

Preliminary Ecological Appraisal

Proposed Development at:

Eastfield Stables (Main Site)

Elsenham, Essex

OS 2664-23-Doc1

July 2023

Preliminary Ecological Appraisal

for

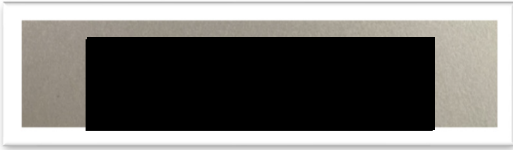

Proposed Development at:

Eastfield Stables

Elsenham

Essex

CM24 8SS

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Date	5 th July 2023	Date	7 th July 2023

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EXECUTIVE SUMMARY

This appraisal has outlined the likely impacts and opportunities for mitigation, compensation, and enhancement to understand the site's ecology.

The site is not designated for its importance for nature conservation at an international, national, regional or county level. The site itself and the habitats found on-site are common and widespread throughout the UK,¹ and the habitats are of limited ecological value and only site value.²

Habitats for protected species were evaluated for their likelihood of providing shelter, roosting, foraging, basking and nesting habitat.³ The likelihood of protected species is negligible, and no further investigation is needed.

¹ National Planning Policy Framework, 2021, paragraph 175.

² CIEEM, 2006, Defining ecological values for component habitats.

³ National Planning Policy Framework, 2021, paragraph 180.

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1.0 INTRODUCTION

1.1 Phase 1 Brief

Ranger Management and Design Services commissioned Open Spaces Landscape & Arboricultural Consultants Ltd (Open Spaces) on behalf of the client to undertake an ecological assessment at Eastfield Stables, Elsenham, Essex, CM24 8SS (Grid Ref: TL 52626 26091).

This report contains the findings of a Preliminary Ecological Assessment (**PEA**). The Purpose of a PEA is to identify the potential for presence of protected species on a site, in line with European legislation, UK law and the requirements of The National Planning Policy Framework (NPPF, 2021). The brief of the ecological survey was to assess the habitats found on site and identify the potential for presence on site of protected species.

The site-based element is supported by a desktop study undertaken to identify presence of Statutory/National/Local designations or protected species within the vicinity (up to a 5KM radius) of the site. The final part of the project brief was to identify and make recommendations as appropriate for any further surveys required to determine presence/absence of protected species on site if the survey determined that presence of a protected species on site was considered to be reasonably likely.

1.2 Development Proposals & Planning Context

Proposals are for the construction of 5x residential dwellings.

The following plan has been viewed:

- Drawing RMDS ES 23 002 – site layout

Given the availability of proposal plans and descriptions, it was possible to undertake an assessment of any potential impacts resulting from the consented proposal and recommend further works/appropriate mitigation as appropriate in section 4.2 of this report.

1.3 Scope of Survey

The purpose of this report is to provide an independent opinion of the likely presence of protected species on a site to inform the client of their obligations and to assist the Local Planning Authority in their determination of a planning application.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. This PEA does not constitute a full botanical survey or a Phase 2 preconstruction survey for Japanese Knotweed. In this regard, this survey provides a preliminary view of the likelihood of protected species occurring on site, based on the suitability of the habitat and any direct evidence on site. Additional surveys may be required if it is considered reasonably likely a protected species may be present.

The survey presents a snapshot in time, and therefore makes an assessment purely of what was seen at the time the survey was undertaken. The PEA does not therefore make any retrospective analysis.

1.4 Copyright

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2.0 METHODOLOGY

2.1 Survey Methodology

Habitats on site were recorded under the general principles and methods provided in the Handbook for Phase 1 Habitat Survey, JNCC 1993. The survey methodology involves a site visit to understand the site's ecology and surrounding characteristics. During the site visit, habitat types and ecological features are recorded and mapped, including identifying the main species present. The potential for the presence of protected species is assessed as part of the overall methodology, and further advice/surveys are recommended as considered appropriate based on the evidence obtained.

The survey works were undertaken following Guidelines for Preliminary Ecological Appraisal produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) in December 2017.

A site plan is included in Appendix 4. Photographs are included in Appendix 3.

2.1.1 Survey Details

The PEA was undertaken by Consultant Ecologist Andrew May on the 27th of June, 2023. The weather was sunny, with a temperature around 20°C.

Andrew May is a fellow and a full member of the Chartered Institute of Ecology & Environmental Management (**CIEEM**) and is subject to the CIEEM Professional Code of Conduct. The surveyor is an ecologist with over 25 years of experience and has been involved in a wide range of projects, from single-dwelling developments to large strategic urban renewal schemes subject to full Environmental Impact Assessment (**EIA**).

2.2 Desktop Study & Records Search

To gain an understanding of any designations on/around the site in addition to the historical presence of protected species, desktop data has been obtained from the following sources:

2.2.1 Biological Records

Records were requested from the Essex Field Club (EFC) Essex Recorders Partnership data search service. The information supplied by EFC is compiled using county records held by the County Recorders of the Essex Field Club, Butterfly Conservation, Essex Amphibian & Reptile Group, Essex Bat Group and provides information on the records that were available at the time the search was undertaken (2020). Therefore, a protected species records data search was

undertaken for records of protected species for a minimum of 1km and a maximum of a 2km radius of the site grid reference, in addition to any other pertinent information relevant to the site.

The use of data is in accordance with CIEEM Guidelines for Accessing & Using Biodiversity Data, March 2016.

2.2.2 Designations

A desktop study was undertaken through MAGIC (Multi-Agency Geographic Information System for Countryside). The search looked to identify the presence of statutory designated sites within a 5km radius (e.g. Special Areas of Conservation (**SACs**), Sites of Special Scientific Interest (**SSSI**), National Nature Reserves (**NNR**) and Local Nature Reserves (**LNR**). A wider search radius up to 10km has also been considered where appropriate in the site's context.

2.2.3 Additional Information

Free online mapping information and Ordnance Survey Maps were consulted for the background assessment.

3.0 RESULTS & ANALYSIS

3.1 Description of Site and Immediate Surrounds

The site is situated on the western side of Elsenham and is located approximately 130m to the west of the M11 motorway.

The site resembled a modified grassland previously used for horses. Areas of grassland included young saplings of self-seeded ash and suckering blackthorn. A raised bund ran along two edges of the site and included ash, poplars, hawthorn, blackthorn, and cedar. Ground vegetation included nettles, brambles and false oat grass. Rabbits were present.

Areas of woodland, development, arable land, and a main road surrounded the potential development sites.

3.2 Potential for Protected Species Impact with Proposals

The site was assessed for the potential presence of protected/priority species that may have a material impact on the development proposals.

The ecological value of the site in respect of the potential presence of an impact upon protected species is considered further in the following sections:

3.2.1 Bats

All bat species are strictly protected under the Wildlife and Countryside Act 1981 and the Conservation Regulations (Habitat Regulations).

Buildings

No buildings would be affected by the development proposal.

Trees & Roosts/Hedgerows/Foraging/Commuting & Roosting

No trees with roosting potential were identified on site, nor would they be affected by the proposal. Based upon the analysis of the proposal plans, existing tree lines and planting would be retained. Bats may commute and forage in the area.

Impact Assessment

No trees with bat roosting potential were identified on site, nor would they be affected by the proposal. Based upon the analysis of the proposal plans, existing tree lines and planting would be retained. Bats may commute and forage in the area. As such, it is reasonable to conclude that bat activities would continue unaffected. It is advised that additional planting be undertaken to enhance existing tree lines/hedgerows, and it is noted from the proposal that new woodland planting would be undertaken on site as part of the proposal. Additionally, integral and tree-mounted bat boxes should be installed in each building and on the wider site as part of the proposal. In addition, as a general enhancement, a low-impact lighting solution is advised during the construction and completion phases. Guidance in respect of ecological enhancements is provided in section 4.2.

3.2.2 Badgers/Transitory Mammal

Badgers and active setts are afforded protection under the Protection of Badgers Act 1992.

No evidence of any badger activity (active or inactive setts, droppings or latrines) was identified during the proposed development site/surroundings survey. However, a transitory presence is considered possible in such a location.

Impact Assessment

No evidence of active/inactive setts/badgers was identified on site, and it should be noted that the proposed development of the site is not considered to have any potential impact upon badger setts (active or inactive), given the lack of any evidence on site. No further surveys regarding badgers are considered necessary or appropriate in this instance. However, given the possibility of a transitory presence, appropriate general guidance regarding the construction phase is provided in section 4.2.

3.2.3 Nesting Birds

The Wildlife & Countryside Act 1981 protects nesting birds and their eggs.

Retention and enhancement of boundary tree lines/hedgerows would maintain existing nesting resources on site. The short grass sward across the main body of the site and existing land use does not afford ground nesting opportunities.

Impact Assessment

As general guidance works to vegetation should ideally be avoided during the bird breeding season from March to September. If this is not possible, a search should be undertaken to confirm the presence/absence of nesting before work is undertaken.

To enhance the nesting resource on site, it is recommended that new opportunities for nesting birds be provided through the provision of nesting boxes on/within new buildings (integral), in addition to new planting as shown on the proposal plan to provide potential nesting opportunities within site, along with specific provision for swallow. Recommendations have been provided in section 4.2.

Provided such actions are adhered to, the proposal would not adversely impact nesting birds.

3.2.4 Reptiles

Reptiles are afforded protection under the Wildlife & Countryside Act 1981, with smooth snakes and sand lizards afforded full protection under the same act and the Conservation Regulations (Habitat Regulations).

As described within section 3.1 site area comprises a large area of mown, modified grass. As such, given on-site land use and management, in addition to neighbouring land uses/management (arable land/paddock) and absence of connectivity to potentially suitable habitat, it is considered unlikely that the site would provide potential reptile habitat, nor that a population has colonised the site. As such, the site does not provide a potentially suitable reptile habitat. It is not considered reasonably likely that the proposal would present or adversely affect reptile species.

Impact Assessment

Based upon the evidence above, it is not considered reasonably likely that reptile species are present on site given the lack of suitable habitat on-site/connectivity to suitable offsite habitats. Therefore, the risk of the proposals' potential impact on reptiles' conservation status is negligible. The risk of the potential impact of the proposals upon individual reptiles is also considered low. No further surveys are necessary in respect of reptile species.

3.2.5 Great Crested Newt

Great crested newt is strictly protected under the Wildlife and Countryside Act 1981 and the Conservation Regulations (European Habitat Regulations).

No water bodies are within the proposed development site, nor would be affected by the proposal. Given the land use and composition of the site as described, the site does not provide a potentially suitable terrestrial habitat, nor is it likely to form part of a wider terrestrial dispersal habitat.

Distance from a potentially suitable water body and intervening land use is critical in determining suitability for the species. A search using mapping data/aerial imagery was undertaken to identify ponds within a 500m radius. The nearest known water bodies are situated approximately 400m to the northwest within Aubrey Buxton LWS. However, the ponds are separated from the site by a large arable field; consequently, terrestrial connectivity is not considered a reasonable likelihood. No other ponds were identified within the search radius.

Whilst it is acknowledged that small numbers of GCN have been known to range significant distances (1km) to colonise new ponds, sometimes over several years if the connective habitat is suitable, research undertaken by English Nature¹ (now Natural England) indicates that it is most common to encounter them within 50m of a breeding pond, with few moving further than 100m unless significant linear features or suitable terrestrial habitat is involved when great crested newts can be encountered at distances of between 150m – 200m. At distances greater than 200-250m great crested newts are hardly ever encountered. This valuation of habitats according to distance from great crested newt breeding ponds has also been adopted as part of Natural England's European Protected Species application form, with specific reference to the guidance provided by Natural England in WMLa14-2.

No other ponds were identified within the search radius. It is acknowledged that there is no way of identifying whether small ponds may be hidden within any nearby field margins/private gardens. None were immediately visible from the site/analysis of mapping data. Identification of ponds on private property cannot be reasonably expected as part of this survey/desk study.

Impact Assessment

Based upon the evidence above, it is not considered reasonably likely that great crested newts would be affected by or at risk from the development proposals. The risk of harm to the species is not considered a reasonable likelihood.

Consequently, it is considered that the risk of the potential impact of the proposals on the conservation status of great crested newts is negligible. The risk of the potential impact of the proposals upon great crested newts is also negligible. No further surveys are considered necessary or appropriate for this species at this site.

3.2.6 Hazel Dormouse

Hazel dormouse is strictly protected under the European Habitats Regulations and the Wildlife and Countryside Act 1981.

The site does not contain nor have connectivity to potentially suitable habitats. The site does not have connectivity to locations where the species has been previously recorded.

Impact Assessment

No further surveys are considered necessary or appropriate, and the proposal would not impact the species.

3.2.7 Invertebrates/Plant-life

Given the existing condition/land use of the site and surrounding land uses, the site is considered unlikely to be of invertebrate or plant life interest. Furthermore, the presence of notable or rare species is also unlikely.

Impact Assessment

Considering the above, no further consideration regarding invertebrates is considered necessary or appropriate. The site could be significantly improved for invertebrates by providing appropriate planting and, where appropriate, within the context of the proposal, along with the retention of existing trees and hedgerows where appropriate.

Including nectar-rich plants in the landscaping design, coupled with the installation of ‘insect hotels/bugs boxes,’ would provide suitable invertebrate habitat on the site post-development. Night-scented plant species such as evening primrose, honeysuckle and jasmine would also attract moths in the evening, attracting foraging bats.

3.2.8 Priority Species & Wider Biodiversity

It is acknowledged that a range of wildlife species may utilise the wider site and development area.

Impact Assessment

As part of appropriate due diligence, it is advised that the full range of recommendations identified in section 4.2 be fully implemented and all reasonable enhancements incorporated into a development proposal such that biodiversity is maximised as part of the development.

In addition, to enable wildlife to use the development area post-development, garden boundaries are advised to remain relatively open so that all wildlife can continue to radiate. This includes using permeable boundaries such as tree lines and hedgerows and leaving hedgehog gaps in any new fencing proposals.

3.3 Desk Study Results

Record searches are not exhaustive, and certain species, including reptiles and great crested newts, are under-recorded nationally. In addition, many of the records can be considered too old or maybe unverified. However, the records indicate the species of note historically found within the search radius.

3.3.1 Biological Records

The full records have been analysed as part of the desk research and considered as part of the conclusions and subsequent recommendations of this report. A summary is provided below:

Great Crested Newt

No of Records	Date Range	Closest Proximity to site
2x Records	1985-2014	1.1km

Reptile

No of Records	Date Range	Closest Proximity to site
1x Grass Snake	2000	1.0km

Bats

No of Records	Date Range	Closest Proximity to site
1x Natterer's	2008	1.4km
1x Noctule	2013	1.5km
11x C. Pipistrelle	1999-2013	0.4km
4x Pipistrelle sp.	1999-2013	0.5km
12x B. Long eared	1999-2013	0.4km

Badger

No of Records	Date Range	Closest Proximity to site
5x Records	1995-2009	1.4km

Western Hedgehog

3x Records	1995-2009	0.4km
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Brown Hare

No of Records	Date Range	Closest Proximity to site
3x Records	1997-2006	1.0km

Western Hedgehog

No of Records	Date Range	Closest Proximity to site
3x Records	1994-2011	1.2km

Hazel Dormouse

No records were identified in respect of this species.

Birds

Species noted include Mallard, Grey Heron, Short Eared Owl, Little Owl, Tufted Duck, Buzzard, Woodpigeon, Carrion Crow, Yellowhammer, Reed Bunting, Kestrel, Jay, Red Kite, Wagtail varieties, Cormorant, Willow Warbler, Magpie & Woodpecker. A large variety of more commonly spotted garden birds were also noted.

3.3.2 Designations

Designations-Statutory

The site is not situated within nor bounding any statutorily designated locations.

The following designations are situated within a 5km radius of the site:

- Hatfield Forest National Nature Reserve (NNR) & Site of Special Scientific Interest (SSSI) – Approx. 4.9km south.
- Hall's Quarry SSSI – Approx. 3.0km north.
- Quendon Wood SSSI – Approx. 4.0km north.
- Elsenham Woods SSSI – Approx. 3.8km east.

Impact Assessment

The site is neither situated within nor bounding a statutorily designated location. Given the existing land use of the site and the absence of connectivity with offsite designated locations, it is not considered likely that the proposal will result in any adverse impact upon statutorily designated locations.

Designations-Non-Statutory

Non-statutory designations are used in the planning system to protect areas with substantive nature conservation value locally.

The search identified that the site is not located within nor directly bounding any such location. Alsa Wood LWS is situated approximately 0.25km to the north of the site, with Aubrey Buxton LWS and Essex Wildlife Trust (EWT) Reserve situated approximately 0.4km northwest of the site.

Impact Assessment

It is not likely that proposals would have any adverse impact on non-statutory designated locations. However, given the relative proximity of the site to such locations, it is advised that the proposal should seek to maximise ecological enhancements to be installed within the site. As such, the

full scope of advisable ecological enhancements identified within section 4.2 should be installed as part of the development proposal, secured by a Biodiversity Management Plan, to be produced using an appropriately worded planning condition.

4.0 CONCLUSION & RECOMMENDATIONS

4.1 Conclusion

The site is not designated for its importance for nature conservation at an international, national, regional or county level. The site itself and the habitats found on-site are common and widespread throughout the UK,⁴ and the habitats are of limited ecological value and only site value.⁵

Habitats for protected species were evaluated for their likelihood of providing shelter, roosting, foraging, basking and nesting habitat.⁶ The likelihood of protected species is negligible, and no further investigation is needed.

4.2 Recommendations and Further Action

Following the survey, the following recommendations have been made to ensure obligations regarding protected species are met/the site is enhanced to benefit biodiversity if developed. The recommendations are considered to be appropriate and in context with the size of the proposals and based upon the findings of the impact assessment section of the report.

Construction Phase

- To protect any radiating mammals, it is recommended that any trenches be covered over with wooden sheeting at night and fencing off construction compounds would be advisable during the construction phase.

Nesting Birds

- As a general point, it should be noted that the main bird breeding season is between the months of March to September inclusive. If possible, vegetation clearance/tree operations should be avoided during the bird breeding season. If this is not possible a search should be undertaken to confirm presence/absence of nesting prior to works being undertaken.

Lighting

- In order to minimise risk of disturbance to potential features that may provide bat commuting and foraging habitat during the construction phase and as part of the completed development, a low impact lighting scheme is advised:

⁴ National Planning Policy Framework, 2021, paragraph 175.

⁵ CIEEM, 2006, Defining ecological values for component habitats.

⁶ National Planning Policy Framework, 2021, paragraph 180.

- a) Brightness of lights should be as low as possible, and in accordance with British Standard Institute (BSI) and Bat Conservation Trust (BCT) guidance. Where possible, low pressure sodium lights are advised.
- b) Lighting should not be directed at features that may be utilised by bats such as tree lines, hedgerows and water bodies/water courses.
- c) Directional lighting and/or fittings with hoods and cowls should be utilised.
- d) Where possible, security lighting should be motion sensitive and timers to minimise the amount of time that lights are on.
- e) Where possible, directional low impact solar bollard lighting should be used to illuminate roads, paths and parking areas.

Enhancements

- The following ecological enhancements will be provided within the development as a minimum:
 - 1 integral bird box per new dwelling;
 - 1 integral bat box per new dwelling;
 - 2 external swallow nesting cups per dwelling;
 - Installation of 10 tree mounted bat boxes;
 - Installation of 10 tree mounted bird boxes;
 - Installation of 1 x invertebrate box per unit;
 - New tree and hedgerow planting throughout site;
 - Creation of wildflower/wild-grass meadow within the site;
 - Low impact lighting solution - no lighting of boundary tree lines;
 - Inclusion of native/wildlife friendly planting in landscape scheme; and
 - Enhancements defined and secured by way of a BMP (By condition)
- It is advised that garden boundaries remain relatively open such that all wildlife can continue to radiate in the area. This includes the use of permeable boundaries such as tree lines and hedgerows, in addition to leaving hedgehog gaps in any new fencing proposals.

Appendix 1 – Legislation & Planning Policy

1.1 Habitat Regulations

The Conservation of Habitats and Species Regulations transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

1.2 Wildlife & Countryside Act

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, (which includes Cirl Bunting) or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

Special Protection Areas (SPA) are strictly protected sites, designated under the Birds Directive, for rare and vulnerable birds and for regularly occurring migratory species.

1.3 Natural Environment & Rural Communities Act

The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

1.4 National Planning Policy Framework (NPPF)

The NPPF February 2019 (Paragraphs 170-183) is specific regarding conservation and biodiversity. ODPM 06/2005 remains in place. NPPF places a duty on planners to consider the

effect of a development on legally protected species when considering planning applications, focusing on sustainable development and biodiversity net gain.

1.5 Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A list of national priority species and habitats has been produced, with all listed species/habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.

1.6 Local Development Plans

County, District and Local Councils have Development Plans and other policy documents that include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions.

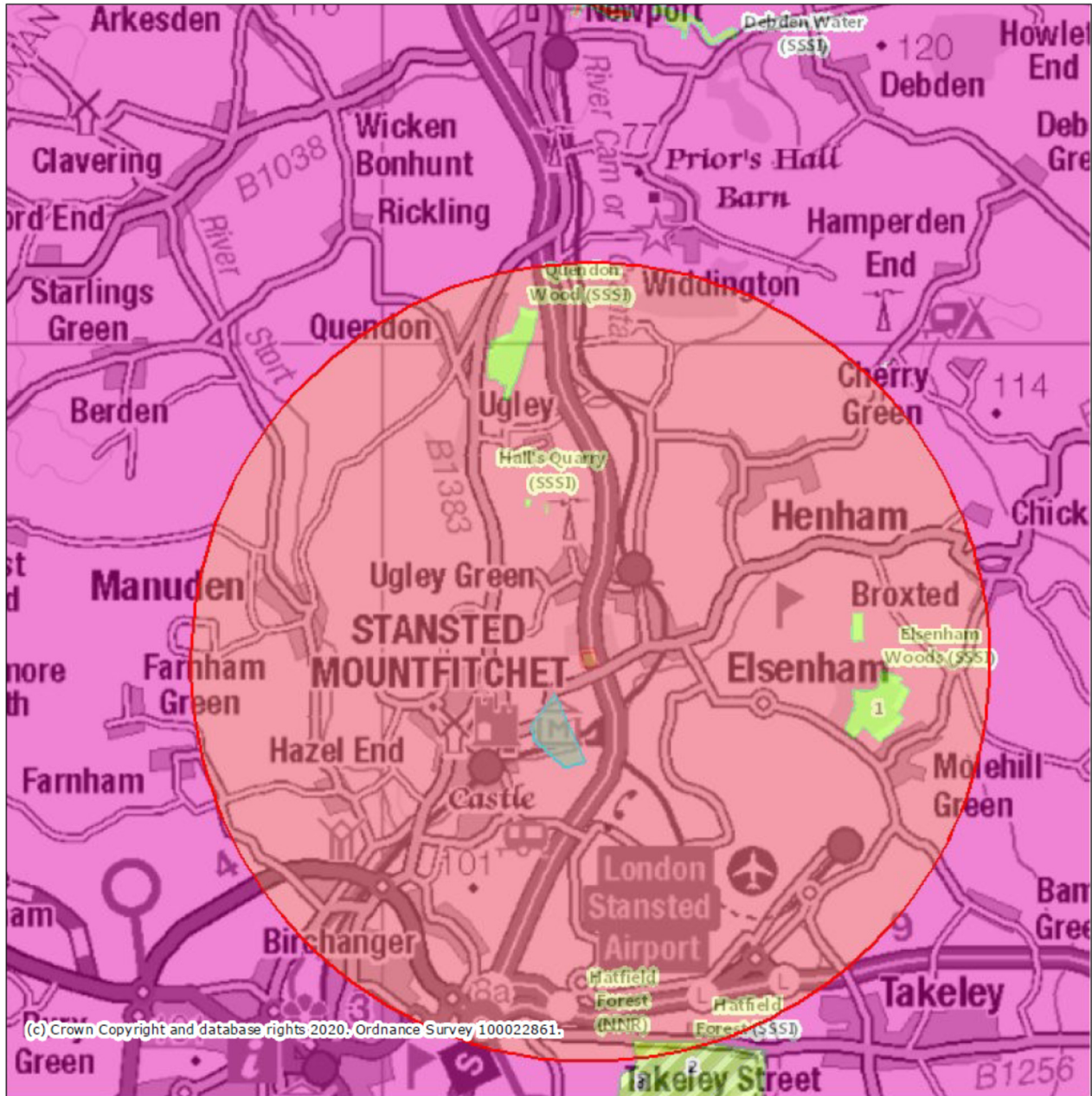
1.7 Natural England Standing Advice

Natural England has adopted national standing advice for protected species. It provides a consistent level of basic advice which can be applied to any planning application that could affect protected species. It replaces some of the individual comments that Natural England has provided in the past to local authorities.

Appendix 2 – Desk Study Map

MAGiC

Magic Map



Appendix 3 – Photographs



Modified grassland



Vegetation on the bund

Appendix 4 - Enhancement Recommendations

The following hedgerows/shrub and smaller tree species could be utilised accordingly:

- Hawthorn *Crataegus monogyna*
- Ash *Fraxinus excelsior*
- English Elm *Ulmus procera*
- Field Maple *Acer campestre*
- Hazel *Corylus avellana*
- Dog Rose *Rosa canina*
- Elderberry *Sambucus nigra*
- Holly *Illex aquifolium*
- Blackthorn *Prunus spinosa*
- Rowan *Sorbus aucuparia*
- Guelder Rose *Viburnum opulus*
- Silver Birch *Betula pendula*
- Alder *Alnus glutinosa*
- Cotoneaster *spp.*
- Spindle *Euonymus europaeus*

The following species could also be considered within the landscaping scheme as appropriate, given their wildlife friendly/native characteristics:

- Viburnum *sp.*
- Californian Lilac *Ceanothus sp.*
- Lavender *Lavandula angustifolia*
- Hebe *Sp.*
- Privet *Ligustrum vulgare*
- Dogwood *Cornus sanguinea*

In addition, vertical areas on sides of buildings and/or boundary fences could be utilised to provide additional habitat. Suitable species to grow on vertical habitats could include:

- Ivy *Hedera helix*
- Clematis *vetalba*
- Honeysuckle *Lonicera periclymenum*

Bulbs and small, wildlife friendly annuals and biennials can also be utilised within wildlife friendly and garden planting where considered appropriate by the landscape architect. Suitable species could include:

- Hypericum *perforatum*

- Wood Anemone *nemorosa*
- Tustan *Hypericum androsaemum*
- Foxglove *Digitalis grandiflora*
- Bluebell *Hyacinthoides non-scripta*

Dependant on soil condition, British Seed House RE1 mix (or similar product) is recommended for installation of the species rich grass areas where required. Alternatively, turf already seeded with wild flower seed could be utilised.

Recommend species are likely to include:

- Slender Creeping Red Fescue *Festuca rubra ssp litoralis*
- Crested Dogs Tail *Cynosurus cristatus*
- Common Bent *Agrostis capillaris*
- Cocksfoot *Dactylis glomerata*
- Meadow Fescue *Festuca pratensis*
- Golden Oat Grass *Trisetum Flavascence*
- Sweet Vernal Grass *Anthoxanthum odoratum*
- Ribwort Plantain *Plantago lanceolata*
- Yarrow *Achillea millefolium*
- Common Knapweed *Centaurea nigra*
- Meadow Sweet *Filipendula ulmaria*
- Lady's Bedstraw *Galium verum*
- Ox eye daisy *Leucanthemum vulgare*
- Self Heal *Prunella vulgaris*
- Meadow Buttercup *Ranunculus acris*
- Bulbous Buttercup *Ranunculus bulbosus*
- Agrimony *Agrimonia eupatorium*
- Rough Hawkbit *Leontodon hispidus*
- Yellow Rattle *Rhinanthus minor*
- Common Birdsfoot Trefoil *Lotus corniculatus*
- Salad Burnett *Sanguisorba minor*
- Harebell *Campanula rotundifolia*
- Cowslip *Primula deorum*
- Field Poppy *Papaver Rhoeas*
- Wild Thyme *Thymus Serpyllum*
- Quaking Grass *Briza Media*
- Pignut *Conopodium majus*

Using Seeds

Seed Bed Preparation

Whilst seeds can be sown at any time, the best time to prepare the meadow bed is summer. The top grass, and top inch of top soil should be removed if possible. The most important factor is to ensure that the seed bed is weed free, and level using roller/rake. Also, remove stones in areas of seedbed, Wildflower meadows from seed are most successful when soil fertility is low and weeds can be less vigorous.

Sowing Seed

The best time to sow the seeds is in spring or early autumn. Spread seeds in a sand mix using a spreader for even distribution at a density of approx. 4 grams per sq. metre.

Using Plugs

Use of wildflower plugs is generally more reliable, and gives quicker results than using seed. However, over large areas, density of plugs can be reduced, with 1 or 2 plugs per square metre. Generally, plugs can be installed at any time but spring/autumn are optimum months.

Using Turf Impregnated with seeds

Use of turf less dependent on soil conditions as the seed are already in place. This enables more variety of species. However, to be successful, it should be installed in free draining areas that do not become water logged. Wildflower Plugs and seeds are available from a number of online suppliers:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Sections of turf already seeded are also available from the following suppliers:

[REDACTED]

[REDACTED]

[REDACTED]

Habitat Boxes.

The use of bird and bat boxes has been recommended. Suitable products include:



Standard Bird Box-Suitable for a wide variety of species.
Can be installed in trees and buildings.



Schwegler 2F Bat box. Suitable for attachment to trees.



Terracotta swallow nesting bowl – RSPB Shop