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Report prepared for: Gradica Building Contractors

For the Site of: 56a Church Hill, Winchmore Hill, Enfield, N21 1JA

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Cherryfield Ecology has prepared this report for the named clients use only.

Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be from the most recent or current season. Therefore, should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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Ecological Appraisal (EA)

0.0 Non-Technical Summary

0.1 Background

This report follows national guidelines JNCC (2010) allowing for a day-time inspection and recommends for further surveys, if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of 56a Church Hill, Winchmore Hill, Enfield, N21 1JA.

The client commissioned Cherryfield Ecology to undertake an EA as the proposals include for the erection of a new detached residential dwelling and associated garden. Plans have been provided (Appendix I)

0.2 Results and Findings

The site consists of bramble scrub and scattered trees. No protected species or evidence of protected species were found on site at the time of the survey.

The site provides **negligible** potential for badger due to the lack of suitable access to the site.

The site provides **negligible** potential for Great Crested Newts (GCN) due to a lack of suitable water bodies within the vicinity of the site.

The site provides **low** potential for reptiles due to some suitable habitat on site but limited access to the site.

A tree (T1) provides **low** potential for roosting bats due to a hole found within the trunk which could provide a suitable cavity.

The scattered tree habitats provide **moderate** potential for breeding birds.

0.3 Impact Assessment and Recommendations

Badger - No further surveys are necessary; however, if any badger setts are found throughout works, all works must stop, and advice sought.

Bats - One of the oak trees on site (T1) provides a potential roosting feature for bats. Prior to development the tree will require an endoscope check by a suitably qualified ecologist to check if the features lead to a suitable cavity / or any bats are present (surveys will be required if bats are found).

Breeding Birds - No further surveys are recommended; however, the development should take place outside the nesting season (March to August). If this is not possible, it is recommended that a qualified ecologist is on site to ensure the building/vegetation is not occupied by breeding birds, prior to demolition/clearance. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

Great Crested Newt (GCN) - No further survey is necessary; however, if any GCN are found throughout works, all works must stop, and advice sought.

Reptiles - No further survey is necessary; however, a qualified ecologist will need to supervise the clearance of any grassland/scrub vegetation on site via a destructive search.

Habitats - All habitats are common and widespread, no impacts foreseen.

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4.4 for further details).

1.0 Introduction

1.1 Aim

The aim of this report is to inform of ecological constraints that may affect the development proposals and recommend to the client if further surveys are required for protected species. An impact assessment is undertaken at this stage; however, if further surveys are required, additional and unexpected impacts may result.

1.2 Background Information

The client, Gradica Building Contractors, has commissioned Cherryfield Ecology to undertake an EA for the site of 56a Church Hill, Winchmore Hill, Enfield, N21 1JA. Planning permission is being sought to build a new detached residential dwelling on the site.

This survey has checked all habitats, buildings, trees (from ground level only) or structures due to be affected by the proposals on site; it includes checking for protected species, signs of protected species or habitat value e.g. crevices, badger setts, ponds etc. as well as mapping the habitats on site.

The inspection was conducted on the 12/12/2022.

The survey can only ever provide a 'snapshot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find evidence.

Biological records have been requested to give the report context and allow a study of the surrounds. The information is often sensitive and therefore a synopsis is provided.

The survey can be conducted year-round with the optimal period between mid-March and mid-October (south)/1st April and 30th September (north). However, it can be limited due to bad weather and in the winter, when some species are not as active, thus evidence and species are often not found. During these periods, habitat value (likely presence) becomes more important to the assessment of the site.

Summary of legislation and National Planning Policy that protects wildlife in England:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- Wildlife and Countryside Act 1981 as amended.
- Countrywide and Rights of Way Act 2000.
- Natural Environment and Rural Communities Act 2006.
- National Planning Policy Framework (“NPPF”).
- Circular 06/05.

This legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture a protected species.
- Deliberately disturb a protected species, whether at rest or not.
- Damage, destroy or obstruct access to a resting place.
- Possess or transport a protected species or any part of that species, unless acquired legally.
- Sell, barter or exchange a protected species, or any part of a species.

1.3 Species Specific Information

All UK protected species have the same protection and the detail under Bats also applies to GCN, Dormouse, Otters and the two UK protected reptiles.

1.3.1 Breeding Birds

All nesting birds are protected under the Wildlife and Countryside Act (as amended) 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. Furthermore, a number of birds enjoy further protection under that Act and are listed on Schedule 1 of the Act. These further protected birds are also protected from disturbance and it may be necessary to operate a “no-go” buffer zone around such nests - typically out to 5m.

1.3.2 Bats

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“Habitats Directive”) which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

1.3.3 Reptiles

There are six species of reptiles in Great Britain (Edgar *et al.* 2010) and four of these are commonly found; the Grass Snake *Natrix natrix* and/or the Barred Grass Snake *Natrix helvetica*), Adder *Vipera berus*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis*.

All native British species of reptiles are legally protected through their inclusion in Schedule V of the Wildlife and Countryside Act 1981. As such, all species are protected from deliberate killing or injury. Therefore, where development is permitted, and there will be a significant change in land use, a reasonable effort must be undertaken to avoid committing an offence. The same act makes the trading of native reptile species a criminal offence without appropriate licensing.

Two species of reptile; the Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis* are further protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which defines UK protected species of animals (“rare reptiles”).

1.3.4 Badgers

Badger *Meles meles* and its habitat are protected under The Protection of Badgers Act 1992, Schedule V of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention 1979.

This legislation makes it an offence to:

- Kill, injure, take or possess a badger.
- Interfere with, damage or destroy a badger sett including e.g. obstruct access to a badger sett.
- Cruelly treat or harm a badger.
- Disturb a badger in a sett.

1.3.5 Great Crested Newts

Great Crested Newts (GCN) *Triturus cristatus* are listed in both The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and in Schedule V of the Wildlife and Countryside Act 1981.

GCN are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

1.3.6 Otter

The Eurasian Otter *Lutra lutra* is the only Otter species native to the UK. The Eurasian Otter is fully protected under Schedule V of the Wildlife and Countryside Act (as amended) 1981 and in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora

(“Habitats Directive”) which defines United Kingdom protected species of animals. This legislation makes it illegal to:

- capture, kill, disturb or injure otters (on purpose or by not taking enough care).
- damage or destroy a breeding or resting place (deliberately or by not taking enough care).
- obstruct access to their resting or sheltering places (deliberately or by not taking enough care).
- possess, sell, control or transport live or dead otters, or parts of otters.

1.3.7 Water Vole

The Water Vole *Arvicola amphibius* are protected under Schedule V of the Wildlife and Countryside Act 1981 and is a priority conservation species. This legislation makes it illegal to:

- intentionally capture, kill or injure water voles.
- damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care).
- disturb them in a place of shelter or protection (on purpose or by not taking enough care).
- possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).

1.4 Protected Sites and Priority Habitats

Some areas with distinctive plants, animals, habitats, geology or landforms are protected at the international, European, national and local level under statutory and non-statutory sites. Some habitats have been identified as needing priority conservation action; UK BAP Priority Habitats are a range of semi-natural habitat types that are identified as being the most threatened and requiring conservation action.

If a statutory site, non-statutory site or UK priority habitat is to be affected in proposed development, details will be outlined below:

There are no protected sites or priority habitats located within the site boundary.

2.0 Methods

The survey follows the national guidelines JNCC (2010), and the following equipment is available for the inspection:

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence.

Target notes are made when appropriate to highlight, for example, protected species or an ‘other feature(s)’ of ecological note.

If a deviation from the guidelines has been made the reason and justification will be explained below:

No deviation from the standard guidelines has been made for this survey.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey only. Species are highly mobile and can turn up from time to time unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys.

Table 1: Habitat value (likelihood) of protected species presence assessed against Collins (2016), Edgar *et al* (2010) and Natural England (2007) etc.

Likelihood of species presence (Habitat Value)	Features that species can use, regardless of evidence being present.
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<p>Confirmed Presence</p>	<p>Species are found to be present during the survey. Evidence of species is found to be present during the survey.</p>
<p>Higher likelihood of presence</p>	<p>Buildings, trees or other structures with features of particular significance for use by protected species e.g. nesting habitat, roosting opportunities, and ponds. Habitat of high quality for foraging e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting species e.g. river and or stream valleys and hedgerows. Site is close to known locations of records for protected species.</p>
<p>Moderate and Lower likelihood of species presence</p>	<p>Several potential habitat opportunities in buildings, trees or other habitats. Habitat could be used for foraging e.g. trees, shrub, grassland or water. Site is connected with the wider landscape by linear features that could be used by commuting species e.g. lines of trees and scrub or linked back gardens. A small number of less significant habitat opportunities. Isolated habitat for foraging e.g. a lone tree or patch of scrub. An isolated site not connected by prominent linear landscape features.</p>
<p>Negligible likelihood of species presence</p>	<p>No features suitable for roosting, minor foraging or commuting.</p>

3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centred on Grid Reference - TQ311946 and Postcode - N21 1JA.

Table 2: Weather Records

Temperature	7°C
Cloud cover	50%
Precipitation	None
Wind	1/12

3.2 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1).

- There are no statutory sites located within the search area.
- There are two NEPS licences granted for bats within the search area:
 - Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *Pipistrellus pygmaeus*, approx. 1300m from the site (Licence 2010-2376).
 - Common Pipistrelle 1200m from the site (Licence 2020-47790).

MAGiC

Magic Map

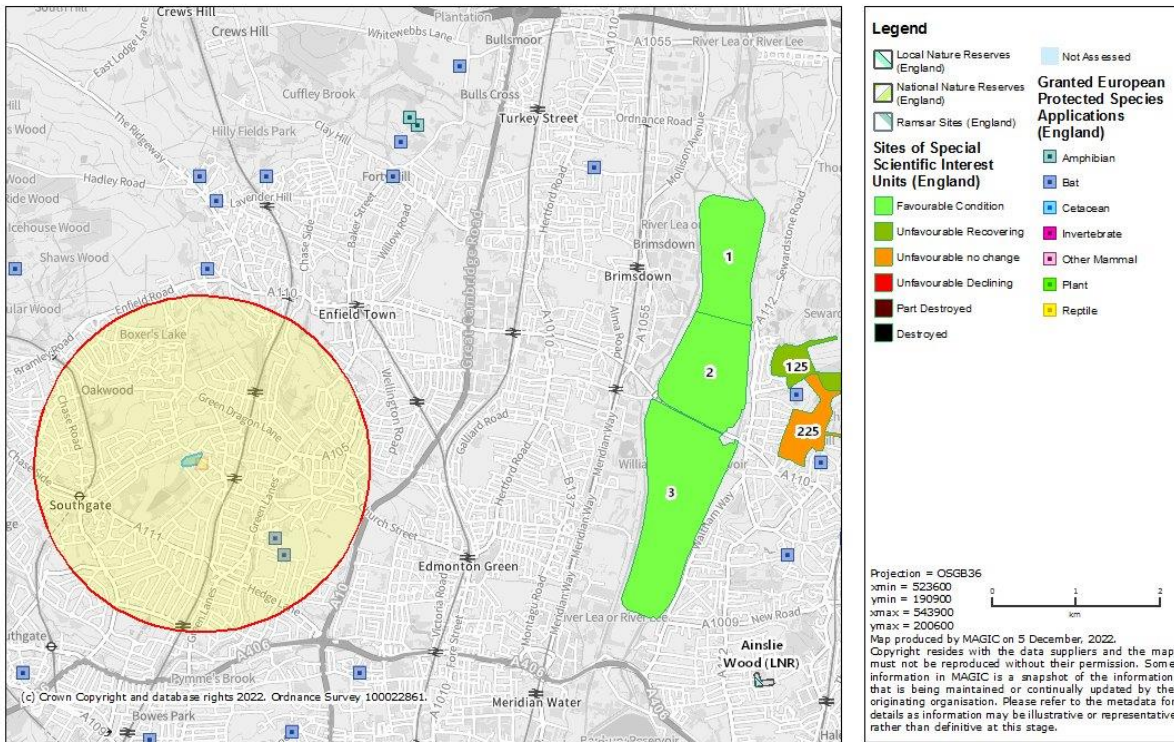


Figure 1: Magic Map Search

3.3 Biological Records Data

A standard 1km data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context.

Biological records were obtained from Greenspace Information for Greater London CIC (GiGL) (2022).

Table 3: Biological Records

Species	Number of Records	Closest Record (accuracy)	Most Recent Record (year)
Amphibians			

Common Frog <i>Rana temporaria</i>	7	637m	2017
Common Toad <i>Bufo bufo</i>	3	637m	2017
Great Crest Newt <i>Triturus cristatus</i>			
Bats			
Barbastelle <i>Barbastella barbastellus</i>			
Brown Long-Eared <i>Plecotus auritus</i>	7	692m	2017
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	11	636m	2020
Daubenton's <i>Myotis daubentonii</i>	11	570m	2017
Leisler's <i>Nyctalus leislerii</i>	2	570m	2007
Nathusius' Pipistrelle <i>Pipistrellus nathusii</i>	10	636m	2017
Natterer's <i>Myotis nattererii</i>	2	570m	2007
Noctule <i>Nyctalus noctula</i>	1	692m	2017
Serotine <i>Eptesicus serotinus</i>			
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	10	636m	2017
Unidentified Bat <i>Chiroptera sp.</i>			
Unidentified Long-Eared <i>Plecotus sp.</i>			
Unidentified Myotis <i>Myotis sp.</i>			
Unidentified Pipistrelle <i>Pipistrellus sp.</i>			
Unidentified Vesper <i>Vespertilionidae</i>			
Whiskered <i>Myotis mystacinus</i>			
Mammals (exc. Bats)			
Badger <i>Meles meles</i>			
Hazel Dormouse <i>Muscardinus avellanarius</i>			
West European Hedgehog <i>Erinaceus europaeus</i>	50	127m	2020
Otter <i>Lutra lutra</i>			
Water Vole <i>Arvicola amphibius</i>			
Reptiles			
Adder <i>Vipera berus</i>			
Common Lizard <i>Zootoca vivipara</i>			
Grass Snake <i>Natrix helvetica</i>			
Slow-Worm <i>Anguis fragilis</i>			
Other			
Birds, Invertebrates, Plants etc.	numerous		
Non-Statutory Sites (see Figure 1b)			
Name	Reference No.	Type	Description/designated for

Grovelands Park & Priory Hospital		Sites of Importance for Nature Conservation (SINC)	Large landscaped park and hospital grounds including some excellent wildlife habitats.
Crews Hill to Bowes Park Railsides		SINC	Well-vegetated railsides providing an important green corridor leading into the centre of Enfield Town.
Oakwood Park		SINC	A large park with areas of woodland and flower-rich grassland.
Hounsden Road Wood and Hounsden Gutter		SINC	A small wood with wet areas.

3.4 Site Location and Surrounds

The site is located in London Borough of Enfield and is surrounded by high density housing in the immediate locale. Table 4 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for use by protected species.

Feature	Description
Water course	Houndsden Gutter is located approximately 369.28 m to the north. New River is located approximately 956.22 m to the south east. A stream forming part of Grovelands Park is located approximately 242.89 m to the south west.
Water bodies	A Boating Lake forming part of Grovelands Park is located approximately 542.45 m to the south west.
Woodland	Woodland forming part of Grovelands Park is located approximately 83.02 m to the north west.
Linear e.g. hedgerows	A Railway line is located approximately 431.86 m to the south east. The search area is dominated by garden hedgerows.
Pasture/arable/grassland	Grovelands Park is located approximately 334.39 m to the south west. Oakwood Park is located approximately 788.61 m to the north west. Winchmore Hills Bowls Club is located approximately 602.94 m to the south east. The search area is dominated by amenity grasslands (in the form of residential gardens and playing fields).
Other	Woodcroft Wildspace is located approximately 455.27 m to the south.

3.5 Habitat, Building, Tree or Other Structure

This section details the structures/habitat reference and descriptions (see Figure 10 for Site Plan).

3.5.1 Habitats

Habitats found on site are mapped using the Phase 1 Habitat (JNCC, 2010) and UK Hab (UK Hab, 2020). When the UK Hab has a subset type, this has been used to match as best as possible to the Phase 1 Habitat.

Table 5: Habitat features found on site, this includes for the Phase 1 Habitat type and the nearest UK Hab type. UK Hab may be broken down to subsets when required and if the habitat meets the criteria.


Habitat Features		
Phase 1 Habitat Type	UKHab Habitat Type	Description
Scattered Trees	Urban Tree	<p>There are a small number of scattered trees on site, dominated by oak <i>Quercus sp.</i></p>  <p>56 Church Hill, London N21 1JA, UK Cherryfield Ecology Ltd 22 Dec 2022 15:00:31</p> <p>Figure 2: Scattered oak trees on site</p>
Introduced Shrub	Introduced Shrub	<p>A cherry laurel tree <i>Prunus laurocerasus</i> and a scattering of cherry laurel and rhododendrum <i>Rhododendron ponticum</i> saplings are present towards the rear of the site.</p>



Figure 3: Cherry Laurel tree on site



Figure 4: Example of rhodendrum saplings to the rear of the site



<p>Scrub</p>	<p>Bramble Scrub</p>	<p>The majority of the site is dominated by dense bramble scrub, which thins out to the rear of the site.</p>  <p>58 Church Hill, London N21 1JA, UK Cherryfield Ecology Ltd 22 Dec 2022 14:46:40</p> <p>Figure 5: Dense bramble scrub at the front of the site</p>  <p>56 Church Hill, London N21 1JA, UK Cherryfield Ecology Ltd 22 Dec 2022 15:18:10</p> <p>Figure 6: Thinned out scrub to the rear of the site</p>
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Table 6: Target Notes

Target Note	Description
T1	A hole found within one of the oak trees on site, inspected from ground level



Figure 7: Hole in tree indicated by red circle



Figure 8: Close up image of hole in tree

T2	There is evidence of historic rabbit use on site, in the form of burrows centered around an old tree stump on site. No further evidence of rabbit use on site was found.
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3.6 Species List

Table 7: Species found on site with relevant *DAFOR abundance. If the DAFOR is blank the species was not present on site.

Common Name	Scientific Name	*DAFOR Scale	Habitat Type
Alder	<i>Alnus glutinosa</i>		
Annual Meadow-Grass	<i>Poa annua</i>		
Annual Mercury	<i>Mercurialis annua</i>		
Apple	<i>Malus sp.</i>		
Ash	<i>Fraxinus excelsior</i>		
Aspen	<i>Populus tremula</i>		
Beech	<i>Fagus sylvatica</i>		
Bent	<i>Agrostis sp.</i>		
Birch	<i>Betula sp.</i>		
Black Horehound	<i>Ballota nigra</i>		
Black Medick	<i>Medicago lupulina</i>		
Blackthorn	<i>Prunus spinosa</i>		
Bluebell	<i>Hyacinthoides non-scripta</i>		
Box Honeysuckle	<i>Lonicera nitida</i>		
Bracken	<i>Pteridium aquilinum</i>		
Bramble	<i>Rubus fruticosus agg</i>	D	Scrub

Bristly Oxtongue	<i>Picris echioides</i>		
Broom	<i>Cytisus scoparius</i>		
Buddleia	<i>Buddleja davidii</i>		
Canadian Fleabane	<i>Conyza canadensis</i>		
Cat's-Ear	<i>Hypochaeris</i> sp.		
Cherry	<i>Prunus</i> sp.	R	Scattered Tree
Cherry Laurel	<i>Prunus laurocerasus</i>	R	Introduced Shrub
Cleavers	<i>Galium aparine</i>	R	Scrub
Cock's-foot	<i>Dactylis glomerata</i>		
Colt's-foot	<i>Tussilago farfara</i>		
Comfrey	<i>Symphytum</i> sp.	R	Scrub
Common Bent	<i>Agrostis capillaris</i>		
Common Bird's-Foot-Trefoil	<i>Lotus corniculatus</i>		
Common Chickweed	<i>Stellaria media</i>		
Common Columbine	<i>Aquilegia vulgaris</i>		
Common Couch	<i>Elymus repens</i>		
Common Knapweed	<i>Centaurea nigra</i>		
Common Lilac	<i>Syringa vulgaris</i>		
Common Mallow	<i>Malva sylvestris</i>		
Common Sorrel	<i>Rumex acetosa</i> subsp. <i>acetosa</i>		
Common Toadflax	<i>Linaria vulgaris</i>		
Cornflower	<i>Centaurea cyanus</i>		
Cotoneaster	<i>Cotoneaster</i> sp.		
Cow Parsley	<i>Anthriscus sylvestris</i>		
Crane's-bill	<i>Geranium</i> sp.		
Creeping Buttercup	<i>Ranunculus repens</i>		
Creeping Cinquefoil	<i>Potentilla reptans</i>		
Creeping Thistle	<i>Cirsium arvense</i>		
Cut-Leaved Crane's-Bill	<i>Geranium dissectum</i>		
Daisy	<i>Bellis perennis</i>		
Dandelion	<i>Taraxacum officinale</i> agg.		
Dock	<i>Rumex</i> sp.	R	Scrub
Dog's Mercury	<i>Mercurialis perennis</i>		
Dogwood	<i>Cornus sanguinea</i>		
Dove's Foot Crane's-Bill	<i>Geranium molle</i>		
Elder	<i>Sambucus nigra</i>		
Elm	<i>Ulmus</i> sp.		
Enchanter's Nightshade	<i>Circaea lutetiana</i>		
Evening Primrose	<i>Oenothera</i> sp.		

False Oat-Grass	<i>Arrhenatherum elatius</i>		
False-Acacia	<i>Robinia pseudoacacia</i>		
False Brome	<i>Brachypodium sylvaticum</i>		
Field Bindweed	<i>Convolvulus arvensis</i>		
Field Maple	<i>Acer campestre</i>		
Firethorn	<i>Pyracantha coccinea</i>		
Garden Privet	<i>Ligustrum ovalifolium</i>		
Garlic Mustard	<i>Alliaria petiolata</i>		
Goat Willow	<i>Salix caprea</i>		
Feverfew	<i>Tanacetum parthenium</i>		
Germander Speedwell	<i>Veronica chamaedrys</i>		
Giant Hogweed	<i>Heracleum mantegazzianum</i>		
Goat Willow	<i>Salix caprea</i>		
Goat's-rue	<i>Galega officinalis</i>		
Good-King-Henry	<i>Chenopodium bonus-henricus</i>		
Gorse	<i>Ulex europaeus</i>		
Great Willowherb	<i>Epilobium hirsutum</i>		
Greater Bird's-Foot-Trefoil	<i>Lotus pedunculatus</i>		
Greater Knapweed	<i>Centaurea scabiosa</i>		
Greater Plantain	<i>Plantago major</i>		
Green Alkanet	<i>Pentaglottis sempervirens</i>		
Ground-Elder	<i>Aegopodium podagraria</i>		
Ground-Ivy	<i>Glechoma hederacea</i>		
Groundsel	<i>Senecio vulgaris</i>		
Hard Rush	<i>Juncus inflexus</i>		
Hart's-Tongue	<i>Phyllitis scolopendrium</i>		
Hawkbit	<i>Leontodon sp.</i>		
Hawthorn	<i>Crataegus monogyna</i>		
Hazel	<i>Corylus avellana</i>		
Hedge Bindweed	<i>Calystegia sepium</i>		
Hedge Mustard	<i>Sisymbrium officinale</i>		
Hedge Woundwort	<i>Stachys sylvatica</i>		

Herb-Robert	<i>Geranium robertianum</i>		
Himalayan Balsam	<i>Impatiens glandulifera</i>		
Hoary Ragwort	<i>Senecio erucifolius</i>		
Hogweed	<i>Heracleum sphondylium</i>		
Holly	<i>Ilex aquifolium</i>	R	Sapling
Holm Oak	<i>Quercus ilex</i>		
Honeysuckle	<i>Lonicera periclymenum</i>		
Hop	<i>Humulus lupulus</i>		
Hornbeam	<i>Carpinus betulus</i>		
Horse-Chestnut	<i>Aesculus hippocastanum</i>		
Horse-Radish	<i>Armoracia rusticana</i>		
Horsetail	<i>Equisetum</i> sp.		
Italian Ryegrass	<i>Lolium multiflorum</i>		
Ivy	<i>Hedera helix</i>	R	Scrub
Ivy-Leaved Speedwell	<i>Veronica hederifolia</i>		
Japanese Honeysuckle	<i>Lonicera japonica</i>		
Japanese Knotweed	<i>Fallopia japonica</i>		
Japanese Laurel	<i>Aucuba japonica</i>		
Lavender	<i>Lavandula</i> sp.		
Lawson's Cypress	<i>Chamaecyparis lawsoniana</i>		
Leyland Cypress	<i>Cuprocyparis leylandii</i>		
Lime	<i>Tilia</i> sp.		
London Plane	<i>Platanus occidentalis x orientalis</i>		
Lords-and-Ladies	<i>Arum maculatum</i>		
Mahonia	<i>Mahonia x media</i>		
Meadow Barley	<i>Hordeum secalinum</i>		
Meadow Buttercup	<i>Ranunculus acris</i>		
Meadow Crane's-Bill	<i>Geranium pratense</i>		
Mexican Orange Blossom	<i>Choisya ternata</i>		
Michaelmas Daisy	<i>Aster</i> sp.		
Mignonette	<i>Reseda</i> sp.		
Montbretia	<i>Crocsmia</i> sp.		
Mouse-Ear Chickweed	<i>Cerastium vulgatum</i>		
Mouse-Ear Hawkweed	<i>Pilosella officinarum</i>		

Mugwort	<i>Artemisia vulgaris</i>		
Mullein	<i>Verbascum sp.</i>		
Nettle	<i>Urtica dioica</i>	R	Scrub
Nipplewort	<i>Lapsana communis</i>		
Norway Maple	<i>Acer platanoides</i>		
Oak	<i>Quercus sp.</i>	O	Scattered Tree
Oxeye Daisy	<i>Leucanthemum vulgare</i>		
Oxford Ragwort	<i>Senecio squalidus</i>		
Pedunculate Oak	<i>Quercus robur</i>		
Pendulous Sedge	<i>Carex pendula</i>	R	Scrub
Perennial Rye-Grass	<i>Lolium perenne</i>		
Perforate St John's-Wort	<i>Hypericum perforatum</i>		
Petty Spurge	<i>Euphorbia peplus</i>	R	Scrub
Pine	<i>Pinus sp.</i>		
Poplar	<i>Populus sp.</i>		
Portuguese Laurel	<i>Prunus lusitanica</i>		
Prickly Sow-Thistle	<i>Sonchus asper</i>		
Procumbent Pearlwort	<i>Sagina procumbens</i>		
Purple Toadflax	<i>Linaria purpurea</i>		
Ragwort	<i>Senecio jacobaea</i>		
Red Champion	<i>Silene dioica</i>		
Red Clover	<i>Trifolium pratense</i>		
Red Dead-Nettle	<i>Lamium purpureum</i>		
Red Fescue	<i>Festuca rubra</i>		
Redshank	<i>Persicaria maculosa</i>		
Rhododendron	<i>Rhododendron ponticum</i>	R	Introduced Shrub
Ribwort Plantain	<i>Plantago lanceolata</i>		
Rocket	<i>Sisymbrium sp.</i>		
Rose	<i>Rosa sp.</i>		
Rosebay Willowherb	<i>Chamerion angustifolium</i>		
Rowan	<i>Sorbus aucuparia</i>		
Russian-Vine	<i>Fallopia baldschuanica</i>		
Salad Burnet	<i>Sanguisorba minor</i>		
Scentless Mayweed	<i>Matricaria recutita</i>		
Selfheal	<i>Prunella vulgaris</i>		
Sheep's Sorrel	<i>Rumex acetosella</i>		
Silver Birch	<i>Betula pendula</i>		
Smooth Brome	<i>Bromus racemosus</i>		

Smooth Sow-Thistle	<i>Sonchus oleraceus</i>		
Snowberry	<i>Symphoricarpos</i> sp.		
Spanish Bluebell	<i>Hyacinthoides hispanica</i>		
Spear Thistle	<i>Cirsium vulgare</i>		
Speedwell	<i>Veronica</i> sp.		
Sycamore	<i>Acer pseudoplatanus</i>	R	Saplings
Tall Fescue	<i>Festuca arundinacea</i>		
Teasel	<i>Dipsacus fullonum</i>		
Timothy	<i>Phleum pratense</i>		
Traveller's-Joy	<i>Clematis vitalba</i>		
Tree-of-Heaven	<i>Ailanthus altissima</i>		
Tufted Hairgrass	<i>Deschampsia cespitosa</i>		
Variegated Yellow Archangel	<i>Lamium galeobdolon</i> subsp. <i>argentatum</i>		
Vetch	<i>Vicia</i> sp.		
Viper's-Bugloss	<i>Echium vulgare</i>		
Virginia-Creeper	<i>Parthenocissus quinquefolia</i>		
Wall Barley	<i>Hordeum murinum</i>		
Wavy Hair-Grass	<i>Deschampsia flexuosa</i>		
Wayfaring Tree	<i>Viburnum lantana</i>		
White Campion	<i>Silene latifolia</i>		
White Clover	<i>Trifolium repens</i>		
White Dead-Nettle	<i>Lamium album</i>		
White Horehound	<i>Marrubium vulgare</i>		
Wild Carrot	<i>Daucus carota</i> subsp. <i>carota</i>		
Wild Privet	<i>Ligustrum vulgare</i>		
Willow	<i>Salix</i> sp.		
Willowherb	<i>Epilobium</i> sp.		
Wood Avens	<i>Geum urbanum</i>		
Wood Sorrel	<i>Oxalis acetosella</i>		
Woody Nightshade	<i>Solanum dulcamara</i>		
Yarrow	<i>Achillea millefolium</i>		
Yellow Corydalis	<i>Pseudofumaria lutea</i>		
Yew	<i>Taxus baccata</i>	R	Scattered Tree
Yorkshire Fog	<i>Holcus lanatus</i>		

*DAFOR - Dominant, Abundant, Frequent, Occasional and Rare



Figure 10: Site Plan

3.7 Evidence or Likelihood of Species Presence

This section details the evidence located and likelihood of species presence.


3.7.1 Bats

Table 8: Bats, evidence or the potential for the species.

Bats found	No bats were found at the time of the survey.
Evidence of bat use	No evidence of bats was found at the time of the survey.
Potential for bat use	<p>Level of likelihood of presence - Low</p> <p>A hole is present within one of the oak trees on site (T1), which could provide suitable roosting potential for bats.</p> <p>No other suitable roosting features were identified within any of the other trees on site.</p> <p>Bats may be using the site for foraging or commuting purposes.</p>

3.7.2 Badgers

Table 8: Badgers, evidence or the potential for the species

Badgers found	No badgers were found at the time of the survey.
Evidence of badger use	No evidence of badger use was found at the time of the survey.
Potential for badger use	<p>Level of likelihood of presence - Negligible</p> <p>The boundaries of the site are walled or fenced, both of which are in good condition.</p>  <p>56 Church Hill, London N21 1JA, UK Cherryfield Ecology Ltd 22 Dec 2022 15:20:35</p> <p>Figure 11: Example of fenced and walled boundaries on site</p> <p>There is potentially suitable habitat further afield from the site within the Grovelands Park, however, the northern and eastern boundaries of the site are adjacent to a road and tarmac car park and the southern and western boundaries are adjacent to further residential gardens, therefore, there is little access to the site for badgers.</p>

3.7.3 Breeding Birds

Table 9: Breeding birds, evidence or potential for the species

Breeding birds found	No breeding birds were found at the time of the survey.
Evidence of breeding bird use	No evidence of breeding birds was found at the time of the survey.
Potential for breeding bird use	Level of likelihood of presence - Moderate The scattered tree habitats on site provide moderate potential for breeding birds

3.7.4 Amphibian

Table 10: Amphibians, evidence or potential for species use.

Amphibians found	No Great Crested Newt (GCN) were found at the time of the survey.
Evidence of amphibian use	No evidence of GCN was found at the time of the survey.
Potential for amphibian use	Level of likelihood of presence - Negligible The nearest water body is approx. 525m to the southwest of the site, Grovelands Boating Lake, which supports a high population of water fowl. Access to the site is limited due to the high fenced and walled boundaries.

3.7.5 Reptile

Table 11: Reptiles, evidence or potential for species use.

Reptiles found	No reptiles were found at the time of the survey.
Evidence of reptile use	No evidence of reptiles was found at the time of the survey.
Potential for reptile use	Level of likelihood of presence - Low The site provides some suitable habitat for reptiles, with other suitable habitat found nearby within Grovelands Park. However, there is limited access to the site and due to the density of the scrub and tree canopy cover there are few basking opportunities on site.

3.7.6 Other Species e.g. Hazel Dormouse / Otter / Water Vole

Table 12: Other protected species, evidence or potential for species use.

Species found	No other protected species were found at the time of the survey.
Evidence of species use	No evidence of other protected species was found at the time of the survey.
Potential for species use	Level of likelihood of presence - Negligible

	No suitable habitat on site for any other protected species
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3.7.7 Invasive Non-Native

Rhododendrum is present on site, however, this is within a residential setting.

4.0 Conclusions, Discussion, Impacts and Recommendations

The following section details the conclusions, discussion, impacts and recommendations in the context of the proposed works.

4.1 Conclusion and Discussion

The proposals include for the erection of a new detached residential dwelling and associated garden.

The site consists of bramble scrub and scattered trees.

4.2 Potential Impacts

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and Table 13 details a proportionate impact assessment based on current information.

Table 13: Impact Assessment

Impact	Bats - A bat roost may be lost in the development. Breeding Birds - Active nests may be lost in the development. Reptiles - Loss of habitat.
Characterisation of unmitigated impact on the feature	Bats - A low-level loss/impact at a local level. Breeding Birds - A low-level loss/impact at a local level. Reptiles - A low-level loss/impact at a local level.
Effect without mitigation	Without mitigation individual bats, birds and reptiles could be killed, injured or trapped during the works.
Mitigation and/or potential enhancement	See Table 13 and Table 14
Significance of effects of residual impacts (after mitigation)	Bats - If lost roosts are replaced by bat boxes, the effects would be negligible. Breeding Birds - If lost habitat is replaced by bird boxes and mitigation is followed, the effects would be negligible. Reptiles - If mitigation is followed, the effects would be negligible.

4.3 Recommendations

Badger - No further surveys are necessary; however, if any badger setts are found throughout works, all works must stop, and advice sought.

Bats - One of the oak trees on site (T1) provides a potential roosting feature for bats. Prior to development the tree will require an endoscope check by a suitably qualified ecologist to check if the features lead to a suitable cavity / or any bats are present (surveys will be required if bats are found).

Breeding Birds - No further surveys are recommended; however, the development should take place outside the nesting season (March to August). If this is not possible, it is recommended that a qualified ecologist is on site to ensure the building/vegetation is not occupied by breeding birds, prior to demolition/clearance. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

Great Crested Newt (GCN) - No further survey is necessary; however, if any GCN are found throughout works, all works must stop, and advice sought.

Reptiles - No further survey is necessary; however, a qualified ecologist will need to supervise the clearance of any grassland/scrub vegetation on site via a destructive search.

Habitats - All habitats are common and widespread, no impacts foreseen.

4.4 Recommended Enhancements and Mitigation

Table 14: Recommended Mitigation

Work	Specification
Precautions to be undertaken during works.	<p>The following must be undertaken:</p> <ul style="list-style-type: none"> ▪ All works must be undertaken within 12 months of this report, thereafter a material change check will be required to check for changes that could affect potential protected species habitat. ▪ If any protected species are found at any point whatsoever during works, works will stop and further advice will be sought. ▪ As evidence of rabbit use is present, heavy machinery must not be used to dig up the burrows as this could cause any rabbits present to be crushed or to asphyxiate. ▪ Trenches and open holes - All trenches and open holes should be covered overnight, or if the hole or trench can't be covered it should be filled in or a rough sawn timber plank installed as an escape route for any species. ▪ Similarly, any open pipework must be covered at the end of each work day to prevent animals from entering/ becoming trapped.

Table 15: The local authority has a duty to enhance biodiversity in its day-to-day duties; the following are suggested enhancements that are easily installed into a development and can be cost effective whilst ensuring a gain for local wildlife.

Work	Specification
Bat, bird and insect box enhancement.	<p>Bat tubes can be installed into the new dwelling.</p> <p>A minimum of two bat tubes (Figure 12) will be installed into the gable ends of the new dwelling.</p>



Figure 12: Bat tube

Bird boxes for a variety of different species can also be installed.

A selection of open fronted boxes and songbird boxes can be installed (Figure 13 and Figure 14); it is recommended that a minimum of two of each of the boxes are installed.



Figure 13: Robin box



Figure 14: Songbird box

A variety of insect boxes can be installed in the area; a minimum of one box is recommended (Figure 15 and Figure 16).



Figure 15: Urban bee nesting box, used for solitary bees and wasps



Figure 16: Bug biome, ideal for ladybirds, lacewings and bees

Hedgehog highways and small mammal connectivity.

In order to allow hedgehogs and other small mammals a continuous corridor across the site, thus linking the garden and green spaces.

- A 13cm-by-13cm is sufficient for any hedgehog to pass through. This will be too small for nearly all pets (Figure 17).
- Remove a brick from the bottom of the wall, creating a 13cm-by-13cm hole.
- Cut a small hole in your fence if there are no gaps.
- Dig a channel underneath your wall, fence or gate.
- Ideally, rather than walls or fences, a hedge will provide foraging, shelter and a route along as well as through the site.

	<p style="text-align: center;">How to make a hedgehog highway</p> <p>You will need</p> <ul style="list-style-type: none"> • A fence panel • Ruler • Pencil • Coping saw • Sandpaper <p>1 If your neighbour is happy, remove your fence panel.</p> <p>2 Measure and mark a 13cm x 13cm hole at the bottom of the panel.</p> <p>3 Ask an adult to help you cut the hole using the coping saw.</p> <p>4 If there are any very rough edges, use the sand paper to smooth them down.</p> <p>5 Put your fence panel back. Your hedgehog highway is now open for business!</p> <p>You could set up your own trail cam to watch and see if any animals are using your highway.</p> <p>Talk to your neighbour! It's important to get their consent to cut a hole in the fence - explain that hedgehogs need to move between gardens to access enough food.</p> <p>www.wildlifewatch.org.uk</p>
<p>Swifts <i>Apus apus</i></p>	<p>Swift nest boxes are recommended due to the increased lack of nesting opportunities swifts are finding in modern built dwelling homes.</p> <p>Information is adapted from the RSPB https://www.rspb.org.uk/our-work/rspb-news/news/stories/swift-advice-for-ecologists/ and http://actionforswifts.blogspot.com</p> <p>The following will be undertaken:</p> <ul style="list-style-type: none"> ▪ Wherever possible, swift bricks will be installed into new or restored buildings to increase the overall availability of nest sites for swifts and other species. Birds such as house sparrow can use swift bricks, but swifts cannot use house sparrow nest bricks. ▪ Integral swift bricks are the preferred option on new housing developments. These should be fitted in clusters of 2 to 4 on gable ends and near the roofline where swifts would naturally look for a potential nest site. ▪ Try to ensure swift bricks have a minimum of 5m clearance beneath and in front. Always avoid locating them above doors and windows to help prevent a disturbance issue to both the birds and human owners.

- Alternatively, swift boxes can be placed on the external walls of a building when a restoration or opportunities don't exist to build in the boxes.



Figure 18: Example of swift bricks, that can be built into a dwelling, Source: <https://www.birdbrickhouses.co.uk/brick-nesting-boxes/>

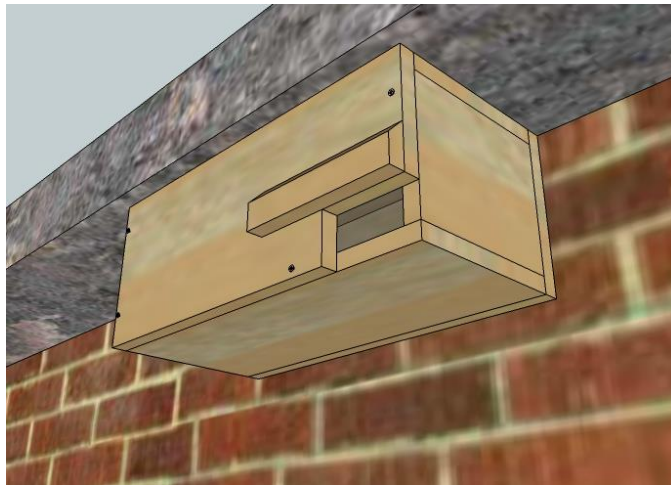


Figure 19: Swift box, source: <http://actionforswifts.blogspot.com/p/diy-swift-box-designs.html>

Hedgerows

Hedgerows provide excellent corridors for wildlife and are extremely important to many species of wildlife. A hedgerow could be included in development plans to assist a range of species (Figure 20).

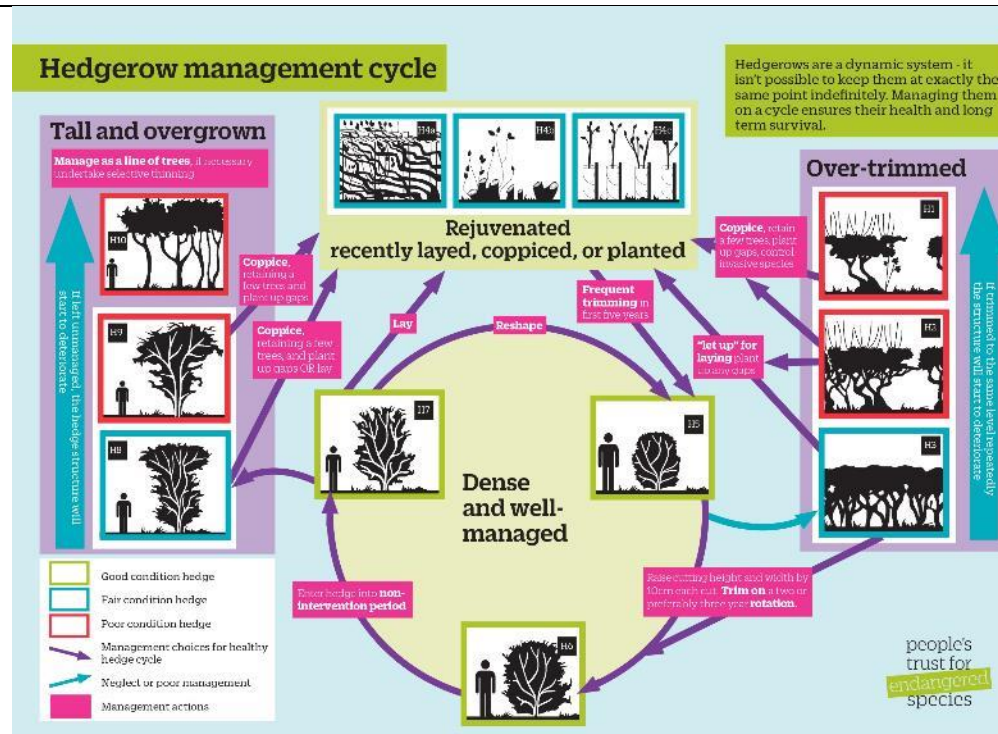


Figure 20: Hedgerow management cycle (<https://hedgerowsurvey.ptes.org/>)

It is recommended that a diversity of hedgerow species is included in the proposed hedgerows on site. Suitable hedgerow species include:

- Hawthorn (*Crateagus monogyna*)
- Hazel (*Corylus avellana*)
- Holly (*Ilex europaeus*)
- Wild Privet (*Ligustrum vulgare*)
- Field Maple (*Acer campestre*)
- Blackthorn (*Prunus spinosa*)
- Guelder Rose (*Viburnum opulus*)
- Wayfaring Tree (*Viburnum lantana*)
- Dog Rose (*Rosa canina*)
- Spindle (*Euonymus europaea*)
- Holly (*Ilex europaeus*)

The hedgerow should include 5 or more woody species within a 30m length in order to be classified as **species-rich**.

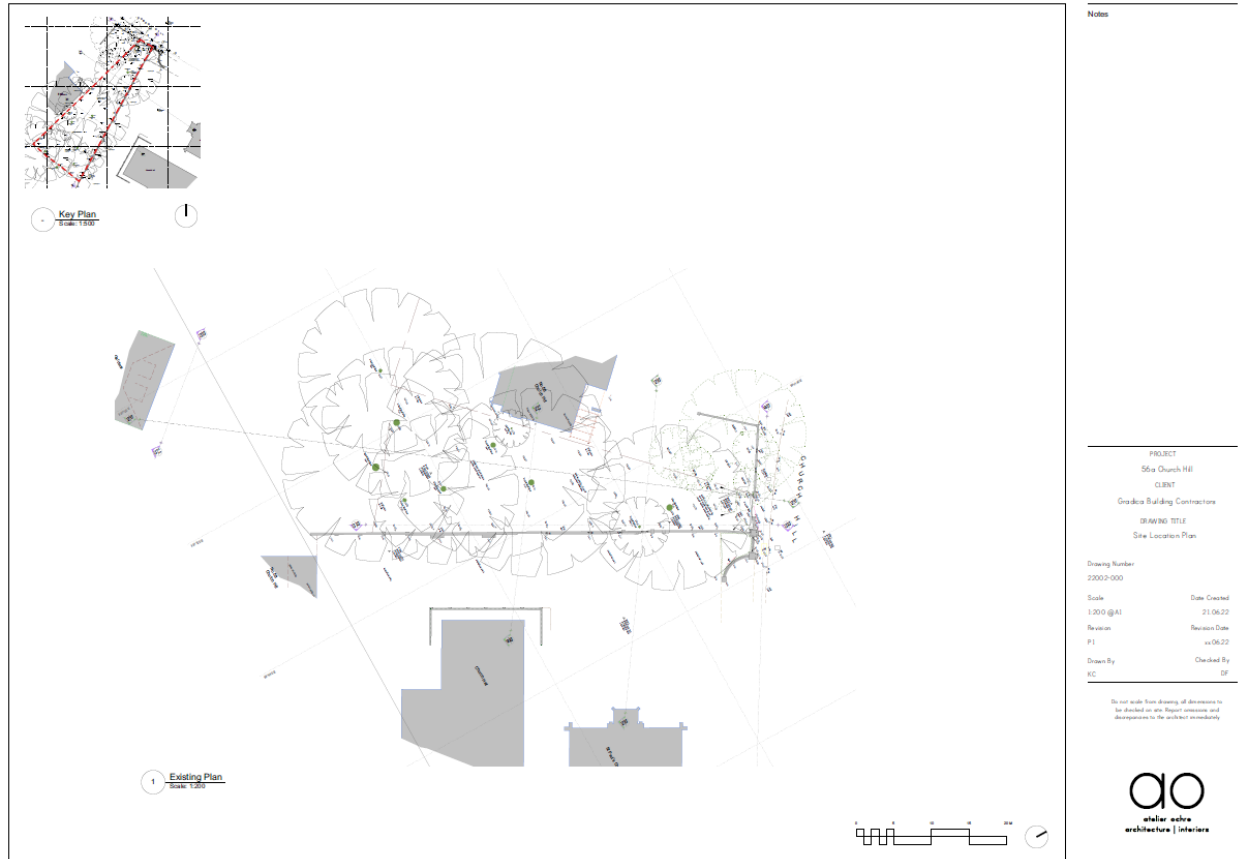
Where possible, no cutting will take place between during peak bird nesting season, which runs from March to September. Where possible, shrubs and

	<p>hedgerows will not be cut back annually, as flower buds often form on second-year growth. Trimming hedges on a two-year or three-year rotation, targeting different sections each year, will make sure there are always flowers for pollinators in spring and berries for birds in autumn. Hedges cut every three years can produce two and a half times as much blossom as those cut annually. Rotational cutting can also save time and money that would be invested in annual cutting.</p>
Reptiles Habitat Enhancement	<p>Log and brash piles can enhance the existing habitat by providing cover for reptiles, as well as enhancing prey availability. Also, including reptile hibernacula and basking banks into development plans will enhance the habitat for reptiles. (Edgar et al., 2010).</p>

5.0 References

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Appendix I - Site Plans



Existing Site Plan (Atelier Ochre Architecture and Interiors, 2022)



Proposed Site Plan (Atelier Ochre Architecture and Interiors, 2022)