

Preliminary Ecological Appraisal

Tear drop Site, Milton

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Appendix A – Ecological Desk Study Data

Appendix B – HSI Scores for Ponds

Appendix C - Plant Species List



Non-technical Summary

This preliminary ecological appraisal report has been prepared by Sweco for Future High Streets Limited and relates to proposed commercial development at Land off Cambridge Road, Milton, Cambridge, CB24 6AZ, for which planning permission will be sought.

The purpose of this report is to establish baseline ecological conditions at the site, detail mitigation measures to be put in place to minimise effects on important ecological features, identify residual effects and their significance including cumulative effects and detail enhancement measures to be incorporated into the development.

An initial ecological desk study, UK habitats classification survey and protected species scoping survey was carried out in May 2021, to map the habitats present on site and assess their potential to support notable/protected species. The site comprises: artificial unvegetated; unsealed surface, developed land with a sealed surface (hardstanding) and dense scrub.

The preliminary ecological appraisal identified habitats suitable for: nesting birds, great crested newts and foraging and commuting bats on site and within vegetation at the site boundaries. Further survey has therefore been recommended for foraging and commuting bats, reptiles, and great crested newts:

- Transect and remote monitoring survey for bats (1 transect visit between June-August inclusive; 2 remote monitoring visits: spring (April/May) and autumn (September/October)
- eDNA survey of an off-site ditch for great crested newts (1 visit; between mid-April to end-June)
- Walkover of habitat within the 'green buffer' to verify its poor suitability for reptiles

Given the on-site presence of potential bird nesting habitat, any clearance of vegetation should be timed to avoid the bird breeding season (March-August inclusive). If this is not possible, these habitats can only be removed following confirmation by a suitably qualified ecologist that they are not in active use by nesting birds.

Opportunities exist for the provision of ecological enhancements in the form of:

- Enhancing the on-site 'green buffer' with native planting/water features
- Including bird boxes within designs to provide additional nesting space
- Planting wildlife-friendly and native vegetation within the soft landscaping scheme, including native, species-rich hedgerows
- Green roofs



Limitations and Exceptions

This report and its findings should be considered in relation to the terms and conditions proposed and scope of works agreed between Sweco and the client.

Interpretations and recommendations contained in the report represent our professional opinions, which were arrived at in accordance with currently accepted industry practices at the time of reporting and based on current legislation in force at that time.

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This report is prepared and written in the context of the proposals stated in the introduction to this report and should not be used in a differing context. Furthermore, alterations to the initial proposals or changes in conditions on site over time may necessitate an alteration to the report in whole or in part after its submission. Therefore, in the event of any change in proposals or lapse of one year or more from the date of the report, the content of the report should not be relied upon unless referred to Sweco for validation and, if necessary, re-appraisal.

Scientific survey data will be shared with local biological records centre in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) professional code of conduct.

This report was prepared only for our client and is not intended to be relied on by any other party. Third parties should not rely on the facts, matters or opinions set out in this report without the express written permission of Sweco.

Please note that Sweco does not purport to provide specialist legal advice.

General Survey Limitations

Unless stated specifically, drawings and plans are indicative only. As such, the position of features marked on the plans or drawings should not be taken as 100% accurate.

Preliminary ecological appraisal does not assess the presence or absence of species, but is used to assess the potential for habitat to support them. Where a species is seen or there is clear and recent evidence of the presence of a species, this is reported.

With reference to the CIEEM guidelines (ref. 1), a preliminary ecological appraisal report is not suitable to support a planning application. This is because where there is the potential for ecological constraints, further survey work is necessary to determine if an actual constraint is present and establish baseline conditions. Once all ecological constraints have been confirmed following any further surveys or assessments that may be required, the effect of the proposals in relation to each of these constraints should be assessed in an ecological impact assessment report, which should be suitable to support a planning application.



Site Specific Limitations

The site was assessed from outside the fence line as access into the site was not possible on the day of the survey visit. Due to the nature of the habitats present on site, and good visibility of habitats on site from the fence line, this is not considered a significant limitation to the results and conclusions within this report.



1 Introduction

1.1 Purpose

This preliminary ecological appraisal report (PEAR) has been prepared by Sweco for Future High Streets Limited and relates to proposed commercial development at Tear drop site (Land off Cambridge Road, Milton, Cambridge, CB24 6AZ) for which planning permission will be sought.

Design proposals were still in the early stages at the time of writing this report and no drawings were available for review. However, proposals are understood to include construction of commercial/industrial units along with associated drainage, parking, soft and hard landscaping.

The purpose of this report is to:

- identify potential ecological constraints to development
- determine the need for further survey work to confirm baseline ecological conditions in order to produce an ecological impact assessment (EcIA) to support a planning application
- highlight opportunities for ecological enhancement.

1.2 Site Description

The site occupies an area of approximately 1.9 ha and is located around national grid reference TL 47198 62137, to the south of Milton.

Habitats on-site include: artificial unvegetated; unsealed surface with ruderal/ephemeral vegetation, developed land with a sealed surface (hardstanding) and dense scrub (dominated by hawthorn and bramble). Dense scrub to the west of the site is described within this report as the 'green buffer zone'.

Habitats surrounding the site boundaries include: native species hedgerow, tree line, dense scrub, and broadleaved woodland. The site is bounded by Cambridge Road to the north, the A14 to the south, and the A10 (Milton Bypass) to the west.

The A14 provides a major barrier to terrestrial animals to the south of the site. Beyond the A14 to the south of the site are: a sewage treatment works, commercial and industrial buildings, and residential housing associated with Cambridge.

To the north of Cambridge Road is a large supermarket, a recreation ground and housing associated with Milton town. More widely to the north of the A14 is agricultural land bounded by hedgerows.

Directly to the east of the site is a cycle/footpath bridge that crosses the A14. This bridge provides habitat connectivity beneath it, between the site and Milton Country Park situated to the east of the site. Milton Country Park is otherwise separated from the site by an industrial estate.

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The indicative site red line boundary for the site is shown in figure 1.1 below:



Figure 1.1 Indicative development boundary (red line). Map data: © 2021 Google.



2 Legislation and Policy Context

2.1 Current UK Legislation

The main pieces of legislation relating to ecology within England are:

- The Conservation of Habitats and Species Regulations 2017 (as amended) transposes European Union Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. These regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' and the adaptation of planning controls for the protection of such sites and species. Under the regulations, public bodies have a duty in exercising their functions to have regard to the EC Habitats Directive.
- The Wildlife and Countryside Act 1981 (as amended) provides detail on a range of protection and offences relating to wild birds, other animals, and plants. The level of protection depends on which Schedule of the Act the species is listed on. Licences are available for specific purposes to permit actions that would otherwise constitute an offence in relation to species.
- The Natural Environment and Rural Communities (NERC) Act 2006 imposes an obligation on all public bodies, including local authorities, to consider whether their activities can contribute to the protection of wildlife. The duty is created by section 40(1) of the Act, which states that: "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." Section 41 requires the Secretary of State to work with Natural England to publish a list of habitats and species that are a priority for local authorities to take into account, for example when assessing planning applications.
- The Protection of Badgers Act 1992 exists for welfare reasons, to protect badgers (*Meles meles*) from cruelty. Under the act it a criminal offense to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so, or to intentionally or recklessly interfere with a sett.

The reader is referred to the original legislation for definitive interpretation.

2.2 Planning Policy

The recommendations of this report are in line with the key principles of the National Planning Policy Framework (ref. 2) and Government Circular 06/05 (ref. 3).

Local planning policies relating to ecology are invariably based on the conservation of species protected under the above legislation, including species and habitats of principal importance listed under Section 41 of the NERC Act 2006; and the protection of designated sites. All of these features are considered within the scope of this PEAR and therefore any recommendations made herein are likely to be in line with this policy.



3 Methods

3.1 Technical Approach

The PEA has been undertaken following CIEEM's guidelines (ref. 4) and British Standard 42020:2013 (ref. 5). This approach has been employed to provide an indication of the ecological importance of the site and the potential for the site to be used by protected species. As such, the work required has been carried out in accordance with the key principles of the National Planning Policy Framework (ref. 2) and Government Circular 05/06 (ref. 3).

Common names and binomial scientific names of plant species identified are as they appear in Stace (ref. 6).

The conclusions and recommendations for further works are in accordance with current legislation and guidance.

3.2 Personnel

This report was produced by Emma England MSc BSc (Hons) ACIEEM PIEMA, who has over six years' experience in the ecology and environmental sector, including surveys and mitigation for a range of protected species and in producing ecological impact assessments and preliminary ecological assessment reports. All surveyors used to establish baseline information have been trained or were supervised by experienced surveyors with extensive knowledge in the particular survey being undertaken. Surveyor names and qualifications are stated under each survey heading below. This report was reviewed by Mike Youdale BSc (Hons) ACIEEM, who has over 11 years' experience and by Alanna Cooper BSc (Hons) CEnv CSci C.WEM MCIEEM MCIWEM who has over 15 years' experience in ecological consultancy and production of ecological impact assessments.

3.3 Scope of the Assessment and Zone of Influence

The features considered within the scope of this assessment were designated sites, habitats and species of principal importance for conservation and species protected by wildlife legislation

The Zone of Influence (ZOI) is the area over which ecological features may be subject to change as a result of the proposed development and associated activities (ref. 7). The ZOI varies depending on the ecological feature concerned and can extend beyond the site boundary. Where possible, ZOIs will be determined using the results of professionally accredited or published scientific studies. Where such studies are not available, the ZOI will be determined using the professional judgement of a suitably experienced and qualified ecologist. This is in line with professional quidelines (ref. 7).



Given the size and location of the site the zone of influence was generally taken to be the site boundary and its immediate environs only, although the following below exceptions apply:

- Statutory designated sites: The ZOI was considered as 10km for internationally important statutory designated sites, 3km for nationally and locally important designated sites and 2km for ancient woodland. These distances were chosen based on best professional judgement.
- Non-statutory designated sites: A Cambridgeshire and Peterborough Environmental Records Centre (CPERC) standard 2km ZOI was considered sufficient (ref. 8). This distance was chosen based on best professional judgement.
- Bats: A CPERC standard 2km ZOI was considered sufficient. This distance was chosen based on best professional judgement.
- Great crested newt: A 500m ZOI from the site boundary was considered sufficient, based on professional guidelines (ref. 9).
- Badgers: A 20m ZOI was considered sufficient, based on Natural England guidelines (ref. 10).
- Water vole: a 5m buffer zone around any watercourse/wetland habitat was considered a sufficient ZOI, based on professional guidelines (ref. 11).

3.4 Desk Study

The Multi-Agency Geographic Information for the Countryside (MAGIC) (ref. 12) online database was consulted to obtain geographic information on nationally and/or internationally/European important site designations of relevance to the site and the location of granted protected species licences.

CPERC was contacted for details of any non-statutory designations and records of protected/notable habitats and species within 2km of the site's central national grid reference. Only records of protected species from within the last 10 years are considered within this report. This was considered sufficient in order to provide insight into the likely presence of protected species on site, but was not used to determine likely absence.

Online mapping tools were used to check for the presence of any ponds within 500m of the site boundary in order to inform an assessment of habitat availability and connectivity for great crested newt (*Triturus cristatus*).

A Capita Symonds ecological appraisal report dating to 2007 was reviewed to inform this report (ref. 13).



3.5 Extended UK Habitat Classification Survey

An extended UK Habitat Classification survey of the site shown at figure 3.1 was undertaken on 13 May 2021 by Emma England. Weather conditions at the time of the survey were dry and overcast, with an air temperature of approximately 14°C.

A list of plant species was compiled in accordance with methodology required to establish UK Habitat Classification types (ref. 14) up to level 4. Level 5 was recorded wherever possible, with care to accurately record all habitats of priority importance (if present). Secondary codes were added to polygons where deemed appropriate, taking special care to map mandatory codes for habitat mosaic, complex and origin. Survey was undertaken at the fine scale minimum mapping unit (MMU) of 25m² (polygons) and 1m width/5m long (lines). Key ecological features below the MMU in either area or length were mapped as points.

Habitats were classified and assessed in terms of both their conservation importance and potential to support notable and/or protected species (based on habitat suitability and/or field signs).

The following was searched for and recorded if present during the survey:

- All field signs of protected species or those of conservation interest, including burrows, droppings, footprints and hairs
- Refuges and particular habitat types to be used by certain classes of fauna
- Any mammal paths if found were noted and followed where possible
- Entry points for fauna along fence and/or hedgerow boundaries if present
- Incidental sightings of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Only accessible buildings and established trees adjacent to the site were inspected and assessed in terms of their suitability (negligible, low, moderate or high) to support roosting bats, in line with the Bat Conservation Trust (BCT) survey guidelines (ref. 15).

Ponds/ditches within 500m of the site boundary were subject to a Habitat Suitability Index assessment to assess their suitability for great crested newts (*Triturus cristatus*) where access was possible, in line with relevant guidelines (ref. 16).

The survey was carried out from the site boundary and covered all areas visible from the fence line.



4 Results

4.1 Designated Sites

All relevant desk study data relating to designated sites is attached in appendix A.

There are no designated sites found within the site boundary.

Consultation of the MAGIC online interactive mapping tool confirms the presence of no internationally/European important statutory designations within 10km of the site boundary. One nationally important and four locally important statutory designations are present within 3km of the site boundary.

- Histon Road SSSI (2.9km to the south west)
- Bramble Fields LNR (1.4km to the south)
- Coldham Common LNR (2.7km to the south)
- Longan's Meadow LNR (2.9km to the south)
- Worts Meadow LNR (2,7km to the north)

No ancient woodland is present within 2km of the site boundary.

CPERC has confirmed the presence of four non-statutory designations within the 2km search radius:

- River Cam County Wildlife Site (1km to the east)
- Ditton Meadows City Wildlife Site (2km to the south)
- King's Hedges Hedgerow (1.7km to the west)
- Milton Road Hedgerow (300m to the south, on the opposite side of the A14)

Designations that have good habitat connectivity to the site, or whose qualifying features have the potential to make use of habitats present at the site, are considered potential constraints. None of the sites above are considered to have good connectivity to the proposed development and as such are not considered constraints.

4.2 Habitats

The results of the UK Habitats Classification survey identified the following habitats present on site:

- u1c 17: artificial unvegetated; unsealed surface, with ephemeral/perennial vegetation
- u1b: developed land with a sealed surface
- h3: dense scrub



These habitats are shown on Sweco drawing 65202554-SWE-ZZ-XX-DR-J-0001. Important ecological features associated with the above habitats are shown as target notes on this drawing.

HSI scores for ponds within 500m, with habitat connectivity with the site are included as appendix B.

Appendix C provides a list of plant species encountered for the habitats listed; as such for these plants scientific names are not provided below.

4.2.1 Artificial Unvegetated; Unsealed Surface with Ruderal/Ephemeral Vegetation

The majority of the site comprises the UK Habitat Classification primary habitat "artificial unvegetated, unsealed surface" (u1c), with a secondary code of (17): ruderal/ephemeral vegetation.

The site is understood to have recently been used as a site compound during works to the A14 and shows signs of recent disturbance including leveling of the ground to create a flat surface. Much of the site is bare ground that is sparsely vegetated with pioneering plants. Species noted from the fence line include: bristly oxtongue, burdock, creeping thistle, common mallow, broadleaved dock, bramble, ground ivy and spear thistle.

4.2.2 Dense Scrub: Dominated by Hawthorn/Bramble

An area of approximately 0.4ha to the west and south of the site comprises habitat dominated by a mosaic of dense bramble and hawthorn scrub (h3d and h3f respectively). The area of dense scrub to the west of the site is termed the 'green buffer zone'.

4.2.3 Developed Land with a Sealed Surface: Hardstanding

A small area around the site's entrance comprises hardstanding.

4.2.4 Offsite: Lowland Mixed Deciduous Woodland

Directly adjacent to the site, on a steep embankment to the north and west of the site is a small area of broadleaved woodland (code w1f). Species present include: ash, sycamore, hawthorn, bramble, field maple, and elder. The woodland is considered a Habitat of Principal Importance for nature conservation in England under S41 of the NERC Act 2006.

4.2.5 Offsite: Tree Line

Directly adjacent to the site, to the north is a gappy tree line (code w1g6) including species such as poplar, cherry, elder, hawthorn, ash and field maple. The ground flora includes: grasses, bristly oxtongue, burdock, creeping thistle, bramble, ground ivy, spear thistle, common nettle, crucifers, ribwort plantain, and teasel.

4.2.6 Offsite: Dense Scrub

Directly adjacent to the site to the west and south is dense bramble and hawthorn scrub.



4.2.7 Offsite: Hedgerow (Priority Habitat)

Directly adjacent to the site to the east is a native species hedgerow approximately 3-5m wide by 5m tall. It is dominated by hawthorn, but includes: dogwood, bramble, hazel, cherry and rose. The northern half of the hedgerow is considered species-rich, with the southern section species-poor. The hedgerow is code h2a and is considered a Habitat of Principal Importance for nature conservation in England under S41 of the NERC Act 2006.

4.2.8 Offsite: Waterbodies

Four offsite waterbodies within 500m of the site were assessed for their suitability for great crested newt.

Full details of the HSI assessment are provided as appendix B. Table 4.1 below provides a summary of the results.

Table 4.1 Summary of HSI Results

Waterbody ref.	HSI Score	Pond suitability class	Description
Pond 1	0.51	Below average	This waterbody (Todd's Pitt) is located approximately 320m to the north east of the site. It is a large fishing lake and is considered unlikely to be occupied by GCN.
Pond 2	0.51	Below average	This waterbody (Hall's Pond) is located approximately 475m to the north east of the site. It is a fishing lake and is considered unlikely to be occupied by GCN.
Ditch 1	0.68	Average	180m to the north east of the site, although poorly connected to it. The only connective habitat is found to the south of the site, beneath the cycle path/footbridge to the east. The ditch had low water levels at the time of survey, but is considered to provide habitat with a 55% chance of GCN occupation.
Ditch 2	n/a	n/a	Approximately 50m to the north of the site, separated from it by Cambridge Road. Cambridge Road is considered to provide a barrier to GCN dispersal to the site. This waterbody was dry so no assessment was made. As the ditch was dry during the breeding season for GCN, it is considered unsuitable.



4.3 Species and Species Groups

The ecological desk study and habitat survey have identified habitat suitable to support the below listed species. The site is not considered suitable to support any other protected or otherwise notable species.

No invasive species were noted during the site visit, although it was not possible to conduct a detailed walkover of the site due to access restrictions encountered during the visit.

4.3.1 Foraging and commuting bats

MAGIC shows two records of granted European Protected Species licences for common pipistrelle (*Pipistrellus* pipistrellus), soprano pipistrelle (*Pipistrellus* pygmaeus), brown long-eared (*Plecotus auritus*) and noctule bats (*Nyctalus noctula*), dating between 2010 and 2015, one to the

CPERC provided 52 records of six species, including eight records of indeterminate species, from within the 2km-radius search area within the last 10 years. The species named were common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius's pipistrelle (*Pipistrellus nathusii*), brown longeared bat (*Plecotus auritus*), noctule bat (*Nyctalus noctula*) and Daubenton's bat (*Myotis daubentonii*). The closest were

The dense scrub, woodland and hedgerows on site, and immediately adjacent to the site, provide suitable habitat for commuting and foraging bats. These habitats are surrounded by roads, although they are near the waterbodies and vegetation of Milton Country Park. Further, these habitats provide somewhat fragmented connectivity to vegetation in the wider surrounds. In addition, it is expected that there are relatively high base levels of artificial lighting on the site's boundary vegetation at night. As a result, the somewhat fragmented nature of the habitats and expected levels of lighting mean these habitats have been classified as providing low suitability for foraging and commuting bat as determined using standard professional guidelines (ref. 15).

4.3.2 Amphibians including great crested newt

CPERC provided five records of common toads (*Bufo bufo*) from within the within the last 10 years. The closest were from This is separated from the site by an industrial estate, although a small strip of connective habitat is present to the south of the site.

MAGIC shows one record of a great crested newt class survey return, approximately and dated 2017. The habitat in this location is not linked to the site due to the presence of the major barrier of the A14, and no other records of this species are present on MAGIC.

Ditch 1 was found to provide average suitability for GCN and has some limited connectivity to the site. There is suitable habitat on and adjacent to site for GCN in the form of dense scrub, hedgerows and woodland.



4.3.3 **Nesting birds:**

CPERC provided 295 records of birds from 44 different species within 2km of the application site. Many of these records relate to wetland birds not relevant to the application site. However, species that may be able to make use of the site for breeding and/or foraging include: linnet (*Linaria cannabina*), spotted flycatcher (*Muscicapa striata*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*), redwing (*Turdus iliacus*), song thrush (*Turdus philomelos*) and fieldfare (*Turdus pilaris*).

The dense scrub on site, as well as the hedgerows and woodland immediately adjacent to the site is suitable for common, as well as widespread and declining species of nesting birds. Song thrush (*Turdus philomelos*), woodpigeon (*Columba palumbus*) and blue tit (*Cyanistes caeruleus*) were observed during the site visit. Song thrush are a Species of Principal Importance under S41 of the NERC Act 2006 for nature conservation in England and are red listed due to large declines in recent years.

4.3.4 **Badger:**

CPERC provided three records of European badgers (*Meles meles*) from within the 2km-radius search area within the last 10 years. The closest was approximately

The steep embankment to the west of the site and just off-site is suitable for badgers to make their setts. No evidence of badger was seen on site and the roads surrounding the site are likely to provide a barrier to badgers making use of the site. However, the site could not be fully inspected and as a result, the presence of badger cannot be ruled out.

4.3.5 Reptiles

CPERC provided 20 records of common lizards (*Zootoca vivipara*) and three of grass snakes (*Natrix helvetica*) from within the 2km-radius search area within the last 10 years. The closest was approximately separated from the site

The permissible area surveyed was not suitable for reptiles, but as the site could not be surveyed in detail, habitat suitable for reptiles could not be ruled out. It is noted that in a previous ecology report (ref. 13) some habitat was recorded on site as suitable for reptiles. Therefore, as the site could not be inspected in detail, although considered very low risk, the presence of reptiles cannot be ruled out.

4.3.6 Hedgehog

CPERC provided nine records of west European hedgehogs (*Erinaceus europaeus*) from within the 2km-radius search area within the last 10 years. The closest was approximately



Hedgehogs are Species of Principal Importance under S41 of the NERC Act 2006 for nature conservation in England and could make use of the dense scrub, woodland and hedgerows on and immediately adjacent to the site. No evidence of hedgehogs was observed during the site visit.

4.3.7 Fox/Rabbit

Evidence of rabbit was seen off-site The habitats on site in the form of dense scrub are suitable for sheltering fox and rabbit. These animals are not strictly protected in law and are not of conservation concern, but they are protected from cruel treatment (Wild Mammals (Protection) Act 1996). This may be applicable during site clearance.



5 Ecological Constraints, Opportunities and Recommendations

The evaluation in this section is based on the site survey on 13 May 2021. For purposes of the assessment, it is assumed there has been no change in the condition of the site since the site survey (unless otherwise stated).

5.1 Ecological Constraints and Recommendations

Table 5.1 provides a breakdown of the important ecological features, which could pose a constraint, that have been identified on the site and the associated recommendations including further survey work, assessments, mitigation and/or considerations for the scheme design.

Table 5.1 Identified Ecological Constraints and Recommended Action(s)

Important Ecological Feature (Ecological Constraint)	Legislation/Policy	Recommended action(s)
Great crested newt (GCN)	WCA Sch 5 NERC HabRegs	Collect water samples for eDNA laboratory analysis from a ditch in Milton Country Park within 500m of the proposed development site that has average suitability for GCN. The collection of eDNA samples should be between 15 April to 30 June and be carried out by an appropriately licenced ecologist. If laboratory analysis reveals an absence of GCN: No further survey work or mitigation for GCN would be required. Where laboratory analysis reveals a presence of GCN: The risk of GCN presence on site would be relatively low. As such, a precautionary method statement and Ecological Clerk of Works would be recommended where suitable GCN habitat was being removed. If any GCN were discovered during site clearance, works would need to stop, and a licence obtained from Natural England before works could continue.
Commuting and foraging bats	WCA Sch 5 NERC HabRegs	The 'green buffer zone' and surrounding scrub, woodland, tree lines and hedgerows provide low suitability habitat for commuting and foraging bats. Avoidance: Avoid increased lighting to the boundary vegetation and vegetation within the 'green buffer zone' through the implementation of a bat sensitive lighting plan.



Important Ecological Feature (Ecological Constraint)	Legislation/Policy	Recommended action(s)
		Retain vegetation within the 'green buffer zone' as far as possible. Mitigation: Where increased lighting to boundary vegetation and/or vegetation within the 'green buffer zone' is expected, and/or where habitat within the 'green buffer zone' is to be removed, further survey is recommended. Due to the location of the habitat and expected high base levels of artificial lighting at night, one transect survey (between June and August) and two remote monitoring periods (each 5 days, one within April-May and one within September-October) have been recommended for the site as a reasonable survey effort. The results of the surveys carried out will inform further mitigations.
Reptiles	WCA Sch 5 NERC	Detailed inspection of habitat within the 'green buffer zone' was not possible during the site visit. The previous ecology report for the site (ref. 13) suggested the presence of suitable habitat on site. No suitable habitat was viewed during the site visit. However, it could not be ruled out. Avoidance: Avoid impacts to dense scrub such as within the 'green buffer zone' to ensure no impacts upon reptiles. Mitigation: Where it will not be possible to retain dense scrub habitats within the 'green buffer zone', a walkover of this habitat should be carried out in order to verify its suitability for reptiles.



Important Ecological Feature (Ecological Constraint)	Legislation/Policy	Recommended action(s)
		Where no suitable reptile habitat is found, no further mitigation would be required. Where a small area of suitable reptile habitat is found, a precautionary method statement and Ecological Clerk of Works would be recommended where suitable habitat was being removed. In the unlikely event that a significant quantity of good reptile habitat is discovered, AND all the suitable reptile habitat on site is to be removed, with no habitat retained, a reptile presence/likely absence survey would be required.
Nesting Birds	WCA Sch 1 NERC BoCC	Dense scrub onsite offers potential nesting opportunities. Avoidance: Retain habitats within the 'green buffer zone' to conserve nesting bird habitat on site. Mitigation: Where dense vegetation is to be removed from site, alternative provision for nesting birds should be included within design proposals. For example, integrated house sparrow or swift nest boxes within new buildings, and/or dense vegetation within landscaping designs. Where removing dense vegetation, site clearance should ideally occur between September and February to avoid the nesting bird season. If this is not possible nesting bird checks by a suitably experienced ecologist are required prior to clearance.

WCA - Wildlife and Countryside Act 1981 (as amended). WCA Sch 1 - Wildlife and Countryside Act 1981 (as amended) Schedule 1. WCA Sch 5 - Wildlife and Countryside Act 1981 (as amended) Schedule 5 (killing, injuring and sale of animals). NERC - Natural Environment and Rural Communities Act 2006 Section 41. Species/habitats of principal importance. HabRegs - Conservation of Habitats and Species Regulations 2017 (as amended), Annex I, Annex II, Annex IV of the Habitats Directive. BoCC Red/Amber - Birds of Conservation Concern - Red or Amber listed.



Following completion of the surveys and assessments required, as detailed in table 5.1 above, an EcIA report should be produced in line with CIEEM guidance (ref. 7). This report should detail the methods and results of all the surveys and assessments undertaken, discuss the ecological baseline and the effect of the development on ecological features considering appropriate mitigation. This report will be suitable for submission with a planning application for the scheme.

5.2 Opportunities for Enhancement

In order to enhance the site for biodiversity and help towards achieving a net gain at the site it is recommended that the following ecological enhancements appropriate for the scheme should be considered for inclusion:

- Enhancing the on-site 'green buffer' with native planting/water features.
- Including bird boxes within designs to provide additional nesting space.
- Planting wildlife-friendly and native vegetation within the soft landscaping scheme, including native, species-rich hedgerows managed at 1.8m x1.8m to provide substantial biodiversity features
- Green roofs.



6 Conclusions

Commercial development at Tear drop site (Land off Cambridge Road, Milton, Cambridge, CB24 6AZ) is proposed, for which planning permission will be sought.

The following ecological constraints need to be considered:

- Great crested newt
- Bats
- Reptiles
- Nesting birds

In order to establish baseline ecological conditions at the site and potential effects of the development to complete an EcIA, the following survey and assessments are required:

- Transect and remote monitoring survey for bats; 1 transect and 2 remote monitoring visits
- eDNA survey of an off-site ditch for great crested newt
- Walkover of habitat within the 'green buffer' to verify its poor suitability for reptiles

The potential effects on ecological features could be reduced by including the following within the design for the scheme:

- Bat sensitive lighting plan
- Retention of the 'green buffer zone' to the west of the site

Opportunities exist for the provision of ecological enhancements in the form of:

- Enhancing the on-site 'green buffer' with native planting/water features
- Including bird boxes within designs to provide additional nesting space
- Planting wildlife-friendly and native vegetation within the soft landscaping scheme, including native, species-rich hedgerows managed at 1.8m x1.8m to provide substantial biodiversity features
- Green roofs



7 References

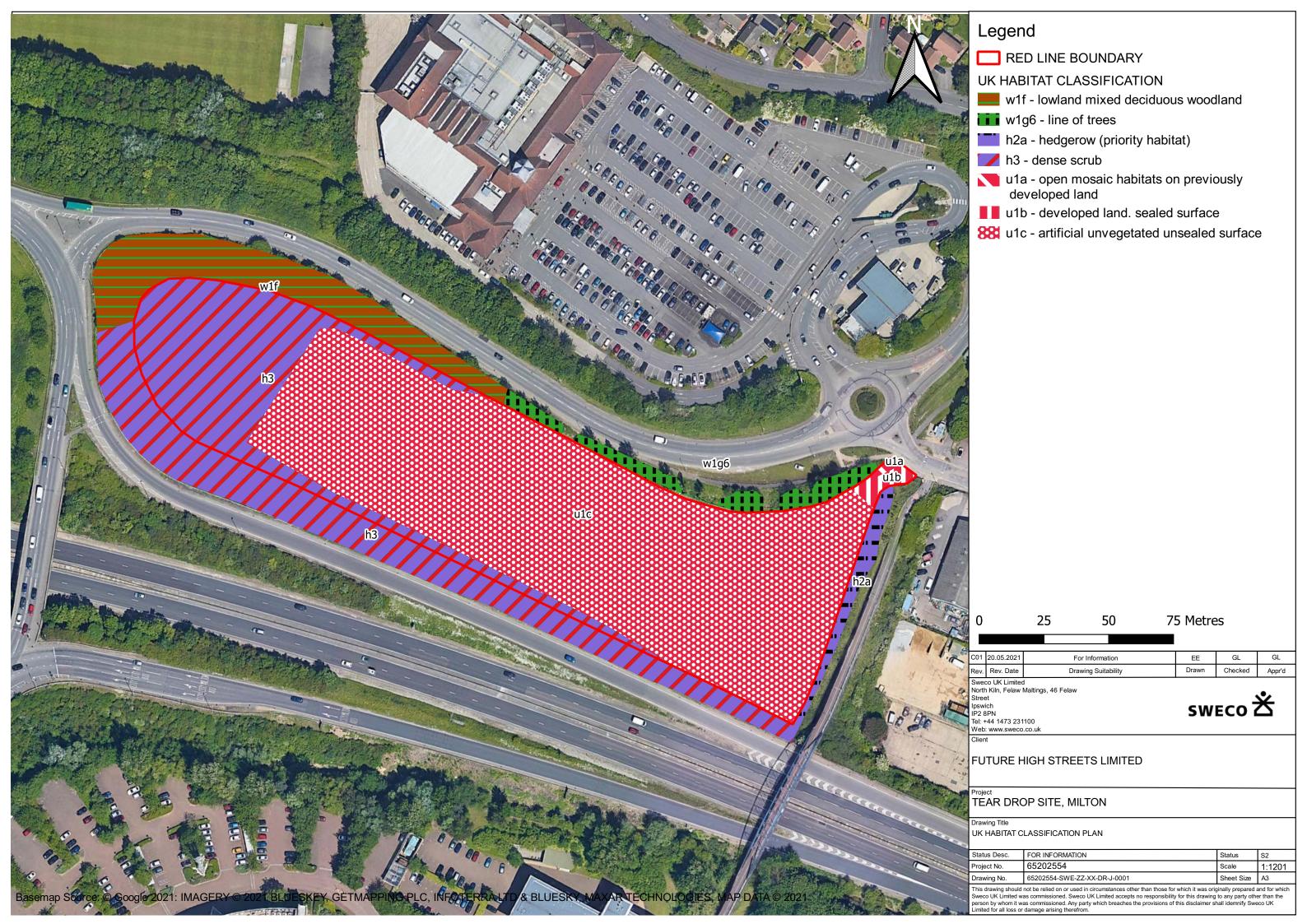
- 1 CIEEM (December 2017) Guidelines for Ecological Report Writing, 2nd ed. Chartered Institute of Ecology and Environmental Management, Winchester.
- 2 Ministry of Housing, Communities and Local Government (February 2019). National Planning Policy Framework.
- 3 ODPM (2005) Government Circular: Biodiversity and Geological Conservation statutory obligations and their impact within the planning system.
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- 5 BSI (2013) BS 42020:2013 Biodiversity Code of practice for planning and development. BSI Standards Limited 2013.
- 6 Stace, C. A. (2010) New Flora of the British Isles (third edition), Cambridge University Press.
- 7 CIEEM (September 2018). Guidelines for ecological impact assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, 2nd ed. Chartered Institute of Ecology and Environmental Management, Winchester
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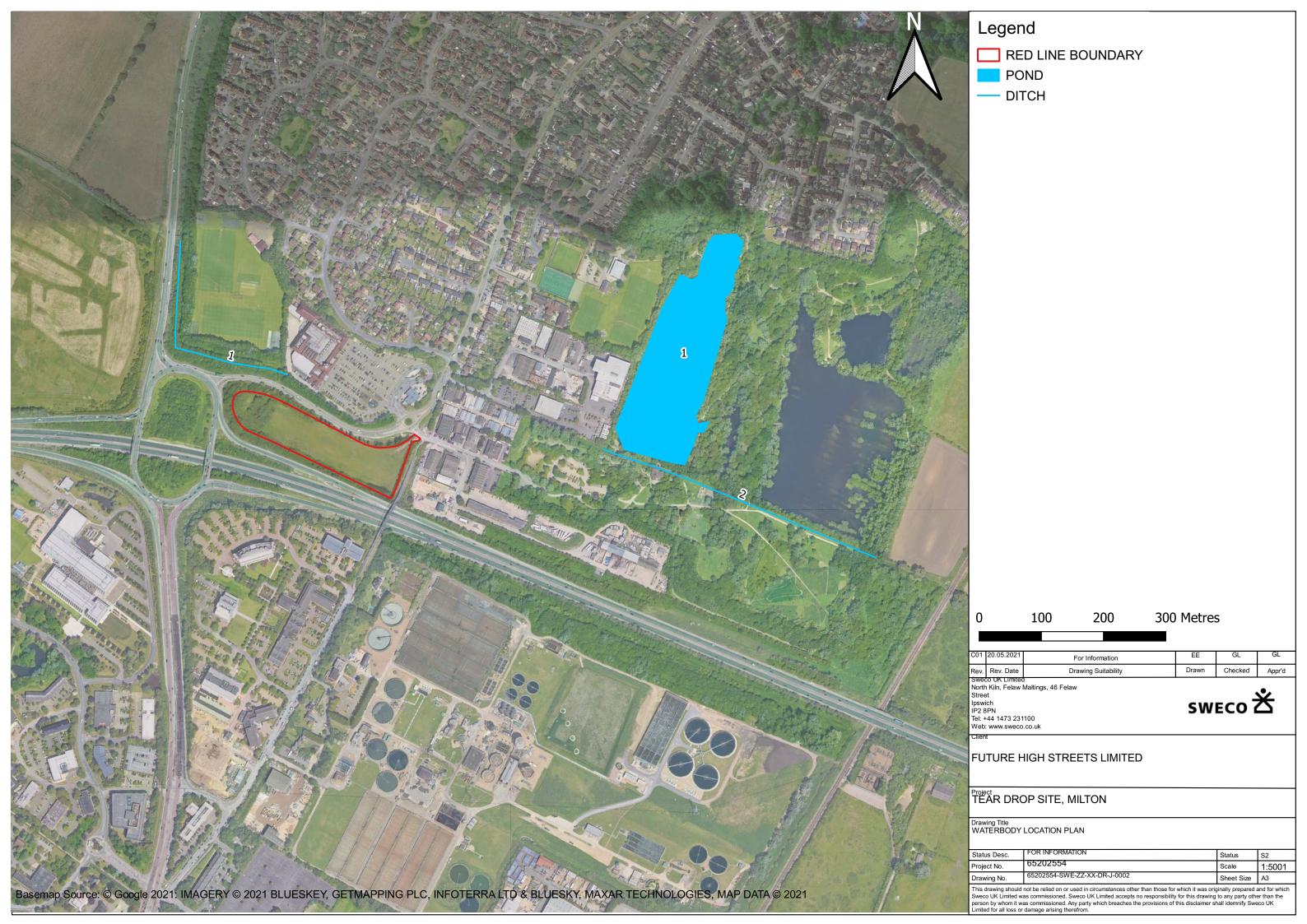


Drawings

65202554-SWE-ZZ-XX-DR-J-0001: UK Habitat Classification Plan

65202554-SWE-ZZ-XX-DR-J-0002: Waterbody Plan



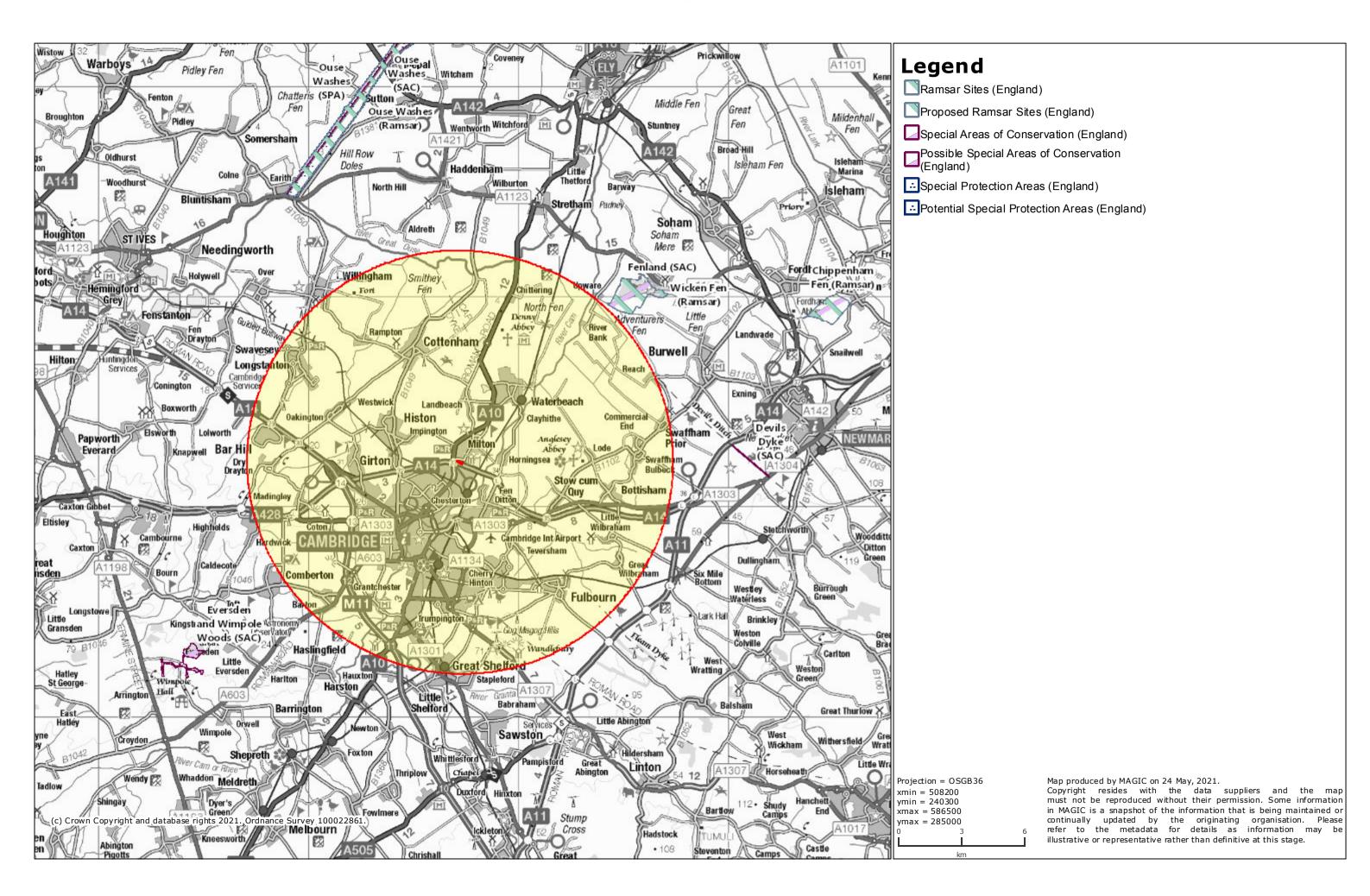




Appendix A – Ecological Desk Study Data

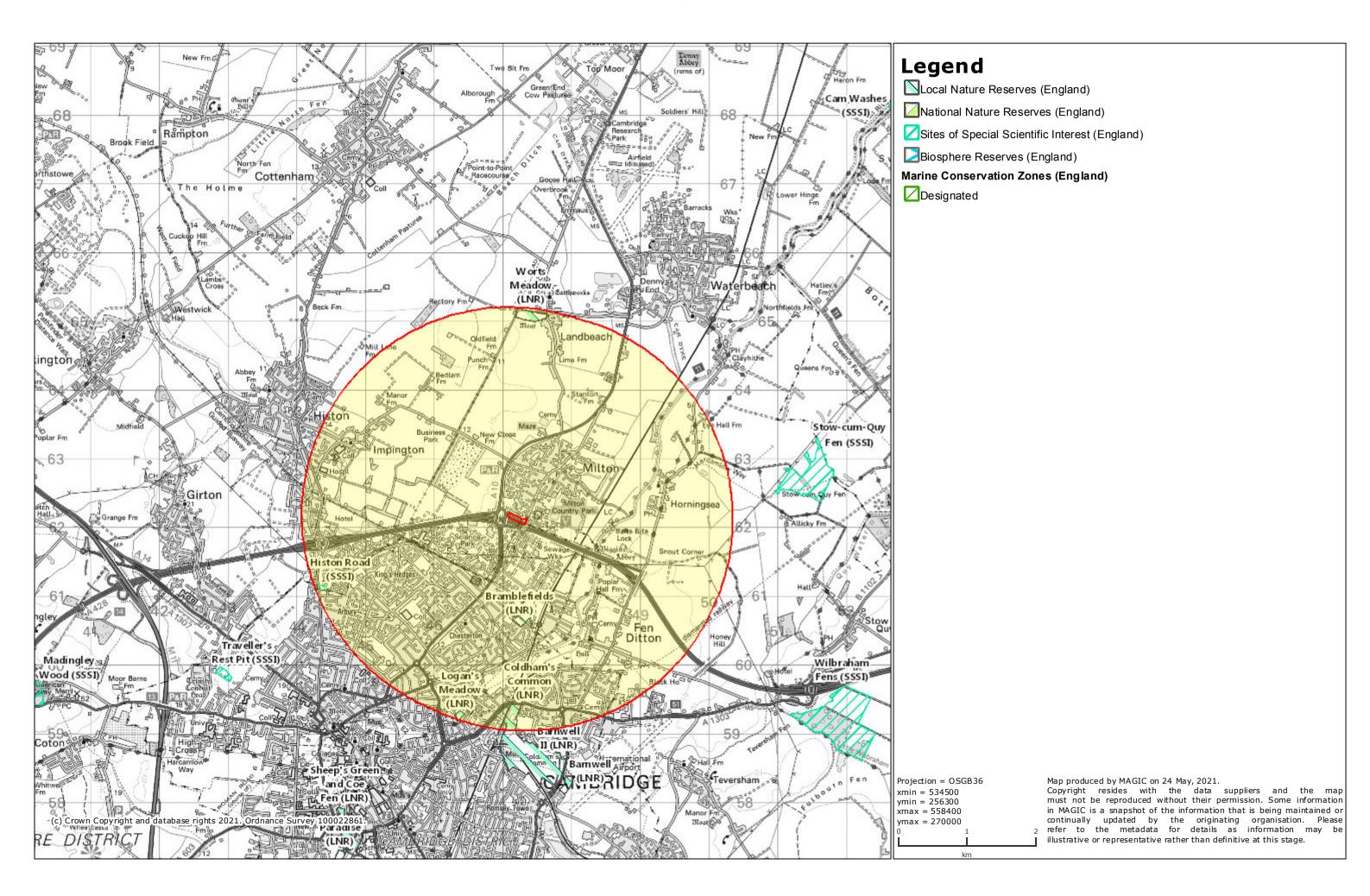


Magic Map





Magic Map



Site Check Report Report generated on Mon May 24 2021 **You selected the location:** Centroid Grid Ref: TL47206212 The following features have been found in your search area:

Local Nature Reserves (England) - points

Reference 1009844

Name BRAMBLEFIELDS

Hectares 2.08

 $\underline{\text{https://designated sites.natural england.org.uk/SiteLNRDetail.aspx?SiteCode=L1009844}}$

Reference 1084815

Name LOGAN'S MEADOW

Hectares 1.11

Hyperlink https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1084815

Reference 1477766

Name WORTS MEADOW

Hectares 5.65

Hyperlink https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1477766

Local Nature Reserves (England)

Reference 1009844

Name BRAMBLEFIELDS

Hectares 2.0

Hyperlink https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1009844

Reference 1475797

Name COLDHAM'S COMMON

Hectares 49.28

Hyperlink https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1475797

Reference 1084815

Name LOGAN'S MEADOW

Hectares 1.11

Hyperlink https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1084815

Reference 1477766

Name WORTS MEADOW

Hectares 5.65

Hyperlink https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1477766

Sites of Special Scientific Interest (England) - points

NameHiston Road SSSIReference1003083

Natural England ContactWest AngliaNatural England Phone Number0845 600 3078

 Hectares
 0.58

 Citation
 1004066

Hyperlink http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1004066

Sites of Special Scientific Interest (England)

Name Histon Road SSSI

Reference1003083Natural England ContactWest AngliaNatural England Phone Number0845 600 3078

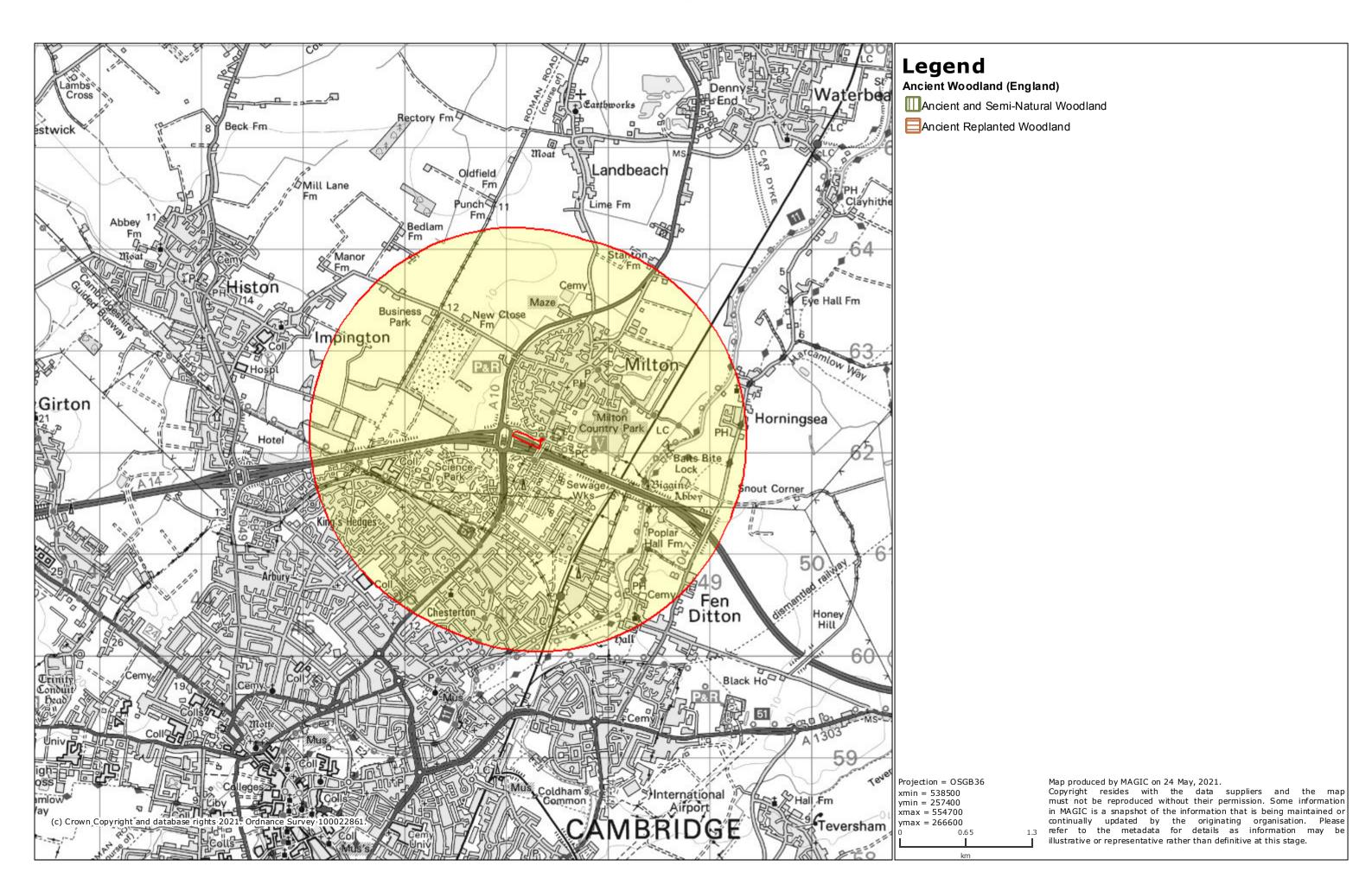
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 Citation
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 Hyperlink
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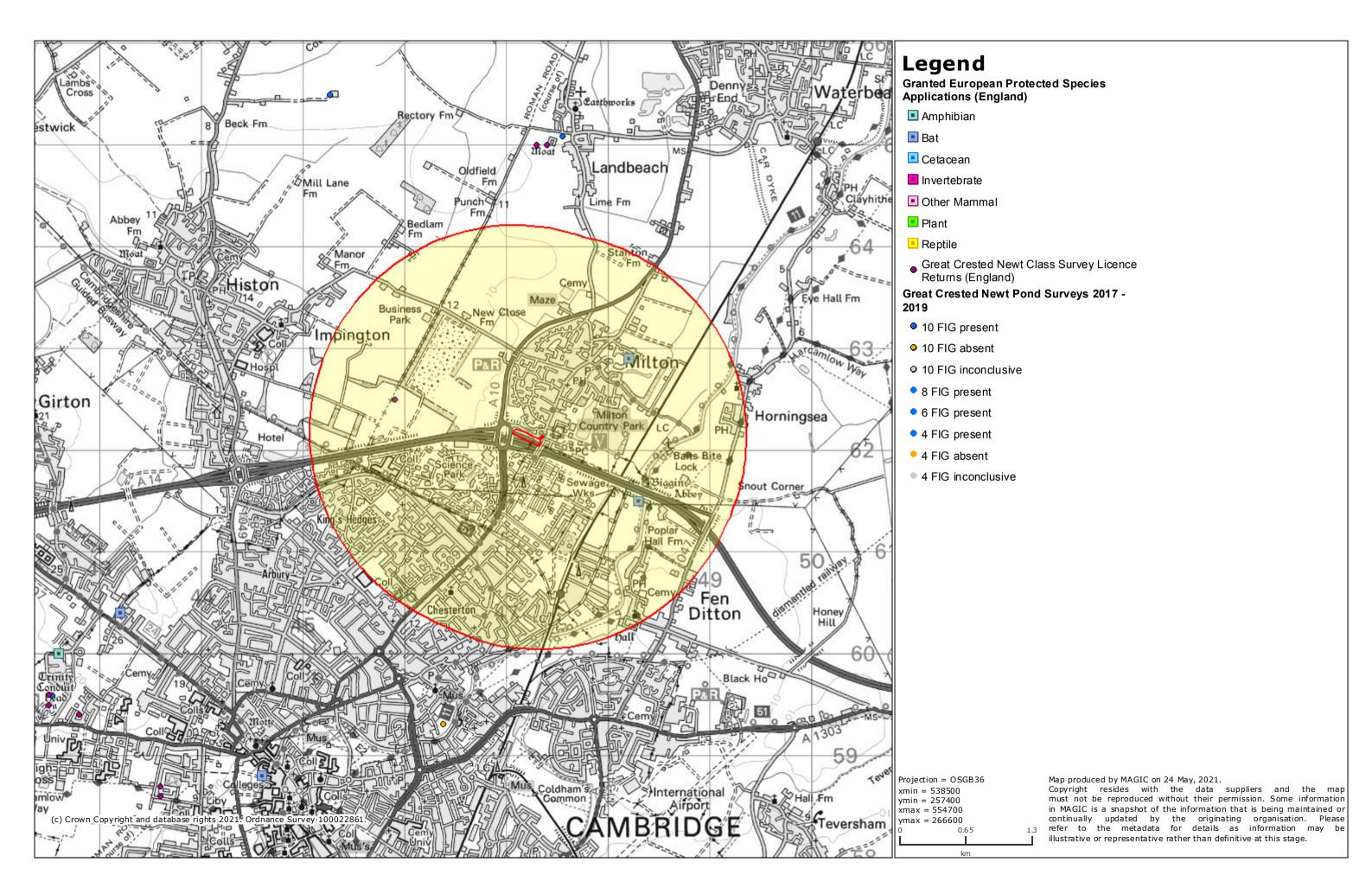


Magic Map





Magic Map





Appendix B – HSI Scores for Ponds



Project: Project Number:	Tear drop site, Milton 65202554	Weather: Dry to light rain, sunny to overcast					Date: 13/05/21		5/21		
Pond Ref:	Todd's Pit - Pond 1	Ditch 1	Ditch 2	Hall's Pool - Pond 2							
SI1 - Location	1	DRY	1	1							
SI2 - Pond area	0.8	DRY	0.8	0.8							
SI3 - Pond Drying	0.9	DRY	0.1	0.9							
SI4 - Water quality	0.67	DRY	0.67	0.67							
SI4 - Shade	1	DRY	1	1							
SI6 - Fowl	0.67	DRY	1	0.67							
SI7 - Fish	0.01	DRY	1	0.01							
SI8 - Ponds	1	DRY	1	1							
SI9 - Terr'l Habitat	1	DRY	1	1							
SI10 - Macrophytes	0.4	DRY	0.4	0.4							
HSI	0.51	Dry	0.68	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pond No	HSI Score	Pond Suitability
Todd's Pit - Pond 1	0.51	Below average
Ditch 1	Dry	Dry
Ditch 2	0.68	Average
Pond 2	0.51	Below average

HSI	
Score	Pond suitability
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent



Appendix C - Plant Species List



PROJECT NAME	PROJECT MANAGER	DATE OF SURVEY					
Tear drop site, Milton			Emma England	13/05/21			
PROJECT NUMBER			AUTHOR				
65202554-SWE-ZZ-XX	(-RP-J-0001		Alanna Cooper				
SURVEYORS							1
Emma England							
Species of Plant Habitats							
		Open Mosaic Habitats on Previously Developed Land: Ruderal/Ephemeral	Dense Scrub	Developed Land with a Sealed Surface: Hardstanding	Lowland Mixed Deciduous Woodland	Line of Trees	Hedgerow (Priority Habitat)
Common name	Scientific name	(u1a17)	(h3d and h3f)	(u1b)	(w1f)	(w1g6)	(h2a)
Field Maple	Acer campestre					Х	
Sycamore	Acer pseudoplatanus				Х		
Umbelifers	Apiaceae	Х					
Burdock	Arctium sp	Х				Х	
Daisy	Bellis perennis						Х
Birch	Betula sp						Х
Knapweed	Centaurea nigra						Х
Creeping Thistle	Cirsium arvense	Х				Х	Х
Spear Thistle	Cirsium vulgare	Х				Х	
Dogwood	Cornus sanguinea						Х
Hazel	Corylus avellana						Х
Cotoneaster	Cotoneaster sp						Х
Hawthorn	Crataegus monogyna		X		Х		Х
Crucifers	Cruciferae					Х	
Cocksfoot	Dactylis glomerata						Х
Teasel	Dipsacus fullonum					Х	Х
Ash	Fraxinus excelsior				Х	Х	
Cleavers	Galium aparine						Х
Geranium	Geranium sp						Х
Ground Ivy	Glechoma hederacea	Х	Х			Х	
Variegated Ivy	Hedera helix						Х
Bristly Oxtongue	Helminthotheca echioides	Х				Х	Х



J-0001	Open Mosaic	Emma England AUTHOR Alanna Cooper	Habitats			13/05/21
J-0001	Open Mosaic		Habitats			
J-0001	·	Alanna Cooper	Habitats			
	·		Habitats			
	·		Habitats			
	·		Habitats			
	·					
Scientific name	Habitats on Previously Developed Land: Ruderal/Ephemeral (u1a17)	Dense Scrub	Developed Land with a Sealed Surface: Hardstanding (u1b)	Lowland Mixed Deciduous Woodland (w1f)	Line of Trees (w1a6)	Hedgerow (Priority Habitat) (h2a)
	(4.4)	((4.10)	()		X
						X
<u> </u>	Х					
<u> </u>						х
Plantago lanceolata					Х	х
oaceae	Х	Х		Х	Х	Х
Poplar sp					Х	
Potentilla reptans					Х	Х
Prunus sp					Х	Х
Prunus spinosa		Х				
Rosa sp		Χ				Х
Rubus fruticosus agg.	Х	Χ				Х
Rumex obtusifolius	Х					
Sambucus nigra		Х		Х		
						Х
rifolium sp						Х
Irtica dioica					Χ	Х
is a second seco	oaceae Poplar sp Potentilla reptans Prunus sp Prunus spinosa Posa sp Pubus fruticosus agg. Pumex obtusifolius Paraxacum officinale Porifolium sp	Land: Ruderal/Ephemeral (u1a17) amium album eucanthemum vulgare flalva neglecta x flyosotis sp flantago lanceolata oaceae x foplar sp fotentilla reptans frunus sp frunus spinosa flosa sp flubus fruticosus agg. flamex obtusifolius faraxacum officinale frifolium sp	Land: Ruderal/Ephemeral (u1a17) Dense Scrub (h3d and h3f) Dense Scrub	Land: Ruderal/Ephemeral (u1a17) Dense Scrub (h3d and h3f) (u1b) amium album eucanthemum vulgare falva neglecta valuatago lanceolata coaceae valuatago lanceolata coaceae valuatago lanceolata valuatago lanceolatago valuatago lanceolata	Land: Ruderal/Ephemeral (u1a17) Dense Scrub (h3d and h3f) Dense Scrub (u1b) Dense Scrub (u1b) (w1f) Dense Scrub (u1b) (w1f) Dense Scrub (w1f) Dense Scrub (w1f) Dense Scrub (w1f) Dense Scrub (u1b) Dense Scrub (w1f) Dense Scrub (w	Land: Ruderal/Ephemeral (u1a17) Dense Scrub (h3d and h3f) Cientific name (u1b) Cientific name (u1a17) Cientific name (u1b) Cientific name (u1c) Cien

Common and scientific names identified are as they appear in Stace, C. (2010) New Flora of the British Isles (3rd edition), Cambridge University Press.



PROJECT NAME	PROJECT MANAGER	DATE OF SURVEY						
Tear drop site, Milton	Emma England				13/05/21			
PROJECT NUMBER			AUTHOR					
65202554-SWE-ZZ-X	X-RP-J-0001	Alanna Cooper						
SURVEYORS							•	
Emma England								
Species of Plant			Habitats					
		Open Mosaic Habitats on Previously Developed Land: Ruderal/Ephemeral	Dense Scrub	Developed Land with a Sealed Surface: Hardstanding	Mixed Deciduous Woodland	Line of Trees	Hedgerow (Priority Habitat)	
Common name	Scientific name	(u1a17)	(h3d and h3f)	(u1b)	(w1f)	(w1g6)	(h2a)	

Names in this list were sourced from the Wildflower Society website: http://www.thewildflowersociety.com/wfs_list_of_all_plants/main_menu_2010.htm

DAFOR key: D = dominant >75% cover; A = abundant 51-75% cover; F - frequent 26-50% cover; O = occasional 11-25% cover; R = rare 1-10% cover, LF = locally frequent, X = present (no frequency recorded).