Crowborough
Community Orchard

Conservation Management Plan 2024

v3 May 2024

Introduction

A key principle governing management of the Community Orchard is that every effort will be made to enhance biodiversity. This is important for many reasons:

- England is one of the most nature-depleted countries in the world. This site was formally a school playing field, regularly mown and probably treated with a range of chemicals in the past. It is a good example of the biologically sterile environments created by our modern society. We want to champion biodiversity and see how far we can go in turning the site into an area where nature thrives.
- Traditional orchards are a protected UK habitat because of their very high biodiversity value and the numbers of rarer species they can support. Orchards are also identified as one of the key characteristics of the High Weald National Landscape, within its Management Plan, stated as providing a diversity of habitats for invertebrates. Whilst we are not creating a traditional orchard in terms of large and widely spaced fruit trees, we still aspire to eventually hosting some of the specialist orchard species and playing our part with respect to this important habitat type.
- Large numbers of children will be using the site for Forest School and other activities. Getting close to nature has been scientifically proven to result in multiple health and wellbeing benefits. We want to help those children have a nature-rich experience when they visit the site to enhance their wellbeing. And of course, all our volunteers and members can benefit as well!
- The most successful orchards rely on a harmonic natural balance to deal with pests. Creatures such as earwigs and birds consume vast quantities of aphids, caterpillars and other wildlife that can cause huge damage to fruit. Well-established, organic orchards barely suffer any insect damage to fruit. Our orchard will be completely organic, so we need thriving populations of predator species.
- Orchard success also relies heavily on insect pollination, so it is crucial that we do everything practicable to encourage a wide range of pollinators into the orchard. Not just to visit, but to make the site their home as well. Studies in Kent orchards have revealed that solitary mining bees are the key pollinator group, so encouraging these species will be a focus for us.

The aims of our approach to conservation management are:

- To work with and conserve existing habitat features that are good for biodiversity, for example bramble thickets and nettle patches.
- Create new biodiverse habitats, for example mixed native hedges and wetland features.
- Manage the grassland within the orchard areas on an annual cut and collect. And as the grassland is relatively species-poor, speed up its diversification through planting wildflower plug plants.
- Change other aspects of site management to enhance biodiversity, for example by allowing the boundary hedge along Herne Road to grow taller and thicken out.
- Manage the orchard organically, entirely without the use of any chemicals, and encourage species which predate common orchard pests.

Action 1: Grass-cutting of orchard areas

During autumn/winter the areas of grass within the Lower and Upper orchards will be subject to an annual mow and the cuttings removed to the cut grass pile or used to mulch trees/hedges. The primary aims of this management regime are to leave plants undisturbed through the spring and summer so they can flower and set seed; and to cause minimal disturbance to other forms of wildlife. Other aims are to gradually reduce fertility to encourage greater biodiversity; and to make it easier to move around the planted area to tend to trees during the winter.

Grass paths will be mown/strimmed at least monthly, resources permitting, to enable easier movement through the site, create an image of a well-managed location, and provide short grass for those species that derive benefits from it. These paths are:

1. The central three-metre wide espalier avenue.
2. The lower three-metre wide path maintained to allow vehicle access to the bottom areas of the site.
3. The path through the Lower Orchard from the central avenue to the shed.
4. The path through the Upper Orchard from the central avenue to the edible hedge.
5. The strip running along the inside of the edible hedge and the Forest School boundary hedge.

All other grass will be left uncut as a biodiversity measure and because grass-cutting resources are limited.

The CCO insurance policy includes cover for the use of brushcutters/strimmers and lawnmowers.

Action 2: Create a Biodiversity Garden

The southernmost corner of the site is not well suited to planting fruit trees as the soil contains large quantities of building rubble and glass, presumably from the nursery buildings which occupied the site before it was a playing field. Instead, we are creating a biodiversity garden here. This will be planted up with approximately 70 different species of plant (native and non-native), which are recognised ‘plants for pollinators’, or have other value to wildlife, such as being a foodplant for butterflies. The garden will also eventually contain an earth mound (aimed at providing nesting sites for mining bees), bee hotels, log piles, rocky hibernacula and other habitat features for a range of wildlife.

Action 3: Improve the hedge along the Herne Road boundary

This hedge is approximately 100m in length and contains 16 different woody species (two of which have been recently planted), including some very old Hawthorn. It has the potential to be a valuable wildlife habitat, as well as providing a protective screen for the orchard. However, ESCC have kept it cut low at the same height each winter with a tractor-mounted flail, a damaging practice which is resulting in the hedge starting to thin out in places. This practice of annual cutting at the same height is now recognised as extremely bad practice and will eventually kill a hedge. Ashdown Primary School are happy for the hedge to be left to grow higher and so we will ask ESCC to allow it to grow an additional two feet in height and if at all possible, not to cut the top every year. We will

not cut it on the inside at all, instead allowing it to thicken out by an additional one metre into the site. We have encouraged this through the planting of Blackthorn whips and other species along the hedge line. Blackthorn spreads by suckers and is ideal for encouraging hedges to thicken up. During winter 2024/25 we will plant additional whips along the inside of the hedge. The hedgerow is a favourite haunt of the House Sparrows which nest in the cemetery chapel eaves across the road. House Sparrows have been on the UK Red List since 2002, so supporting them is a priority for us. Hedge bases with dense vegetation create extremely valuable habitats for wildlife, so we will leave the hedge base undisturbed, only cutting grass well out from the hedge base. Where ESCC hedgecutting kills off individual hedgerow plants we will manage this through coppicing and supplementary planting as necessary.

Action 4: Plant and maintain new hedges

This section covers the hedge demarcating the orchard from the forest school part of the site, as well as the newer edible hedge planted in 2022, and the mixed native hedge acting as a boundary for the Biodiversity Garden planted in spring 2024.

At least one hand-weeding exercise will take place during the spring/summer to try and keep the mulched area free from grass and other plants. The whips will be watered if at all possible, during any periods of drought.

Once the new hedges are properly established, we will aim to encourage a range of wildflowers growing along the bases and the hedges will be encouraged to thicken out where space permits. The hedges will be kept at appropriate heights through sympathetic and variable cutting by hand.

Action 5: Manage a wildflower and scrub bank alongside the drainage ditch

This habitat was created relatively recently, as a result of a ditch-clearing exercise, presumably arranged by ESCC. The spoil was dumped on the inside edge of the ditch, creating bare soil for germination, and possibly stimulating an existing soil bank. This bank is now the most biodiverse part of the site. Although most species are ruderals, these can have significant benefits for wildlife.

The bank has been divided into thirds. The lower third has been planted with some native scrub species as part of the original site planting and a fair bit of bramble is present. This will be left to develop as a dense scrub patch and we plan to supplement the existing planting with more hawthorn and blackthorn, extending the scrub a few metres north along the bank. This will also help screen the adjacent property.

The middle section will be managed with an annual cut and collect regime, with the cut in autumn/winter. Some ground disturbance may be undertaken to stimulate the seed bank and provide bare earth for germination.

The upper section has now developed as a bramble patch and it is probably futile to try and recover this, so it will be left as it is for now.

Action 6: Create new ponds and wetland habitats

Whilst no ponds or wetlands exist on site at present, these are critical for wildlife and a key aspiration for site development. At present Ashdown Primary School do not want any water features on site due to safety concerns. However, the following are proposed should this position change in the future:

- A large pond with dipping platform and associated marsh area for the far eastern corner.
- A small wildlife pond of approximately 2m x 1m on the site of an existing hollow close to the western boundary and opposite Montrose within the Upper Orchard.

Action 7: Create and maintain areas of scrub

Small areas of dense bramble and native scrub species such as blackthorn grading into long grass have very high biodiversity value. They are also important for harbouring predator species that will consume fruit tree pest species. Working with what has already developed on the site we will maintain five small scrubby patches as follows:

- Against the western boundary fence, immediately north of the Biodiversity Garden.
- Slightly further up the western boundary fence where Ashdown Primary School planted a number of Hawthorns a few years ago. This merges into the end of the new edible hedge.
- In the far eastern corner of the site, and along the bottom third of the bank adjacent to the ditch on the eastern boundary.
- On the upper section of the bank adjacent to the ditch on the eastern boundary. This has developed as a bramble thicket and merges into the eastern end of the hedge marking the boundary with the Forest School area.
- Immediately east of the entrance gate, on the topsoil pile scraped from the Biodiversity Garden area. This has been planted up with dozens of native tree and scrub species and will double as a screen for the site from the road.

Wherever possible, at least two feet of long grass will be left adjoining the scrub before it grades into any grassland under a mowing regime, as this maximises the value to wildlife.

Action 8: Leave nettle patches

We will retain the existing nettle patches growing on the site because nettles support over 40 species of invertebrates, including acting as the foodplant for some of our more colourful butterflies. And of course, they will provide a source of nettle leaves for any members who want to make nettle tea or soup! Nettle patches are located:

1. At the far south-western corner of the site, as part of the Biodiversity Garden.
2. In the middle of the lower orchard.
3. Next to the shed.
4. At the hedgerow base either side of the entrance gate.
5. On the outer hedgerow base alongside Herne Road.

Action 9: General interventions to create micro-habitats

Measures not mentioned elsewhere include:

- Creation of a brash pile for hedge prunings and other woody waste. An area will be identified in the NE corner, as that is where most woody waste is originating. The aim is to keep this pile to six feet in length, with branches trimmed so that the pile can be kept as compact and unobtrusive as possible. This pile will add to the habitat creation along the eastern boundary of the Forest School area aiming to favour minibeasts.
- Two sheets of corrugated metal have been placed on this same boundary and will be left in situ to be lifted as part of forest school activities.
- A large cut grass heap will be maintained on the western boundary inside the Forest School area.
- Earwig refugia will be hung on some of the fruit trees.
- Small quantities of dead wood will be positioned around the site in addition to the log pile in the Biodiversity Garden. This will be on an opportunistic basis when logs of native species become available to be brought onto site. Most value will be derived from individual logs on the ground, ideally partly in shade, partly in sun.

Action 10: Support butterflies to breed on the site

Many UK butterfly species are in decline and the orchard offers the potential to support breeding populations of a number of commoner species through appropriate management. Butterflies are good indicators of habitat quality, so if we record increasing numbers, we'll know we are getting things right in general in terms of enhancing biodiversity. They are also a highly visible form of wildlife, so great for children undertaking Forest School activities to see them in good numbers. Over the last two years we have recorded ten species on the site, the most numerous being Gatekeeper, followed by Meadow Brown – these two being the UKs commonest 'Browns'. The full list is: Gatekeeper, Meadow Brown, Large White, Speckled Wood, Red Admiral, Small White, Small Tortoiseshell, Holly Blue, Brimstone and Small Copper. We will be providing abundant nectar sources across the site, so this section focuses on caterpillar foodplants and suitable habitat for what we consider to be a maximum 21 potential breeding species:

- **Brimstone:** this large yellow butterfly breeds on Alder Buckthorn, a small and attractive native tree. Using funding from the Sussex branch of Butterfly Conservation we planted four one-year whips of this species in the far eastern corner of the site around the existing scrub, in May 2024. As this species is common throughout Crowborough, and has been seen in the orchard, it should be easy to create a breeding population.
- **Comma:** nettles are the main foodplant and as noted previously we will be retaining and encouraging a number of nettle patches across the site. It does use other plants for breeding such as willows, and we also have a number of these within the orchard.
- **Common Blue:** this butterfly uses a range of legumes for breeding, primarily Bird's-foot Trefoil, but also clovers and other trefoils. At present almost all of the grassland areas are a bit too coarse for this species, however over time they will become more suitable. Using funding from the Sussex branch of Butterfly Conservation in May 2024 we planted 12 large plug plants of Bird's-foot Trefoil around an area in front of the Biodiversity Garden where

the soil has been compacted and grass growth is sparse. Hopefully this will create a dense patch which may encourage Common Blue to breed should the species reach the site. At the point we start planting wildflower plugs into the grassland, Greater Bird's-foot Trefoil will be one of the species chosen, to provide further encouragement to Common Blues to start breeding.

- **Dingy Skipper:** it is unlikely this relatively scarce species will breed in the orchard, however it is known from a few sites locally such as Walshes Park (1.5km away) and the habitat is broadly suitable. However, we would also need areas of sparser vegetation with its foodplant (one of the bird's-foot trefoil species). As noted above, Bird's-foot Trefoil plugs were planted in May 2024 to try and encourage breeding should Dingy Skippers visit the site.
- **Essex Skipper:** it is possible that this species could become established, as grasses it uses for foodplants are present, although its main plant, Cock's-foot, is not common. However, the Essex Skipper and Small Skipper don't tend to be found together on the same site, with the habitat tending to suit one species or the other.
- **Gatekeeper:** this butterfly is already breeding in the orchard. It uses several species of common grass and the way we are planning to manage the grassland areas of the orchard will be perfect to allow this species to increase its numbers.
- **Green-veined White:** the Weald is the stronghold for this species in Sussex and it prefers damp grassland. The orchard is a possible breeding site, although its main foodplant, Cuckooflower, is only found in low numbers at present. If we do get the large pond and wetland area constructed breeding would be more likely. We should also look for opportunities to plant Garlic Mustard in the bases of our hedgerows.
- **Holly Blue:** primarily uses Holly and Ivy but will breed on other species such as Bramble. We already have all these species present and as our hedges develop and are allowed to grow taller the orchard should be suitable for this species to breed.
- **Large Skipper:** the orchard is perfect habitat for this species, and its main foodplant, Cock's-foot, is present, although not in large quantity. No specific actions are required, it will just be a question of whether it spreads from other breeding locations in and around the town.
- **Marbled White:** until recently this species was not recorded anywhere near Crowborough, however there have been a number of sightings in recent years and it is very likely breeding in Walshes Park. It mainly uses Red Fescue for breeding, although will use other grasses such as Yorkshire-fog. Both are found in the orchard, so breeding is possible.
- **Meadow Brown:** assumed to be resident already. The way we manage the grassland areas will favour this species, particularly as fertility is gradually reduced allowing the finer grass species it favours to increase.
- **Orange-tip:** breeding in the orchard is definitely a possibility, although at present its main foodplant, Cuckooflower, is only present in low numbers. Hopefully it will increase naturally as the meadow management becomes established, but we should also look for opportunities to increase its spread through plug-planting in wetter areas and also to plant Garlic Mustard along the hedgerows – a secondary foodplant.
- **Painted Lady:** we are planning to plant a number of species in the Biodiversity Garden that this butterfly uses as foodplants – thistles and Viper's-bugloss.

- **Peacock:** nettles are the main foodplant and we will be retaining and encouraging a number of nettle patches across the site.
- **Red Admiral:** nettles are the main foodplant and we will be retaining and encouraging a number of nettle patches across the site.
- **Ringlet:** the habitat will be suitable and the coarser grass species it needs for breeding are already present.
- **Small Copper:** this species is breeding in Herne Road Cemetery where its foodplant (Sorrel) is common. However, the management of the cemetery is not conducive for butterflies as the whole site is regularly mown. Small Coppers have been seen in the orchard, visiting from the cemetery so one definite aim is to try and encourage the species to start breeding in the orchard. Common Sorrel is present in the orchard in very small numbers. It should spread as the meadow management technique becomes established, however we will look for opportunities to plant more Sorrel.
- **Small Heath:** this species uses a range of common grasses for breeding, which are already present in the orchard. This species is found in Walshes Park and it is possible it could eventually start breeding in the orchard. Habitat conditions will be broadly suitable as the site becomes established.
- **Small Skipper:** breeding is a definite possibility as the habitat is suitable and its main foodplant, Yorkshire-fog, is common in the orchard. No specific action is required, we just need to wait and see whether it will arrive from sites in and around Crowborough where it currently breeds. However, the Small Skipper and Essex Skipper don't tend to be found together on the same site, with the habitat tending to suit one species or the other.
- **Small Tortoiseshell:** nettles are the main foodplant and we will be retaining and encouraging a number of nettle patches across the site. The photo below shows Small Tortoiseshell caterpillars on nettles in the orchard, taken in spring 2023.
- **Speckled Wood:** prefers grasses along hedgerows and uses a range of species already present on site, especially Common Couch, Yorkshire-fog and Cock's-foot. No specific action is therefore needed and as the site develops it should become increasingly suitable for this species to breed.
- **Wall:** this species is currently restricted to the South Downs but was formerly much more widespread and it is possible, perhaps with climatic change, that its range may expand again. The orchard could represent a suitable breeding site and the common grass species needed as foodplants for the caterpillars are present.

Action 11: Regularly clear litter

Regular litter picks will take place to try and keep the site as clean as possible as litter can represent a hazard to wildlife, as well as making the site look poorly maintained. It is appreciated that foxes regularly bring items into the site, so clearance of these will need to be ongoing. A litter picker is kept in the shed and a roll of refuse sacks will be purchased as soon as budget allows. Volunteers will take turns to remove litter and waste to their domestic bins or place into the Ashdown School bins.

Action 12: Regularly survey wildlife found on the site

An ongoing aim is to compile as many wildlife records for the orchard as possible and create a picture of changes over time. An initial list of plants was made in 2022 and is included as Appendix 1. Kevin Crook will manage a spreadsheet recording all wildlife records for the site. The following work will take place annually:

- **Flowering plants** – will be recorded throughout the year and a fresh list will be produced on an annual basis, with frequency recorded using the DAFOR scale (Dominant, Abundant, Frequent, Occasional, Rare) (K. Crook)
- **Lower plants** – there is less expertise available covering mosses, liverworts and lichens. However, occurrence is low and it should be possible to compile a list of species present (K. Crook)
- **Butterflies** – will be recorded regularly through the year (K. Crook, B. Welch)
- **Moths** – at least two moth-trapping sessions will be arranged, and the aim will be to link at least one to Forest School activities (B. Welch)
- **Birds** – will be recorded regularly through the year (K. Crook)

- **Other invertebrates** – work on some groups will take place regularly through the year (B. Welch)
- **Plant galls** – will be recorded regularly through the year (K. Crook)
- **Mammals** – all members will be encouraged to submit records to K. Crook
- **Reptiles and Amphibians** – all members will be encouraged to submit records to K. Crook.
- All members will be encouraged to record wildlife and submit any sightings.

Action 13: General interventions to support pollinators

The success of our orchard depends on effective pollination of our fruit trees. Pollination requirements are highly variable, however, in general our trees will rely primarily on pollinating insects. Research undertaken in Kent apple orchards over several years by the University of Reading has yielded interesting results. Over 25 different species of bee and hoverfly were recorded pollinating apples, with the most commonly recorded being wild *Andrenid* bees. These are solitary bees that live in holes in the ground, and it seems orchards are one of their favourite habitats. The university also undertook experiments to test whether pollinating insects actually had any impact on fruit production. Their studies showed that without insect pollination fruit yields were reduced by over 60% and the fruit that did develop was smaller and misshapen. In addition, the immature life stages of some pollinators consume pest species which negatively impact fruit trees.

To support and encourage the presence of pollinators on site we will:

- Include a number of features within the Biodiversity Garden, for example: nesting habitat for mining bees (sandy bank), a wide range of flowers attractive to different pollinators, nectar sources for an extended flowering period, food plant species for butterflies and shelter for overwintering insects.
- Install bug hotels, with two already present having been sponsored by Pennies Nursery.
- Manage the overall site to favour an increase in wildflowers and retain vegetation overwinter to provide shelter.
- Retain existing willows on site, as their flowers are favoured by early emerging queen bumblebees.
- Seek to increase ivy on site, as it provides a great food source for late summer solitary bees.
- Maintain a small cobnut plat, as hazels are recommended to provide habitat for pest predators.
- Make some planting decisions based on research undertaken by the National Botanic Garden of Wales which sought to identify which plants honeybees use most during spring. This time of year is crucial, as honey stores are used up over winter. Using DNA metabarcoding researchers identified that bees only used a small selection of plants in flower during April and May. The top 10 plants used are: **willows**, **hawthorn**, cotoneaster, **apple** and **cherry trees**, gorse, **sycamore**, hellebores, **dandelions**, **holly** and **oak**. Those in bold are already present on site, so we can take their value into account. The Biodiversity Garden design includes a white hellebore and we will look for an opportunity to plant gorse and cotoneaster somewhere within the site; and supplement our hedges with additional hawthorn whips via free hedging packs.

- Completely avoid the use of pesticides, insecticides or herbicides within the site.
- Seek to provide drinking water for bees by placement of stones in our ponds if we can secure agreement from Ashdown Primary School for any wetland habitats.
- Leave some areas of the site completely undisturbed during the year – to support pollinator species which nest in long grass, under hedgerows and in vegetation heaps.

Appendix 1

Crowborough Community Orchard - Plant List 2022 (64 species)

Common Name	*Latin Name*	Current frequency
Field Maple	*Acer campestre*	O
Sycamore	*Acer pseudoplatanus*	R
Yarrow	*Achillea millefolium*	F
Creeping Bent	*Agrostis stolonifera*	A
Cow Parsley	*Anthriscus sylvestris*	R
Thale Cress	*Arabidopsis thaliana*	F
False Oat-grass	*Arrhenatherum elatius*	O
Silver Birch	*Betula pendula*	O
Downy Birch	*Betula pubescens*	O
Hairy Bitter-cress	*Cardamine hirsuta*	F
Cuckooflower	*Cardamine pratensis*	O
Field Bindweed	*Convolvulus arvensis*	O
Hazel	*Corylus avellana*	O
Hawthorn	*Crataegus monogyna*	F
Cock's-foot	*Dactylis glomerata*	O
Wild Carrot	*Daucus carota ssp. carota*	R
Common Couch	*Elytrigia repens*	A
Red Fescue	*Festuca rubra*	O
Lesser Celandine	*Ficaria verna*	R
Common Fumitory	*Fumaria officinalis*	R
Cleavers	*Galium aparine*	F
Herb-Robert	*Geranium robertianum*	R
Wood Avens	*Geum urbanum*	O
Ivy	*Hedera helix*	F
Hogweed	*Heracleum sphondylium*	R
Yorkshire-fog	*Holcus lanatus*	A
Bluebell	*Hyacinthoides non-scripta*	R
Cat's-ear	*Hypochoeris radicata*	R
Holly	*Ilex aquifolium*	O
Red Dead-nettle	*Lamium purpureum*	R
Perennial Rye-grass	*Lolium perenne*	R
Pineappleweed	*Matricaria discoidea*	O
Ribwort Plantain	*Plantago lanceolata*	R
Rough Meadow-grass	*Poa trivialis*	A
Knotgrass	*Polygonum aviculare*	O
Cherry Laurel	*Prunus laurocerasus*	R
Blackthorn	*Prunus spinosa*	O
Bracken	*Pteridium aquilinum*	O

Common Name	*Latin Name*	Current frequency
Pedunculate Oak	*Quercus robur*	F
Meadow Buttercup	*Ranunculus acris*	R
Creeping Buttercup	*Ranunculus repens*	A
Dog-rose	*Rosa canina*	O
Bramble	*Rubus fruticosus agg.*	F
Common Sorrel	*Rumex acetosa*	R
Curled Dock	*Rumex crispus ssp. crispus*	R
Broad-leaved Dock	*Rumex obtusifolius*	O
Grey Willow	*Salix cinerea subsp. cinerea*	O
Groundsel	*Senecio vulgaris ssp. vulgaris*	O
Prickly Sowthistle	*Sonchus asper*	R
Rowan	*Sorbus aucuparia*	O
Lesser Stitchwort	*Stellaria graminea*	O
Dandelion	*Taraxacum agg.*	A
White Clover	*Trifolium repens*	O
Common Nettle	*Urtica dioica*	F
Common Cornsalad	*Valerianella locusta*	O
Germander Speedwell	*Veronica chamaedrys*	R
Lilac Ivy-leaved Speedwell	*Veronica hederifolia ssp. lucorum*	F
Common Privet	*Ligustrum ovalifolium*	O
Rugosa Rose	*Rosa rugosa*	R
Cultivated honeysuckle	*Lonicera sp.*	R
Shepherd's-purse	*Capsella bursa-pastoris*	R
Poppy	*Papaver sp.*	R
Geranium	*Geranium sp.*	R
Cotoneaster	*Cotoneaster sp.*	R

Key to frequency:

D = Dominant (covering over 50% of the site)

A = Abundant (over 100 individual plants and covering up to 50% of the site area)

F = Frequent (30-99 individual plants)

O = Occasional (10-29 individual plants)

R = Rare (1-9 individual plants)