common pipistrelle	364
Nathusius pipistrelle	1
Noctule	93
Brown long-eared	2
Serotine	143
Myotis species	85
Cetti's warbler	3
Kingfisher	2
Greenfinch	12
House sparrow	3
Starling	2
Swift	4
Bullfinch	2
Dunnock	3
Mallard	8
Moorhen	2
Reed bunting	1
Sedge warbler	1
Song thrush	2
Woodpigeon	17
Whitethroat	1
Wren	3
Blackbird	4
Blackcap	1

Key
Bats
Birds
Odonata
Butterflies
Other Invertebrates
Mammals
Herpetofauna
Plants
Non-native

Blue tit	5
Chiffchaff	1
Chaffinch	2
Common buzzard	1
Great spotted woodpecker	1
Great tit	5
Jay	1
Long-tailed tit	5
Magpie	3
Robin	4
Stonechat	2
Reed Warbler	1
Swallow	4
Pheasant	5
Herring gull	2
Starling	200
Black-headed gull	13
Common gull	1
Kestrel	1
Meadow pipit	1
Redwing	1
Sparrowhawk	1
Teal	3
Cormorant	2
Grey heron	1
Little grebe	1
Mute Swan	2
Egyptian Goose	2
Azure Damselfly	-
Beautiful Demoiselle	2
Banded Demoiselle	1
Blue-tailed Damselfly	1
Common Blue Damselfly	1
Large Red Damselfly	1
Red-eyed Damselfly	-
White-legged Damselfly	1
Black-tailed Skimmer	-
Broad-bodied Chaser	-
Brown Hawker	-
Common Darter	-
Emperor Dragonfly	-
Scarce Chaser	2
Migrant hawk	1
Southern Hawker	1
Small tortoiseshell	3
Peacock	1
Painted lady	1
Common blue	1

Small heath	1
Brown argus	1
Marbled white	1
Brimstone	1
Small skipper	1
Large skipper	1
Speckled wood	1
Green-veined white	1
Holly blue	2
Red admiral	1
Gatekeeper	1
Meadow brown	50
Honey bee	
Early bumblebee	
White-tailed bumblebee	1
Red-headed cardinal beetle	1
Common field grasshopper	
Lesser marsh grasshopper	
European hornet	1
Footballer moth	1
Cinnabar moth	1
Small Magpie moth	1
Ruby Tiger moth	1
Flower crab spider	2
Zebra jumping spider	1
	1 + hatched egg sack
Nursery web spider	
Wasp spider	1
Otter	2
Roe Deer	1
Common shrew	1
Weasel	1
Grass snake	1
Red Eared Terrapin	2
Rose Spp.	Present
Alder	Present
Amphibious Bistort	Present
Annual Meadow-grass	Present
Ash	Present
Autumn hawkbit	Present
Bearded Couch	Present
Bittersweet	Present
Black Bent	Present
Black Medick	Present
Blackthorn	Present
Bramble	Present
Branched Bur-reed	Present
Bristly Oxtongue	Present

Broad-leaved Dock	Present
Brown Bent	Present
Bulbous Buttercup	Present
Bulrush	Present
Cat's-ear	Present
Cherry Laurel	Present
Cleavers	Present
Clustered Dock	Present
Cock's-foot	Present
Common Bent	Present
Common Bird's-foot-trefoil	Present
Common Chickweed	Present
Common Club-rush	Present
Common Comfrey	Present
Common Duckweed	Present
Common meadow-rue	Present
Common Mouse-ear	Present
Common Nettle	Present
Common Orache	Present
Common Ragwort	Present
Common Reed	Present
Common Soft-brome	Present
Common Sorrel	Present
Common Vetch	Present
Corky-fruited water-dropwort	Present
Corn Spurrey	Present
Cow Parsley	Present
Creeping Bent	Present
Creeping Buttercup	Present
Creeping Cinquefoil	Present
Creeping Thistle	Present
Creeping-Jenny	Present
Crested Dog's-tail	Present
Curled Dock	Present
Cut-leaved Crane's-bill	Present
Daisy	Present
Dandelion	Present
Dog-rose	Present
Dove's-foot Crane's-bill	Present
Elder	Present
Equal-leaved Knotgrass	Present
Evergreen Oak	Present
False Fox-sedge	Present
False Oat Grass	Present
Field Horsetail	Present
Field Maple	Present
Firethorn	Present
Floating Sweet-grass	Present

Fool's-water-cress	Present
Germander Speedwell	Present
Great Willowherb	Present
Greater Bird's-foot-trefoil	Present
Greater Burdock	Present
Greater Plantain	Present
Greater Pond-sedge	Present
Ground-ivy	Present
Guernsey Fleabane	Present
Gypsywort	Present
Hairy Sedge	Present
Hairy Tare	Present
Hard Rush	Present
Hawthorn	Present
Hazel	Present
Hedge Bindweed	Present
Hedge Mustard	Present
Hedge Woundwort	Present
Hemlock	Present
Hemlock Water-dropwort	Present
Hoary Willowherb	Present
Hogweed	Present
Hop	Present
Hybrid Black-poplar	Present
Hybrid Crack-willow	Present
Hybrid Woundwort (<i>S. palustris</i> <i>x sylvatica</i>)	Present
Ivy	Present
Jointed Rush	Present
Knotgrass	Present
Large Bindweed	Present
Lesser Bulrush	Present
Lesser Burdock	Present
Lesser Swine-cress	Present
Lesser Trefoil	Present
Marsh Cudweed	Present
Marsh Foxtail	Present
Marsh Ragwort	Present
Meadow Barley	Present
Meadow Buttercup	Present
Meadow Foxtail	Present
Meadow Vetchling	Present
Meadowsweet	Present
Mugwort	Present
Nettle-leaved goosefoot	Present
Nipplewort	Present
Orange Balsam	Present
Osier	Present
Pedunculate Oak	Present

Pellitory-of-the-Wall	Present
Perennial Rye-grass	Present
Perforate St John's-wort	Present
Petty Spurge	Present
Pineappleweed	Present
Prickly Lettuce	Present
Prickly Sow-thistle	Present
Procumbent Pearlwort	Present
Purple-loosestrife	Present
Red Clover	Present
Red Duckweed	Present
Red Fescue	Present
Redshank	Present
Reed Canary-grass	Present
Reed Sweet-grass	Present
Ribwort Plantain	Present
Rough Meadow-grass	Present
Rusty / Pussy Willow	Present
Scented Mayweed	Present
Scentless Mayweed	Present
Selfheal	Present
Sharp-flowered Rush	Present
Sheep's Sorrel	Present
Shepherd's-purse	Present
Short-styled Field-rose	Present
Silverweed	Present
Small-leaved Lime	Present
Smooth Hawk's-beard	Present
Spear Thistle	Present
Spear-leaved Orache	Present
Spiked Water-milfoil	Present
Square-stalked St John's-wort	Present
Square-stalked Willowherb	Present
Sticky Mouse-ear	Present
Sweet Vernal-grass	Present
Sycamore	Present
Tall Fescue	Present
Tansy	Present
Thyme-leaved Speedwell	Present
Timothy	Present
Toad Rush	Present
Tufted Hair-grass	Present
Tufted Vetch	Present
Unbranched Bur-reed	Present
Vervain	Present
Wall Barley	Present
Wall Speedwell	Present
Water Figwort	Present

Water Forget-me-not	Present
Water Mint	Present
Water-pepper	Present
Water-starwort	Present
White Clover	Present
White Dead-nettle	Present
White Willow	Present
Whitebeam	Present
Wild Angelica	Present
Wild Onion	Present
Wild Teasel	Present
Winter-cress	Present
Wood Avens	Present
Wood Dock	Present
Wood Forget-me-not	Present
Yarrow	Present
Yellow Iris	Present
Yellow Water-lily	Present
Yorkshire-fog	Present

Appendix 3: Reports referenced

Hicks Farm SANG BAT REPORT 784-B032855 (Tetra Tech Limited, 2022)

Hicks Farm SANG BREEDING BIRD SURVEY REPORT 784-B032855 (Tetra Tech Limited, 2022)

Hicks Farm SANG WINTERING BIRD SURVEY REPORT 784-B032855 (Tetra Tech Limited, 2022)

2021 Odonata Survey Stour Valley - Millhams Mead - Throop Nature Park Report. Reference: BCP-OS-01 (BCP Council, 2021)

Hicks Farm SANG - Otter and Water Vole Survey – Spring 2022 (Guy Finucane, 2022)

Hicks Farm SANG - Otter and Water Vole Survey – Winter 2022 (Guy Finucane, 2022)

Preliminary Ecological Appraisal: Proposed Suitable Alternative Natural Greenspace at Hick's Farm, Throop. August 2019 revised January 2021. (Abbas Ecology, 2021)

Hicks Farm Plant species list FA Woodhead 2018 (Felicity Woodhead, 2018)

Hicks Farm Species Records GF (Guy Finucane, 2022)