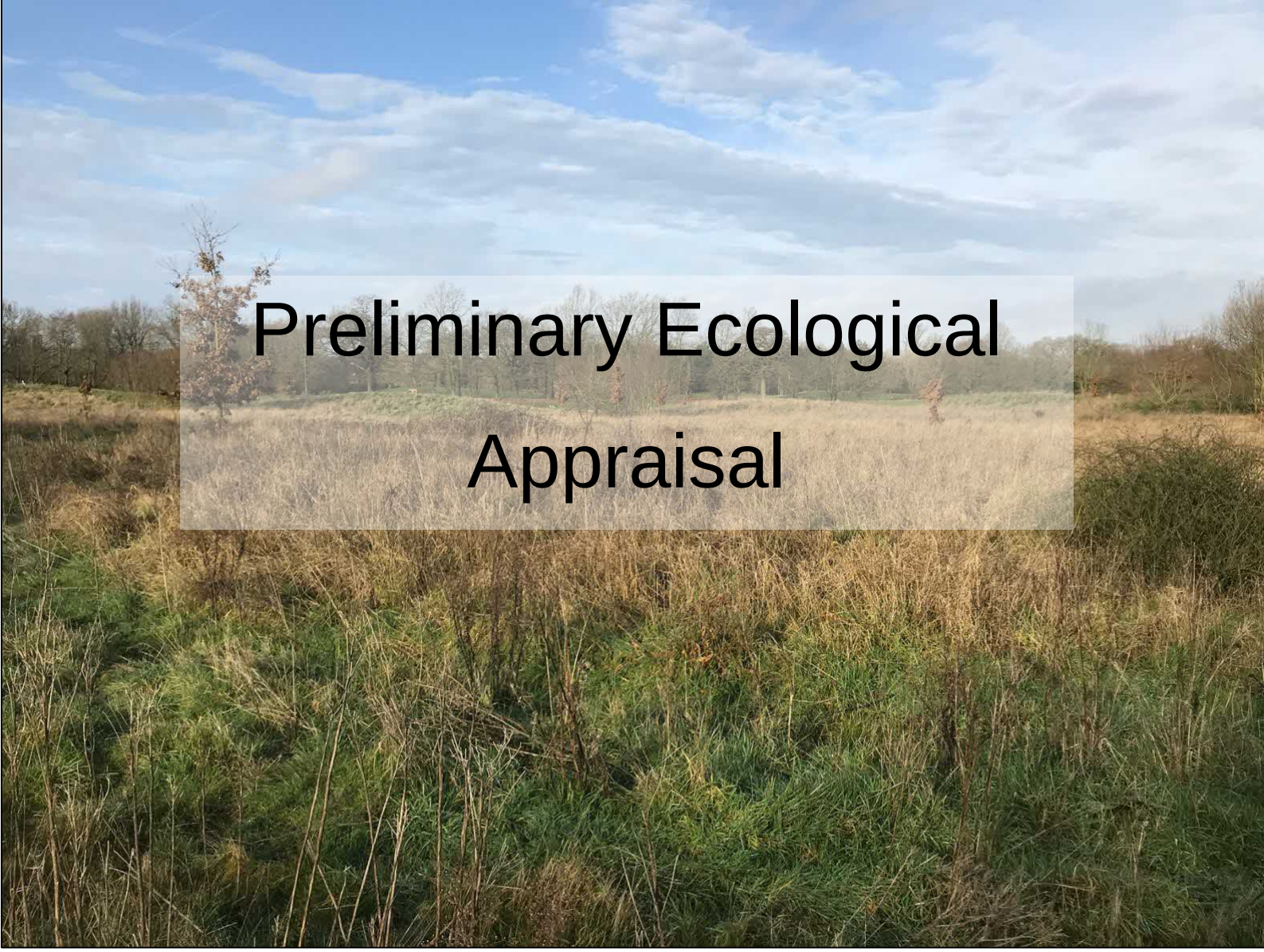

Preliminary Ecological Appraisal

Burhill Golf Course

On behalf of Reading Agricultural Consultants Ltd

January 2020

Ecology by Design Ltd,

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Project Code	Title	Date of Issue
EBD01110	Burhill Golf Course	27th January 2020

	Name	Date
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Contents

1 Executive Summary

Report purpose	This report identifies the potential ecological impacts, mitigation, compensation and enhancement measures for a new reservoir at Burhill Golf Club, Burhill, Walton-on-Thames, Surrey, KT12 4BX.
Date and methods of survey	Surveys of the site were conducted in January 2020 including: A desk study to identify records of designated sites, protected and priority species within 2km An extended Phase 1 habitat survey A Habitat Suitability Index (HSI) assessment of waterbodies within 500m of the site.
Key findings	The site is 2 ha in extent and includes scattered broadleaved trees, dense scrub, scattered scrub, poor semi-improved grassland, tall ruderal, bracken and ephemeral / short perennial / bare ground mosaic. There are no ponds within the site but 9 ponds and 3 wet ditches within 500m of the Site. Protected and priority species present or potentially present include: Potential presence of great crested newts in the terrestrial habitat on site and potential breeding populations within the surrounding ponds; Potential presence of common reptiles within the scrub, grassland, tall ruderal and ephemeral / short perennial habitats; Potential for common birds to nest within the trees, scrub and grassland on site; and Habitats within the site provide negligible opportunities for other protected or priority species.
Potential impacts	Habitats within the site have the potential to support protected species. In the absence of mitigation, development within the site may result in: Removal of great crested newt terrestrial habitat, destruction of resting places and potential for killing / injury of individuals during works; Removal of habitat of common reptiles and potential for killing / injury of individuals during works; and Destruction of active bird nests during vegetation clearance.
Further survey	A presence / absence survey for great crested newts combining traditional survey techniques and environmental DNA is required to determine whether great crested newts are present or likely absent. Where present, population estimate surveys will be required to inform a licence from Natural England in order for works to proceed.
Measures to avoid and/or reduce impacts	A precautionary method must be followed to ensure reptiles are safeguarded during site clearance; Vegetation clearance must be undertaken outside of the nesting bird season (March – August, inclusive), or following a check for nests by an ecologist; and Further mitigation may be required as a result of the great crested newt surveys.
Delivering biodiversity enhancement	Biodiversity net gain may be achieved through planting the new reservoir with native marginal vegetation, avoiding introduction of fish, creating reptile hibernacula out of logs and hardcore, creating log piles out of felled vegetation, installing bird and bat boxes on mature trees and enhancing the surrounding habitats for biodiversity.

2 Introduction

2.1 Background and Survey Objectives

Ecology by Design Ltd was commissioned by Reading Agricultural Consultants Ltd to undertake a preliminary ecological appraisal of land at Burhill Golf Club, Burhill, Walton-on-Thames, Surrey, KT12 4BX (TQ 11009 62259). The client seeks to create an irrigation reservoir at the site to service the golf course.

The aim of the survey and supporting desk study was to satisfy the requirements of the National Planning Policy Framework and relevant legislation and to identify ecological features within or near the site that could potentially pose a constraint to the proposed works and highlight any opportunities for incorporating biodiversity enhancements into the proposals.

The objectives of this report are:

- To identify designated nature conservation sites within the vicinity of the site;
- To identify any records and/or populations of protected, notable or scarce species in the vicinity of the site;
- To record habitats or features of ecological interest within or in immediate proximity of the site;
- To record the presence of, or potential for, protected or notable species;
- To make an ecological assessment and highlight potential ecological constraints;
- To outline any further survey work and potential protected species requirements if relevant; and
- To make suggestions for mitigation, compensation and enhancements where appropriate.

2.2 Site Description

The survey area was approximately 2 hectares and was located towards the south-east of Burhill Golf Club. The site comprised an area of former agricultural land which was unmanaged, comprising poor semi-improved grassland, some self-seeded broadleaved trees and scattered scrub. There was a single raised bund which was colonised with ephemeral / short perennial vegetation and had areas of bare ground. Bordering the site on the eastern boundary was an area of woodland belonging to the adjacent school, and there was Rhododendron (Rhododendron ponticum) encroaching from the woodland.

The wider landscape comprised the Burhill Golf Club to the north, south and west, with a school to the east. The River Mole was situated 450m to the north, and the A3 600m to the south-east.

2.3 Proposed Works

The development proposals are for an irrigation reservoir to be constructed which will service the golf course.

1.1 Scope and Aims of Study

This report presents the approach and findings of the assessment of the potential ecological impacts of the proposed development works. This report will be submitted to Elmbridge Borough Council in support of the planning application.

3 Methods

1.2 Desk Study

A desk study was carried out to identify:

Internationally protected sites within the potential zone of influence of the site (minimum of 7km);

Nationally protected sites within 5km of the site; and

Non-statutory designated sites and records of protected or priority species within 2km of the site (central OS national grid reference TQ 11009 62259).

Sources consulted include:

Surrey Biodiversity Information Centre (SBIC) (returned 17th January 2020)

MAGIC (www.magic.gov.uk) (accessed 22nd January 2020).

Local Planning Policy documents

1.3 Preliminary Ecological Appraisal

A Preliminary Ecological Appraisal (PEA) was conducted on 7th January 2020 by Ecology by Design Ecologists Emily Power and Kate Philpot using standard techniques and methodologies (CIEEM, 2017) and the nomenclature of Stace (2019). The PEA includes a survey of the habitats utilising the standard Phase 1 habitat survey methodology (JNCC, 2010) as well as a scoping assessment of the presence of, or potential for protected and notable species. Where potential impacts on features of ecological interest are identified, the PEA is extended to include an assessment of impact. Any further surveys required are outlined and recommendations are made for appropriate avoidance, mitigation, compensation and enhancement measures.

1.4 Habitat Suitability Index (HSI) Assessment

A Habitat Suitability Index (HSI) assessment was undertaken by Emily Power (Natural England class licence number: 2017-30086-CLS-CLS) and Kate Philpot (Natural England class licence number 2017-32203-CLS-CLS) on 7th January 2020 to determine suitability for great crested newts (Triturus cristatus). Natural England recommends calculation of HSI scores for ponds as a tool to assess habitat quality in a repeatable, objective manner (Natural England, 2017). In particular, the HSI allows individual factors that influence newt presence to be easily identified. Natural England suggests that ecological consultants apply the adapted HSI methods used by the National Amphibian and Reptile Recording Scheme (Herpetological Conservation Trust, 2008) in order to determine the HSI value of each waterbody. This adapted method simplifies the way in which terrestrial habitat is evaluated.

The suitability index is calculated by allocating scores to features associated with each waterbody; these include features such as size, quality of surrounding habitat and presence of fish. These scores are then used to calculate the overall HSI for each waterbody as a number between 0 and 1, with 0 being the least suitable and 1 being the most suitable. The HSI score allows each waterbody to be placed in one of five pre-defined categories defining its suitability for great crested newts (Triturus cristatus) as follows:

<0.5	=	poor
0.5 – 0.59	=	below average
0.6 – 0.69	=	average
0.7 – 0.79	=	good
>0.8	=	excellent

3.1 Limitations/ Constraints

The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of a survey carried out during January 2020. Any appreciable delay in making reference to this report or changes to the proposed development boundary may necessitate a re-survey.

The species information gained from local record centres is largely derived from data submitted from members of the public and volunteers. For this reason, it should be understood that the desk study may not provide an exhaustive list of all protected species that could occur in the local area.

Weather conditions were suitable to conduct the survey.

4 Results and Interpretation

4.1 Desk Study

The desk study identified two internationally designated sites for nature conservation within 7 km of the site, six nationally designated sites for nature conservation within 5km and four non-statutory sites within 2 km of the site.

For developments being brought forward within Elmbridge Borough the key policy document is The Thames Basin Heaths Special Protection Area Avoidance Strategy 2010-2015 (Elmbridge Borough Council, 2011). This document confirms that sites between 400 m and 5 km from the SPA boundary are classified as being within the SPA linear mitigation zone and proponents are therefore required to consult with Natural England on any proposal for 1 or more dwellings (net). This development will not result in the construction of any dwellings and therefore is not applicable.

Table 1. Internationally classified / designated sites within 7km of the site

Name and international reference	Distance and direction from site	Size and interest
South West London Waterbodies (Ramsar[1]) and SPA[2])	5.8 km NE	830 hectares (ha); comprises several gravel pits and reservoirs around Staines. It has large overwintering populations of Gadwall (Anas Strepera) and Shoveler (Anas clypeata). These numbers are significant at a European level.
Thames Basin Heaths (SPA)	4.2 km SW	8,300 ha; lowland heath supporting important populations of: Dartford Warbler (Sylvia undata) Nightjar (Caprimulgus europaeus) Woodlark (Lullula arborea)

There are two Sites of Special Scientific Interest (SSSI), within 5 km of the site boundary. These are summarised in Table 2 below:

[1] A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention. The Convention on Wetlands, known as the Ramsar Convention, is an intergovernmental environmental treaty established in 1971 by UNESCO (United Nations Educational, Scientific and Cultural Organisation).

[2] Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive (79/409/EEC), which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

Table 2. SSSIs notified within 5km of the site

Name & SSSI reference	Distance & direction	Size and interest
Esher Commons (1000151)	0.9 km E	360 ha notified for the presence of over 2000 species of insect, some rare or scarce, on the site which comprises common grazing land, heathland, woodland and ponds.
Ockley and Wisley Commons (1000162)	3.7 km SW	267 ha notified for having a large tract of heathland containing heath, bog, open water, secondary woodland and scrub. These habitats support a rich community of heathland plants and animals.

There are five Local Nature Reserves (LNR) within 5km of the site boundary. These are summarised in Table 3 below:

Table 3. LNRs notified within 5km of the site

Name	Distance & direction	Size and interest
Esher Commons	0.9 km E	See SSSI description in table two.
Ockley and Wisley	3.7 km SW	See SSSI description in table two.
West End Common	1.3 km NE	70 ha common with wetter areas, which have starfruit (Damasonium alisma), woodland with ancient oak (Quercus robur) and beech trees (Fagus sylvatica) and grassland.
Old Common	1.2 km S	16 ha, no other information available.
Claygate Common	4.9 km E	14 ha woodland with oak, beech and hornbeam (Carpinus betulus).

The SBIC data search identified four non-statutory Sites of Nature Conservation Importance (SNCIs) within 2km of the site, as detailed in Table 4 below:

Table 4. Non-statutory designated sites within 2km of the site

Name & Designation	Distance & direction	Details
Fairmile Common	1.3 km SE	3 ha of land designated for its position within the middle of Esher Common SSSI and for the potential of the site to improve with further management.

North of A3 (EL005) (SNCI)		
Whiteley Village (EL013) (SNCI)	1.6 km W	0.3 ha of interest for the presence of species-rich unimproved grassland which is a declining habitat.
Old Common, Cobham (EL017) (SNCI)	1.3 km N	9.1 ha of interest for having acid grassland, secondary wet and dry woodland, neural grassland and a pond. Forms part of an important habitat mosaic.
Field West of Old Common (EL019) (SNCI)	1.6 km NE	2.2 ha of interest for rough grassland which is attractive to common species of reptile.

SNCI: Site of Nature Conservation Importance

4.2 Habitats

At the time of the survey (January 2020) the following habitats detailed in Table 5 were recorded on site.

Photographs are included in Appendix 1 and a habitat map is included in Figure 1, Appendix 2:

Table 5. Habitat types identified during the Phase 1 habitat survey

Habitat type	Description
Scattered broadleaved trees	There were a number of self-seeded scattered broadleaved trees, including grey willow (Salix cinerea), pedunculate oak (Quercus robur) and apple (Malus sylvestris). There were a number of Rhododendron shrubs encroaching from the neighbouring woodland along the eastern boundary. The trees had potential to support nesting birds but were young specimens without features for roosting bats.
Dense scrub	In the south-eastern corner of the site was an area of dense scrub, formed predominantly of bramble (Rubus fruticosus agg.) and dog rose (Rosa canina). The scrub had potential to support nesting birds, reptiles and great crested newt.
Scattered scrub	In scattered patches around the site were areas of scattered scrub, formed of bramble, blackthorn (Prunus spinosa), grey willow and dog rose. The scrub had potential to support nesting birds, reptiles and great crested newt.
Poor semi-improved grassland	The majority of the site was formed of unmanaged poor semi-improved grassland, comprising Yorkshire-fog (Holcus lanatus), false oat-grass (Arrhenatherum elatius) and cock's-foot (Dactylis glomerata), with some wetter areas with soft rush (Juncus effusus). There are forbs in the sward including ragwort (Senecio vulgaris), black knapweed (Centaurea nigra), curled dock (Rumex crispus) and cleavers (Galium aparine). Anecdotal evidence was given that the grassland had previously been agricultural land. The grassland had potential to support reptiles, great crested newt and ground-nesting birds.

Tall ruderal	There were areas of tall ruderal vegetation alongside the scrub and earth bund, largely comprising common nettle (Urtica dioica). The tall ruderal vegetation had potential to support reptiles and great crested newt.
Bracken (Pteridium aquilinum)	There was an area of bracken alongside the adjacent woodland on the eastern boundary. There was some potential for reptiles and great crested newts in this area.
Ephemeral / short perennial / bare ground	Towards the south-east of the site was a raised bund which was formed of bare earth and had self-seeded ephemeral / short perennial vegetation, including mugwort (Artemisia vulgaris), spear thistle (Cirsium vulgare), St John's-wort (Hypericum sp.) and common broom (Cytisus scoparius). There was suitable basking habitat for reptiles in this area.

4.3 Adjacent Habitat

Along the southern boundary there were mature oak trees and a ditch with a slight flow (D1) which led westward and northward towards the River Mole.

Along the eastern boundary of the site was a ditch with a slight northward flow into the river (D2), and a broadleaved woodland which was part of the adjacent school.

There were nine ponds and three ditches within 500m of the site.

4.4 Protected, priority and invasive species

In this section the findings of the desk study and field survey are presented together. Relevant legislation and policy are referred to as appropriate and further details are provided in Appendix 1. The presence or potential for each species / group to occur within the site is considered.

Table 6. Species / species groups considered during the Phase 1 habitat survey

Species	Protection or Status *	Presence/potential at the site
Bats	EPS. Some species are also SPIs. W&CA 1981 Sch5	Forty-two records of nine bat species have been recorded within 2km of the site including common pipistrelle (Pipistrellus pipistrellus), soprano pipistrelle (Pipistrellus pygmaeus), Nathusius' pipistrelle (Pipistrellus nathusii), brown long-eared (Plecotus auritus), Myotis species (Myotis sp.), Daubenton's bat (Myotis daubentonii), noctule (Nyctalus noctula), serotine (Eptesicus serotinus) and barbastelle (Barbastella barbastellus). Individuals are likely to forage over the site and to commute along the woodland on the eastern boundary and the mature trees along the southern boundary. However, there were no mature trees within the site itself suitable for roosting.

Dormouse (Muscardinus avellanarius)	EPS. SPI. W&CA 1981 Sch5	There were no records of dormouse returned by the desk study. There was some suitable habitat on the site within the bramble scrub which is connected to the adjacent woodland, however this woodland has an open structure with little understorey and is therefore unsuitable for dormouse.
Otter (Lutra lutra)	EPS. SPI. W&CA 1981 Sch5	There were no records of otter and no suitable waterbodies on site.
Great crested newt (Triturus cristatus)	EPS. SPI. W&CA 1981 Sch5	There were two records of great crested newt and there is potential for this species to breed within the nine ponds and three ditches within 500m of the site, and to forage and hibernate on site. See Section 4.5 for details of the HSI assessment.
[redacted]		
Water vole (Arvicola amphibius)	W&CA 1981 Sch5	There were no records of water vole and no suitable habitat on site.
Nesting birds	W&CA 1981 Sch1 / Sch5	There were records of 13 bird species, comprising a mix of species typical of urban, heathland and woodland habitat, including nightjar (Caprimulgus europaeus), starling (Sturnus vulgaris), dunnock (Prunella modularis) and house sparrow (Passer domesticus). There are opportunities for foraging and nesting birds within the trees and scrub on site.
Reptiles	EPS. W&CA 1981 Sch5	Forty reptile records comprising grass snake (Natrix helvetica), common lizard (Zootoca vivipara), slow-worm (Anguis fragilis) and adder (Vipera berus) were returned by the desk study. There is suitable habitat for common reptiles in the poor semi-improved grassland, dense scrub, scattered scrub and tall ruderal vegetation. There are suitable basking opportunities on the earth bund.
Common toad (Bufo bufo)	SPI	Seven records of the species were returned by the desk study. The nine ponds and three ditches within 500m of the site provide potential breeding habitat, and the site may be used by foraging and resting individuals.
White-clawed crayfish (Austropotamobius pallipes)	EPS. SPI. W&CA 1981 Sch5	There were no waterbodies on site and therefore no suitable habitat for white-clawed crayfish. There were also no local records.
Invertebrates	SPIs.	There were multiple records of priority invertebrate species returned by the desk study, including stag beetle (Lucanus cervus) and purple emperor (Apatura isis). The habitats on site are of low

		value but there may be opportunities within the scrub for foraging and sheltering.
Protected plants	W&CA 1981 Sch8	There were 16 records of bluebell (Hyacinthoides non-scripta), and there is potential for it to be present along the edges of scrub and alongside the adjacent woodland.
Invasive species	W&CA 1981 Sch9	There were no records of invasive plant species and none were recorded on site. However, the survey was conducted in January which is sub-optimal for botanical surveys and therefore non-native species may have been missed.

* Where:
EPS = European Protected Species under the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended)
SPI = Species of Principal Importance under Section 41 of the NERC Act 2006
W&CA 1981 = Wildlife and Countryside Act 1981 (as amended)
Sch1 = Schedule 1 Birds which are Protected by Special Penalties (W&CA 1981)
Sch5 = Schedule 5 Animals which are Protected (W&CA 1981)
Sch8 = Schedule 8 Plants which are Protected (W&CA 1981)
Sch9 = Schedule 9 Animals and Plants to which Section 14 Applies (W&CA 1981)

4.5 Habitat Suitability Index (HSI) Assessment of Ponds

The component scores and HSI scores resulting from this assessment are shown in Table 7 below. These results indicate that eight of the ponds and all three ditches have some suitability for great crested newts. Pond 9 was discounted as it is situated across the River Mole, which is considered to be a significant dispersal barrier to great crested newts.

Table 7. Habitat Suitability Index (HSI) scores and suitability class

Pond No.	Description/ Notes	Distance (m)	Direction	HSI Score	HSI Category
P1	Artificial lined pond	60	W	0.79	Good
P2	Natural pond within copse	30	N	0.86	Excellent
P3	Natural pond within copse	160	N	0.88	Excellent
P4	Artificial lined pond	290	N	0.71	Good
P5	Artificial lined pond	250	NW	0.72	Good
P6	Artificial lined pond with central island	450	SW	0.69	Average
P7	Natural pond within a flowing ditch	450	SW	0.72	Good
P8	Irrigation reservoir	35	SW	0.5	Below average

P9	Not surveyed	500	NW	Discounted due to being located across a major dispersal barrier	
D1	Flowing ditch through golf course	5	S and W	0.60	Average
D2	Flowing ditch within woodland	15	E	0.64	Average
D3	Flowing ditch through golf course	450	SW	0.73	Good

5 Potential Impacts and Recommendations

5.1 Designated sites

Natural England defines Impact Risk Zones (IRZs) around SSSI's, SACs, SPAs and RAMSAR sites and categories of development for local authorities to determine if they need to consult Natural England in regard to potential impacts upon them.

The IRZ for which the site lies within is not considered to apply to the category of planning application proposed at the site; as such, the potential for impacts on nearby SSSIs are considered unlikely.

Given the nature and scale of the proposals, it is considered that all other designated sites within the surrounding area are sufficiently removed and separated from the site that the proposals will result in no negative impact on designated sites.

5.2 Evaluating importance of habitats and species

Using the criteria in the table in Appendix 5, the majority of habitats within the site are considered to be of negligible importance due to their composition of common and widespread species. However, some habitats may support protected species and therefore may be important at a local level.

Using the criteria in the table in Appendix 6, the site itself is considered likely to be of value to great crested newts, foraging and commuting bats, reptiles and nesting birds, however further surveys are required regarding these species in order to assess importance.

5.3 Potential Impacts

Without mitigation, it is likely that the development will result in the removal of habitat for great crested newt, common reptiles and breeding birds. Impacts during construction could result in the killing or injury of great crested newts and reptiles, and the destruction of active bird nests.

It is not considered likely that there will be any long-term impacts to bats, as the new reservoir will provide foraging opportunities and commuting routes along the woodland and adjacent mature trees will be retained. No lighting is proposed and therefore impacts to bats are likely to be limited to the construction period.

5.4 Recommendations

A great crested newt presence / absence survey should be conducted of the eight ponds and three ditches within 500m, to comprise bottle trapping, torching at night, egg searches, and where any of these three methods are not possible, sweep netting and terrestrial refugia searches. If great crested newts are found, a further two surveys would be required to determine the population size. These surveys must be carried

out between mid-March and mid-June, with at least two surveys between mid-April and mid-May. Environmental DNA (eDNA) surveys may be undertaken from mid-April, which if negative would allow some ponds to be discounted from the survey, however, if positive the full six surveys would be required.

Given the good connectivity to other areas of grassland suitable for reptiles, it is recommended a precautionary working method should be followed to minimise impacts to reptiles. This will involve the phased clearance of vegetation outside of the hibernation season (November - March) in the direction of retained habitats. These habitats should be enhanced for reptiles through the creation of hibernacula (see example in Appendix 7) and through managing a mosaic of rough grassland and scrub.

Vegetation clearance should be undertaken outside the bird nesting season which is taken to be March – August, inclusive. If this is not possible, vegetation clearance should be immediately preceded by a check for nests by an ecologist. Any nests found to be active must be left in situ until the chicks have fledged.

Works should only be conducted during daylight hours in order to avoid impacts to foraging and commuting bats.

To enhance the site for biodiversity in line with local planning, various enhancements to the site could be adopted as follows:

Planting plans for the site should include a wide variety of native plants of local provenance which may be planted along the banks of the reservoir and marginal vegetation along the shoreline;

Cut vegetation should be used to create small, stacked piles of wood to provide refuge for reptiles, amphibians and hedgehogs (Erinaceus europaeus) as well as enhancing invertebrate abundance and diversity on site to support a range of other species; and

Bat and bird boxes may be placed on nearby mature trees at a height of at least 4m for bats and 2m for birds, in locations with clear flight lines and on a variety of aspects to provide a variety of environmental conditions through the year.

6 Relevant Legislation and Policy

6.1 European Protected Sites

Habitats of European-wide importance (other than for birds) are listed under Annex I of the Council Directive 92/43/EEC (1992) on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) (Ref. 8.5).

Habitats designated under this Directive are Special Areas of Conservation (SAC's).

Habitats of European-wide importance for birds are listed under the EC Wild Birds Directive (1982) (Ref.8.6). Habitats designated under this Directive are Special Protection Areas (SPA's).

6.2 Natural Environment & Rural Communities Act 2006

Section 40 of the NERC Act, 2006 places a duty upon all local authorities in England to promote and enhance biodiversity in all of their functions. Section 41 lists habitats and species of principal importance to the conservation of biodiversity. These are all the habitats and species in England that have been identified as requiring action in the UK. These species and habitats are a material consideration in the planning process.

6.3 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was updated in February 2019 thereby replacing the older version of July 2018. The new framework sets out in section 15 that to protect and enhance biodiversity and geodiversity, plans should:

> 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.

When determining planning applications, local planning authorities should apply the following principles:

> if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

The following should be given the same protection as habitats sites:

potential Special Protection Areas and possible Special Areas of Conservation;

listed or proposed Ramsar sites; and

sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

6.4 Local Planning Policy

The Elmbridge Borough Council's new Local Plan is currently under consultation and therefore the current Local Plan, comprising the Core Strategy 2011 and the Development Management Plan 2015 apply. The following policies are of relevance to this development:

Policy CS15: Biodiversity

'The Council will seek to avoid loss and contribute to a net gain in biodiversity across the region and the objectives of the Surrey Biodiversity Action Plan (BAP), by:

1. Protecting and seeking to improve all sites designated for their biodiversity importance, as identified on the proposals map, in accordance with PPS9: Biodiversity and Geological Conservation and CS13-Thames Basin Heaths Special Protection Area (SPA), including those sites considered as being relevant to the integrity of the South West London Waterbodies SPA and Ramsar site. Criteria based policies against which proposals will be judged for any development on, or affecting, sites of regional or local significance will be brought forward through future DPD's that address Development Management and Site Allocations;
2. Support the implementation of the Regional Forestry and Woodland Framework by:
    a. Protecting all woodland, including ancient woodland, as shown on the proposals map, from damaging development and land uses;
    b. Promoting the effective management, and where appropriate, extension and creation of new woodland areas including, in association with areas of major development, where this helps to restore and enhance degraded landscapes, screen noise and pollution, provide recreational opportunities, helps mitigate climate change, and contributes to floodplain management;
    c. Replacing woodland unavoidably lost through development with new woodland on at least the same scale;
    d. Promoting and encouraging the economic use of woodlands and wood resources, including wood fuel as a renewable energy source;
    e. Promoting the growth and procurement of sustainable timeber products.
3. Protecting and enhancing BAP priority habitats and species and seeking to expand their coverage by supporting the development of the Biodiversity Opportunity Areas; as shown on the proposals map;
4. Managing and maintaining a mosaic of habitats and rich variety of wildlife across the Council's landholdings in accordance with the Elmbridge Countryside Strategy;
5. Working in partnership to re-store and enhance:
    a. The Thames Basin Heaths SPA, in accordance with CS13-Thames Basin Heaths SPA, which is an area of strategic opportunity for biodiversity improvement.
    b. Brooklands Community Park and Esher Commons Site of Special Scientific Interest (SSSI) in accordance with the Council's most up-to-date mitigation strategy for the Thames Basin Heath SPA and the Esher Commons SSSI Restoration and Management Plan.
6. Maximising the contribution of other green spaces and features, where appropriate, to the area's biodiversity resources including identifying and developing wildlife corridors to provide ecological

'stepping stones' and form a coherent local and regional biodiversity network in accordance with CS12-The River Thames and its tributaries and CS14-Green Infrastructure;

7. Directing development to previously developed land in accordance with CS1-Spatial Strategy, taking account of its existing biodiversity value.
8. Ensuring new development does not result in a net loss of biodiversity and where feasible contributes to a net gain through the incorporation of biodiversity features.'

6.5 Protected Species

6.5.1 Birds

Wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to take or harm them, their nests (whilst in use or being built) or their eggs.

Additionally, for some species it is an offence to intentionally or recklessly disturb the adults while they are in and around their nest or intentionally or recklessly disturb their dependent young (schedule 1 species).

6.5.2 Bats

Bats and their roost sites are protected by UK and European legislation.

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; and

Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.

Additionally, the Conservation of Habitats and Species Regulations 2017 make it an offence to:

Deliberately capture or kill a bat;

Deliberately disturb a bat;

Damage or destroy a breeding site or a resting place of a bat; and

Keep, transport, sell or exchange or offer for sale or exchange alive or dead bat or any part of a bat.

6.5.3 Great crested newt

The domestic legislation protecting great crested newts arises largely from the Habitats Directive, which has a central aim to restore scheduled species to a favourable conservation status.

Great crested newts, their breeding ponds and terrestrial habitats are protected by UK and European legislation. The Wildlife and Countryside Act (1981) (as amended) makes it an offence to:

Intentionally kill, injure or take a great crested newt

Possess or control any live or dead specimen or anything derived from a great crested newt

Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt

Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose

In addition, The Conservation of Habitats and Species Regulations (2017) make it an offence to:

Deliberately capture or kill a great crested newt

Deliberately disturb a great crested newt

Damage or destroy a breeding site or a resting place of a great crested newt

Keep, transport, sell or exchange or offer for sale or exchange a live or any part of a great crested newt

6.5.4 Reptiles

Slow-worm, adder, grass snake and common lizard are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to kill or injure them.

It is not illegal to capture, disturb or to damage their habitats. However, the reptiles themselves are protected so any works to damage their habitat could risk causing harm to reptiles and hence could be illegal.

In addition, smooth snake and sand lizard receive additional legal protection making it an offence to disturb them or to cause damage to their habitat.

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Appendix 1 - Photographs

Photograph 1: Poor semi-improved grassland with scattered trees and scrub (view NW)

Photograph 2: Tall ruderal and dense scrub (view S)

Photograph 3: Ephemeral / short perennial / bare ground mosaic

Photograph 4: Scattered broadleaved trees

Photograph 5: Ditch 1

Photograph 6: Ditch 2

Photograph 7: Ditch 3

Photograph 8: Pond 1

Photograph 9: Pond 2

Photograph 10: Pond 3

Photograph 11: Pond 4

Photograph 12: Pond 5

Photograph 7: Pond 6

Photograph 8: Pond 7

Photograph 9: Pond 8

Appendix 2 - Figures

Figure 1: Habitat Map

Figure 2: Pond Map

Next page.

Appendix 3 - Species List

Common Name	Latin
Alder	Alnus glutinosa
Black knapweed	Centaurea nigra
Blackthorn	Prunus spinosa
Bracken	Pteridium aquilinum
Bramble	Rubus fruticosus agg.
Broom	Cytisus scoparius
Cleavers	Galium aparine
Cock's-foot	Dactylis glomerata
Common bent	Agrostis capillaris
Common bird's-foot trefoil	Lotus corniculatus
Common nettle	Urtica dioica
Common ragwort	Jacobaea vulgaris
Crab apple	Malus sylvestris
Creeping buttercup	Ranunculus repens
Curled dock	Rumex crispus
Daisy	Bellis perennis
Dog rose	Rosa canina
False oat-grass	Arrhenatherum elatius
Grey willow	Salix cinerea
Mugwort	Artemisia vulgaris
Pedunculate oak	Quercus robur
Red fescue	Festuca rubra
Rhododendron	Rhododendron ponticum
Soft rush	Juncus effuses
Spear thistle	Cirsium vulgare
St John's wort	Hypericum sp.

White clover	Trifolium repens
Yorkshire-fog	Holcus lanatus

Appendix 4 – Habitat Suitability Index (HSI) Assessment

Water Body	Habitat Suitability Index Factor											Pond Suitability
	Geographic Location	Pond Area m^2	P7ond Drying	Water Quality	Shade %	Fowl	Fish	Pond Count (1km)	Terrestrial	Macrophytes %	Overall Score	
P1	1	0.7	1	0.67	1	0.67	1	0.9	0.33	0.4	0.79	Good
P2	1	0.6	1	0.67	0.6	1	1	0.9	1	0.9	0.86	Excellent
P3	1	0.8	1	0.67	0.6	1	1	0.9	1	1	0.88	Excellent
P4	1	0.8	0.9	0.67	1	0.67	0.33	0.9	0.33	0.6	0.71	Good
P5	1	-	0.9	0.67	1	0.67	0.33	0.9	0.33	0.7	0.72	Good
P6	1	-	0.9	0.67	1	0.67	0.33	0.9	0.33	0.4	0.69	Average
P7	1	0.3	0.5	0.67	0.6	1	1	0.9	0.67	0.5	0.72	Good
P8	1	-	0.9	0.67	1	0.01	0.33	0.9	0.67	0.4	0.5	Below average
P9	Discounted – situated across a major dispersal barrier											
D1	1	1	0.1	0.67	0.3	1	1	0.9	0.33	0.4	0.60	Average
D2	1	1	0.1	0.67	0.2	1	1	0.9	1	0.3	0.64	Average
D3	1	1	0.1	0.67	1	1	1	0.9	0.67	0.4	0.73	Good

HSI Thresholds:
<0.5 = Poor
0.5 – 0.59 = Below Average
0.6 – 0.69 = Average
0.7 – 0.79 = Good
>0.8 = Excellent

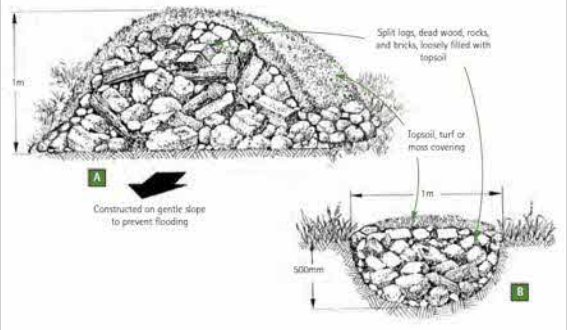
Appendix 5 – Definitions of the level of Habitat Value

Geographic level of Value	Examples
International value	Ramsar Sites, Special Protection Areas, Biosphere Reserves, Special Areas of Conservation. Sites supporting populations of internationally important species.
National value	SSSIs or non-designated Sites meeting SSSI selection criteria, NNRs, Marine Nature Reserves, NCR Grade 1 Sites. Sites containing viable areas of key habitats identified in the UK Biodiversity Action Plan.
Regional value	Sites containing viable areas of threatened habitats listed in a Regional BAP (or some Natural Areas), comfortably exceeding SINC criteria, but not exceeding SSSI criteria.
County / Metropolitan	Sites meeting the criteria for county or metropolitan designation (SINC, CWS, etc.). Ancient semi-natural woodland, LNRs or viable areas of key habitat types listed in county BAPs/Natural Areas.
District / Borough	Undesignated Sites or features considered to appreciably enrich the habitat resource in the District or Borough.
Parish / Neighbourhood	Undesignated Sites or features which appreciably enrich the habitat resource within the Parish or Neighbourhood.
Negligible value	Low grade and widespread habitats.

Appendix 6 – Definitions of the level of Species Value

Geographic level of Value	Examples
International	Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population/number of any internationally important species.
National	Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population/number of any nationally important species.
Regional	Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species.
County/ Metropolitan	Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan "red data book" or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species.
District / Borough	A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Parish / Neighbourhood	Species that are not threatened but are valued at a local level on intrinsic appeal.
Negligible	Common or widespread species.

Appendix 7 – Proposed Enhancements

Products	Description
	Hibernacula A place of refuge for herpetofauna includes newts and reptiles. Constructed by digging a hole and backfilling with logs/ rubble before covering with soil turf.
	2F Schwegler Bat Box (or similar) A standard bat box for smaller bats to be placed on a mature tree at a height of 5m, facing east, south or west. A variety of aspects will provide a variety of environmental conditions through the year. Up to three boxes may be placed on one tree, at a variety of heights and aspects. http://www.nhbs.com/2f-schwegler-bat-box-general-purpose
	Schwegler Bird Box 1B (or similar) The 1B nest box will attract a wide range of species and is available with different entrance hole sizes for different species. The boxes should be placed at intervals of 20m to prevent territory disputes. https://www.nhbs.com/1b-schwegler-nest-box