

# **Horsted Green Park Ecological Assessment & Management Plan 2024 - 2028**

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# 1.0 Introduction

## 1.1 Background

Horsted Green Park (referred to here as “the park”) is a 30ha (74 acre) greenspace owned by Wealden District Council (WDC) near Uckfield in East Sussex. Its central grid reference is TQ467195.

The park was arable farmland before being acquired to provide an area of Suitable Alternative Natural Greenspace (SANG). In Wealden District SANGs are required to mitigate the impact on the Ashdown Forest Special Protection Area (SPA) of increasing recreational pressure associated with growth in population from new residential development.

The purpose of SANGs is to provide greenspaces that will attract visitors. They are required to have ease of access, parking provision, circular walks and varied paths within a range of habitats in open countryside. Horsted Green Park was opened to the public in 2019.

Whilst provision of accessible greenspace is a core purpose of SANGs, these sites also have very good potential for wildlife conservation. In 2023 WDC commissioned Dolphin Ecological Surveys to carry out an ecological assessment of Horsted Green Park and to make management recommendations based on the findings.

Lists of the flora and fauna observed at Horsted Green Park during site visits in June 2023 are included in the Appendix. These observations were subject to seasonal bias and do not represent exhaustive lists for the site. A further site visit was carried out in January 2024, shortly before this report was prepared.

This five-year management plan sets out management priorities and recommendations that will help WDC to enhance biodiversity across the existing and newly created habitats at Horsted Green Park. Management of the park is overseen by WDC but is carried out by contractors (see 3.2).

## 1.2 Data Search

An ecological assessment carried out in 2023 was supplemented by a data search provided by the Sussex Biodiversity Records Centre (SxBRC). Biological information about Horsted Green Park and the surrounding area is contained in data report reference SxBRC/22/1003 dated 28/3/2023 (held by WDC).

The report’s many records of vascular plants and birds at tetrad (2km x 2km) resolution are useful to identify species that occur in surrounding areas and which could colonise the park if suitable habitats develop over time. The full details of relevant wildlife status and legislation are contained in the report and are not reproduced here.

The park itself is very new and with no previous public access biological recording will have been limited. The only record supplied by SxBRC from the park itself was a Small Heath butterfly (2021), a grassland species considered a priority species under the UK Biodiversity Action Plan.

Semi-natural habitats around the park include numerous ponds, areas of deciduous and ancient woodland and the Ridgewood Stream (a tributary of the River Uck). Records of Bullhead and Brown/Sea Trout in a downstream section of the Ridgewood Stream from 2003 and a Sussex rare Caddis fly *Polycentropus kingi* in 2016, highlight the potential ecological value of this watercourse.

A number of legally protected, designated and declining species have been recorded on the edges of Horsted Green Park, some of which may be found within its boundaries.

- **Great Crested Newt and other amphibians** are highly likely to frequent the park because the ponds and rough grassland provide good opportunities for breeding and foraging. Great Crested Newt is legally protected and has been recorded over several years up to 2019 in the pond at Pondtail House on the southern boundary of Horsted Green Park. There are also records of Great Crested Newt eggs (2017) from the pond at Hoathfield Wood east of the car park and of adult newts in 2011 in the “Horsted Place” area. Adult Great Crested Newts routinely disperse some distance overland from their breeding ponds and will make use of suitable ponds and terrestrial habitat across a wide area. The Sussex Weald is a stronghold for this internationally rare species.
- **Dragonflies and damselflies** are likely to colonise the ponds and wetland areas of the park. There are records of Downy Emerald, Small Red-eyed Damselfly, Brilliant Emerald and Common Darter from nearby in 2009/2010. Five additional species were observed in the park during the 2023 assessment (see appendix).
- **European Hedgehog** was recorded from Horsted Lane Pond (2017) and a dead hedgehog was found on the A22 (2014). This charismatic but declining mammal clearly occurs in the vicinity of the park and may be present but not yet recorded on the site.
- **Hazel Dormouse** was recorded nearby in 2021. Dormice primarily inhabit woodland and also use dense hedgerows and scrub habitats. There is little suitable habitat for this protected and declining species within the park at present but greater habitat connectivity with increased amounts of scrub, woodland and dense hedgerows will be beneficial at a landscape scale.

## 2.0 Ecological Assessment

### 2.1 Summary

Horsted Green Park is dominated by open grassland with a network of paths. It lies in an elevated position between Horsted Pond Lane and the busy A22 Uckfield by-pass. There are gentle, east-facing slopes on the sides of the Ridgewood Stream (a tributary of the River Uck) which forms part of the park's north-eastern boundary. To the north of the park there is open farmland (see Map 1).



*View to the south-east from the plateau of Horsted Green Park*

The park's past as intensive arable farmland is reflected in the scarcity of mature semi-natural habitats. Just a few fragments of older hedgerows, two farm ponds and some rough, damp corners appear to have escaped cultivation. However, extensive new habitat has been created across the park which includes sown wildflower meadows, a series of ponds and newly planted orchards, hedges, woodland blocks and parkland trees.

### 2.2 Grassland

Grassland in the park varies from sown, flower-rich areas to much more grassy swards that may have developed naturally since arable farming ceased.

The main areas of tussocky, grass-dominated swards occur on the upper plateau where soils are likely to remain highly fertile after years of cultivation. Along with native grasses such as Cock's-foot, Yorkshire Fog and bent-grasses there are occasional relicts of cultivation such as Black-grass. Wildflowers in these areas are most likely to be derived from the soil seedbank and include swathes of Fleabane and Creeping Buttercup.





*Tussocky grassland with Fleabane and Creeping Buttercup*

Extensive areas of the park were sown with Weald Native Origin wildflower seed to create wildflower meadows. In some places wildflowers are abundant, most notably in the east and also on the lower slopes, where there are shorter, legume-rich swards with abundant Red Clover, White Clover and Bird's-foot-trefoil. These colourful, flowery areas of grassland are particularly valuable as a source of nectar and pollen for pollinating insects such as bees, hoverflies, butterflies and moths. In taller sown swards wildflowers such as Ox-eye Daisy, Common Knapweed, Grass Vetchling and Meadow Buttercup are locally prominent.



*Sown wildflower-rich grassland*

Both types of grassland can be useful to wildlife and the way they are managed can make an important contribution to biodiversity in the park. For example, tussocky grassland provides good habitat for invertebrates which in turn are a source of prey for insectivorous birds, amphibians and reptiles. Field Vole are also common in such habitat and can attract predators such as Kestrel, Barn Owl and Fox.

The flower-rich grassland is not only important for pollinating insects but is also likely to be rich in the seed and invertebrate food sources essential to declining farmland birds. Areas of low, sparse grassland can support ground-nesting Skylark. This farmland bird is on the UK Red List of Birds of Conservation Concern due to severe population decline and several Skylarks were seen displaying at Horsted Green Park during the site visits in June 2023. Skylarks nest in open fields to avoid predators but unfortunately disturbance from off-lead dogs may limit their breeding success in the park.

Large stands of Creeping Thistle occur in places and although this plant is considered a pernicious weed in agricultural grassland it can nevertheless be a valuable source of food for wildlife. Seed-eating birds such as Goldfinch feast on its abundant seed whilst thistles are the preferred larval foodplant of Painted Lady butterflies. Depending on the way the grassland is managed, Creeping Thistle could become even more widespread at Horsted Green Park and in future may need control to stop it becoming dominant (see 3.3.1). Curled Dock is also locally frequent and may need targeted control in future.

Near the centre of the park's grassland expanse, just north of Place View Pond, is a small amphitheatre. This features a mown grassy circle, planted flowerbeds, deep gravel paths, a boardwalk and a bank retained by wooden sleepers.



*View of the amphitheatre*

Areas of distinctly wet, rushy grassland occur in the south-east of the park near the boundary with Hoathfield Wood and the swale. Tree and shrub planting on these wet soils has had mixed success but in winter 2023/4 a new group of non-native pines had been planted and fenced on an area of very wet grassland between two paths.



*Newly planted pines*

Near the woodland edge to the east there is abundant natural regeneration of willow, Hornbeam and Oak. The soils in these low-lying, wet areas are particularly vulnerable to compaction and heavy vehicle movements across them should be avoided as much as possible.



## 2.3 Ponds

Two old farm ponds are present on the upper slopes of the park. These well established features appear on early 20<sup>th</sup> Century OS maps and may support protected fauna, notably Great Crested Newt, which is known to occur in other ponds on the borders of the park.

Place View Pond and College Pond both have a fringe of mature trees and shrubs including mature Oaks and Ash trees that are affected by Ash dieback disease. Small mixed copses and young parkland trees have been planted nearby over sown wildflower grassland with an abundance of Common Knapweed, Ox-eye Daisy and Red Clover.



*Place View Pond*

Dogs swimming in the ponds have left the banks eroded in places and the water turbid. This tends to limit aquatic vegetation but occasional Branched Bur-reed, Common Water-plantain, Soft Rush, Floating Sweet-grass and Bittersweet are present, especially in College Pond.



*College Pond*

A series of new ponds and seasonally dry swales created along the lower slopes in the east of the park are intended to collect surface water run-off and slow its discharge into the Ridgewood Stream. The ponds and swales are already developing into varied wetland habitats with areas of deep and shallow water. They have the potential to become rich in wildlife from dragonflies and damselflies to molluscs and aquatic beetles.





*New pond with developing vegetation*

The vegetation in and around these wetlands is already diverse and includes Common Stonewort (a green alga that often colonises new ponds) rafts of Broad-leaved Pondweed and large stands of Bulrush with marginal plants such as Brooklime, Common Spike-rush and Common Water-plantain.

Unfortunately the new ponds have also been colonised by at least two invasive alien plant species; New Zealand Pigmyweed and Curly Waterweed.



*Curly Waterweed in the new ponds*

The new pond banks and shallow swales at the south end of the ponds have been enhanced with wildflowers retained with jute netting. These damp, flowery areas have a diverse flora, rich in legumes with rushes, sedges, abundant Fleabane and developing willow scrub.



*Vegetation in the swale*

## 2.4 Trees, Hedges & Scrub

Mature trees are scarce within Horsted Green Park but there are a few examples, mostly Oak and Ash, in hedgerows and near the old ponds. A dead “monolith” Oak has been retained in grassland near the car park. Living and dead mature trees are ecologically important for many reasons including features such as rot holes, bark flaps, crevices and dense Ivy that can provide nest sites for birds and space for roosting bats. Standing and fallen deadwood is also an important resource that may support specialist invertebrates and fungi.



*Standing dead tree within tussocky grassland*

Fragments of old hedgerows with mature trees and a small amount of woodland edge habitat occur along some of the park boundaries, especially near Horsted Pond Lane and around College Farm. This type of dense, woody vegetation provides valuable habitat for wildlife from nesting birds to Hedgehogs and overwintering invertebrates. Hedges and woodland edges can act as a reservoir of flora and fauna that will colonise developing habitats in the park over time.



*Established hedge and mature Oak near College Farm*

A newly planted mixed hedgerow extends from both sides of Place View Pond across quite exposed ground. This feature is becoming quite overgrown and is in need of maintenance to ensure it can establish successfully.



*The new hedgerow*

There is little established scrub in the park but in places the early stages of natural regeneration of trees and shrubs is prolific. North of College Farm there is quite extensive young willow scrub on the damp, poorly drained soils over a typical wet grassland flora, rich in rushes and sedges. Willow scrub is a particularly valuable resource for invertebrates and its flowering catkins are an excellent source of pollen for emerging queen bumblebees in early spring.





*Path through naturally regenerating willow scrub*

At the opposite end of the park, between Pond Orchard and the A22, there is another damp corner where willow scrub is flourishing amongst the rows of planted Hawthorn and Alder. A dense stand of Aspen suckers has spread out from the edge of Hoathfield Wood into the park near the car park whilst self-sown Oak and Hornbeam saplings are frequent near mature trees and along woodland edges.



*Natural woody regeneration on the woodland edge*

The vigorous regeneration of trees and shrubs in the park shows how valuable it is to allow space for habitat development through natural processes on formerly arable land. Management of the park should encourage natural woody regeneration in suitable areas where it can provide extremely valuable, diverse habitat for wildlife at no cost.

## 2.5 New Woodland & Orchards

Woodland blocks, orchards, parkland trees and hedgerows have all been planted in the park. The larger woodland blocks are fenced to exclude deer. Whilst some of the young trees and shrubs are thriving there have inevitably been many losses. Essential tree aftercare, particularly watering, is often difficult on a site of this size and appears to have been neglected at Horsted Green Park. Monitoring the health of newly planted trees and good aftercare is essential to ensure their survival in the long term.





*Dead parkland trees*

### 2.5.1 Woodlands

Within some new woodland areas the planted trees co-exist with an abundance of self-sown tree seedlings and saplings, mostly Oak and Sallow but also other native species. A good example is to the west of College Pond where trees and shrubs derived from natural regeneration will develop in a random pattern over the straight rows of planted trees. The northernmost woodland block adjoins a mature boundary hedgerow and the planted trees are now over-topped by diverse natural regeneration.



*Natural regeneration in planted woodland*

### 2.5.2 Orchards

College Orchard on the plateau is easily accessible from the car park and main paths whilst Pond Orchard is more tucked away in a sheltered area between two blocks of mature woodland in the southeastern corner of the park (see Map 1).

The two new orchards have been carefully designed and planted with an interesting variety of fruit and nut trees but they are in need of much better management to fulfil their potential as community orchards and wildlife havens (see 3.3.6).



*Pond Orchard*

Some orchard trees have died and most of the tree ties and stakes need to be adjusted to avoid damaging tree bark. The short lengths of Hornbeam hedging in both orchards could have the rabbit spirals removed in the near future before they get lost in the vegetation. Surfaced paths within the orchards have become weedy and the surface gravel is spreading into adjoining grassland, which gives both these areas a rather neglected air.

The orchard grassland appears to have been enhanced with wildflower seed and in places the swards are reasonably flowery. The presence of single flowering stems of Common Spotted-orchid and Southern Marsh-orchid in Pond Orchard should be celebrated. It is possible that these plants are derived from the original soil seedbank rather than recent seeding as this corner of the park may have escaped arable cultivation in the past.



*Southern Marsh-orchid in Pond Orchard*

In contrast College Orchard has been planted on formerly arable land. Its grassland is quite tussocky in places with a deep thatch of dead vegetation building up where the sward has been cut and left in situ.



*College Orchard after being mown in June 2023*

Enhanced grassland management to promote wildflowers in both orchards would be highly beneficial for wildlife as well as encouraging pollinating insects to increase fruit production.

## 2.6 Public Access

### 2.6.1 Visitors & Dogs

Horsted Green Park is an extremely popular place for people to walk their dogs and at times the small car park is over-flowing. Attracting visitors is of course the main purpose of a SANG but the attendant high numbers of dogs, mostly exercised off-lead, inevitably affects wildlife in the park and imposes some constraints on habitat management.

The two main impacts of dogs on wildlife and habitats are direct disturbance of fauna and cumulative changes to soils and terrestrial vegetation caused by high levels of nutrient input from faeces and urine, especially alongside paths. Ponds and watercourses can also be adversely affected by the persistent insecticides routinely used on dogs to deter fleas and ticks. When dogs enter the water, particularly soon after treatments have been applied, insecticides polluting the water can have an impact on aquatic invertebrates.

Grassland management options can be restricted on sites with high levels of dog activity because hay crops contaminated with faeces are rarely acceptable as livestock feed and thus have little commercial value.

### 2.6.2 Paths

SANGs are required to have easily used and well maintained paths that provide a variety of walking routes and Horsted Green Park has an extensive network of paths that encourage access across the whole area. Some paths are surfaced and others are mown through grassland and scrubby areas.

Unfortunately in some places the surfaced paths have already started to suffer from erosion of the upper layers sometimes exposing a layer of fill containing some potentially hazardous fragments including insulated wire, sharp ceramics and glass. If glass is displaced from the path into surrounding grassland it poses some risk of causing grass fires in dry, sunny conditions. Large diameter material from the upper layers that washes into surrounding grassland may cause damage to mowing equipment.





*Deteriorating path surface*

### 2.6.3 Access & Infrastructure

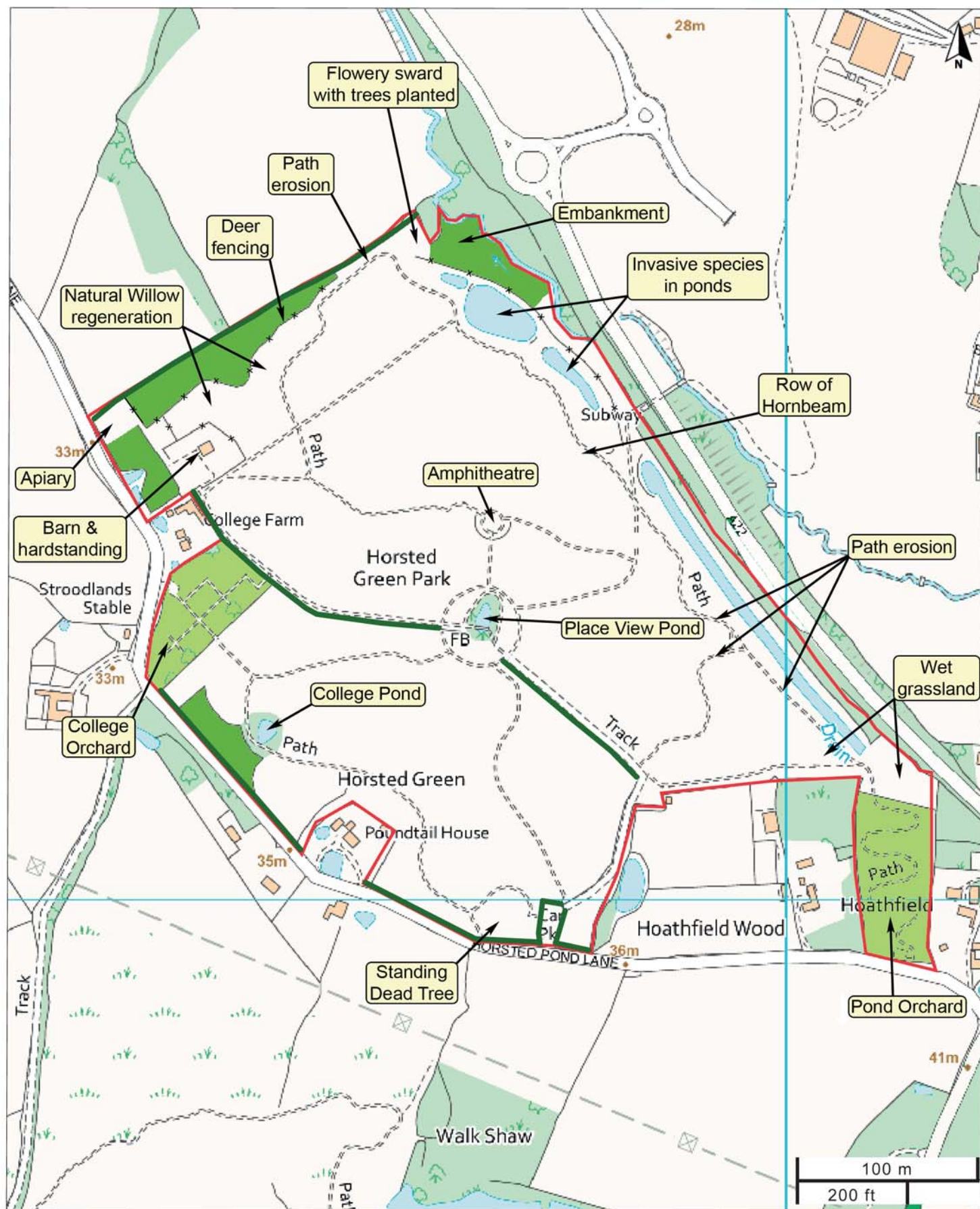
There is open access across most of the park but in the north-west corner there is a fenced area that is not accessible to visitors containing a hardstanding compound, a storage barn, “Horsted Green Apiary” and blocks of planted trees.

There are information boards at the entrances and in selected locations in the park. A few are beginning to deteriorate and the text of some would benefit from updating and correcting.





# Horsted Green Park Map 1 - Features



## 3.0 Recommendations

### 3.1 Management Priorities

- To maximise biodiversity at Horsted Green Park within the constraints imposed by its function as a well-used and accessible greenspace.
- To maintain old habitats and features that are already of high wildlife value in good condition.
- To manage new habitats in a way that enhances the overall value of the park to wildlife.
- To encourage the local community and visitors to the park to appreciate its wildlife and become involved with its care and management.

### 3.2 Management Capacity

The management recommendations set out in this plan are intended to benefit the wildlife and habitats at Horsted Green Park. However, it is acknowledged that WDC may not have the resources available to implement all the recommendations and that some may be delayed beyond the five-year lifetime of the plan.

Most of the recommended management is straightforward but some may require changes in the techniques or equipment that are currently used, for example to ensure more consistent cut and collect management of all wildflower grassland areas.

Routine management of the park is carried out by contractors on behalf of WDC. This arrangement has implications for how the recommendations made in this management plan can be implemented. Successful habitat management for wildlife often requires flexibility around the basic prescriptions and an ability to react to changing conditions. Delivering the more nuanced and reactive management that would most benefit biodiversity in the park effectively will be limited if monitoring of on-site conditions is infrequent.

Despite the obvious resource implications of employing a ranger, there would be undeniable advantages for WDC in having a dedicated member of staff with a highly visible on-site presence on the council's main greenspaces; Horsted Green Park, the Cuckoo Trail and Walshes Park.

A greenspaces ranger could not only oversee contractors and monitor on-site conditions but also carry out a significant proportion of management tasks on all these sites. A ranger would also be best-placed to build up good relationships with visitors and neighbouring landowners as well as to address any anti-social behaviour before it becomes entrenched.

Site rangers employed by local authorities elsewhere in Sussex have established Friends Groups in their nature reserve and greenspaces. Some also carry out or oversee biological survey and monitoring activities. Capacity to arrange volunteer work parties that could carry out orchard maintenance and other management tasks would help to foster community engagement at the park and fulfil another purpose of the SANG.

## 3.3 Habitat Management

### 3.3.1 Grassland

#### Cut & Collect

Consistent management is very important to sustain natural and sown wildflower grasslands. Mowing needs to remove the year's grass growth and create small gaps in the sward where seeds can germinate. Traditionally these conditions were created in hay meadows, which were usually grazed by livestock after the hay crop was taken. Management of the sown wildflower areas of the park should aim to mimic this traditional management as closely as possible by "cut and collect" mowing (although conservation grazing of the aftermath is unlikely to be feasible in Horsted Green Park).

Failure to remove the cut vegetation prevents wildflower meadows from developing to their full potential. The cuttings accumulate and form a dense, smothering thatch which not only raises soil nutrient levels as it rots down but also prevents the seeds of annual species germinating. In these circumstances many wildflowers are gradually out-competed by coarse, tussocky grasses and nutrient-demanding plants such as thistles, docks and nettles.

Grassland now covers most of Horsted Green Park and good management of this newly-established vegetation for wildlife is a high priority. The current mowing regime allows for a series of paths to be cut through grassland blocks to link the main, surfaced routes and swathes up to 2m wide alongside surfaced paths are mown in early summer. In future path-side swathes should be restricted to 1m wide and only need to be cut if vegetation is encroaching onto the paths.



*Wide mown swathes and cuttings accumulating*

The wildflower meadow areas are scheduled to be cut in late summer/early autumn and on-site information states "we are (therefore) managing the meadow areas to reduce the nutrients in the soil by taking away grass cuttings...". However, in winter 2023/4 it was clear that this is not taking place and significant areas of sown wildflower grassland across the north of the park had not been cut at all. Only the grassland south of the new hedgerow that bisects the park had been managed by cut and collect.





*Unmown wildflower grassland in January 2024*

It is essential to implement annual cut and collect mowing (equivalent to taking a hay crop) on all the sown wildflower meadow areas of the park, in particular the legume-rich lower slopes. This will ensure that the considerable resources put into creating meadows using Weald Native Origin wildflower seed are not wasted through inappropriate or insufficient management.

Yellow Rattle seed was included in the wildflower seed mix to help weaken grass growth and promote wildflowers but no plants were not observed during the 2023 site assessment. This annual species cannot germinate under a thatch of dead grass and may already have been lost from the site as its seeds are relatively short-lived. However, if a few plants have managed to persist it may gradually return under more favourable conditions.

The wildflower meadows should be mown between late-August and mid-September in dry weather conditions. Ideally the cut hay should then be left to dry for at least 2 days to allow seeds to drop before being collected. This may not be possible if a flail mower-collector is used. Timing the hay cut for late summer is recommended on this site as a compromise between the optimum time for wildflower meadows (slightly earlier) and creating suitable conditions for breeding Skylark.

## Skylarks

Skylarks are ground-nesting birds and may have multiple broods between April and August. Ideal grassland habitat for this species has a sward height of 20-50cm with patches of sparse growth and bare ground, rather than uniformly dense vegetation. The adult birds eat leaves, seeds, insects and spiders whilst young chicks are initially fed only on insects and spiders, making grassland rich in invertebrates vital for successfully raising the young birds.

## Disposal of Cuttings

Disposing of cut grass/hay from amenity sites can be difficult and incur a cost if it does not have any value as livestock feed but there are two potential options at Horsted Green Park. First, there is a green waste composting site very nearby in Isfield <https://www.kps.uk.com/green-waste-recycling-centre/> where the cuttings can be taken. Alternatively WDC could consider building an on-site hay composting facility in the existing yard near College Farm. Hastings Borough Council has adopted this innovative in-house approach very successfully by using an old silage clamp where grass cuttings from council-owned sites, including a Country Park, are converted into compost.



## Thistle Control

Some targeted control of the largest stands of Creeping Thistle (and to a lesser extent Curled Dock) may be needed in future to prevent their spread into flower-rich swards. Creeping Thistle should be selective cut when plants are at the “purple bud” stage just before the flowers open (usually mid-June to July). Cut thistle stems should be removed, not left in situ.

## Minimal Intervention Zones

At present Horsted Green Park has extensive areas of new grassland and small plantations but little natural scrub or woodland habitat. There would be considerable wildlife benefits to cease mowing some of the tussocky grassland areas and allow them to develop into scrubby habitat through natural succession.

Creating minimal intervention zones around the park margins will increase habitat diversity, connectivity and the structural complexity of its vegetation. Transitional vegetation comprising a mosaic of unmanaged grassland with developing trees and scrub can support a rich array of invertebrates, small mammals, birds, amphibians and reptiles.

## Tree Removal

In the north of the park there is a small corner of flowery, rabbit-grazed grassland near the Ridgewood Stream that has been planted with trees and shrubs. Several of the young trees have died and the existing grassland will be shaded out if the remaining trees survive. The surviving trees, shrubs and tree guards should be removed and could be used to gap up the hedge alongside Horsted Pond Lane (see 3.3.4).

## Grassland Prescriptions

- Mow wildflower meadow areas for hay in dry weather in the period late August to mid September. Leave the cut hay in place to dry and drop seeds for at least 2 days if possible then collect and remove it.
- Continue to mow minor paths during the growing season as needed.
- Mow swathes of 1m wide alongside surfaced paths only if necessary and no more than twice during the growing season.
- Cut and remove dense stands of Creeping Thistle in wildflower meadows at the purple bud stage (June-July) if necessary.
- Designate no-mow minimum intervention zones where scrubby vegetation can develop naturally.
- Remove planted trees and shrubs from flowery grassland next to the Ridgewood Stream.

### 3.3.2 Ponds

Regular disturbance by dogs swimming in the two old ponds has an impact on the aquatic fauna and flora. Excluding dogs to protect wildlife would require fencing the ponds with sturdy post and rail fencing and stock netting. This could be unpopular with some dog owners and to mitigate any annoyance, clear explanatory signage would be essential. Ideally both College Pond and Place View Pond should be fenced but an initial trial at College Pond may be advisable to gauge visitor reaction.



*Eroded bank at College Pond*

Attempting to exclude dogs from the new ponds is not realistic but information boards could be installed near the most popular swimming spots to advise owners of the risk to aquatic wildlife from recently applied flea treatments. Where dogs swim in several different ponds there is some risk that they will eventually transfer some of the invasive alien plant species from the new ponds to the older ponds. However, dogs are not the only potential vectors of invasive aquatic species as wild birds and mammals can also cause these plants to spread from pond to pond.

Attempting to control the invasive alien plant species in the new ponds will be an ongoing task but without action they will spread further and may reduce biodiversity in the ponds and wetland. Complete elimination of aquatic invasive species such as New Zealand Pigmyweed and Curly Waterweed is rarely possible, especially on heavily used greenspace. Any small fragments left behind after control work will quickly regrow. Guidance on the different options for controlling invasive alien species is widely available. Reliable sources of advice and information are:

- The GB Non-native Species Secretariat <https://www.nonnativespecies.org/home/index.cfm>
- The Ouse and Adur Rivers Trust (<https://oart.org.uk/our-work-and-projects/>) who may offer assistance since the ponds lie adjacent to a tributary of the River Uck.

Consulting a specialist invasive species advisor for help to develop a strategy for managing invasive aquatic species in the park would also ensure compliance with the regulations on transportation and disposal of the plant material.

The new ponds and swales are still at an early stage of natural succession and will change rapidly as more plants and animals arrive. Apart from addressing invasive species there is unlikely to be a need for any extra

management of these habitats in the short term but they should be monitored so that any problems can be dealt with swiftly.

### Pond Prescriptions

- A trial of fencing with explanatory signs around College Pond to deter dogs from swimming.
- Install fencing around Place View Pond if the trial is successful.
- Display information about the risks to wildlife from canine insecticides and transfer of invasive species near the new ponds.
- Seek specialist advice on a control strategy for invasive aquatic species.
- Remove discarded tree guards from the pond banks.

### 3.3.3 Trees & Scrub

All the new parkland trees should be inspected to assess their condition. Where necessary ties should be adjusted to avoid damage to the young trees. Where trees have died or are in poor condition they should be removed and the wooden tree guards dismantled for possible re-use. Rather than plant new parkland trees, some of the healthy, self-seeded saplings that occur across the park could be selected as replacements and protected with the tree guards.

The Hornbeam trees alongside the new ponds are on poorly-drained soils. Many are dead or dying and need to be removed in the near future. These trees should not be replaced although a small number of self-seeded saplings that will survive in these conditions could be selected for protection and allowed to develop as shade trees alongside the path. The pines planted on wet grassland in the south-east of the park may also struggle on the waterlogged clay soils.

Mature Ash trees in the park must be monitored for Ash dieback disease and made safe if necessary.

On some of the park edges and corners there is good natural regeneration of trees and shrubs. These should be designated as minimal intervention zones (see Map 2) where ecologically valuable tall herb and scrub habitat can develop through natural processes. The new habitats will soon provide undisturbed areas for fauna and may also increase privacy for the neighbouring properties.



*Area for minimal intervention in the south-east of the park*

## Trees & Scrub Prescriptions

- Inspect new parkland trees. Loosen ties as necessary.
- Remove dead parkland trees and dismantle wooden guards.
- Re-erect guards around suitable saplings if replacements are considered essential.
- Monitor Ash trees for signs of disease and take appropriate action if they become unsafe.
- Designate minimal intervention zones for natural development of tall herb and scrub vegetation.

### 3.3.4 Hedges

The roadside edge and top of the hedgerow along Horsted Pond Lane will need to be trimmed annually in late winter to keep the lane clear for traffic. Its internal edge can be allowed to grow untrimmed for the duration of this management plan as part of the adjoining minimal intervention zone (see Map 2).

One section of this hedgerow near the car park (see Map 1) is very sparse and should be planted up with the saplings removed from flower-rich grassland (see 3.3.1). These could be supplemented with a suitable mixture of native hedging shrubs, such as Hawthorn, Blackthorn, Hazel and Guelder-rose if necessary.

The new hedgerow that bisects the park should have redundant rabbit spirals removed and dead whips replaced.

For the duration of this management plan the internal edges of the park's boundary hedges should be cut back only if they impede access and otherwise managed as infrequently as possible to promote billowing, flowering scrub edges. In future the resulting scrub will need to be cut back periodically in sections on rotation. The aim should be to create a dense, thorny scrub habitat with a diverse age structure that will provide an abundance of flowers, fruit and wildlife refuges.

Some boundary hedges and woodland edge habitats in the south-east of the park and near College Farm lie close to main paths. These may need to be trimmed annually to keep the paths open.

Hedge and scrub management should only be carried out in late winter (January/February) when most of the berries have already been consumed. Ground conditions must be dry and/or frozen to minimise soil damage from heavy machinery during management.

## Hedge Prescriptions

- Trim the roadside edge and top of Horsted Pond Lane hedgerow annually.
- Plant gaps in the Horsted Pond Lane hedgerow with mixed native shrubs.
- Remove empty spirals and gap up the new hedgerow as necessary.
- Allow the internal face of boundary hedges to billow into a scrub edge that can be maintained by cutting in sections on rotation in future.
- If necessary for access, trim hedges and woodland edges next to paths.
- Carry out hedge and scrub management in January/February when the ground is dry and/or frozen.



### 3.3.5 New Woodlands

All the newly planted woodland areas and small groups of trees should be inspected and any dead trees and shrubs removed along with redundant plastic spirals and tree guards. The spirals and tree guards should be re-used if possible or disposed of at a suitable facility.

Deer browsing does not appear to be severe in the park with few signs of damage from this source in the unfenced orchards and natural regeneration but some new woodland blocks have deer fencing installed.

The deer fence around new woodland on the northern edge of the park seems to be redundant because there is easy access for deer into this area via a low pedestrian gate at the eastern end of the woodland. It is recommended that the deer fencing should be removed as it could act as a corral and trap deer should they be chased in by dogs.



*Deer fencing with a low gate*

### New Woodland Prescriptions

- Remove dead trees, redundant rabbit spirals and tree guards from newly planted areas.
- Re-use or dispose of old tree guards appropriately.
- Remove deer fencing from the northern woodland area.

### 3.3.6 Orchards

The two new orchards are in need of careful, ongoing management of their trees and grassland to reach their full potential as valuable community and wildlife assets. Some of the recommended tasks would be suitable for volunteers and others would benefit from specialist advice.

The fruit and nut trees that have died should be removed and replaced. Surviving trees should be checked at least annually to ensure their stakes are sound and to loosen ties as necessary. As they grow the trees will also need to be pruned, which requires some specialist knowledge.

The orchard grasslands should be a particular focus for wildflower enhancement and management. These swards must have cut and collect management, ideally in August, to prevent an accumulation of thatch and to remove the “hay” before orchard fruit is ready to harvest.



*Cut and drop grassland management in College Orchard*

Mowing the orchard grassland will require smaller machinery than the flail mowers used on the main wildflower meadows in the park. This is partly due to their layout but also to reduce the risk of damaging the trees and causing soil compaction. Options include a small all-in-one flail collector, power scythe, brush cutters or even hand scythes.

Alongside a cut and collect mowing regime, targeted introduction of Yellow Rattle seed in the orchard swards would help to suppress grass growth and promote greater coverage of wildflowers which would make mowing by hand or with small machinery more viable. Once small areas of Yellow Rattle are successfully established it will spread rapidly under suitable sward conditions.

Weald Native Origin Yellow Rattle seed can be sown in September/October after grass cuttings have been collected. In preparation small areas where the sward is already fine and sparse should be lightly raked to ensure the seed makes contact with bare soil.

The material and maintenance of surfaced paths in the orchards needs to be reviewed (see 3.3.7.1). The gravel surfaces are eroding and becoming vegetated. Use of herbicide for weed control is not appropriate in the park and especially not in the orchards. In the short term it is unlikely that hand weeding would be viable.

### Orchard Prescriptions

- Remove and replace dead trees.
- Check trees at least annually, maintain stakes and ties.
- Regular pruning as needed.
- Cut and collect grassland in August using appropriate low-impact machinery or hand tools.
- Sow patches of Yellow Rattle seed in September/October.
- Review path material and maintenance.

## 3.3.7 Other Recommendations

### 3.3.7.1 Paths

The condition of all the surfaced paths needs to be reviewed because in places their construction is proving inadequate to withstand conditions in the park. There is also a risk of the surface dressing and low quality fill being washed into the surrounding grassland, ponds and wetland habitats, which may cause future management problems.

Ideally all these paths should be made more resilient by replacing their upper layers with a more appropriate, inert material. However, resources may not be available for such a potentially expensive and disruptive operation. As a minimum the sections that are already deteriorating, should be repaired using more suitable materials, particularly those on steep slopes.

Information is widely available on suitable path construction methods and materials to use in countryside settings for example at:

<https://www.pathsforall.org.uk/mediaLibrary/other/english/lowland-path-guide.pdf>

<https://conservationhandbooks.com/footpaths/>

The most widespread natural aggregate material used on paths in nature reserves for many years is Type 1 as sub-base, usually with a fine, self-binding natural aggregate surface layer, appropriate to the local geology and soil pH.

### 3.3.7.2 Amphitheatre

The amphitheatre sits within open grassland at the confluence of three surfaced paths. The sown wildflower banks have developed well but its flowerbeds appear neglected and have been colonised by ruderal plants. Only a few of the planted shrubs and grasses seem to have survived.

The flowerbeds in the amphitheatre feature should be re-designed to remove the need for ongoing maintenance and weed control.



*Flowerbed in the amphitheatre*



Removing the weed membrane and re-planting the beds at high density with nectar- and pollen-rich native, perennial plant plugs such as Common Knapweed, Devil's-bit Scabious, Ox-eye Daisy and Common Cat's-ear would result in colourful flower-rich areas of value to pollinating insects.

These "wildflower beds" could be cut annually in late summer/early autumn and cut material removed as part of the wider grassland management regime or collected separately as a supply of wildflower seed.

### 3.3.7.3 Community Engagement

Horsted Green Park is a popular and valuable community asset with great potential to be a place where people can get involved with wildlife conservation. The extent of community engagement possible at the park depends on the support available from WDC, ideally via a Greenspaces Ranger or similar post.

With appropriate support a Friends of Horsted Green Park group could be established and members encouraged to report management needs or problems in the park. Volunteers could take on some management tasks, for instance maintaining the orchards or to help remove old tree guards.

Visitors could be encouraged to submit records of wildlife in the park via apps such as iRecord <https://irecord.org.uk/> or iNaturalist <https://www.inaturalist.org/>. Collecting more data about the fauna and flora will help to inform future management as the habitats mature.

The information boards scattered around the park should be reviewed and updated with more specific information about wildlife in the park using data from the 2023 ecological assessment. A few of the existing boards have incorrect photo captions and other errors which could be corrected when boards are renewed.

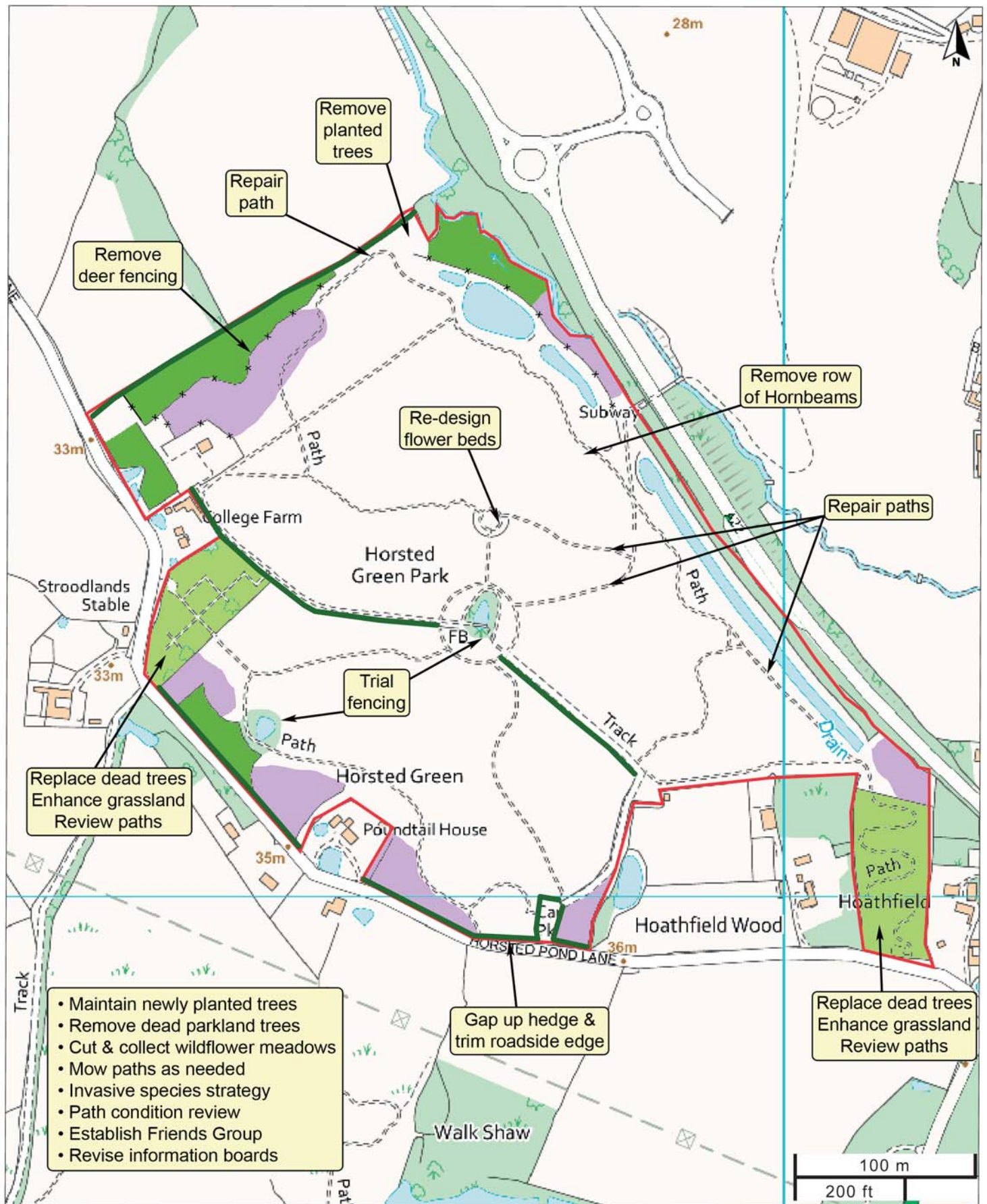
New boards drawing attention to the invasive plants in the new ponds and the dangers of dogs swimming immediately after using flea treatments are also recommended.

### Summary of Other Recommendations

- Review condition of surfaced paths and repair eroded sections.
- Remove weed barrier from amphitheatre flowerbeds and re-plant with native perennials.
- Cut and collect the amphitheatre wildflower beds.
- Establish a Friends of Horsted Green Park group to encourage greater community engagement through recording wildlife and volunteering in the park.
- Review and revise information boards.

# Horsted Green Park

## Map 2 - Summary of Management Recommendations



# Horsted Green Park Work Schedule 2024-2028

The work schedule for this five-year period includes seasonal timing of management actions where appropriate. Also see Map 2 for specific recommendations.

[illegible]



[illegible]

## Appendix

### Horsted Green Park Flora & Fauna Recorded 2/6/2023

SCIENTIFIC NAME	COMMON NAME	01/06/23
KEY: D = Dominant, A = Abundant, F= Frequent, O= Occasional, R= Rare, L = Locally		
<b>GRASSES, RUSHES &amp; SEDGES</b>		
<i>Agrostis capillaris</i>	Common Bent	A
<i>Agrostis stolonifera</i>	Creeping Bent	A
<i>Alopecurus geniculatus</i>	Marsh Foxtail	LF
<i>Alopecurus myosuroides</i>	Black-grass	F
<i>Alopecurus pratensis</i>	Meadow Foxtail	OLF
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	OLF
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Bromus hordeaceus</i>	Soft-brome	F
<i>Carex flacca</i>	Glaucous Sedge	LF
<i>Carex otrubae</i>	False Fox-sedge	LF
<i>Carex sp.</i>	Sedge	O
<i>Cynosurus cristatus</i>	Crested Dog's-tail	FLA
<i>Dactylis glomerata</i>	Cock's-foot	OLF
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	R
<i>Eleocharis palustris</i>	Common Spike-rush	R
<i>Elymus repens</i>	Common Couch	OLF
<i>Glyceria fluitans</i>	Floating Sweet-grass	LF
<i>Holcus lanatus</i>	Yorkshire Fog	A
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	LF
<i>Juncus articulatus</i>	Jointed Rush	O
<i>Juncus conglomeratus</i>	Compact Rush	O
<i>Juncus effusus</i>	Soft Rush	OLF
<i>Juncus inflexus</i>	Hard Rush	O
<i>Lolium multiflorum</i>	Italian Rye-grass	FLA
<i>Lolium perenne</i>	Perennial Rye-grass	A
<i>Poa trivialis</i>	Rough Meadow-grass	A
<i>Schedonorus arundinaceus</i>	Tall Fescue	O
<b>FERNS</b>		
<i>Dryopteris filix-mas</i>	Male Fern	R
<i>Pteridium aquilinum</i>	Bracken	LA
<b>FORBS &amp; WOODY PLANTS</b>		
<i>Achillea millefolium</i>	Yarrow	OLF
<i>Alisma plantago-aquatica</i>	Common Water-plantain	R
<i>Anthriscus sylvestris</i>	Cow Parsley	OLF
<i>Bellis perennis</i>	Daisy	O
<i>Calystegia sepium</i>	Hedge Bindweed	O
<i>Centaurea nigra</i>	Common Knapweed	FLA
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Cirsium arvense</i>	Creeping Thistle	FLA
<i>Cirsium palustre</i>	Marsh Thistle	O
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid	R
<i>Dactylorhiza praetermissa</i>	Southern Marsh-orchid	R
<i>Dipsacus fullonum</i>	Common Teasel	O
<i>Epilobium ciliatum</i>	American Willowherb	OLF
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Epilobium sp.</i>	Willowherb sp.	O
<i>Ervum tetraspermum</i>	Smooth Tare	OLF
<i>Galium album</i>	Hedge Bedstraw	R
<i>Galium aparine</i>	Cleavers	OLF
<i>Galium verum</i>	Lady's Bedstraw	R
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	OLF
<i>Glechoma hederacea</i>	Ground-ivy	O
<i>Helminthotheca echioides</i>	Bristly Oxtongue	F
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Hypochaeris radicata</i>	Common Cat's-ear	O
<i>Jacobaea vulgaris</i>	Common Ragwort	LF
<i>Lathyrus nissolia</i>	Grass Vetchling	LA
<i>Lathyrus pratensis</i>	Meadow Vetchling	OLF
<i>Leucanthemum vulgare</i>	Ox-eye Daisy	OLF
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	OLF
<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil	LF
<i>Medicago lupulina</i>	Black Medick	OLF



<i>Myosotis discolor</i>	Changing Forget-me-not	R
<i>Plantago lanceolata</i>	Ribwort Plantain	OLF
<i>Plantago major</i>	Greater Plantain	O
<i>Potamogeton sp.</i>	Pondweed sp.	LF
<i>Potentilla reptans</i>	Creeping Cinquefoil	OLF
<i>Poterium sanguisorba ssp. balearicum</i>	Fodder Burnet	R
<i>Prunella vulgaris</i>	Selfheal	OLF
<i>Pulicaria dysenterica</i>	Common Fleabane	FLA
<i>Quercus robur</i>	Pedunculate Oak	O
<i>Ranunculus acris</i>	Meadow Buttercup	FLA
<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Rosa canina</i>	Dog Rose	OLF
<i>Rubus fruticosus agg.</i>	Bramble	FLA
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Rumex crispus</i>	Curled Dock	F
<i>Rumex obtusifolius</i>	Broad-leaved Dock	OLF
<i>Salix caprea</i>	Goat Willow	OLA
<i>Salix cinerea</i>	Grey Willow	OLA
<i>Silene dioica</i>	Red Campion	LO
<i>Silene flos-cuculi</i>	Ragged Robin	LO
<i>Silene latifolia</i>	White Campion	R
<i>Solanum dulcamara</i>	Bittersweet	LF
<i>Stachys sylvatica</i>	Hedge Woundwort	R
<i>Tamus communis</i>	Black Bryony	R
<i>Taraxacum officinale agg.</i>	Dandelion	O
<i>Trifolium dubium</i>	Lesser Trefoil	OLA
<i>Trifolium pratense</i>	Red Clover	OLA
<i>Trifolium repens</i>	White Clover	A
<i>Urtica dioica</i>	Common Nettle	OLF
<i>Veronica chamaedrys</i>	Germander Speedwell	O
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	R
<i>Vicia cracca</i>	Tufted Vetch	OLF
<i>Vicia sativa</i>	Common Vetch	OLF
<i>Vicia sepium</i>	Bush Vetch	R
<i>Vinca minor</i>	Lesser Periwinkle	
<i>Viola riviniana</i>	Common Dog-violet	

Common Name	Scientific Name
<b>INVERTEBRATES</b>	
Red-tailed Bumblebee	<i>Bombus lapidarius</i>
Common Carder Bee	<i>Bombus pascuorum</i>
Beautiful Demoiselle	<i>Calopteryx virgo</i>
Large Red Damselfly	<i>Pyrrhosoma nymphula</i>
Azure Damselfly	<i>Coenagrion puella</i>
Common Blue Damselfly	<i>Enallagma cyathigerum</i>
Broad-bodied Chaser	<i>Libellula depressa</i>
<b>BIRDS</b>	
Buzzard	<i>Buteo buteo</i>
Swift	<i>Apus apus</i>
Skylark	<i>Alauda arvensis</i>
Jackdaw	<i>Coloeus monedula</i>
Goldfinch	<i>Carduelis carduelis</i>
Robin	<i>Erithacus rubecula</i>
Chiffchaff	<i>Phylloscopus collybita</i>
Dunnock	<i>Prunella modularis</i>
Common Whitethroat	<i>Curruca communis</i>
Song Thrush	<i>Turdus philomelos</i>
Great Spotted Woodpecker	<i>Dendrocopos major</i>
<b>MAMMALS</b>	
European Rabbit	<i>Oryctolagus cuniculus</i>