MKA
ECOLOGY

Burns Playing Field

Biodiversity Strategy 2026

Site	Burns Playing Field
Project number	176325
Client name / Address	Great Easton and Tilty Parish Council parish.clerk@greateastonparishcouncil.co.uk

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Author(s)	Madelaine Grove	Madelaine Grove W O'Connor
Surveyor(s)	Will O'Connor; Madelaine Grove	
Reviewed by	Will O'Connor CEcol MCIEEM	

Declaration of compliance

This Preliminary Ecological Appraisal has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of practice for planning and development".

The information which we have provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

We are a Chartered Institute of Ecology and Environmental Management (CIEEM) Registered Practice. All of our ecologists are members of CIEEM working at the forefront of their profession.

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1. INTRODUCTION

1.1. Vision and aims

In November 2024, MKA Ecology Limited was commissioned to undertake a biodiversity study at Burns Playing Field in Duton Hill by Great Easton and Tilty Parish Council. The aim is to provide recommendations to improve and enhance the biodiversity of the playing fields.

Vision: To enhance the ecological value of the playing fields through nature-friendly grassland management, habitat diversification, and the creation of features that support pollinators, invertebrates, and other wildlife, while maintaining accessibility and recreational value for the local community.

The aims of the study were to:

- Summarise site background to ensure guidance reflects the ecological and geological context.
- Consider the wider landscape to ensure recommendations are feasible and proportionate.
- Set out targeted measures to enhance the site for a range of habitats and fauna, informed by the Essex Local Nature Recovery Strategy.
- Provide site-specific habitat management and monitoring recommendations.
- Identify constraints noted during the field survey.
- Propose mitigation to address potential impacts during implementation.
- Produce a Biodiversity Strategy for Burns Playing Field.

Burns Playing Field. Source: Great Easton and Tilty Parish Council Website


VISION
Habitat Management Plan to enhance trees, scrub and hedgerows for priority species.
Enhance grassland biodiversity by adopting LNRS-aligned management practices for neutral grasslands.
Control invasive species, specifically giant hogweed, along the river corridor, to reduce its ecological impact.
Incorporate community engagement opportunities through visible wildlife features and educational enhancements.
Create bird and bat box plan to increase roosting and nesting opportunities for priority species.
Pond creation scheme to increase habitat diversity for amphibian, and invertebrate diversity.
Install hibernacula to support invertebrate, reptile and amphibian species at the Site.

1.2. Site description and context

Burns Playing Field is shown in Figure 1 and is located within the village of Dutton Hill. Amenity grassland that is managed under an intensive mowing regime is the dominant habitat type. Burns Playing Field extends to approximately 2 hectares and is used primarily for recreational purposes. It includes a small children's play area located in the centre of the main field, as well as a changing room facility situated to the north of the site. The River Chelmer lies on the western perimeter. There are some naturalised habitats present, such as scrub, scattered trees and areas of longer grass around the perimeter of the playing field.

1.3. Legislation and policy

This study has been undertaken with reference to relevant wildlife legislation and planning policy.

Relevant legislation considered within the scope of this document includes the following:

- The Environment Act 2021;
- The Wildlife and Countryside Act 1981;
- The Conservation of Habitats and Species Regulations 2017;
- Natural Environment and Rural Communities (NERC) Act 2006; and
- The Countryside and Rights of Way (CRoW) Act 2000.

The Essex Local Nature Recovery Strategy (LNRS) has recently been published and provides a comprehensive, evidence-based framework for nature recovery across the county (Essex County Council, 2025). It includes detailed assessments of the current distribution and condition of key habitats and species in Essex, as well as mapping areas of particular ecological importance and opportunity. The strategy sets out priority actions for habitat restoration, creation, and long-term management, offering practical guidance on the measures most likely to benefit locally significant species and ecosystem types.

In developing our enhancement proposals, this biodiversity strategy will ensure all recommendations are fully aligned with, and supportive of, the objectives and priorities set out within the LNRS. This will help ensure that the proposed works not only meet site-specific needs but also contribute to the wider, county-level vision for ecological enhancement and nature recovery.

Figure 1: Red Line Boundary for Burns Playing Fields

2. METHODOLOGIES

2.1. Desktop study

A desktop study was undertaken to inform the recommendations for the Biodiversity Strategy. This process included a review of local biodiversity records provided by the Essex Field Club, alongside a MAGIC (Multi-Agency Geographic Information for the Countryside) data search covering the Site and a 2km surrounding buffer. All data used to support this study were obtained from the sources listed in Table 1.

Table 1: Sources of data for the desktop study

Organisation	Data collected	Date collected
Multi-agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk	Information on local, national, and international statutory protected areas.	01.12.2025
Essex Field Club	Information on protected and notable sites and species within 2km of the Site, as well as information on B-Lines within 2km of the Site.	01.12.2025
Ordnance Survey maps and aerial photography	Information on habitats and connectivity between the Site and the surrounding landscape	01.12.2025
Plantlife Important Plant Areas Buglife Important Invertebrate Areas	Information on important plant and invertebrate areas within proximity to the Site.	01.12.2025
Natural England GCN Risk Zone	Information on whether areas fall into Red, Amber, or Green Risk zones for the likelihood of Great Crested Newt presence.	05.01.2026
B-Lines Network	B-Lines UK collects data on pollinator habitats, species records, and geographic mapping of wildflower areas to create connected corridors that help insects move and survive across the landscape.	05.01.2026

Organisation	Data collected	Date collected
Landis	LANDIS collects data on land cover, vegetation types, climate, and disturbances (like fires or harvesting) to model how landscapes and ecosystems change over time.	05.01.2026

2.2. UK Habitat Classification

Habitats were surveyed using the standardised UK Habitat classification and mapping methodology (UKHab Ltd, 2023). Data were recorded onto a Samsung Tablet in a Geographic Information System (GIS), in this instance QField, following a modified UK Habs colour mapping palette. Dominant plant species were observed and recorded within each habitat type. The plant species nomenclature follows that of Stace (2019).

In order to assess grassland habitats, a series of 1m by 1m quadrats are used to understand species composition. Within each quadrat, the percentage cover of each species is recorded. The number of quadrats used varies depending on grassland complexity. Low complexity grasslands, such as amenity grasslands, have fewer quadrats. Neutral, acidic, and calcareous grasslands have at least five quadrats to ensure the habitat types are correctly assigned.

2.3. Soil sampling

Soil samples were collected from the Burns Playing Field using a soil auger. The field was divided into three sections: north, central, and river. Within each section, soil cores were collected in a zig-zag pattern to ensure an even spatial distribution across the area. Between 20 and 25 cores were taken systematically and evenly across the field at a sampling depth of 7.5 cm. Sampling followed the recommended methodology provided by the supplier of the analysis kit, Cawood Scientific.

Sampling locations avoided areas that could bias results, including locations near gates, fences, drinking troughs, headlands, dung or urine patches, and places where fertiliser, manure, or lime had previously been heaped or spilled. Areas with different soil types, slopes, drainage conditions, or previous cropping histories were not combined in the same sample, and sampling areas did not exceed 4 hectares.

Each soil core was checked to ensure that roots, plant material, or accumulated organic matter were not included. The collected cores from each area were then mixed thoroughly in a clean container to create a composite sample. A representative sub-sample was taken from this mixture and used to completely fill the sample box provided in the analysis kit.

Cawood Scientific Ltd CRM provides standardised soil analysis results, including nutrient levels, pH, organic matter, texture, and moisture content, which are used to ensure accurate and reliable laboratory testing.

2.4. Protected and notable species scoping survey

To ensure recommendations for enhancements are site-specific and relevant, an assessment of the potential for the habitats to support protected or notable species was made. This assessment was based on the quality, extent, and interconnectivity of suitable habitats, along with the results of the desktop study. This includes Species of Principal Importance as listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006), and Red and Amber listed Birds of Conservation Concern (BoCC) as per Stanbury *et al*., 2021 (see **Error! Reference source not found.**). Protected and notable species considered within the protected species scoping survey for Burns playing field include the following:

- **Plants and fungi:** Such as early marsh-orchid *Dactylorhiza incarnata*, fan-leaved water-crowfoot *Ranunculus circinatus*, or other locally recorded species.
- **Invertebrates:** Such as stag beetle *Lucanus cervus* and white-letter hairstreak *Satyrium w-album.*
- **Fish:** The following species are known to occur in suitable watercourses in Essex and are of conservation concern: European eel *Anguilla anguilla*, river lamprey *Lampetra fluviatilis*, and brown trout *Salmo trutta*.
- **Amphibians:** Such as great crested newt *Triturus cristatus* and common toad *Bufo bufo*.
- **Reptiles:** Such as common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis* and grass snake *Natrix helvetica.*
- **Birds:** With special reference to species listed under Schedule 1 of The Wildlife and Countryside Act, 1981, Species of Principal Importance and BoCC species.
- **Mammals:** Badger *Meles meles*, bats (all species), water vole *Arvicola amphibius*, otter *Lutra lutra*, hazel dormouse *Muscardinus avellanarius*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, harvest mouse *Micromys minutus* and polecat *Mustela putorius*.

Turtle dove by Andy Symes, MKA Ecology Ltd

2.5. Surveyor, author and reviewer

The survey was undertaken, and report written, by Madelaine Grove, Ecologist at MKA Ecology Limited. Maddy has 1.5 years of experience as an ecological consultant. The survey was supervised, and report reviewed by Will O'Connor CEcol MCIEEM, Director and Principal Ecologist at MKA Ecology Ltd. Will has over 15 years' experience as a consultant ecologist.

2.6. Date, time and weather conditions

See
Table 2 below for details of the date, time and prevailing weather conditions recoded during the site visit.

Table 2: Date, time and weather conditions of survey visit

Date	Time of survey	Weather conditions*
9 July 2025	10:00am	Wind: 1 Cloud: 1 Temp: 26°C Rain: None

*Wind as per Beaufort Scale / Cloud cover given in Oktas.

Cowslip *Primula veris* and Green Winged Orchid *Anacamptis morio*, by Andy Symes, MKA Ecology

3. BACKGROUND

3.1. Geological setting

Burns Playing Field lies within the South Suffolk and North Essex Clayland Landscape Character Area, a gently undulating landscape underlain predominantly by chalky boulder clay deposited during the glacial period. These clay-rich deposits give rise to moderately fertile but often poorly drained soils that support productive grass growth and are widely used for agriculture and amenity grassland. River valleys within this landscape contain more variable alluvial soils associated with floodplain processes.

The South Suffolk and North Essex Clayland's clay-rich, often poorly drained soils support productive grassland but also underlie important semi-natural habitats. These include species-rich lowland meadows, ancient woodlands with bluebells, and valley floor mosaics of wetland, fen, and grazing marsh. These habitats support notable wildlife such as rare plants, dormice, otters, bats, and various bird species, showing that the geological and soil conditions contribute directly to areas of high ecological value.

The playing fields are dominated by modified grassland growing on nutrient-enriched soils. Soil analysis indicates elevated phosphorus (P) levels, which could limit the development of species-rich grassland and favour competitive grasses such as perennial rye-grass *Lolium perenne*, Yorkshire fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius* and cock's-foot *Dactylis glomerata*. These species form dense swards that suppress less competitive wildflowers, while robust broad-leaved species including docks *Rumex* spp., nettle *Urtica dioica* and creeping thistle *Cirsium arvense* are also typical of these conditions.

The elevated nutrient status is consistent with the Site's floodplain setting and is likely to reflect a combination of historic fertiliser inputs associated with long-term management as amenity grassland, periodic deposition of nutrient-rich alluvial sediments during flood events, and ongoing nutrient inputs from surrounding land uses. Phosphorus is strongly retained within soils and can remain elevated for extended periods; therefore, even with changes in management, the Site is likely to continue supporting modified grassland rather than developing highly diverse meadow habitats in the short to medium term. Key details from the soil analysis and site survey are presented in Table 6.

Table 6: Soil sampling results at Burns Playing Field

Field	pH	P (mg/l)	Mg (mg/l)	Notes
River	7.4	303	119	Giant hogweed infestation along the western river.

Field	pH	P (mg/l)	Mg (mg/l)	Notes
Central	7.3	261	101	Short, regularly mown sward.
North	7.4	259	99	Short, regularly mown sward.

3.2. Ecological setting

An ecological desk study was completed for the Site and the surrounding 2km. Data provided by the Essex Field Club identified numerous UK and European protected species, as well as Species and Habitats of Principal Importance listed under Section 41 of the NERC Act 2006, and other species of conservation concern within 2 km of the Site. These records do not represent a comprehensive account of the distribution or extent of locally important flora and fauna. Species records are discussed in greater detail in the protected species scoping survey (Section 4.3). The designated site in proximity to Burns Playing Field can be seen in Figure 3, later in this section.

Statutorily designated sites identified during the desk study are presented in Table 4 and comprise three Sites of Special Scientific Interest (SSSIs) and one Local Nature Reserve (LNR).

Several non-statutory Local Wildlife Sites occur closer to the Site, and these are listed in Table 5. These include Eseley Wood (0.7 km north-west) and Home Wood (0.46 km north-west), both of which support characteristic lowland mixed deciduous woodland communities and notable plant species such as oxlip *Primula elatior*. Tilty Mill Meadow (0.4 km north-west) comprises a mosaic of wet meadow grassland, sedge beds and woodland associated with the Mill Race and is identified as a Lowland Fen Priority Habitat.

The desktop study also provides an indication of the ecological character of the wider area. Nationally important woodland habitats occur within the wider landscape, including Hatfield Forest approximately 7.8 km to the south-west, which supports extensive ancient coppiced woodland, wet ash–maple and oak–hornbeam woodland, and a rich assemblage of higher plants, lichens, bryophytes and invertebrates. Additional woodland SSSIs include Elsenham Woods approximately 7.1 km to the west and High Wood approximately 4.5 km to the south, both supporting ancient or semi-natural woodland with diverse ground flora and woodland rides that provide important habitat for invertebrates and birds.

Burns Playing Field has multiple Habitats of Principal Importance (listed in the NERC Act, 2006) within 2km. These include ancient woodland, good quality semi-improved grassland, and coastal and floodplain grazing marsh. The locations of these priority habitats in relation to the Burns Playing Field can be seen in Figure 2.

The wider landscape also includes linear habitat corridors such as Flitch Way approximately 6 km to the south-east. This former railway line now functions as a wildlife corridor containing species-rich grassland, hedgerows and woodland habitats supporting reptiles, amphibians and a range of invertebrates. In addition to this the River Chelmer which runs to the west of the Site provides an important hydrological and biodiversity corridor to the wider landscape.

Together, these sites indicate that the surrounding landscape is characterised by a network of ancient woodland, wet meadow and grassland habitats linked by linear corridors that facilitate wildlife movement. The position of Burns Playing Field within this landscape provides opportunities for biodiversity enhancements that complement these habitats and contribute to local ecological connectivity.

Figure 2: The locations of Habitats of Principal Importance within 2km of Burns Playing Field

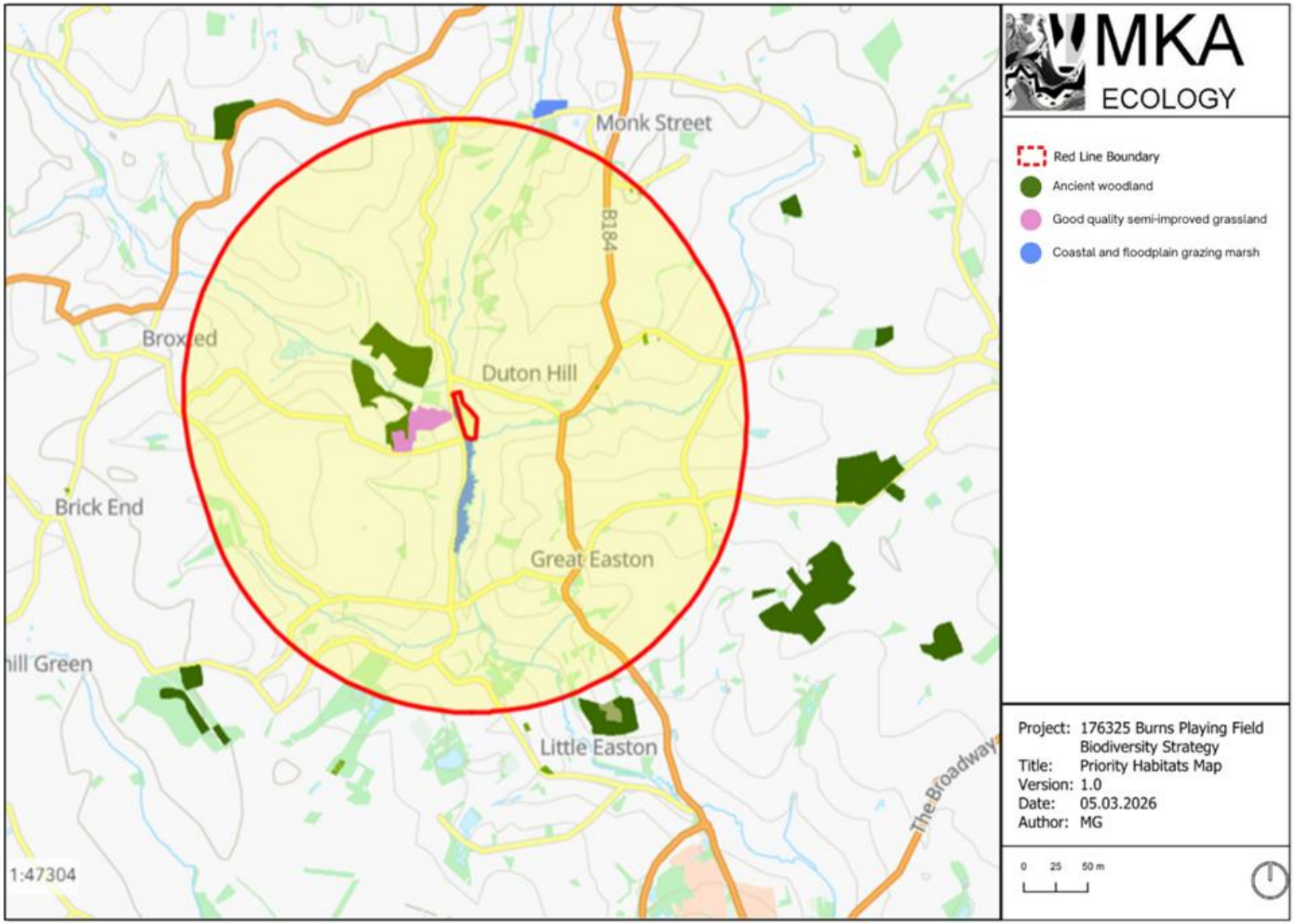


Table 3: Statutorily designated sites within 10km of Burns Playing Field

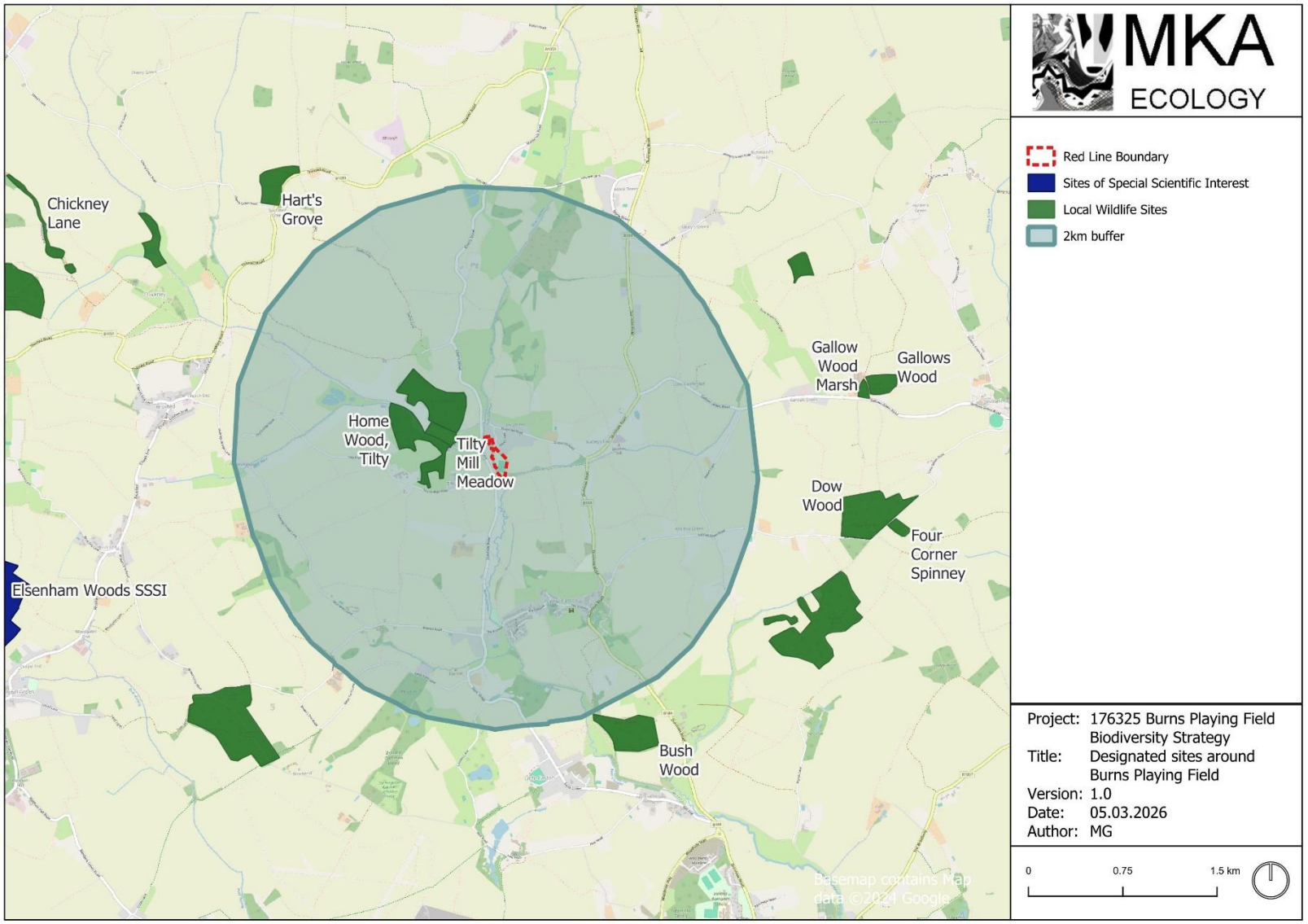
Site name	Area (ha)	Distance and direction	Reasons for selection
Hatfield Forest - National Nature Reserve, SSSI	403 ha	7.8 km SW	Ancient, coppiced woodland, wet ash-maple and oak-hornbeam woodland; over 400 species of higher plants recorded; rare county plants such as stinking hellebore *Helleborus foetidus* and oxlip, rich in lichens, bryophytes, and invertebrates.
Elsenham Woods SSSI	44 ha	7.1 km W	Ancient mixed woodland on chalky boulder clay; includes damp grass rides and ponds supporting diverse invertebrates and birdlife.
High Wood, Dunmow SSSI	42 ha	4.5 km S	Woodland of wet ash-maple and oak-hornbeam; some ancient woodland; diverse ground flora including dog's mercury *Mercurialis perennis,* woodland rides provide key habitat for invertebrates and birds.
Bra33 Flitch Way, LNR	Linear – 15 miles	Approximately 6km SE	Former railway line converted to a wildlife corridor / country park. Rich in grassland, wildflower meadow, hedgerow, and woodland habitats. Supports significant wildlife, including great crested newts, slow-worms, common toad, and butterflies, insects, and birds.

Table 4: Non-statutorily designated sites within 2km of Burns Playing Field

Site name	Area (ha)	Distance and direction	Reasons for selection
Eseley Wood	11.79 ha	0.7 km NW	Ancient / semi-natural woodland / Ancient Woodland Inventory / identified as local wildlife site.

Site name	Area (ha)	Distance and direction	Reasons for selection
Tilty Mill Meadow	2.7 ha	0.4 km NW	This site comprises a mosaic of wet meadow grassland, sedge beds and the wooded Mill Race associated with the former Tilty Mill. The grassland supports a diverse mix of meadow grasses and herbs, with wetter areas dominated by sedges, tall herbs and some common reed. Scrub woodland along the Mill Race adds further habitat diversity. The site qualifies under HC14 due to its varied floodplain habitats and is identified as a Lowland Fen priority habitat, with public rights of way crossing privately owned land.
Home Wood, Tilty	8.1 ha	0.46 km NW	An ancient woodland fragmented since the 19th century, supporting a diverse deciduous canopy, rich understorey and ground flora typical of long-established woodland. The nationally scarce oxlip is believed to be present, and the site is fully listed in the Ancient Woodland Inventory as Lowland Mixed Deciduous Woodland.

Figure 1: Locations of designated sites in proximity to Burns Playing Field



4. RESULTS AND RECOMMENDATIONS

This section provides a summary of the results and ecological opportunities at Burns Playing Field.

4.1. Habitats

An overview of the results of the UK Habitat Classification for Burns Playing Field can be seen in Figure 4. Species records from the site visit are provided in the Appendix.

Modified grassland (g4)

Modified grassland covers a large proportion of the site (Figure 2). However, the sward varies according to management intensity. Areas subject to frequent mowing, associated with amenity use for sports fields are species-poor and dominated by competitive grasses including perennial rye-grass.

In contrast, grassland along the margins and less frequently mown areas supports a slightly taller sward dominated by grasses including Yorkshire-fog *Holcus lanatus*, cock's-foot, false oat-grass, rough meadow-grass *Poa trivialis*, and common couch *Elytrigia repens*.

Broad-leaved species occur at low frequency throughout the grassland and include dandelion *Taraxacum officinale* agg., creeping buttercup *Ranunculus repens*, white clover *Trifolium repens*, creeping cinquefoil *Potentilla reptans*, ribwort plantain *Plantago lanceolata*, greater plantain *Plantago major*, yarrow *Achillea millefolium*, smooth hawk's-beard *Crepis capillaris*, and selfheal *Prunella vulgaris*. These are all relatively common species which are typical of high intensity management of grasslands.

Regular mowing across much of the Site limits structural diversity and flowering potential, particularly within the amenity areas. However, the presence of slightly less intensively managed margins indicates potential for enhancement through changes in mowing regime and targeted grassland management.

Secondary codes relevant to this habitat type:

- g4c Amenity grassland (where management is intensive)

Aquatic marginal vegetation (f2d)

Aquatic marginal vegetation is present along the river margin of the River Chelmer. This habitat is of moderate ecological value, providing transitional vegetation between aquatic and terrestrial habitats. Dominant and frequent species include common reed *Phragmites australis*, reed canary-grass *Phalaris arundinacea*, creeping bent *Agrostis stolonifera*, pendulous sedge *Carex pendula*, and unbranched bur-reed *Sparganium emersum*. Broad-leaved marginal species recorded include purple-loosestrife

Lythrum salicaria, great willowherb *Epilobium hirsutum*, marsh woundwort *Stachys palustris*, marsh thistle *Cirsium palustre*, clustered dock *Rumex conglomeratus*, and bittersweet *Solanum dulcamara*.

River (r2)

The River Chelmer runs along the western boundary of the site. The channel margins support a mosaic of aquatic marginal vegetation and tall ruderal species.

Bankside flora includes alder *Alnus glutinosa*, white willow *Salix alba*, goat willow *Salix caprea*, and occasional ash *Fraxinus excelsior*, with an understorey of common nettle *Urtica dioica*, bramble *Rubus fruticosus* agg., ivy *Hedera helix*, hop *Humulus lupulus*, hedge bindweed *Calystegia sepium*, garlic mustard *Alliaria petiolata*, and false-brome *Brachypodium sylvaticum*.

Tall herbs such as wild teasel *Dipsacus fullonum*, spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, and perennial sow-thistle *Sonchus arvensis* are frequent. The river functions as a movement route for wildlife, though ecological condition is compromised in places by giant hogweed *Heracleum mantegazzianum*, which poses both ecological and public safety concerns.

Scattered trees (w1)

Scattered rural trees are present alongside the river. Species recorded include ash *Fraxinus excelsior*, alder *Alnus glutinosa*, field maple *Acer campestre*, aspen *Populus tremula*, and white willow *Salix alba*.

Mixed scrub (h3h)

Areas of mixed scrub occur throughout the site margins and adjacent to the river. Dominant woody species include blackthorn *Prunus spinosa*, bramble, field maple, goat willow *Salix caprea*, and occasional hawthorn. Scrub is interwoven with climbers such as ivy, hop, and hedge bindweed.

Recommendations and opportunities for enhancement

Species-rich meadow creation

Establish meadow habitat through turf stripping or scarification followed by seeding with locally appropriate native wildflower mixes to increase floral diversity and pollinator resources. Ongoing management should follow traditional hay cut techniques. This requires a later summer cut, between mid-July and September, with arisings left to drop seeds and then removed. Further cuts later autumn and very early spring could also be considered to restrict the growth of vigorous grasses and allow wildflowers to thrive.

Conservation grazing

Conservation grazing is the use of livestock to manage land for the primary purpose of wildlife conservation and habitat restoration. This low-intensity grazing creates diverse habitats by managing vegetation height, opening up bare ground for regeneration, and providing different conditions for a

wide range of species, including wildflowers, insects, and birds. It involves using hardy, often native, breeds of animals like cattle, sheep, ponies, and goats for their specific grazing and trampling behaviours.

In the UK semi-natural grasslands are typically managed in two ways.

1) Pastures, exclusively managed with grazing animals.
2) Meadows, removing a summer hay cut (for winter fodder) usually accompanied by grazing in the spring autumn or winter.

Therefore, conservation grazing plays a critical role in the management of both types of grassland.

Some key advantages of using grazing as a management technique are;

1) Grazing results in the gradual removal of plant material which benefits the invertebrate fauna, allowing it to move and persist in the sward. This is in contrast to the immediate removal of all material when a grassland is cut.
2) Dung provides habitat for specific invertebrate communities.
3) The ability of highly competitive species to dominate the sward is usually limited when a grassland is managed with grazing.
4) Trampling has beneficial effects on the composition and structure of communities, for example bare patches allowing seeds to germinate.
5) Layers of thatch and litter are broken up.
6) Grazing can help with scrub encroachment.

Some key disadvantages of using grazing as a management technique are;

1) Livestock require careful management with animal welfare the primary objective, particularly in areas with public access where there is greater risk.
2) Keeping livestock in the right location requires fencing, or no fence collars, with concomitant financial and maintenance implications.
3) Trampling can have detrimental effects with bare patches creating opportunities for undesirable species (eg thistles), or poaching causing compaction impeding drainage.
4) Overgrazing can create undesirable closely cropped uniform lawns.
5) Overgrazing can result in negative impacts on ground nesting birds through trampling of nest sites.

Grazing can help maintain grassland diversity and provide bare ground for regeneration and it generally results in the development of an uneven, structured sward. The species composition and community of that sward is influenced by myriad factors including livestock breed, species, stocking density, grazing

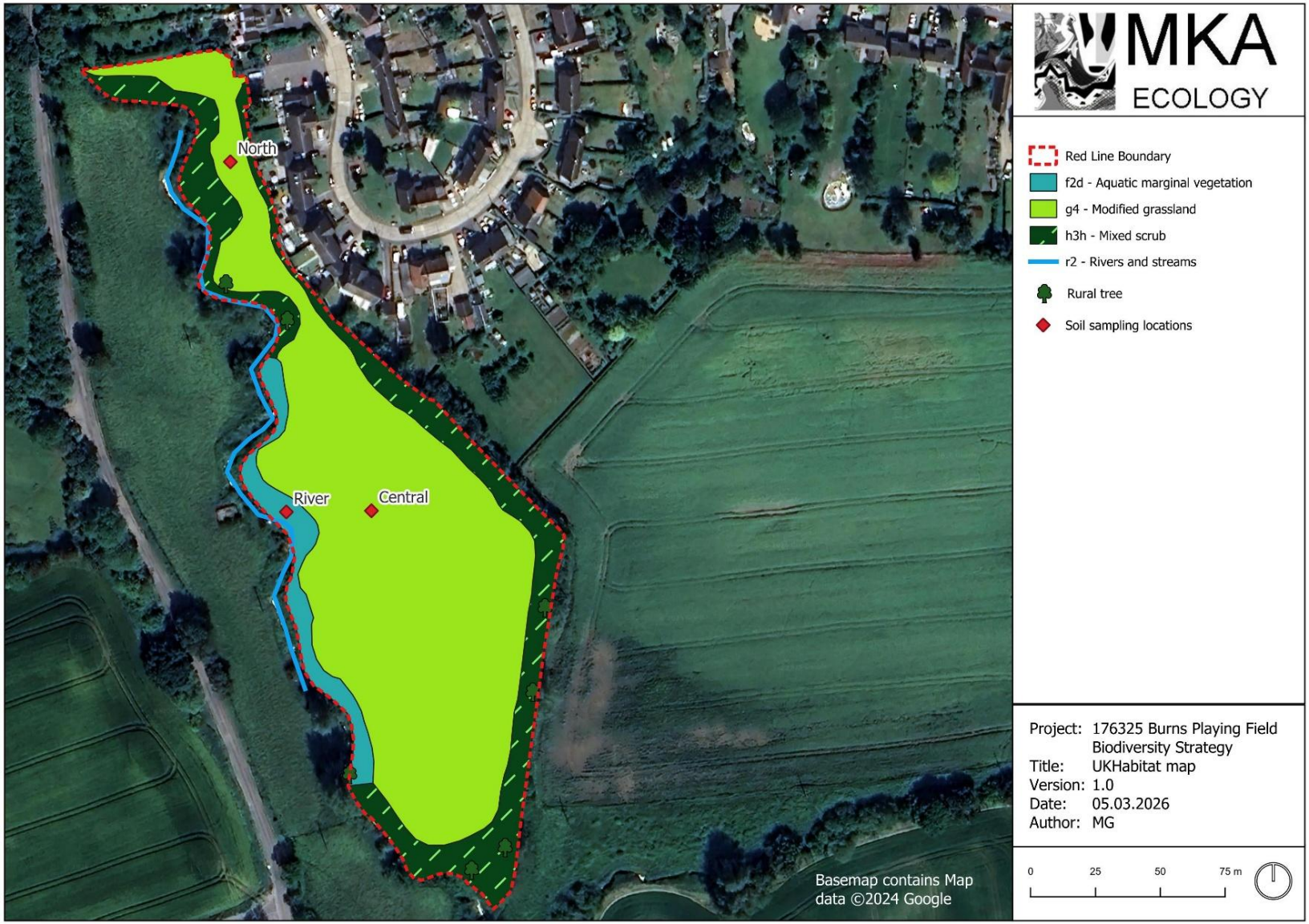
season, soil moisture and length of grazing. There are no predefined prescriptions for grazing management but grazing management must be monitored and adaptive to the prevailing site conditions.

Native scrub establishment

Create small pockets of native scrub using species such as hawthorn *Crataegus monogyna*, blackthorn and hazel *Corylus avellana* to provide structural diversity, shelter and nesting opportunities for wildlife.

These measures will increase the availability of nectar and pollen resources for pollinators and contribute to the wider B-Lines pollinator network. The introduction of meadow and scrub habitats will also create a more structurally diverse landscape, forming a mosaic of grassland, scrub and riparian habitats that enhances biodiversity value and strengthens ecological connectivity with the River Chelmer corridor.

Figure 4: UKHab Map of Burns Playing Field



4.2. Plants and fungi

Historical records: The data search for Burns Playing Field returned records of Bluebell *Hyacinthoides non-scripta,* which is protected under Schedule 8 of the Wildlife and Countryside Act 1981. Additionally, an Essex BAP species, oxlip*,* was returned within the data search. This species is listed as a rare and scarce species. In addition to this, the data search returned records for three species of invasive plant listed under Schedule 9 of the Wildlife and Countryside Act 1981. These include giant hogweed *Heracleum mantegazzianum,* Indian balsam *Impatiens glandulifera,* and butterfly-bush *Buddleja davidii.*

Survey findings: While no plants are listed as Essex LNRS or Schedule 8 under The Wildlife and Countryside Act were recorded, the site holds potential to support rare plant species, and enhancements should be made to further support the growth of these species. A large amount of giant hogweed was found to line the riverbank during the survey effort. Due to the presence of invasive species at the Site, and specifically the risk that it poses to public health, action to mitigate the spread and potentially remove these invasive species from Burns Playing Field is recommended.

Recommendations and opportunities for enhancement

The habitat enhancement measures recommended above will help to improve botanical and fungal diversity onsite.

Giant hogweed control

Giant hogweed is abundant at Burns Playing Field, this is listed as an invasive species under Schedule 9 of the UK's Wildlife and Countryside Act 1981. It's an offence to plant giant hogweed or otherwise cause it to grow in the wild. This broadly means you must not do anything that results in its spread beyond its current location. The current programme of giant hogweed control should be continued. Opportunities to support, or develop, wider eradication programmes through the Chelmer valley should be considered.

Due to the presence of giant hogweed, a management plan has been recommended below. However, we understand that the Parish Council already has management measures in place for this species. Ultimately, our advice would be to seek input from suitably qualified invasive non-native species specialists or invasive species management contractors to ensure that control measures are undertaken safely and in accordance with current best practice.

Containment, control and removal

Where stands of the invasive species are present in areas of vegetation that will not be cleared, the location should be noted and the stand and surrounding soil left undisturbed to prevent spread of seeds and fragments. Where plants are to be removed, this can be achieved by the mechanical excavation of the stand and surrounding soils. It is important to make sure all plant matter and seeds are removed

completely. The plants should be fully excavated, including 500cm of earth surrounding the plants to ensure all the roots have been removed. This can be done at any time of the year; however, it is recommended that the plant should be removed in spring or early summer (April-July) when the plant is in flower. If seeds are present, the plant should be bagged and sealed prior to removal to minimise the risk of seeds being spread off or across the site during removal. Plants can also be controlled through chemical treatment if mechanical excavation is not possible, but removal is desirable. Herbicide application is best done during the growing season, mid- March to the end of October. A specialist contractor should confirm that the herbicide used is selective and will not affect adjacent flora that will be retained in the Site landscaping scheme (this is particularly pertinent in this location adjacent to the River Chelmer). Figure 2 gives an overview of this process.

Conservation grazing

Conservation grazing, particularly with sheep, is a proven, sustainable, and effective long-term method for controlling and eradicating giant hogweed, as evidenced by trials conducted by the Scottish Invasive Species Initiative (2023). This approach is also detailed within the Essex Local Nature Recovery Strategy as a positive change to enhance biodiversity within Essex, and can help to contain and limit the spread of Giant Hogweed, as well as creating varied habitat conditions which are beneficial to different wildlife species with varying habitat preferences.

Sheep readily graze giant hogweed at all growth stages, progressively exhausting the plant's root reserves over several years. This approach is often more cost-effective than repeated chemical treatments, especially across large areas, as it reduces labour, contractor costs, and reliance on herbicides. It is also well-suited to environmentally sensitive locations, including riverbanks and nature reserves, where chemical control may be undesirable.

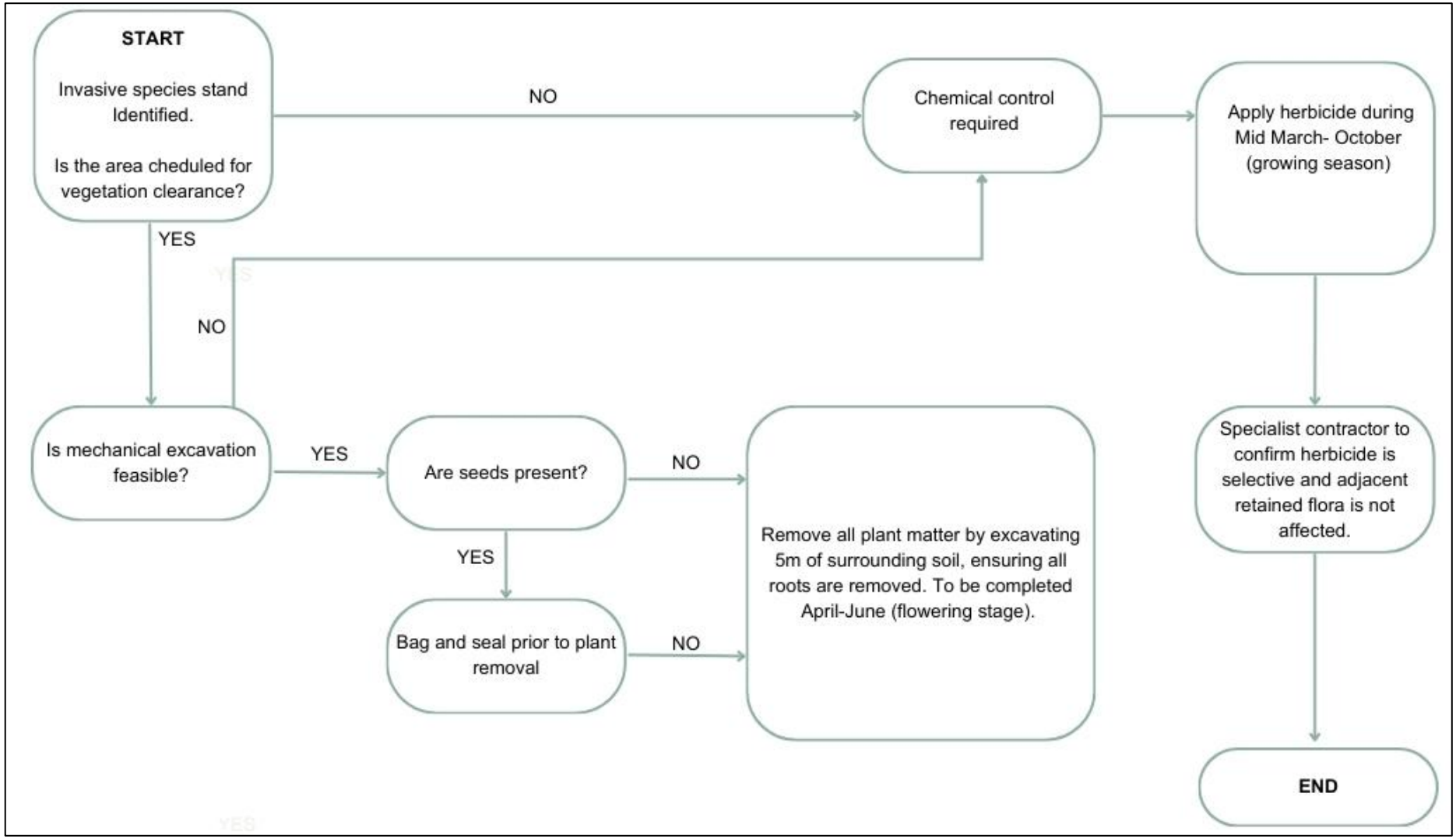
In addition to controlling giant hogweed, conservation grazing delivers wider ecological benefits. Over time, it encourages the development of a dense sward of native, grazing-tolerant species that suppresses hogweed regeneration and enhances overall biodiversity. Livestock used in grazing schemes, including sheep, cattle, pigs, and horses, have shown no apparent adverse health effects from consuming the plant, with dark-skinned breeds potentially offering greater resistance to phototoxic sap on exposed skin.

Successful implementation requires careful planning and long-term commitment. Grazing intensity should be introduced at low levels and adjusted annually based on site monitoring to avoid overgrazing or soil damage. Grazing is most effective when sheep are introduced in early May and removed by mid-August to coincide with the hogweed growing season. Appropriate fencing, whether temporary or permanent, is essential to control grazing pressure and target priority areas.

Grazing should be integrated with ongoing monitoring and supplementary control. In areas where grazing access is limited, flowering heads should be manually removed before seed set, ideally in July,

to prevent replenishment of the soil seed bank. Given the long viability of giant hogweed seeds, sustained grazing, monitoring, and adaptive management over multiple years are essential to achieve successful eradication.

Figure 2: Summary of Invasive Species Control Methodology for Giant Hogweed



4.3. Invertebrates

Historical records: The grassland and scrub at Burns Playing Field provide good habitat for an array of invertebrate species. The data search returned records of small heath *Coenonympha pamphilus*, wall brown *Lasiommata megera* and white-letter hairstreak. All of these butterfly species are listed as Species of Principal Importance on the NERC Act (2006). The small heath and wall butterflies hold near threatened status, and the white-letter hairstreak holds Endangered status as well as being Schedule 5 within the Wildlife and Countryside Act 1981. Additionally, The Essex LNRS identifies the grizzled skipper *Pyrgus malvae* as the butterfly priority species for nature recovery actions in the county. These findings from the data search reinforce the importance of uplifting the habitats within Burns Playing Field to support a greater array of invertebrate species.

The data search also revealed that the Site falls within the B-Lines network (Buglife, 2024). B-Lines is a landscape scale initiative to enhance declining pollinator populations by connecting up the best remaining wildflower-rich habitats through the creation or restoration of wildflower habitats. B-Lines was identified as a method to reverse pollinator declines in the National Pollinator Strategy's Implementation Plan, by aiding their movement across the fragmented landscape. therefore recommendations focusing on pollinator species will be beneficial to the Site.

Survey findings: Species of butterfly such as brimstone *Gonepteryx rhamni* and gatekeeper *Pyronia Tithonus*, which are not listed as endangered or priority species, were also found on Site. The site supports a range of habitats suitable for a wide variety of invertebrate fauna, not just butterflies. Mature trees provide important microhabitats within fissured bark, rot holes, and dead wood, supporting bark-dwelling and saproxylic invertebrates such as beetles, spiders, and overwintering insects. Grassland areas offer food plants and shelter for butterflies and moths, as well as nectar resources for pollinators, including bees and hoverflies, and habitat for grasshoppers, ants, and ground beetles. The river and its associated aquatic and marginal vegetation provide suitable habitat for aquatic and semi-aquatic invertebrates, including mayflies, caddisflies, aquatic beetles, and dragonflies, increasing overall invertebrate diversity.


Photo: Grizzled Skipper by Andy Symes, MKA Ecology Ltd

Recommendations and opportunities for enhancement

Invertebrate/butterfly garden

- Create species-rich grassland in the northern scrub glades to provide nectar sources and larval food plants for butterflies, bees, hoverflies, and other invertebrates.
- Include native, nectar-rich flowers in the scrub and grassland to strengthen the Site's contribution to the B-Lines network.
- Retain areas of longer grass over winter to provide shelter for a wide range of invertebrates. Grass should be managed on a rotating basis so that each winter there are always some areas of longer grass.

Grazing / structural diversity

- Use conservation grazing (e.g., light livestock) to maintain a varied sward structure, creating patches of short turf and bare ground.
- These areas support butterfly egg-laying, feeding, and movement while maintaining open, sunlit habitats for other invertebrates.

Hibernacula / deadwood and microhabitats

- Install invertebrate hibernacula (e.g., solitary bee hotels, log piles, or stone piles) to provide overwintering opportunities.
- Retain mature trees, dead wood, fissured bark, and rot holes to support saproxylic beetles, spiders, and overwintering insects.

Riparian habitat enhancement

- Pollard willows along the River Chelmer margins to increase sunlight and flowering resources, benefiting nectar-feeding invertebrates.
- Maintain diverse aquatic and marginal vegetation to support mayflies, caddisflies, dragonflies, and other semi-aquatic species.

Connectivity

- Link the enhanced habitats within the Site to surrounding woodland, meadow, and river corridors to maximize pollinator movement and biodiversity benefits.

4.4. Amphibians

Historical data: The site lies within a green risk zone for great crested newts, with an amber risk zone bordering the western edge of Burns Playing Fields. A pond is located approximately 170 m south of the site; however, Dutton Hill Road lies between the site and this pond, which is likely to limit ecological connectivity. A second pond is located approximately 160 m to the north-east within a residential

garden, and there is good habitat connectivity between this pond and the site. Figure 5 shows all ponds within 500m of Burns Playing Fields.

The data search returned five records of great crested newt within 1.3 km of the site, dating from 2017–2019. No newt pond surveys were undertaken during this period, and no great crested newt class licence returns were identified through a review of MAGIC mapping.

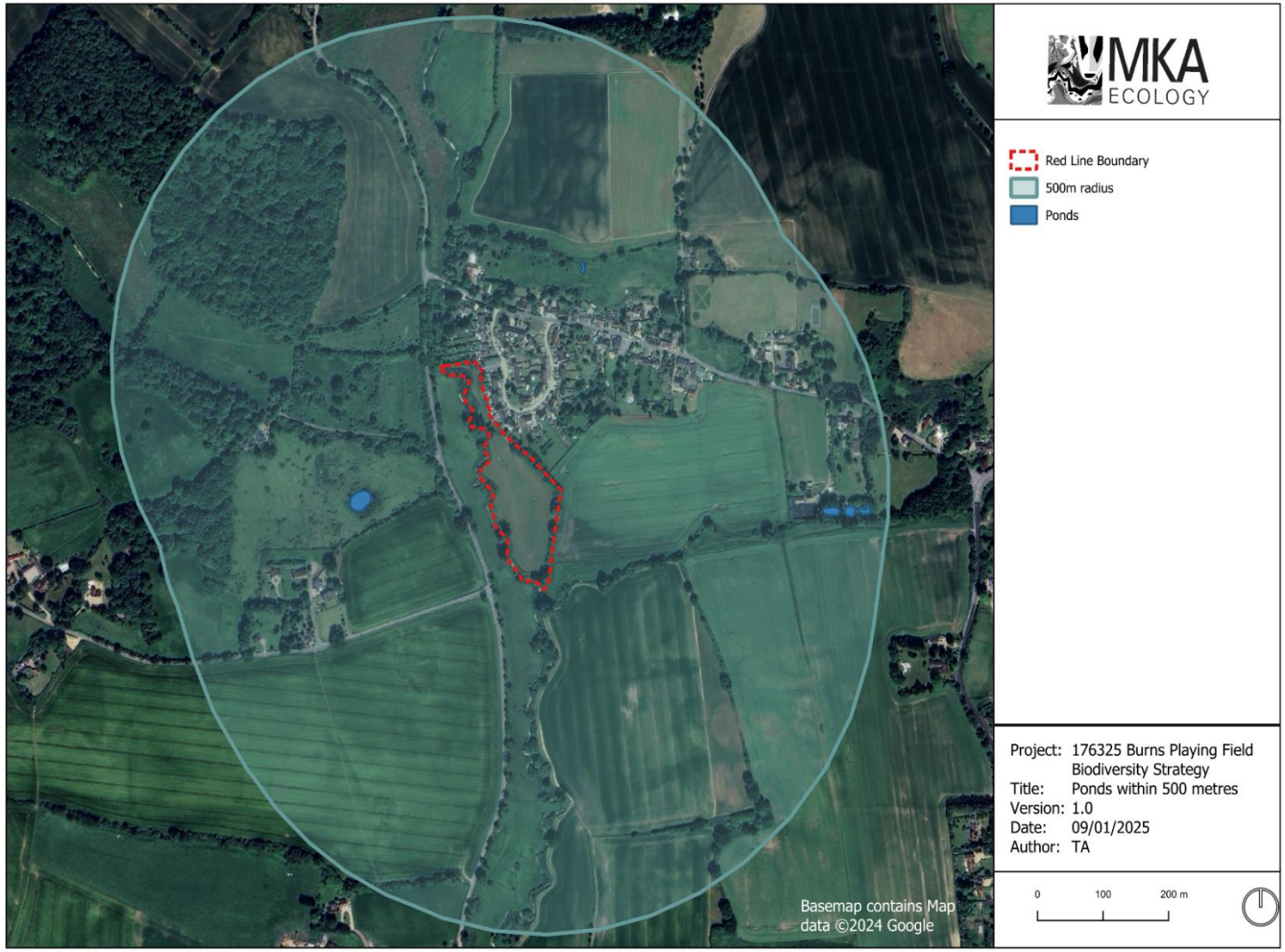
Survey findings: Areas of scrub and semi-natural vegetation within Burns Playing Fields provide some suitability for terrestrial habitat for great crested newts. On this basis, there is a low but credible potential for the presence of great crested newts within the site, therefore there is ample opportunity to incorporate biodiversity enhancements for this species at the Site. Such measures will also benefit other amphibians and wildlife.

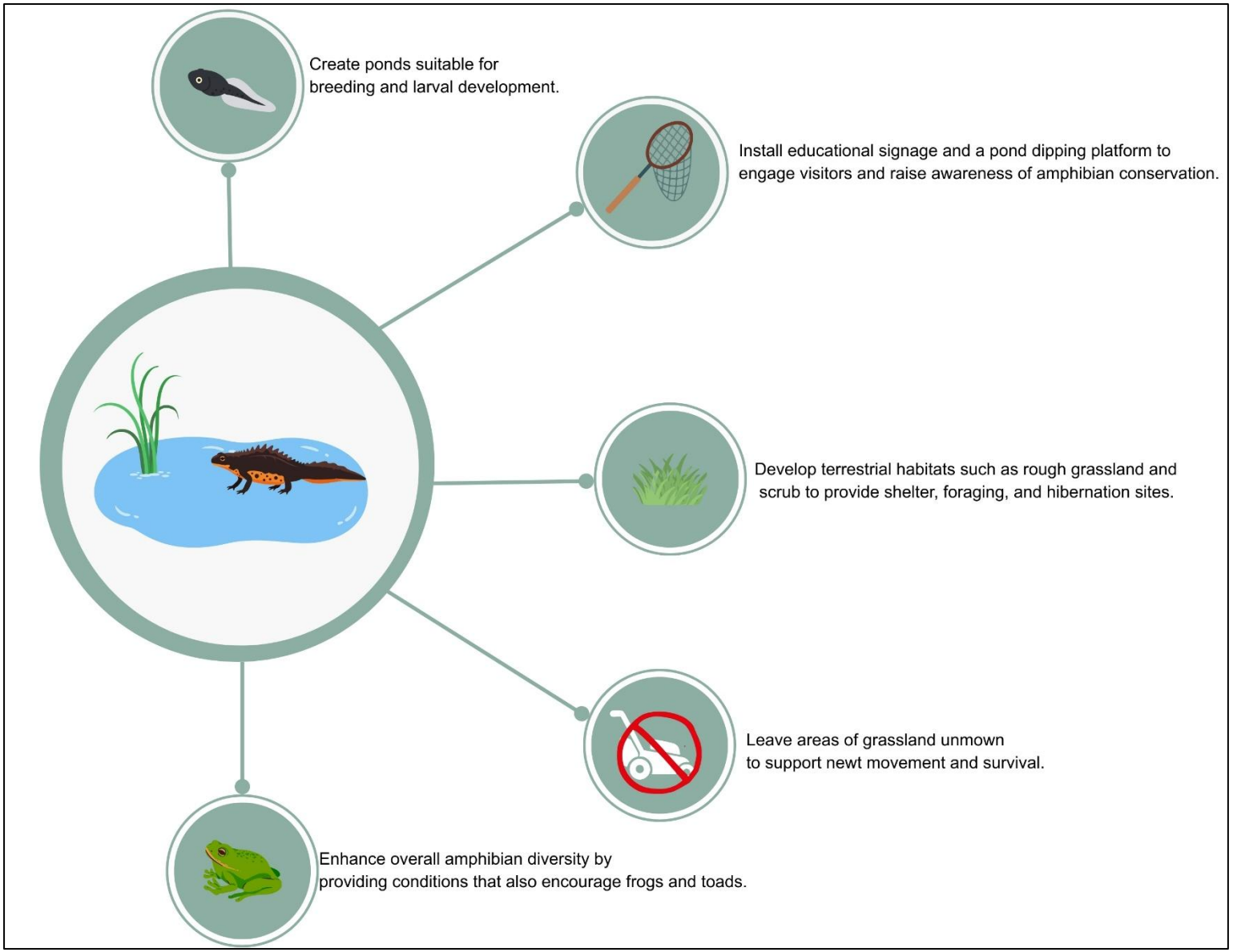
Recommendations and enhancements

- Create amphibian breeding ponds: Establish small ponds designed to support amphibian breeding and larval development, with gently sloping margins and suitable aquatic vegetation.
- Develop terrestrial habitat: Enhance surrounding terrestrial habitats by maintaining areas of rough grassland and scrub to provide shelter, foraging habitat, and hibernation sites for amphibians.
- Retain areas of unmown grassland: Leave sections of grassland uncut or managed with reduced mowing regimes to support amphibian movement between habitats and provide refuge areas.
- Enhance habitat for multiple amphibian species: Design habitats that benefit a range of amphibians, encouraging not only newts but also frogs and toads, thereby increasing overall amphibian diversity on site.
- Install educational and engagement features: Provide educational signage and a pond-dipping platform where appropriate to promote community engagement and raise awareness of amphibian conservation.

Great crested newt, Alfie Bunting, MKA Ecology Ltd.

Figure 3: Map of ponds within 500m of Burns Playing Fields




Create ponds suitable for
breeding and larval development.
Install educational signage and a pond dipping platform to
engage visitors and raise awareness of amphibian conservation.
Develop terrestrial habitats such as rough grassland and
scrub to provide shelter, foraging, and hibernation sites.
Leave areas of grassland unmown
to support newt movement and survival.
Enhance overall amphibian diversity by
providing conditions that also encourage frogs and toads.

4.5. Reptiles

Historic data: No reptiles were recorded in the data search for 2km surrounding the Site. At present, the site has limited suitability to host reptile populations due to the intensive mowing regime, however, the denser boundary vegetation could host species such as grass snake or common lizard. The Essex LNRS and related county ecology records recognise four native reptile species present in the region: adder which is locally distributed, grass snake which is relatively widespread, common lizard which is locally present and slow-worm which is relatively widespread. These are all Species of Principal Importance in England and are protected under the Wildlife and Countryside Act 1981.

Survey results: The site is considered to have low potential to support reptiles, however this population could be supported by suitable management regimes i.e. less intensive mowing.

Recommendations and enhancements

- Enhance rough grassland, scrub and edge habitats with a mix of short and tall vegetation, tussocks, and open sunny patches to support basking, shelter, foraging and thermoregulation for all reptile species. Structural diversity is key for reptiles to find sunny basking sites adjacent to cover. Protect and connect scrub edges to grassland mosaics to enable movement between hibernation, feeding and breeding areas.
- A careful mowing regime should be implemented to minimise harm to reptiles and other wildlife. Grassland cutting should be undertaken progressively from the centre of an area moving outwards, allowing reptiles to disperse safely into surrounding vegetation. At each mowing event, areas of longer grass should be retained on a rotational basis to maintain refuge, basking, and foraging habitat. This approach will create a mosaic of sward heights, supporting reptile movement and thermoregulation while reducing the risk of injury from machinery.
- Create log piles, rockeries, brash heaps and compost piles to provide additional refugia and hibernation sites.
- Remove or control invasive vegetation that reduces open areas and microclimate variability; schedule scrub cutting outside reptile active seasons to avoid disturbance.
- Ensure wetland and pond habitats within sites have gentle terrestrial margins and abundant amphibian prey, as grass snakes often forage near water.

Photo: Common Lizard by Andy Symes, MKA Ecology Ltd

4.6. Birds

Historic data: The data search returned numerous records of rare and protected bird species within 2km of the Burns Playing Field. These included schedule 1 species such as red kite *Milvus milvus*, and kingfisher *Alcedo atthis.* There are also records of lapwing *Vanellus vanellus*; which is one of several species specifically identified in the Essex Local Nature Recovery Strategy Priority species.

Survey results: The site provides a wide range of habitat opportunities for nesting bird species within its large trees, and areas of dense trees to the south of the Site. The scrub and marginal vegetation alongside the river also provide excellent nesting habitats. There is scope for nesting kingfisher in some of the riverside banks although there may be too much disturbance on the Site.

Recommendations and enhancements

- Increase floristic diversity throughout to enhance foraging opportunities for birds.
- Leave unmown strips within the fields to provide shelter and foraging opportunities for the birds. Leave longer areas on rotation during the winter months to provide foraging opportunities for birds.
- Plant and manage native scrub, hedgerows, and small woodland patches to support nightingale, marsh tit, and turtle dove, these are all species which are identified with the Essex LNRS as being priority species.
- The pond creation which is recommended for amphibian enhancement can be further enhanced to provide suitable habitat support for birds including shallow margins and reed beds surrounding the ponds.
- Install species specific bird boxes, these are detailed within appendix 7.1.

Marsh tit, Andy Symes, MKA Ecology Ltd.

4.7. Bats

Historic data: The data search identified records of bat activity within a 2 km radius of Burns Playing Field, confirming the presence of five bat species: brown long-eared bat *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, Natterer's bat *Myotis nattereri,* Leisler's bat *Nyctalus leisleri* and noctule *Nyctalus noctula*. Bats are recognised within the Essex Local Nature Recovery Strategy (LNRS) as a species group of conservation priority.

Survey data: The ecological landscape surrounding Burns Playing Field provides suitable habitat to support commuting and foraging bats, with a well-connected network of vegetation. In addition, several large trees within the site exhibit features with potential to support roosting bats, including holes, cracks, loose or peeling bark, and woodpecker cavities. The adjacent River Chelmer also provides strong connectivity for bat species to the wider landscape.

A small changing room facility is present to the north of the Site and may have potential to support roosting bats. Should work on this structure be proposed at any stage, it is recommended that a Preliminary Roost Assessment is undertaken to determine the likelihood of bats using the building.

Recommendations and enhancements

- Install bat boxes on trees and buildings: Bat boxes can be installed on suitable mature trees within the Site and, where appropriate, on existing buildings such as the changing facility. A range of box designs would provide roosting opportunities for locally recorded bat species. Boxes should be installed at a height of approximately 3–6m, positioned away from artificial lighting to maximise their suitability and ideally south facing. Retention and management of mature trees: The mature trees present within the site should be retained where possible, as they may already provide natural roosting features such as holes, cracks, loose bark, and woodpecker cavities. Ongoing tree management should seek to preserve these features unless removal is required for health and safety reasons. Checks for bat roosts should always be undertaken before any tree works.
- Enhancement of vegetation structure for commuting and foraging: Although the site is predominantly open, the existing trees and areas of vegetation provide structural features that bats can use for navigation and foraging. Planting additional native trees or shrubs in small clusters could help strengthen these features and improve connectivity across the site without altering its open character.
- Creation of insect-rich grassland areas: Portions of the playing field margins could be managed less intensively, for example, through reduced mowing or the introduction of wildflower-rich grassland. This would increase insect abundance, thereby enhancing foraging opportunities for bats while remaining compatible with recreational use.

- Long-term site management: Bat enhancement measures should be supported by appropriate ongoing management. This may include periodic inspection of bat boxes, continued low-intensity management of grassland margins, and regular review of lighting to ensure bat-sensitive conditions are maintained over t

Photo: Tree-mounted bat box taken from the People's Trust for Endangered Species.

4.8. River

Small-scale river restoration has been shown to deliver measurable biodiversity benefits when designed to increase habitat complexity and improve riparian condition (Environment Agency, 2019; Norfolk Rivers Trust, 2021). Similar approaches have been successfully implemented in Norfolk and Huntingdonshire on comparable lowland watercourses.

The enhancement measures are designed to support the following species groups:

- Fish
- Water voles *Arvicola amphibius*
- Otters *Lutra lutra*
- Aquatic invertebrates

Recommendations and enhancements

- **Feasibility study:** Sustainable Uttlesford maintains a directory of community-led environmental and river restoration projects across the district, demonstrating successful initiatives to improve river habitats, water quality and biodiversity. Given the Site's location adjacent to the River Chelmer, similar approaches could be explored here, particularly through engagement with the existing local River Warden listed within the Sustainable Uttlesford project network to help guide a coordinated enhancement strategy aligned with wider catchment initiatives (Sustainable Uttlesford, 2026). Prior to implementing any river enhancement works, a feasibility study should be undertaken to ensure that proposed measures are appropriate, sustainable and compliant with flood risk and land-use constraints. This study should include a hydrological assessment (including flow regime, water levels and flood risk), baseline ecological surveys (e.g. fish, water vole and aquatic invertebrates), a bank condition and erosion assessment, and a review of public access and safety considerations. Subject to the findings of this study, nature-based river improvements such as riparian buffer creation, marginal planting, bank re-profiling or installation of woody debris could be implemented to enhance habitat complexity and ecological connectivity along the river corridor. Feasibility studies undertaken on small rivers in Norfolk and Huntingdonshire have demonstrated that low-cost, nature-based solutions can be successfully delivered when informed by baseline data and site-specific constraints (Norfolk Rivers Trust, 2021; Huntingdonshire District Council, 2019).
- **Marginal habitat enhancement:** Floating berms could be installed in selected, slower-flowing sections of the river. These structures should be pre-planted with native marginal and emergent vegetation, including common reed, reed canary-grass, and water mint *Mentha aquatica*. Floating marginal features increase habitat heterogeneity, providing refuge for juvenile fish and aquatic invertebrates, while also improving marginal cover suitable for water voles (Environment Agency, 2019). Trials on small watercourses in Huntingdonshire demonstrated increased invertebrate abundance and successful establishment of marginal vegetation within 12–24 months following installation (Huntingdonshire District Council, 2019).
- **Riparian and bank planting scheme:** A targeted riparian planting scheme could be implemented along the riverbanks to improve habitat suitability for water voles and stabilise banks. Planting should prioritise native species that provide food, cover, and bank reinforcement, including reed sweet-grass *Glyceria fluitans*, brooklime *Veronica beccabunga*, water forget-me-not *Myosotis scorpioides*, and meadowsweet *Filipendula ulmaria*. Planting should be undertaken in staggered zones from the upper bank to the water's edge, with biodegradable coir rolls used where erosion risk is present. Riparian planting schemes delivered by the Norfolk Rivers Trust have resulted in increased water vole activity and improved bank stability on restored tributaries (Norfolk Rivers Trust, 2021).

- **Fish habitat enhancement:** The introduction of in-stream habitat features, such as woody debris, brushwood bundles, and small riffle–pool sequences, is recommended to improve fish habitat and support aquatic invertebrate communities. These features promote flow diversity, improve substrate composition, and create refuge areas for juvenile fish (Environment Agency, 2018). Small-scale habitat enhancement projects in eastern England have demonstrated that the addition of naturalistic woody material can significantly increase fish abundance and macroinvertebrate diversity without increasing flood risk when appropriately designed (River Restoration Centre, 2017).
- **Otter habitat support:** Artificial otter holts should be installed in quiet, undisturbed sections of the river corridor, preferably adjacent to dense riparian vegetation. Holts should be positioned away from regular public access and designed to allow safe entry and exit from the water. Artificial holts have been shown to support otter breeding and resting where natural holt availability is limited, particularly along modified or urbanised watercourses (Environment Agency, 2017).

4.9. Summary of recommendations

This table provides a summary of the recommendations set out above.

Key

	Cost	Scale of Impact
	High	Low – likely only to impact at the Site level.
	Moderate	Moderate – could impact the Site and local surroundings.
	Low	High – Could have benefits for species at a county level.

Table 5: Summary of recommendations for Burns Playing Field

Recommendation	Cost	Scale of Impact	Link to the aim or objective	Actions	Species impacted
Invasive species management plan			Prevent spread of Schedule 9 invasive species; protect public safety; improve river corridor ecology	Map infestations; mechanical excavation or targeted herbicide treatment; biosecurity measures; ongoing monitoring. Continue existing control programme; undertake removal or treatment by qualified contractors; monitor and adapt management annually	Invasive species (giant hogweed)
Conservation grazing			Sustainable control of giant hogweed; improve grassland	Introduce low-intensity sheep grazing (May–August); install	Plants, invertebrates, improve overall grassland health.

Recommendation	Cost	Scale of Impact	Link to the aim or objective	Actions	Species impacted
			structure and biodiversity. Maintain grassland diversity, create structural variation, and support invasive species control	fencing; adjust stocking rates through monitoring	
Developing a species rich grassland. / grassland management scheme			Enhance pollinator habitat; align with B-Lines and LNRS objectives	Reduce mowing frequency; create rough grassland margins; introduce appropriate native wildflowers where feasible. implement wildlife-sensitive mowing (e.g. phased cutting from centre outward)	Invertebrates, amphibians, reptiles, birds bats.
Insect hibernacula			Increase overwintering habitat and invertebrate resilience	Create log piles, brash heaps, dead wood features in undisturbed areas	insects
Pond creation			Enhance amphibian habitat; support wider biodiversity and ecological connectivity	Create pond with shallow margins and native planting; manage long-term water quality and vegetation	Amphibians, reptiles, birds, bats
Educational signage			Raise awareness; reduce disturbance; support long-term stewardship	Install interpretive signage explaining habitats, species, and management measures	All species!

Recommendation	Cost	Scale of Impact	Link to the aim or objective	Actions	Species impacted
Reptile and amphibian hibernacula			Increase shelter and overwintering opportunities	Construct log piles, rubble heaps, compost mounds in sunny, undisturbed locations	Reptile and amphibians
Scrub , tree , hedgerow management plan			Maintain habitat connectivity; enhance structural diversity; protect roosting and nesting features	Retain mature trees; manage scrub mosaics; phased cutting outside sensitive seasons	Reptiles, birds, newts, bats
Bird boxes			Increase nesting opportunities for target and priority species	Install species-appropriate boxes in suitable trees and habitats; periodic inspection	birds
Bat boxes - including a management plan with periodic checking of the boxes.			Enhance roosting opportunities; support commuting and foraging populations	Install bat boxes at 3–6 m height; avoid lighting; periodic checks and maintenance	bats
Native scrub establishment			Increase structural diversity, shelter, and nesting opportunities	Plant small pockets of native scrub species (e.g. hawthorn, blackthorn, hazel) in suitable locations	Birds, invertebrates, small mammals, reptiles

Recommendation	Cost	Scale of Impact	Link to the aim or objective	Actions	Species impacted
River enhancement measures			Increase habitat complexity and support aquatic and riparian biodiversity	Install marginal planting, floating berms, woody debris, and artificial otter holts subject to feasibility assessment	Fish, water voles, otters, aquatic invertebrates

5. CONSTRAINTS

This list provides a summary of the key constraints that might be encountered during works at Burns Playing Field. They do not represent an exhaustive list of constraints but should provide an indication of areas of concern. An ecologist should be consulted for advice on protected species in advance of works which may result in impacts.

- **Presence of invasive plant species**, particularly giant hogweed, along the riverbank, which poses risks to public health and biodiversity and requires careful management to prevent further spread.
- **Potential presence of protected and priority species** associated with the site habitats, including butterfly and bird species listed as Species of Principal Importance under the NERC Act (2006). The site also provides suitable commuting and foraging habitat for bats, and the adjacent river corridor has potential to support water vole and otter.
- **Certain species are legally protected under the Wildlife and Countryside Act 1981 and other relevant legislation, including bats, breeding birds, water vole, and otter**. Site management and enhancement works should therefore be undertaken using a precautionary approach to avoid disturbance, particularly during sensitive periods such as the bird nesting season. The likelihood of great crested newts and reptiles being present is considered low based on current habitat conditions; however, good practice measures should still be followed during vegetation management**.**
- **Proximity to the River Chelmer**, which provides valuable ecological connectivity but also requires that any enhancement works consider hydrological processes, bank stability, and flood risk constraints.
- **Existing recreational use of the playing field**, meaning habitat enhancements and management changes must remain compatible with public access and amenity use.
- **Current intensive mowing regime**, which reduces habitat suitability for reptiles, invertebrates, and ground-nesting birds, limiting biodiversity potential unless adjusted.
- **Potential bat roost features within mature trees and the existing changing facility**, meaning that any future works affecting these structures may require further bat surveys.

6. MONITORING

Post-implementation monitoring should be undertaken to assess the effectiveness of the recommended enhancement measures across the site. Monitoring will help determine whether habitats are establishing as intended and whether the recommendations are delivering measurable biodiversity benefits. Ideally monitoring projects would be designed so that they can be undertaking by the community. This will help to deliver useful monitoring results, but also promote community engagement in the success of the biodiversity enhancements.

Recommended monitoring may include:

- **Habitat and vegetation monitoring**, including establishment success, species composition, and condition assessments.
- **Protected and notable species surveys**, where appropriate (e.g. water vole burrow and latrine checks, bat activity surveys, or periodic otter spraint surveys).
- **Aquatic and wetland monitoring**, such as fish surveys or seasonal aquatic invertebrate sampling (e.g. Riverfly monitoring), where relevant to implemented measures
- **General wildlife surveys**, including breeding bird surveys, winter bird counts, or butterfly and pollinator transects.
- **Photographic monitoring**, using fixed-point photography to document habitat changes over time.
- Where appropriate, elements of the monitoring programme could be supported through citizen science initiatives, which can provide valuable long-term datasets while encouraging community engagement with local biodiversity. This could include for example:

    - Volunteer breeding bird surveys or participation in national schemes (e.g. BTO-led surveys)
    - Butterfly or pollinator transects, following standardised methodologies.
    - Riverfly monitoring undertaken by trained local volunteers.
    - Community recording of notable species through recognised biological recording platforms
    - Monitoring results should be reviewed periodically and used to inform **adaptive management**, allowing site management practices to be refined in response to observed outcomes. This approach is consistent with current best practice in habitat management and ecological enhancement, ensuring that measures remain effective and responsive to changing site conditions

7. CONCLUSION

This Biodiversity Strategy sets out recommendations to enhance the ecological value of Burns Playing Field while retaining its recreational function for the local community. The proposed measures focus on improving habitat diversity, strengthening ecological connectivity, and supporting priority species identified through the desktop study, field survey, and the Essex Local Nature Recovery Strategy.

While biodiversity enhancement is the primary aim of this strategy, several ecological constraints must be considered during implementation. These include the potential presence of bat roosts within mature trees and built structures, the extensive infestation of giant hogweed along the river corridor, the use of the river by otters, and the likelihood of nesting birds within trees and scrub. Although detailed protected species surveys were outside the scope of this assessment, all works must comply with relevant wildlife legislation. Habitat enhancement or management activities must cease immediately if protected species are discovered, until appropriate advice and mitigation measures are in place.

Key recommendations include the development of an invasive species management plan (with a focus on giant hogweed), the introduction of conservation grazing, and changes to grassland management to promote a more structurally and floristically diverse sward. Additional measures include the creation of ponds, insect and reptile hibernacula, installation of bird and bat boxes, enhanced scrub and hedgerow management, and targeted river habitat improvements. Together, these actions will support a wide range of taxa, including plants, invertebrates, amphibians, reptiles, birds, and bats.

The recommendations directly support the project vision by promoting nature-friendly grassland management, increasing habitat heterogeneity, and creating features that benefit pollinators and other wildlife. They are site-specific, informed by the LNRS, and designed to be feasible within the existing landscape context. Importantly, they balance ecological enhancement with continued public access and recreational use, ensuring long-term sustainability and community benefit.

The soil sampling results are a key evidence base for guiding grassland enhancement. Elevated phosphorus levels confirm that the site is likely to remain a modified grassland in the short to medium term and that attempts to establish highly species-rich meadow communities would be unrealistic without significant intervention. These findings support the recommendation to focus on improved grassland structure, reduced mowing, and the careful selection of wildflower species tolerant of more nutrient-enriched soils. Using soil data to inform planting and management decisions will maximise the likelihood of successful establishment and ensure that grassland enhancements are achievable, cost-effective, and sustainable.

Overall, this strategy provides a robust framework for delivering meaningful biodiversity gains at Burns Playing Field, contributing both to local wildlife value and to wider nature recovery objectives across Essex, while also ensuring that local residents have opportunities to engage with and enjoy biodiversity.

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9. APPENDICES

9.1. UK Wildlife Legislation

Please note that the following is not an exhaustive list, and is solely intended to cover the most relevant legislation pertaining to species commonly associated with development sites.

Subject	Legislation (England)	Relevant prohibited actions
Amphibians		
Great crested newt *Triturus cristatus* Natterjack toad *Epidalea calamita*	Schedule 2 of Conservation of Habitats and Species Regulations (2017) Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Deliberately capture or kill, or intentionally injure; • Deliberately disturb or recklessly disturb them in a place used for shelter or protection; • Damage or destroy a breeding site or resting place; • Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and • Possess an individual, or any part of it, unless acquired lawfully.
Reptiles		
Common lizard *Zootoca vivipara* Adder *Vipera berus* Slow-worm *Anguis fragilis* Grass snake *Natrix helvetica helvetica*	Part of Sub-section 9(1) of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill or injure individuals of these species (Section 9(1)).

Subject	Legislation (England)	Relevant prohibited actions
Sand lizard *Lacerta agilis* Smooth snake *Coronella austriaca*	Full protection under Section 9 of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Deliberately or intentionally kill, capture (take) or intentionally injure; • Deliberately disturb; • Deliberately take or destroy eggs; • Damage or destroy a breeding site or resting place or intentionally damage a place used for shelter; or • Intentionally obstruct access to a place used for shelter.
Birds		
All wild birds	Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure, or take any wild bird or their eggs or nests.
'Schedule 1' birds	Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)	• Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young; or • Disturb the dependent young of any wild bird listed on Schedule 1.
Mammals		
Bats (all UK species)	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	• Deliberately capture, injure or kill a bat; • Deliberately disturb a bat (disturbance is defined as an action which is likely to: (i) Impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) Impair their ability to

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	hibernate or migrate; or (iii) Affect significantly the local distribution or abundance of the species); • Damage or destroy a bat roost; • Intentionally or recklessly disturb a bat at a roost; or • Intentionally or recklessly obstruct access to a roost. In this interpretation, a bat roost is "*any structure or place which any wild [bat]...uses for shelter or protection*". Legal opinion is that the roost is protected whether or not the bats are present at the time.
Badger *Meles meles*	Protection of Badgers Act 1992	Under Section 3 of the Act: • Damage a sett or any part of it; • Destroy a sett; • Obstruct access to, or any entrance of, a sett; or • Disturb a badger when it is occupying a sett. A sett is defined legally as any structure or place which displays signs indicating current use by a badger (Natural England 2007).
Hazel dormouse *Muscardinus avellanarius*	Schedule 2 of Conservation of Habitats and Species Regulations (2017) Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Intentionally or deliberately capture or kill, or intentionally injure; • Deliberately disturb or intentionally or recklessly disturb them in a place used for shelter or protection; • Damage or destroy a breeding site or resting place; • Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and • Possess an individual, or any part of it, unless acquired lawfully.

Subject	Legislation (England)	Relevant prohibited actions
Otter *Lutra lutra*	Schedule 2 of Conservation of Habitats and Species Regulations (2017) Section 9(4)(b) and (c) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Deliberately capture, injure or kill an otter; • Deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young; • Intentionally or recklessly disturb any otter whilst it is occupying a holt; • Damage or destroy or intentionally or recklessly obstruct access to an otter holt.
Water vole *Arvicola amphibius*	Section 9 of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure or take water voles; • Possess or control live or dead water voles or derivatives; • Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection; or • Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.
Crustaceans		
White-clawed crayfish *Austropotamobius pallipes*	Section 9(1) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure or take white-clawed crayfish by any method.

The Environment Act 2021

Full legislation text available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted

The Environment Act 2021, sets out key legislation after the UK's exit from the European Union. With the largest changes to green regulations in decades, the Act includes the establishment of an Office for Environmental Protection, targets on air pollution, water quality and biodiversity, and the enshrinement of the 25 Year Environment Plan in law. The Act also makes provisions for a mandatory 10% net gain in biodiversity for all developments covered by the Town and Country Planning Act and it also introduces a statutory requirement for Local Nature Recovery Strategies.

The Conservation of Habitats and Species Regulations 2017 (as amended)

Full legislation text available at: The Conservation of Habitats and Species Regulations 2017 (as amended) (legislation.gov.uk)

The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: http://www.legislation.gov.uk/ukpga/1981/69/contents.

Countryside and Rights of Way Act 2000

Full legislation text available at: http://www.legislation.gov.uk/ukpga/2000/37/contents

Protection of Badgers Act 1992

Full legislation text available at: http://www.legislation.gov.uk/ukpga/1992/51/contents

Section 41 of Natural Environments and Rural Communities (NERC) Act 2006

Full legislation text available at: http://www.legislation.gov.uk/ukpga/2006/16/section/41

Many of the species above, along with a host of others not afforded additional protection, are listed on Section 41 of the NERC Act 2006.

Section 41 (S41) of the Natural Environment and Rural Communities (NERC Act 2006) requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn up in consultation with Natural England and draws upon the UK Biodiversity Action Plan (BAP) List of Priority Species and Habitats.

The S41 list should be used to guide decision-makers such as local and regional authorities to have regard to the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006. The duty applies to all local authorities and extends beyond just conserving what is already there, to carrying out, supporting and requiring actions that may also restore or enhance biodiversity.

Schedule 9 of Wildlife and Countryside Act 1981 (as amended)

In addition to affording protection to some species, The Wildlife and Countryside Act 1981 (as amended) also names species which are considered invasive and require control. Section 14 of the Act prohibits the introduction into the wild of any animal of a kind which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed in Schedule 9 to the Act. In the main, Schedule 9 lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated.

Wild Mammals (Protection) Act 1996

Full legislation text is available at: http://www.legislation.gov.uk/ukpga/1996/3/contents

Under this legislation it is an offence to cause unnecessary suffering to wild mammals, including by crushing and asphyxiation. It largely deals with issues of animal welfare, and covers all non-domestic mammals including commonly encountered mammals on development sites such as rabbits, foxes and field voles.

Birds of Conservation Concern (BoCC)

This is a quantitative assessment of the status of populations of bird species which regularly occur in the UK, undertaken by the UK's leading bird conservation organisations. It assesses a total of 245 species against a set of objective criteria to place each on one of three lists – Green, Amber and Red – indicating an increasing level of conservation concern. There are currently 70 species on the Red list, 103 on the Amber list and 72 on the Green list. The classifications described have no statutory implications, and are used merely as a tool for assessing scarcity and conservation value of a given species.

National Planning Policy Framework (NPPF)

Full text is available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2.

The revised NPPF was updated on 12 December 2024 setting out the Government's planning policies for England and the process by which these should be applied. The policies within the NPPF are a material consideration in the planning process. The key principle of the NPPF is a presumption in favour of sustainable development, with sustainable development defined as a balance between economic, social and environmental needs.

Policies 187 to 201 of the NPPF address conserving and enhancing the natural environment, stating that the planning system should:

- Contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes;
- Recognise the wider benefits of ecosystem services; and
- Minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.

Furthermore, there is a focus on re-use of existing brownfield sites or sites of low environmental value as a priority, and discouraging development in and around National Parks, Sites of Specific Scientific Interest, the Broads, and National Landscapes other than in exceptional circumstances.

Where possible, planning policies should also:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

9.2. Species list from field visit

Species	Common name
Flora	
Scientific name	Common name
Achillea millefolium	Yarrow
Acer campestre	Field maple
Agrostis stolonifera	Creeping bent
Alliaria petiolata	Garlic mustard
Alnus glutinosa	Alder
Arrhenatherum elatius	False oat-grass
Brachypodium sylvaticum	False-brome
Bromus sterilis	Barren brome
Calystegia sepium	Hedge bindweed
Carex pendula	Pendulous sedge
Cirsium arvense	Creeping thistle
Cirsium palustre	Marsh thistle
Cirsium vulgare	Spear thistle
Crepis capillaris	Smooth hawk's-beard
Dactylis glomerata	Cock's-foot
Dipsacus fullonum	Wild teasel
Elytrigia repens	Common couch
Epilobium hirsutum	Great willowherb
Fraxinus excelsior	Ash
Hedera helix	Ivy
Heracleum mantegazzianum	Giant hogweed
Holcus lanatus	Yorkshire-fog
Humulus lupulus	Hop
Jacobaea vulgaris	Common ragwort
Lapsana communis	Nipplewort
Lolium perenne	Perennial rye-grass
Lythrum salicaria	Purple-loosestrife
Phalaris arundinacea	Reed canary-grass
Phragmites australis	Common reed
Plantago major	Greater plantain
Poa trivialis	Rough meadow-grass
Populus tremula	Aspen
Potentilla reptans	Creeping cinquefoil

Species	Common name
Prunella vulgaris	Selfheal
Prunus spinosa	Blackthorn
Ranunculus repens	Creeping buttercup
Rubus fruticosus agg.	Bramble
Rumex conglomeratus	Clustered dock
Salix alba	White willow
Salix caprea	Goat willow
Solanum dulcamara	Bittersweet
Sonchus arvensis	Perennial sow-thistle
Sonchus asper	Prickly sow-thistle
Sparganium emersum	Unbranched bur-reed
Stachys palustris	Marsh woundwort
Taraxacum officinale agg.	Dandelion
Urtica dioica	Common nettle
Birds	
Carduelis carduelis	Goldfinch
Coloeus monedula	Jackdaw
Columba palumbus	Woodpigeon
Corvus frugilegus	Rook
Curruca communis	Whitethroat
Dendrocopos major	Great spotted woodpecker
Periparus ater	Coal tit
Pica pica	Magpie
Troglodytes troglodytes	Wren
Turdus merula	Blackbird
Invertebrates	
Aglais io	Peacock
Gonepteryx rhamni	Brimstone
Pieris brassicae	Large white
Polygonia c-album	Comma
Pyronia tithonus	Gatekeeper
Vanessa atalanta	Red admiral
Calopteryx splendens	Calopteryx splendens
Mollusc	
Odhneripisidium tenuilineatum	Odhneripisidium tenuilineatum

9.3. Bird box recommendations

A large number of bird boxes are available, designed for the specific needs of individual species. These are normally either designed to be mounted onto trees, external walls or integrated into a building. In general, bird boxes should be mounted out of direct sunlight and prevailing winds, out of reach of predators, with suitable foraging habitat for the subject species close by. Bird boxes should also be left up over winter as they can provide useful roosting sites for birds in bad weather.

Nest boxes should be cleaned at the end of each bird breeding season. All nesting material and other debris should be removed from the box. It should then be scrubbed clean with boiling water to kill any parasites (avoid using any chemicals). Once the box is clean, it should be left to dry out thoroughly. Under the Wildlife and Countryside Act 1981 it is an offence to disturb breeding birds and therefore annual cleaning is best undertaken from October to January when there is no risk of disturbing breeding birds.

Generalist boxes

Boxes to attract garden birds and woodland breeding species such as tits, nuthatch, redstart and pied flycatcher can be placed in gardens, orchards, woodlands and a wide variety of other habitats. The species of birds attracted to the box will depend upon the size of the entrance hole (see table below).

Boxes should be fixed two to five metres up a tree or wall, out of the reach of predators such as domestic cats. Unless there are trees or buildings, which give permanent shelter, it is best facing between north and east.

General		
Schwegler No. 1B General Purpose Nest box	www.schwegler-nature.com Suitable for various garden and woodland birds, created with different sized entrance holes to avoid competition between species. Other variations (e.g. 2M) can be free hanging, to deter predators.	
Entrance Hole	**Species**	
26 mm	Blue-, Marsh-, Coal- and Crested Tit, possibly Wren. All other species are prevented from using the nest box due to this smaller entrance hole	

32 mm	Great-, Blue-, Marsh-, Coal- and Crested Tit, Redstart, Nuthatch, Pied Flycatcher, Tree and House Sparrows.
Oval	Redstart; also used by species that nest in the diameter 32 mm boxes. However, because more light enters the brood chamber, it is preferred by Redstarts.

Robin/flycatcher boxes

Nest boxes that aim to attract robins and flycatchers should be open-fronted and placed in a hidden location, such as within a climber or other vegetation. The box design can be attached to the outside of a building or mature tree, or incorporated into a building. It is best placed between 1.5m and 3m high.

Robin/flycatcher		
Example	**Description**	**Picture**
Vivara Pro Barcelona WoodStone Open Nest Box	www.nhbs.com This nest box is made mix of concrete and FSC certified wood fibres and is suitable for wrens, robins, spotted flycatchers, pied and grey wagtails, song thrushes and blackbirds. The best height for this nest box is between 1.5m and 3m high and sited in undergrowth such as ivy.	

Starling boxes

Starlings are often found in areas where there are established pasture fields close to their roosting site, with further foraging provided by hedges close by.

The nest box should be placed at soffit/eaves level, or at a similar height on a tree, and should not be situated closer than 3m to the ground. Although Starlings do not defend a territory, boxes should be spaced at least several metres apart.

The ideal nest box for starlings is approximately 400mm (h) x 180mm (w) x 180mm (d) with a hole approximately 45mm in diameter.

Kingfisher breeding tunnels

Kingfishers nest in tunnels in steep river embankments. The species use two different tunnels or tubes for its first and second brood. It is therefore advisable to put two nest tunnels in the same steep slope, keeping them at least 70 cm apart, and should slope down from the nest at an angle of 10 or 20 degrees to allow for drainage. The kingfisher nest box entrance must be at least 1 metre above the maximum water level.

Kingfisher		
Example	**Description**	**Picture**
Schwegler Kingfisher/Sand Martin Tunnel	www.wildcare.co.uk Dimensions: W 12.5cm x H 15 x L 58 cm. This kingfisher box is made of air-permeable, long-lasting and lightweight concrete. It is designed for underground installation.	 
Vivara Pro WoodStone Kingfisher Tunnel	www.nhbs.com Dimensions: H 150mm x W 150mm, L x 550mm This tunnel is a mix of cement and FSC wood fibres. The tunnel should be placed in a vertical bank beside a slow-moving river or lake. It should be completely buried so that only the entrance is visible.	

Barn owl boxes

Barn owls hunt over open fields, mainly lowland farmland, with the best foraging habitats being rough tussocky grassland, with a high population of field voles.

Barn owl boxes are available for attachment to houses or trees. The access point of the nest box should face the open countryside. Installing two boxes a few hundred yards apart from each other will accommodate the male during the breeding season.

Barn owl		
Example	**Description**	**Picture**
Barn owl nest box	www.barnowltrust.org.uk The best place for an owl box is within a large building at 3 metres or higher. Otherwise, erecting an owl box on a tree is suitable.	
Barn owl nest box	https://www.birdfood.co.uk/barn-owl-nest-box.html This box should be installed on a tree in open farmland, an isolated hedgerow or woodland edge ensuring that the entrance hole is clearly visible.	

Barn owl		
Example	**Description**	**Picture**
Barn owl nest box	https://www.nhbs.com/barn-owl-nest-box This box is constructed from exterior grade plywood making it suitable for use both inside buildings, such as barns, or outside.	

Tawny owl boxes

Tawny owls prefer to nest in areas of woodland or well-wooded parks, squares and large gardens with tall, mature trees and whilst will forage in this habitat, will also forage in areas of grassland, and scrub habitat. Tawny owls have several roost sites which they will use at different times of the year.
The best box is a chimney-style box made to mimic the hollow, rotten end of a broken branch with internal dimensions of approximately 795mm x 230mm x 230mm, open at the upper end.

The nest box can be fixed at an angle of 45° in a large tree fork, or slung beneath a sloping branch, or fixed by an angled strip of wood to a vertical trunk. Drainage holes should be present in the bottom with wood chips or stone chippings inside.

Tawny owl		
Example	**Description**	**Picture**
Schwegler Tawny Owl Box No 5	www.schwegler-nature.com https://www.nhbs.com/no-5-schwegler-owl-box The front panel can be removed for inspection and cleaning purposes. The floor should be covered by a layer of sawdust or similar material.	
Tawny owl wooden nest box	https://www.vinehousefarm.co.uk/wooden-nest-boxes-tawny-owl/ The Tawny Owl Nest Box is made to order with FSC timber, felt roof and eco friendly preservative. There is a ledge to provide a safe area for the chicks when they first emerge as well as a door to the side to allow for cleaning and inspection. Built based on BTO guidelines.	
Tawny owl nest box	https://www.nhbs.com/tawny-owl-nest-box The Tawny Owl Nest Box is made from plywood and should be mounted to the underside of a branch at an angle of 45° or less to the vertical (see image). It is recommended that ratchet straps or polypropylene rope (not included) are used to secure the box as these will cause minimal damage to the tree. In populated areas the box should be sited at a minimum of 3.7m from the ground. In quieter or more	

Tawny owl		
Example	**Description**	**Picture**
	remote locations, it may be placed at a height of 3m. Always ensure that the entrance of the box is facing away from the prevailing wind.	

9.4. Bat box recommendations

A wide range of bat boxes are available to suit a variety of species and design requirements. Bat boxes can be mounted externally on buildings, built directly into the wall structure or mounted on trees (dependent on box design).

Boxes are more likely to be inhabited if they are located where bats feed and it may help to place the box close to features such as tree lines or hedgerows, which bats are known to use for navigation and can provide immediate cover for bats leaving the roost. Boxes should be placed in areas sheltered from strong winds and are exposed to the sun for part of the day. Access to any bat roosting features should not be lit and should also be at a reasonable height to avoid predation (at least 2m if possible, preferably 4-5m).

Example	Description	Picture
Schwegler General Purpose Bat Box 2F	www.schwegler-nature.com Height: 33 cm Weight: approx. 3.8 kg External diameter: 16 cm Installation: Hanging A general purpose box, suitable for all species.	

Example	Description	Picture
Schwegler General Purpose Bat Box 2F with Double Front Panel	www.schwegler-nature.com Height 33 cm Weight: approx. 4.1 kg External diameter: 16 cm Installation: Hanging This box is suitable for crevice dwellers, such as Nathusius´ pipistrelle, Daubenton`s bat and common pipistrelle.	
Schwegler 1FF	www.schwegler-nature.com Dimensions: 14(d) x 27(w) x 43(h) cm Weight: 9.9 kg Installation: Hanging This box is suitable for crevice dwellers, such as Nathusius´ pipistrelle, Daubenton`s bat and common pipistrelle. This box minimises temperature fluctuations in spring and autumn and is self-cleaning.	
Schwegler 1FQ	www.schwegler-nature.com Dimensions: 60(h) x 35(w) x 9(d) cm Weight: 15.8kg Installation: Attached to most external brick, timber or concrete walls at least 3m high. Can also be placed inside roof space This box is ideal for all types of bats that inhabit buildings. The box is weather-resistant and is also temperature controlled and self-cleaning. The front panel of the box can also be painted during manufacture, to match an existing colour.	

Example	Description	Picture
Schwegler 1MF (Swift and Bat)	www.schwegler-nature.com Dimensions: 46(h) x 43(w) x 22.5(d) cm. Weight: approx. 24 kg Installation: The box can be hung against any types of wall of any type of building, between 6-7m above ground level. This box is designed for nesting swifts, however the recess in the rear panel creates a space between the wall of the building and the box, making it ideal for bats that inhabit building, such as common pipistrelle. Whilst the box may require cleaning, the back recess for bats requires no maintenance.