

# Ecology Report

## Valley View, Roydon Road, Harlow Hertfordshire

### Two proposed dwellings.

1. **Surveys and report commissioned by Pelham Structures, Brices Yard/Butts Green, Saffron Walden CB11 4RT.**



Existing buildings 72.8 m<sup>2</sup> and 84.75 m<sup>2</sup> Total 157.55 m<sup>2</sup>

Area of dwellings: 411m<sup>2</sup>

Area of garages: 120 m<sup>2</sup>

Area of hardstanding: 920 m<sup>2</sup>

Net 373.45 increase in built environment.

Application Site Area: 3,505 m<sup>2</sup>

Green space 2054 m<sup>2</sup>

This report is a composite document composed from 3 survey periods. The original intention was to submit an application in autumn 2018 for 5 dwellings: 4 semi-detached and a single detached property. For numerous reasons, including a possible change in horse location and management, the client did not pursue the application.

Planning Applications App Number Proposal Status Decision Date HW/FUL/19/00428  
Erection of 2 no. residential dwellings Withdrawn.

07 Feb 2020 HW/FUL/20/00618 Erection of 4 no. new build residential dwellings Withdrawn  
HW/FUL/20/00093 Erection of 1 no. detached dwelling and 2 no. semi-detached dwellings  
Refused.

HW/FUL/20/00618 Allowed on Appeal Decision APP/N1540/W/21/3267464 10th Nov 2020

03rd Nov 2021 HW/CND/22/00230 Application for approval of details reserved by condition 3 (Details of Slab Levels), condition 4 (Nature of Contamination), Condition 5 (External Facing Materials), Condition 6 (Hard & Soft Landscaping) and condition 7 Pending 10 (Scheme of bio-enhancement Features) of planning permission allowed under planning appeal reference APP/N1540/W/21/3267464.

HW/NMA/22/00149 Minor non-material amendments approved.

Variation to Condition 2 (Drawings) of Appeal Decision APP/N1540/W/21/3267464 to allow for dwellinghouses of larger sizes.

Having resolved all the outstanding planning condition issues, including ecological, biodiversity enhancement, hydrological, arboricultural matters, and design layout etc., Application for 2 semi-detached dwellings and 1 detached dwelling was granted planning consent under Appeal judgment Appeal Decision APP/N1540/W/21/3267464 to allow for dwellinghouses of larger sizes. Subsequent to the Appeal a variation of Condition 2 was granted on 10<sup>th</sup> November 2022.

Construction of all three dwellings was well established at the commencement of this third survey period.

The first survey period ran from late March 2018- mid-September 2018

The second survey period ran from early September 2019 to mid-November 2019

**The third survey period for this 2024 Application commenced on 9<sup>th</sup> July 2023 and finished on 7<sup>th</sup> January 2024. During this period the entire application area was a building site. Building materials, log piles and earth spoil being constantly moved.**

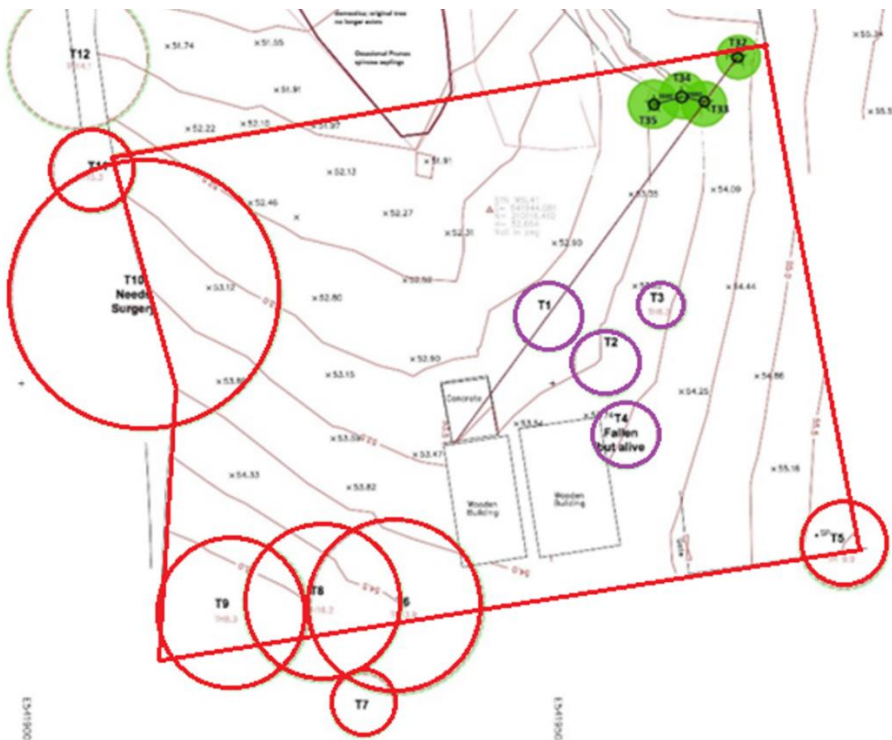
## **2. Grid Reference: 541947, 210105**

## **3. Gradient**

There is a 5 metre rise from the Roydon Road carriageway to the southernmost boundary of the application area. There is a 2 metre rise from the northernmost part of Plots 1 and 2 to the southernmost boundary. The development area is of similar height at the east and west boundaries but the plot dips in the centre at the location of the historic Public Footpath, see old maps, and the ditch that was filled in decades ago.

#### 4. Site history and description

The site lies immediately to the east of East End Farmhouse and immediately to the west of No 1 Roydon Road, Harlow, Essex. CM19 5D and CM19 5HE. To the south of the development described above that is currently under construction.



Plan above showing contours and the existing tree root protection areas. The trees marked in red and green are to be retained, those in purple are scheduled to be removed in this application.

The site was an area of regularly mown improved grassland with a relic pit to the north east. Since the gravel pit workings ceased many decades ago, the pit area has been neglected leading to the self-seeding of a group of multi-stemmed *Acer pseudoplatanus*, Sycamore trees, four of which remain, with very little in the way of ground flora. See below.



The central southern part of the site has an area of dense *Prunus domestica* ssp *domestica* with the occasional *Prunus spinosa* / *Prunus x fruticans* with very limited ground flora, predominantly *Hedera helix*, Ivy and the ubiquitous *Kindbergia praelonga*, Common Feather Moss. See below.



To the southwest of the *Prunus* scrub is an area of recently deposited tree stumps and large logs. In 2023 and 2024 these are moved regularly and used for heating; see below.



On the western edge there is a temporary earth pile covered in ruderal weeds. This pile was altered a few days after this image was taken



On the extreme west side, beyond the application area, lies Public Footpath No 185 109 the eastern boundary of which is not distinctly marked.

The remainder of the undeveloped area is close mown lawn with four fruit trees. There are two large outbuildings: former stable and storage facility. These buildings are in excess of 30 years old. A mobile home, which serves as the site office for the development to the north is situated along the southern boundary.

Beyond the southern boundary lies a small, wooded area, 0.55 hectares in area that should not be adversely affected by this development, with adequate measures to limit the light pollution.

## Note

**As of the commencement of the new construction work to the north, this application area should be considered as a building site. Earth spoil, building materials and what remains of the log pile are constantly being moved. The bare earth when left for a few weeks develops a low density covering of common ruderal weeds. Other than the area of close mown lawn and the existing buildings, there are no permanent habits.**

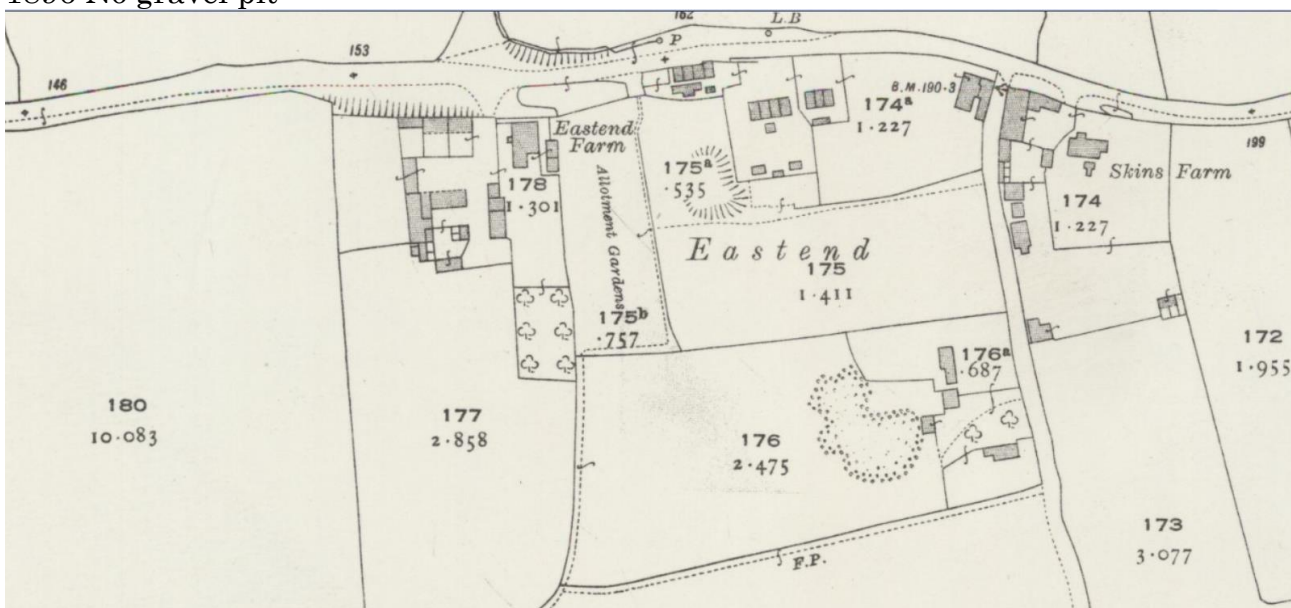
## Site history

Below, O.S. Map dated 1920 showing the application site with allotments, the pit, the 6 dwellings and the watercourse flowing from south to north towards the original pond area. The Public Footpath appears to take a central route with an eastward spur.



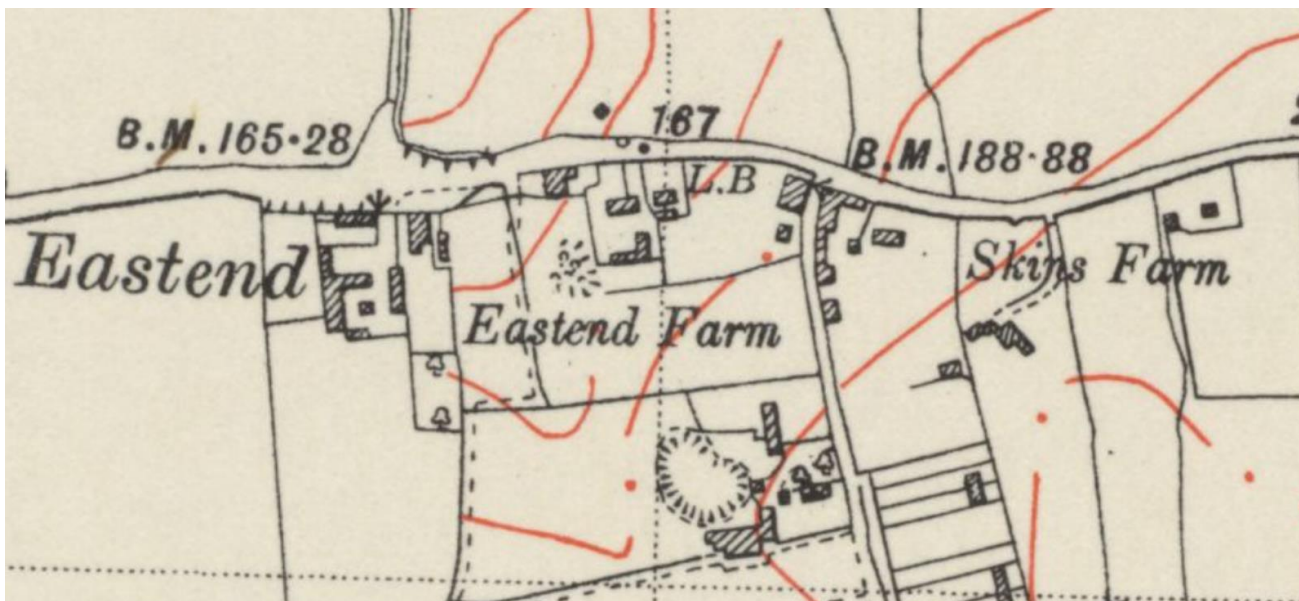


1896 No gravel pit



Published 1920

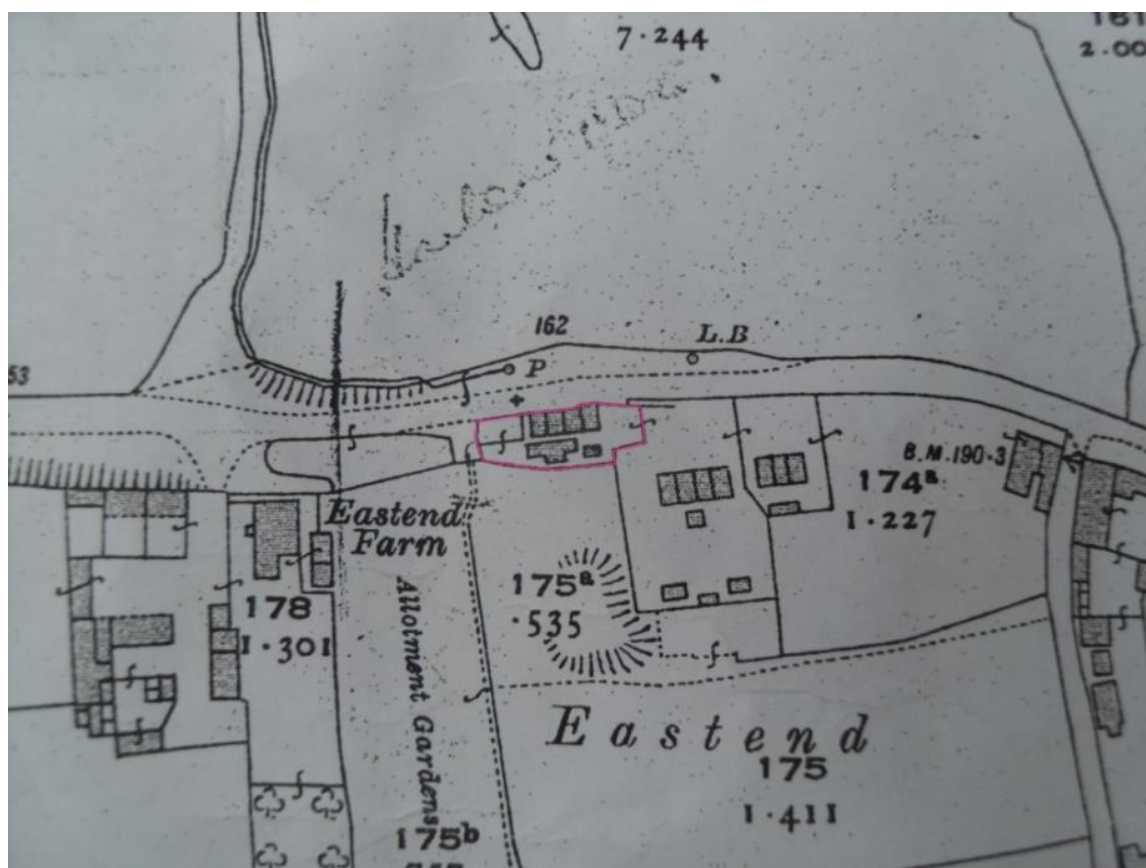
Gravel pit shown. Excavation of this Glaciofluvial gravel deposit commenced between 1895 and 1915.



1948 The six dwellings at the access point were still extant in 1948 as shown.



1964 The six dwellings are still shown to exist.





The position of the 6 dwellings, outlined in pink, at the northeast corner of the application area.



Site of the former dwellings; numerous bricks, tiles and other building debris remain in and around the site of the development. According to a local resident these dwellings were demolished in the 1960's. The seed bank 50 years later still contains a good number of garden plants probably originating from around these dwellings.

### The Allotments

The allotments marked on the plan above must have been there for some time. Only allotments that are subject to the 6 Parliamentary Allotment Acts are detailed by the Ordnance Survey. As allotments it is unlikely that any rare or uncommon plants would be cultivated; no rarities were recorded either from the previous two surveys. The occurrence of *Datura stramonium* on the temporary earth pile and *A Armoracia rusticana* may have germinated from relic seed as it is a plant associated with allotments.





## The Disused Gravel Pit

There seems to be little information on the history of the pit. One would speculate from the old maps together with the 2018 / 2019/ 2023/ 2024 botanical and arboricultural surveys that the excavation commenced at some point in the early 20<sup>th</sup> Century and ceased perhaps in the 1950s. Left neglected, these former diggings became occupied with a group of self-sown *Acer pseudoplatanus*, Sycamores.

## The Pond

The following paragraph is an educated assessment in the absence of any sound history of this pond.

It is often the case that where a pond is located at the edge of an established carriageway that it had some communal use, e.g., sheep drovers watering stop. The shape of this pond as seen from maps of Roydon from the mid-19<sup>th</sup> Century has been much altered over the period. The long narrow curved shape adjacent to the carriageway is reminiscent of traditional cart ponds used to wash horse drawn carts and also to swell the wooden wheels in hot weather. The fact that the shape of this pond changed over the 50 years between 1920 and 1970 tentatively suggests that it was relatively shallow; again evidence that it was a cart pond on what was possibly Common Land. This area of land is not registered with the Land Registry; its title and ownership, despite numerous research attempts, still remains a mystery with no definitive answer. Evidence of the numerous enquiries is available if required. Recently, January 2024, this issue has made progress,.

There is no good solid geological or periglacial evidence as to why this pond should be located here, in which case probably artificial. It is presumed that the small drain that flowed from the south fed into his pond. Once the stream of water was cut off, or at least ceased to flow, possibly by the large area of development to the south, it is possible that this waterbody was no longer sustainable in the long term if indeed ever. In recent years the waterbody may have become less permanent, drying out for prolonged periods after winter inundation. At present there are no aquatic or even marginal plants to be recorded at the site of the original pond.

Recently, within the last 6 years, a new pond has been crudely dug with steep sides and a few native and non-native, (but not those quoted in Schedule 9, Wildlife and Countryside Act 1981 as amended or any other species relevant to Section 14 of the same), aquatic and marginal species introduced.

Subsequent to the 2018 and 2019 surveys, this pond has been remodelled with much needed shelves and a newly excavated arm. See images in the Hydrology section.

## The Grassland

During the first series of site visits a good list of native and introduced plant species were recorded. Since the time between the original surveys and the third survey period this land has been developed. The area had been regularly and closely mown. This regular mowing inevitably led to a much-reduced plant list in 2019, and dominated by common grass species. The original plant list is included below to show that no rare or uncommon plants have been recently lost due to the recent development.

## 5. Geology

### Solid Geology

The entire site is located on the London Clay Formation this is clay, silt and sand bedrock formed in deep seas. Made up from coarse to fine grained slurries of material from a continental shelf flowing into a deep-sea environment in the Palaeogene Period 48 – 56 Ma when the local environment was dominated by deep seas.



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The London clay extends northward up to the railway line and the River Stour navigation channel. At that point the solid geology changes to the Thanet Formation and Lambeth Group but undifferentiated. This is again a clay, sand and silt deposit dating to approximately 48 -66 Ma where there was a change from the deep-sea deposits that had sludged down a continental shelf to shallow sea deposits.

To the northwest are deposits of the Lambeth Group and further west the Lewes Nodular Chalk and Seaford Chalk Formation dominates.

### Superficial Geology

The vast majority of the application site is covered with a layer of Glaciofluvial material. This is sand and gravel separated out when outwash and meltwater flush through an area beneath a glacier or during periglacial conditions. The relic pit on the site offered a good easily accessible source of these elements vital for construction. One suspects that this pit on the very edge of this deposit was not deep and soon exhausted. The base of the pit must be at the level of the London Clay solid geology.



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To the north is the alluvium of the modern course of the river and to the south is the Lowestoft Formation most likely left by the Great Anglian Glacial period c. 450,000 years BP; three Ice Ages ago.

## 6 Hydrology

The former central drain

Historically a small, presumably man-made drain flowed from the higher land to the south through the centre of the site to the pond area marked on the old maps from 1920's. It would appear that this watercourse ceased to flow some decades ago and was finally terminated when the industrial units to the south of the application property were constructed C. 2002. There is no floral evidence remaining, relic marginal plants etc.



Red and white markers in the image above, from 2018 showed the path of the small drain that fed the original pond

Post the development of the industrial units under application No HW/ST/01/00131, granted on 19<sup>th</sup> October 2001, some fishing lakes have been constructed. These according to local knowledge are now stocked with *Cyprinus carpio*, Common Carp and its allies. The largest of these lakes is the Horseshoe Lake at approximately 5,555 square metres in area the smallest is to the southeast of this lake complex at 1275 square metres.

### **The nearest pond**

The previous reports for this site investigated Pond 1 thoroughly.

Pond 1 lies in the northwest corner of the original application site boundary. It had an area of just 45 square metres, length of 10.25 metres and a maximum width of 5.25 metres. This pond has been recently dug, (within the last six years), and still showed a eutrophic nature. Being recently dug, the mineral layer at the base has not yet had a significant organic rich covering although it has largely proceeded from the Charophyte stage with the addition of some wholly unhelpful, but thankfully not Schedule 9, species of introduced plant.

Subsequent to recent Land Register inquiries, this pond was searched for any Schedule 5 species and then enlarged to approximately 60 square metres and fully shelved. In August 2023, it was developing the Charophyte stage with a new mineral base. In due course, after this enlargement and improvement, an organic base will develop and if left to its own devices a proper aquatic biodiversity will develop.

The eutrophic nature of this waterbody is clear to see; the mobilisation of nutrients is often a consequence of recent earth movements.



April 2018



May 2018



May 2018

The three images above showing the eutrophic nature of the water in the late spring of 2018



The same pond in the autumn, 4<sup>th</sup> November 2019, much of the vegetation has been physically removed and the pond cleared.



Pond August 4<sup>th</sup> 2023

At some point in 2022 this pond was expanded and shelved. Despite this improvement no amphibians have been recorded and the waterbody remains free of fish.

### Nearest watercourse

The nearest watercourse was the ditch dug late 2016 or early 2017 to the north and east of Pond 1. This partially inundated ditch was dug solely to prevent illegal occupation and encampment the site. It temporarily fills with water but this is so irregular that there are no true marginals or any perennial aquatic plants except *Lemna minor*, *gibba* and *minuscule*. This inundation only occurred during extremely wet periods but then this feature remains dry for months on end. This feature is now part of the new development to the north of this application area.



Ditch holding water 15<sup>th</sup> April 2018 and still inundated on 9<sup>th</sup> June 2018



Totally dry in Noovember 2019



## Pond 2

Pond 2 is approximately 100 metres to the east of the application area. Efforts have again been made in 2023 to survey this site but to no avail; gates always closed and no obvious contact number. Were there any protected species occupying this pond the records would surely show that. In addition, there would probably be some evidence on the application site as it is so close and the connectivity between the two sites is adequate alongside the carriageway although difficult through the farmyard as shown from aerial images.

## Nearest flowing watercourse



Small stream which runs northward eventually into the River Stour

Images of this small stream taken from Little Brook Lane in Roydon 670 metres to the west of the application site

## The nearest River

Nearest River is the canalised River Stort (navigation) which passes 500 metres to the north of the application site. This much modified watercourse joins with the larger River Lee at Hoddesdon to the west southwest of the site. 1800 metres to the north and west of the application property there are numerous large waterbodies, minor tributaries and drainage channels associated with the canalization of the River Stort and its confluence with the River Lee. To the east and south there are fewer land drainage channels and no large bodies of water.

## 7. Wider Environment

The site lies just outside the Epping Forest District London Green Belt which is immediately to the west of the application site.

There are no Scheduled Monuments within 2000 metres

Nearest non-statutory Historic site is 'Briggens' 900 metres to the northwest

Nearest Listed Buildings

Eastend Farmhouse Immediately adjacent to the western boundary Grade II; possible roost site for Chiropteran species especially the two commoner Pipistrelles, Natterers and Brown Long Eared.

The Old House Grade II\* in Blue is to the east of the application area.

Nearest SSSI

The nearest SSSIs are:

1. Hunsdon Mead at 645 metres due north. This SSSI has 4 impact zones, and the application site is between 3 and the outermost zone number 4. At such a distance it is hard to imagine that this very small development of two dwellings could have an adverse impact either by light pollution, hydrological reasons, (it is on the north side of the river), or disturbance.
2. Rye Meads SSSI at 2870 metres to the east; it has 5 impact zones but none of these zones from this protected site cover the application site.
3. Harlow Woods SSSI lies 3670 metres to the south southeast. There are 7 impact zones surrounding this SSSI but again the area of the outer one does not include the application area.

Local Nature Reserves

1. Hawkenbury Meadow is an L.N.R. 1800 metres to the southeast
2. Nazeing Triangle L.N.R. is 3650 metres away in a south by west direction.

The 5 statutory designations on the areas described above are varied; meadows, wood.

From a desk top point of view it is hard to see that these 5, or any combination of the 5, form any kind of Nature Network. The proposed development should not therefore adversely affect the combined biodiversity of these sites.

## **8 Invertebrates**

The following list has been recorded over the three survey periods 2018-2024.

Due to the lack of any permanent waterbodies, there were no aquatic invertebrates recorded from the 2024 application area.

Aquatic invertebrates recorded from Pond 1 all three survey periods: March 2018-January 2024

1. *Acilius sulcatus*, Lesser Diving Beetle one individual only
2. *Agabus* sp not collected and examined as ownership of pond unknown therefore no permission to do so.
3. *Gerris lacustris*, Common Pond Skater 3 individuals only recorded in May 2018

4. Gyrindae sp. Whirligig Beetle

Little more was recorded from observing this pond as no permission available from the owner to sample the water.

Terrestrial invertebrates from all three survey periods

1. *Lasius niger* Black Garden Ant
2. *Bombus lapidarius* Red Tailed Bumblebee
3. *Bombus pascuorum* Common Carder Bee
4. *Bombus terrestris* Buff Tailed Bumblebee
5. Or *Bombus lucorum* White Tailed Bumblebee
  
6. *Chorthippus brunneus* Common Field Grasshopper
  
7. *Porcellio scaber* Rough Woodlouse
8. *Armadillidium vulgare* Common Pill Bug
9. *Philoscia muscorum* Striped Woodlouse
  
10. *Coccinella septempunctata* Seven Spotted Ladybird
11. *Harmonia axyridis* Harlequin Ladybird
12. *Forficula auriculata* Common Earwig male
13. *Pyrochroa serraticornis* Red Headed Cardinal Beetle
14. *Laemostenus terricola* syn *Pristonychus terricola* Ground Beetle
15. *Ocypus olens* Devil's Coach Horse very common on site
  
16. *Lithobius forficatus* Brown Centipede
17. *Polydesmus angustus* Flat Backed Millipede
18. *Tachypodoiulus niger* White Legged Snake Millipede
  
19. *Tipula paludosa* Crane Fly short grassland October 2019 August 2023
  
20. *Pieris rapae* Small White Butterfly
21. *Gonepteryx rhamni* Brimstone Butterfly
22. *Anglais io* Peacock Butterfly
23. *Pyrinia tithonus* Gatekeeper Butterfly
24. *Anthocharis cardamines* Orange Tip Butterfly
25. *Maniola justina* Meadow Brown Butterfly
26. Crambinae (Grass Moths) not captured so no formal identification
  
27. *Cornu aspersum* Garden Snail
28. *Cepaea nemoralis* (presumed) Dark Lipped Banded Snail
29. *Cepaea hortensis* White Lipped Banded Snail
30. *Limacus maculatus* Green Cellar Slug
31. *Deroceras reticulatum* Grey Field Slug
32. *Arion ater* Large Black Garden Slug
33. *Arion rufus* Large Brown Garden Slug



## 9. Amphibians

**The following investigation was carried out in 2018 and recorded no Amphibian species from the site.**

With the exception of the large log pile a fingertip search was conducted over the whole application area on May 10<sup>th</sup> 2018; it recorded no amphibians, native or otherwise, of any species. It is axiomatic that the adults, particularly newts, would be in their aquatic phase and breeding at this time. The immature individuals however, those who had their larval stage in 2017, would be terrestrial for the whole of 2018.



The procedure was repeated again on November 4<sup>th</sup> 2019, including the large log pile see images above and below, when all amphibian species adult and immature were likely to be recorded. Searching the whole log pile would have been a mammoth task. Consequently, in order to search for terrestrial amphibians in the autumn of 2019, a good sample of these very large logs some with the root system still attached were removed by a compact tractor.



Despite removing a good number of these large logs, no amphibian species were recorded. In addition there was no evidence of any amphibian species, no mummified or skeletal remains; only good numbers of very common invertebrates typical of this habitat and micro-climate.



## Investigation of Pond 1

**Below is the investigation undertaken in 2018.**

As is often said the Oldham Brady HSI calculation is naïve to say the least. Mid range scores, as at this site, are rather meaningless and no firm conclusion should be reached.

### HSI

Si 1 Geographic location: A = 1

Si 2 Pond area: < 50 square metres = 0.05

Si 3 Permanance: suspect that it will dry in most years = 0.5

Si 4 Water quality: poor clearly eutrophic = 0.33

Si 5 Shade: total absence of shade = 1

Si 6 Waterfowl: 2 *Anas platyrhichos* often present = 0.67

Si 7 Fish: no fish recorded = 1

Si 8 Other ponds: if one dicounts the pond on the north side of the Roydon Road and the lakes beyond the industrial area as having a significant barrier then there is only one other relevant pond which is to the west of East End Farm.

= 0.32

Si 9 Terrestrial habitat: = 1

Si 10 Macrophyte cover: = 10 % = 0.4

### HSI calculation

	A	B	C	D
1	<b>ARGUK GCN HSI Calculator</b>			
2		Pond Name	<i>Example</i>	Roydon Road
3		Grid Ref	<i>SK123456</i>	TL 4195 1016
4	SI No	SI Description	SI Value	SI Value
5	1	Geographic location	1.00	1
6	2	Pond area	0.50	0.05
7	3	Pond permanence	0.90	0.5
8	4	Water quality	1.00	0.33
9	5	Shade	1.00	1
10	6	Water fowl effect	1.00	0.67
11	7	Fish presence	1.00	1
12	8	Pond Density	0.65	0.32
13	9	Terrestrial habitat	1.00	1
14	10	Macrophyte cover	0.90	0.4
15	<b>HSI Score</b>		<b>0.88</b>	<b>0.48</b>
16	Pond suitability (see below)		<i>Excellent</i>	
17				
18	Categorisation of HSI Score by Lee Brady			
19	<b>HSI Score</b>	<b>Pond Suitability</b>		
20	< 0.50	Poor		
21	0.50 - 0.59	Below average		
22	0.60 - 0.69	Average		
23	0.70 - 0.79	Good		
24	> 0.80	Excellent		
25				
26	Based on ARGUK advice note 5 - Great Crested Newt Habitat Suitability Index			

The HSI score with these values = 0.48 which is on the boundary of poor to below average. As the ownership of this pond is currently unknown, permission cannot at present be sought for funnel trapping or DNA testing. One can however do torch surveys along with a day and night time eggsearch. Natural England demand three separate survey methods but without the owner's permission, netting, DNA analysis and Funnel trapping either with the conventional bottle traps or the more recent Dewsbury traps is not lawful.

### Pond night time visits:

- I. Thursday 5<sup>th</sup> April
- II. Thursday 19<sup>th</sup> April
- III. Thursday 26<sup>th</sup> April
- IV. Friday 10<sup>th</sup> May
- V. Friday 17<sup>th</sup> May
- VI. Tuesday 21<sup>st</sup> May



Images from the 6 night time pond torching exercise. The turbidity on three occasions was 3/5 but the turbidity on the other three visits had reduced to 2/5. All the torching visits lasted over an hour to document any air gulping, but there were no Newts, Toads or Frogs recorded. There was just enough submerged vegetation to conduct an egg search during the later visits but no evidence of eggs was recorded.

In addition to the terrestrial fingertip search and the pond search the refugia laid down for the Reptile survey were also examined after sunset for amphians; again nothing recorded.



### Conclusion from 2028 and 2019

After this extensive effort to survey the application site for amphibians none of the following species were recorded either from the first survey period, spring 2018 or the second survey period autumn 2019;

1. *Triturus cristatus*, Great Crested Newts
2. *Lissotriton vulgaris* Smooth Newt
3. *Lissotriton helveticus* Palmate Newt
4. *Rana temporaria*, Common Frog
5. *Bufo bufo*, Common Toad the absence of this species on this site is concerning.

### Resurvey in September 2023

A further destructive search was carried out on 15<sup>th</sup> September 2023 over this application area. As explained earlier the northern part of previous application area is now under intensive development. Any adult newt should have joined the juveniles and adopted a terrestrial foraging phase. This destructive search was complete and systematic, the recently relocated log pile was dismantled, images of before and after above.



The results were similar to 2018 and 2019, no species of Amphibian was recorded. This result is hardly surprising with the intensive development immediately to the north and the current application site being constantly disturbed and structures relocated.

## 10. Reptiles

### Below the result of the previous investigations in 2018 and 2019

In the spring of 2018, during the first survey period, ten refugia mats were laid down following the NARRS, (National Amphibian and Reptile Recording Scheme – NARRS Reptile Surveys) methodology.

Refugia laid down 23<sup>rd</sup> March 2018

Observation dates were

- I. Thursday 5<sup>th</sup> April 2018
- II. Thursday 19<sup>th</sup> April 2018
- III. Thursday 26<sup>th</sup> April 2018
- IV. Friday 10<sup>th</sup> May 2018
- V. Friday 17<sup>th</sup> May 2018
- VI. Tuesday 21<sup>st</sup> May 2018

The 14 day gap between the first and second visit were due to air temperatures being out of the 11-18 degree range

There were a few existing structures on the site, mostly large litter and refuse objects, that provided some shelter and opportunity to bask. However 10 purpose-made artificial refugia were strategically placed both on the tussocky grassland and just into the tall vegetation by the pit area.



Existing structures, A. C. O.s were examined for Reptile species.

The results of the artificial refugia survey after 6 visits during April and May 2018 were that no *Zootoca vivipara*, Common Lizard; *Anguis fragilis*, Slow Worm or *Natrix helvetica*, Barred Grass Snake was recorded. Only very common invertebrates were seeking shelter under the refugia mats, e.g. *Cepaea nemoralis* Dark Lipped Banded Snail; *Cornu aspersum* Garden Snail; *Deroceras reticulatum* Grey Field Slug

One has to conclude that the change in habitat, regular disturbance by humans and dogs has left this site unsuitable for these three species of native reptile.

The destructive search in September 2023 recorded no Reptile species, native or otherwise from this new application area. The main reason for this result is explained above; building site disturbance.

## **Birds**

**Below the conclusions from the surveys in 2018 and 2019.**

*Picus viridis*, Green Woodpecker

The ant rich grassland available to this species towards the north of the Roydon Road, provides a good food source. Individuals but not pairs were recorded regularly throughout the survey periods. The construction of new dwellings over the existing grassland should not compromise the ability of this species to feed and breed as the biodiversity enhancement plan will provide a much-improved environment for this species to feed. The Black Poplars to the west of the application site seem to attract this species; a procession of ants seeking the honeydew from aphids could be responsible.

*Tyto alba*, Barn Owl

There are no structures suitable for nesting or winter roosting within the application area. The extensive grassland habitat together with the absence of a major road, i.e. dual carriageway offers good habitat over the wider environment. Certainly scope to erect a Barn Owl box at the southern end of the retained land outlined in blue.

Ground Nesting Birds

*Alauda arvensis* Skylark too much disturbance. Habitat has changed from a tussocky floral rich area to a closely mown improved grassland. None recorded

*Emberiza calandra* Corn Bunting Habitat now far too open and sward height far too low for this species. None recorded

*Anthus pratensis* Meadow Pipit Recorded once only from the sheep meadow opposite with both song and distinctive parachuting display; not recorded from the application site, perhaps disturbance too regular.

## **Common Passerines**

*Sylvia curruca*, Lesser Whitethroat heard singing from the land opposite near Golf Course

Other species of common passerines should benefit from the increased food available in winter and the extra nesting opportunities offered by the 230 metres of additional native hedge and bird boxes placed on the new dwellings and in the gardens.

*Sylvia atricapilla*, Blackcap

These were recorded from the site in early November 2019; one suspects that these are migrants from Continental Europe. The retained Blackthorn scrub area will be an asset to this species.

Despite the disturbance currently taking place on this application area, the following were recorded in 2023.

- a) *Turdus merula* Blackbird
- b) *Cyanistes caeruleus* Blue Tit
- c) *Fringilla coelebs* Chaffinch
- d) *Sturnus vulgaris* Starling
- e) *Parus major* Great Tit
- f) *Motacilla alba (yarellii)* Pied Wagtail
- g) *Carduelis chloris* Greenfinch one male
- h) *Hirundo rustica* Swallow overhead
- i) *Erithacus rebecula* Robin

No current opportunity for *Apus apus* to nest

## Mammals

*Meles meles* Badger,

In 2018 and 2019 there were diggings 150 metres away on the northeast corner of the industrial estate to the south of the application site. Four or four identifiable entrance holes two of which have not been used for some weeks; several dead leaves obscuring the entrance. This I believe is an outlier sett; the main sett may be located 100 or so metres away but its precise location was never recorded.



Images from this small outlier sett showing entrance holes and regular tracks

The site and immediate surroundings were surveyed for this species on 7<sup>th</sup> January 2024, and examined all available areas around the application site.

There was no evidence within the application area of hair, latrines or snuffle holes. The site is largely fenced.

No evidence of any activity was recorded during the search of the immediate surroundings, 50 metres.

As there was no evidence of latrines, hair, paw prints or de-turfing and snuffle holes recorded on 7<sup>th</sup> January 2024, there should be no conflict or breach of the Protection of Badgers Act 1992 resulting from the proposals in this application.

## Chiroptera, Bats

The four trees scheduled for removal were assessed in late September 2023. The new survey has assessed each tree for Potential Roosting Features, PRFs. Table 4.1 Collins 4<sup>th</sup> Edition 2023 provides guidelines for assessing the potential suitability of both structures and potential flightpaths and foraging habitats.

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible <sup>a</sup>	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions <sup>b</sup> and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats <sup>c</sup> ).	Habitat that could be used by small numbers of bats as flight paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions <sup>b</sup> and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions <sup>b</sup> and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

<sup>a</sup> Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

<sup>b</sup> For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

<sup>c</sup> Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2016 and Jansen et al., 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but roosters should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

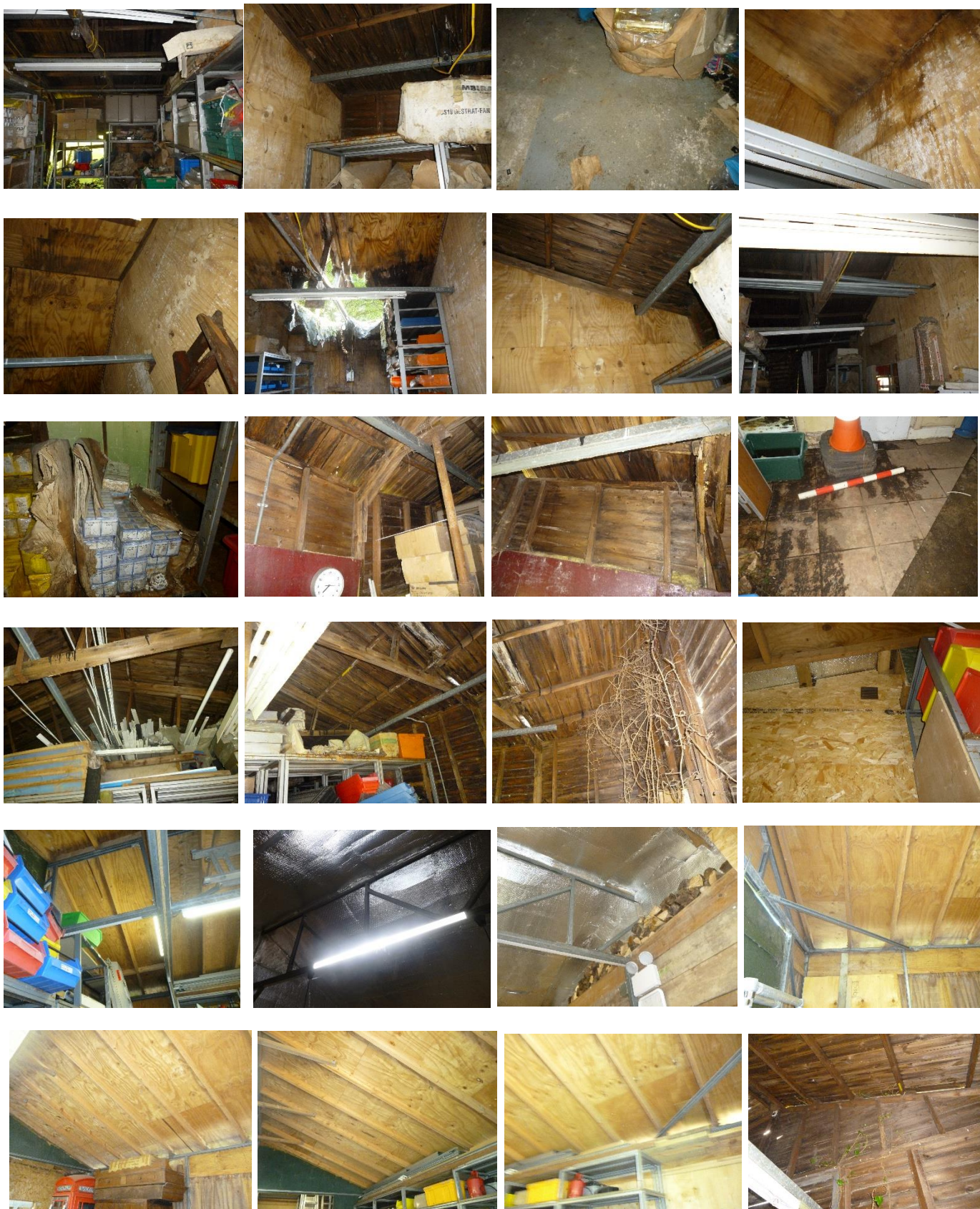
Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible <sup>a</sup>	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions <sup>b</sup> and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats <sup>c</sup> ).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions <sup>b</sup> and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.

Table 4.1 Potential suitability descriptions; Potential Roosting Features and Potential Flight Paths and Foraging Habitat.

It is self-evident that there two buildings within the red line boundary of the application area. These were inspected both on 15<sup>th</sup> September 2023. They are both constructed with a single skin roof and are both well used.



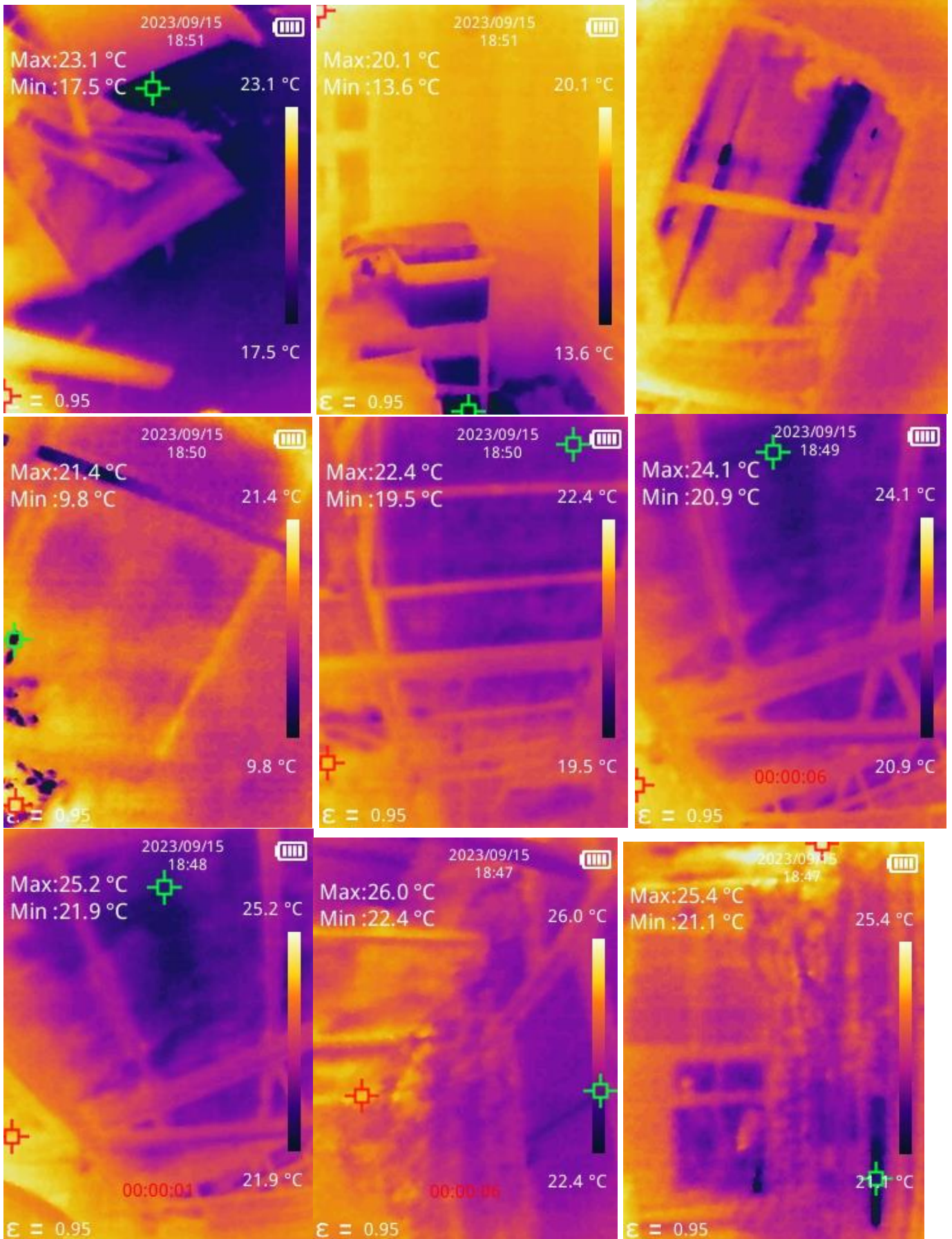


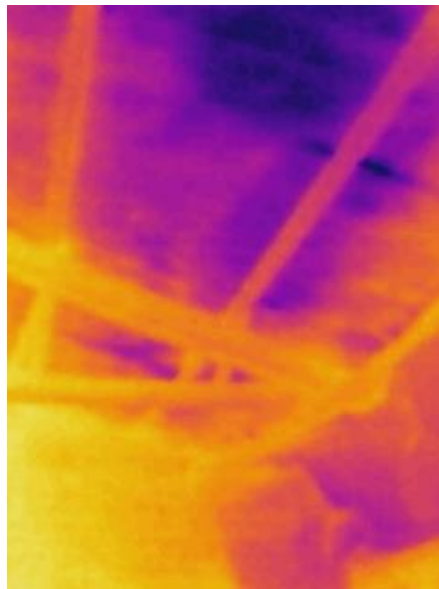
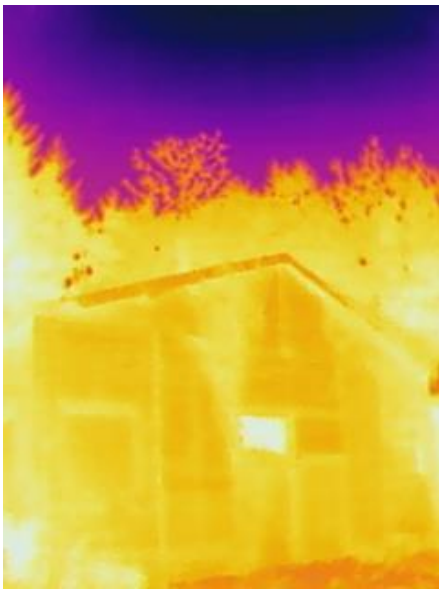


Above images taken on the 15<sup>th</sup> September 2023 of the internal survey of both buildings

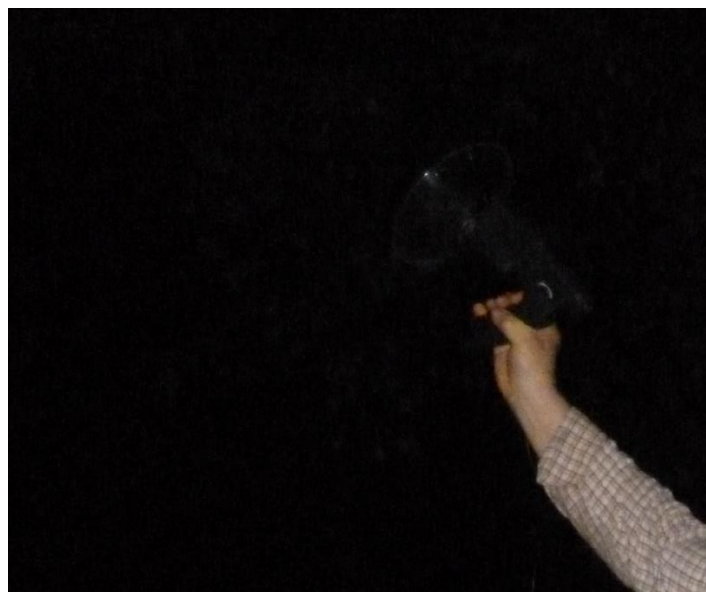
Below a selection of the thermal imaging photographs taken again on 15<sup>th</sup> September 2023. These images are just a brief record of the survey. The TI camera was used throughout

these buildings giving a continuous real time observation into all the nooks and crannies within these buildings. No hotspots of roosting Bats were observed.





The equipment used was a topdon TC004. Although havng a lower resolution than the 640 x 480 equipment, it does show the warmest point with the red cross. As can be seen in the dog image botton left. Roosting Bats during the volant season can be adequately identified.

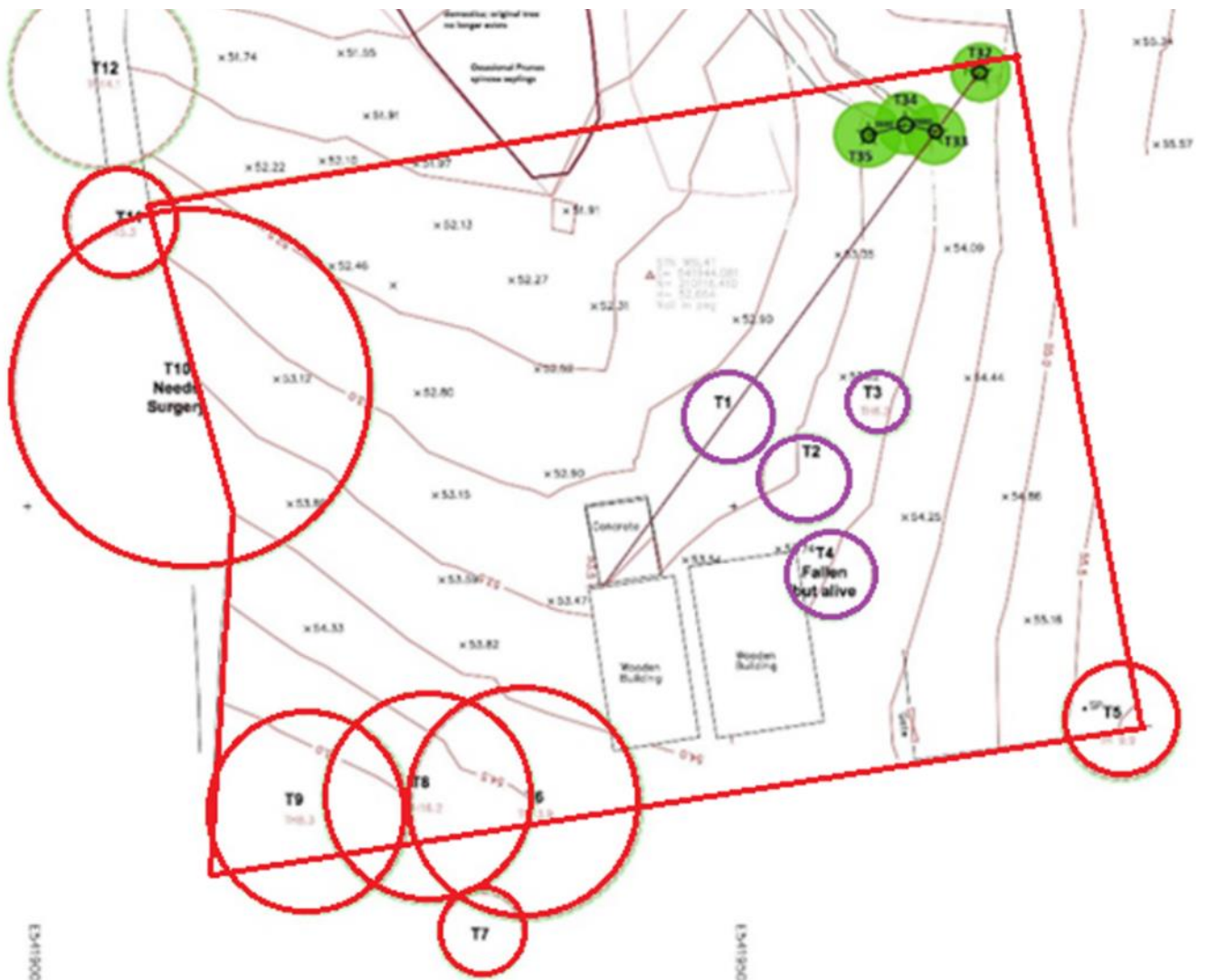


In addition to the thermal imaging investigation, the buildings were examined internally and externally with a parabolic microphone. This equipment can easily pick up chattering before emergence.

The results of the internal search and external examination, visual, thermal and with the parabolic microphone were all negative for any Chiropteran species. Both buildings are used and as with the main part of the application area, there is constant movement and disturbance.

Both buildings currently have a very low to negligible potential for roosting thus removal subject to a proper methodology should be straight forward.

### Tree survey



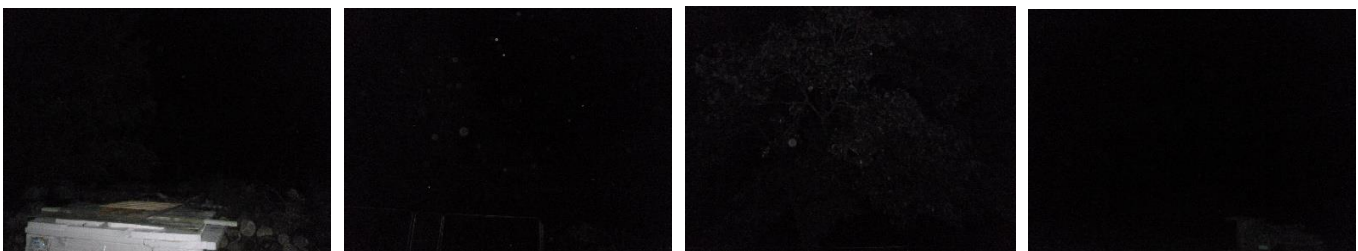
Plan showing the trees to be retained in Red and Green. The trees scheduled for removal in this application are marked in Purple.

Tree	Species	English	N	E	S	W	Height	Diameter	RPA	Condition	Comments
											To be
T1	Malus domestica	Cultivated apple	4000	3000	3000	3500	6500	180,180,170	3100	B1	Removed
T2	Malus domestica	Cultivated apple	3500	5000	5000	5000	8000	220,200	3000	B1	Removed
T3	Malus domestica	Cultivated apple	2000	2000	3000	3000	5500	160,130	2100	B1	Removed
T4	Malus domestica	Cultivated apple	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U Fallen	Removed
T5	Crataegus monogyna	Hawthorn	5000	5000	5000	5000	10000	320,170,150,100	4000	A1	Retained
T6	Carpinus betulus	Hornbeam	8000	9500	9500	8500	13000	500,500,400	8100	B1	Retained
T7	Ulmus sp.	Elm	0	0	4000	5500	11000	240	2880	A1	Retained
T8	Acer pseudoplatanus	Sycamore	8500	5500	5500	6500	14000	540,300,300,250	7300	B1	Retained
T9	Corylus avellana	Hazel	8000	8000	8000	8000	7500	24 stems 220-120 #	7000#	A1	Retained
T10	Acer pseudoplatanus	Sycamore	12000	12000	12000	12000	16000	1,050	12600	A1	Retained
T11	Acer pseudoplatanus	Sycamore	2500	2500	0	2500#	9000	220,200,140,140,120	3800	B2	Retained

Note Trees T1 and T 2 are too small to support any species of Bat.



The neighbouring trees along the southern boundary. These have a high potential for a flight path but will be largely unaffected by this proposed development. Only light pollution needs to be accounted. See Conclusion.



Images of the southern boundary flight path survey 15<sup>th</sup> September 2023. Only one Pipistrellus pipistrellus was recorded using this southern boundary. Even in the absence of this record, the flight path potential is obviously high. Care must be taken to reduce the light

pollution generated by this proposed development to a minimum. At present with the two buildings and the Mobile Home, there is already significant light pollution here.

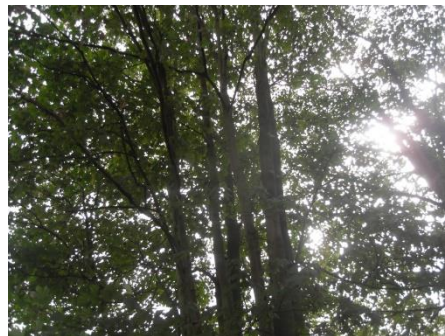


Tree 3



Tree 4

In September a great deal of time was taken observing the trees within the application area, T1-T11, were subject to a ground level scoping survey guided by BS 8596:2015. The Ground Level Tree Assessment using Chapter 6 of the then current Collins Edition 3 2016, concluded that there was a low density covering of *Hedera helix*, Ivy but all the *Carpinus betulus*, *Ulmus* and *Acer pseudoplatanus*, were free of any significant roosting structure. The one *Crataegus monogyna* appeared to be in sound condition with no obvious hollows or suitable crevices. All are to be retained.



### *Erinaceus europaeus*, Hedgehog

Habitat excellent plenty of terrestrial foraging habitat along the southern boundary and into the adjacent woodland. The site surveys of 2023 and 024 resulted in no evidence for this species being recorded. As explained above, site disturbance and fencing are currently partially responsible. If planning consent is granted the biodiversity enhancement plan will provide ample opportunity for this species to travel freely and thrive.

### *Lutra lutra* Otter

River Stour is 500 metres away to the north. The small fast running brook is 670 metres away. The geographic location is not impossible for a natal holt but the heavy use and disturbance of the application site rather ensures a very low probability of even transit use let alone residence.

## 1. Plants

The previous application split the original site into 5 different plots. The botanical records were taken accordingly.

This new application area is capable of supporting all the previously quoted species if not as growing plants these taxa will be in the seedbank particularly in the earth piles now present within this application area. For that reason, the following species lists for the previous application are reproduced and updated here.

### Images





1. The proposed construction area to a point 30 metres beyond the neighbour's *Taxus baccata*

1. *Dactylis glomerata* Cock'sfoot Grass
2. *Rumex obtusifolium* Broad Leaved Dock
3. *Ranunculus repens* Creeping Buttercup
4. *Dipsacus fullonum* Common Teasel
5. *Urtica dioica* Common Stinging Nettle
6. *Trifolium repens* White Clover
7. *Poa trivialis* Rough Meadow Grass
8. *Heracleum sphondylium* Hogweed
9. *Holcus lanatus* Yorkshire Fog Grass
10. *Cirsium arvense* Creeping Thistle
11. *Carduus crispus* Welled Thistle
12. *Poa annua* Annual Meadow Grass
13. *Helminthotheca echioides* Bristly Ox Tongue
14. *Stachys sylvatica* Hedge Woundwort
15. *Calystegia silvatica* Large Bindweed
16. *Bellis perennis* Common Daisy
17. *Datura stramonium* Thorn Apple 2023
18. *Sonchus asper* Prickly Sow Thistle
19. *Medicago lupulina* Black Medick
20. *Crepis capillaris* Smooth Hawk'sbeard
21. *Epilobium ciliatum* American Willowherb
22. *Geranium robertianum* Herb Robert
23. *Taraxacum officinale* agg Dandelion
24. *Armoracia rusticana* Horseradish
25. *Agrostis gigantea* Black Bent
26. *Malva sylvestris* Common Mallow
27. *Senecio vulgaris* Common Groundsel
28. *Silene latifolium* White Campion
29. *Buddleja davidii* cultivar Butterfly Bush
30. *Plantago major* Greater Plantain
31. *Vicia tetrasperma* Smooth Tare
32. *Lolium perenne* Perennial Ryegrass
33. *Elytrigia repens* Common Couch Grass
34. *Leucanthemum vulgare* Ox Eye Daisy
35. *Juncus inflexus* Hard Rush
36. *Lapsana communis* Nipplewort
37. *Geum urbanum* Herb Benet
38. *Verbascum thapsus* Great Mullein



39. *Agrostis stolonifera* Creeping Bent Grass
40. *Ballota nigra* Black Horehound
41. *Geranium dissectum* Cut Leaved Crane'sbill
42. *Matricaria discoidea* Pineapple Weed
43. *Tanacetum parthenium* Feverfew
44. *Rubus fruticosus* agg Bramble
45. *Rubus caesius* Dewberry
46. *Viola tricolor* Heartsease Garden origin and variety
47. *Lactuca serriola* Wild Lettuce
48. *Sinapis arvensis* Charlock
49. *Cerastium fontanum* Common Mouse Ear
50. *Cerastium glomeratum* Sticky Mouse Ear
51. *Capsella bursa pastoris* Shepherd's Purse
52. *Silene x hampeana* Hybrid White Champion x Red Champion
53. *Conium Maculatum* Hemlock
54. *Nigella damascena* Love in a Mist
55. *Aquilegia canadensis* cultivar Granny's Bonnet garden origin
56. *Catapodium rigidum* Fern Grass
57. *Trifolium dubium* Lesser Trefoil
58. *Myosotis arvensis* Field Forget me not
59. *Vulpia bromoides* Squirrel Tailed Fescue
60. *Veronica persica* Common Field Speedwell
61. *Veronica serpyllifolia* Thyme Leaved Speedwell
62. *Sagina procumbens* Procumbent Pearlwort
63. *Trifolium arvense* Hare'sfoot Clover
64. *Sagina apetala* Annual Pearlwort
65. *Prunella vulgaris* Common Self Heal
66. *Aphanes arvensis* Parsley Piert
67. *Vicia sativa* Common Vetch
68. *Papaver rhoeas* Common Field Poppy
69. *Sonchus oleraceus* Smooth Sow Thistle
70. *Plantago lanceolata* Ribwort Plantain
71. *Solanum dulcamara* Bittersweet
72. *Rumex conglomeratus* Clustered Dock
73. *Digitalis purpurea* Foxglove garden origin
74. *Lepidium didymium* Lesser Swinecress
75. *Alliaria petiolata* Garlic Mustard
76. *Epilobium hirsutum* Hairy Willowherb

Area south of construction site; occasional paths cut and bonfire

1. *Anthriscus sylvestris* Cow Parsley
2. *Rumex obtusifolius* Broad Leaved Dock
3. *Ranunculus repens* Creeping Buttercup
4. *Silene latifolium* White Champion
5. *Cirsium arvense* Creeping Thistle
6. *Heracleum sphondylium* Hogweed
7. *Holcus lanatus* Yorkshire Fog Grass
8. *Arrhenatherum elatius* False Oat Grass
9. *Dactylis glomerata* Cock'sfoot Grass
10. *Poa trivialis* Rough Meadow Grass
11. *Trifolium repens* White Clover
12. *Potentilla reptans* Creeping Cinquefoil

13. *Calystegia silvatica* Large Bindweed
14. *Geum urbanum* Herb Benet
15. *Geranium dissectum* Cut Leaved Crane'sbill
16. *Plantago major* Greater Plantain
17. *Urtica dioica* Common Stinging Nettle
18. *Ballota nigra* Black Horehound
19. *Convolvulus arvensis* Field Bindweed
20. *Dipsacus fullonum* Common Teasel
21. *Lolium perenne* Perennial Ryegrass
22. *Trifolium pratense* Red Clover
23. *Lapsana communis* Nipplewort
24. *Galium aparine* Common Cleavers
25. *Crepis capillaris* Smooth Hawk'sbeard
26. *Achillea millefolium* Yarrow
27. *Plantago lanceolata* Ribwort Plantain
28. *Alopecurus pratensis* Meadow Foxtail
29. *Taraxacum officinale* agg. Dandelion
30. *Cirsium vulgare* Spear Thistle
31. *Carduus crispus* Welled Thistle
32. *Poa annua* Annual Meadow Grass
33. *Ranunculus acris* Meadow Buttercup
34. *Rumex crispus* Curled Leaved Dock
35. *Glechoma hederacea* Ground Ivy
36. *Malva sylvestris* Common Mallow
37. *Geranium dissectum* Cut Leaved Crane'sbill
38. *Stachys sylvatica* Hedge Woundwort
39. *Armoracia rusticana* Horseradish

### 3 The road verge

1. *Cynosaurus cristatus* Crested Dog'stail Grass
2. *Urtica dioica* Common Stinging Nettle
3. *Dactylis glomerata* Cock'sfoot Grass
4. *Lolium perenne* Perennial Ryegrass
5. *Potentilla reptans* Creeping Cinquefoil
6. *Taraxacum officinale* agg Dandelion
7. *Poa trivialis* Rough Meadow Grass
8. *Heracleum sphondylium* Hogweed
9. *Artemisia vulgaris* Mugwort
10. *Rubus caesius* Dewberry
11. *Solanum dulcamara* Bittersweet
12. *Trifolium repens* White Clover
13. *Cirsium vulgare* Spear Thistle
14. *Ranunculus repens* Creeping Buttercup
15. *Anthriscus sylvestris* Cow Parsley
16. *Elytrigia repens* Couch Grass
17. *Cirsium arvense* Creeping Thistle
18. *Ballota nigra* Black Horehound
19. *Silene x hampeana* Hybrid between the White and Red Campion
20. *Silene latifolia* White Campion
21. *Agrostis stolonifera* Creeping Bent Grass

22. *Bromus hordeaceus* Soft Brome
23. *Melilotus albus* White Melilot 2023
24. *Holcus lanatus* Yorkshire Fog Grass
25. *Sonchus asper* Prickly Sow Thistle
26. *Polygonum aviculare* agg Knotgrass
27. *Triticum aestivum* Wheat
28. *Matricaria discoidea* Pineapple Weed
29. *Crepis capillaris* Smooth Hawk'sbeard
30. *Silene dioica* Red Campion
31. *Geum urbanum* Herb Benet
32. *Jacobea vulgaris* Common Ragwort
33. *Capsella bursa pastoris* Shepherd's Purse
34. *Agrostis capillaris* Common Bent Grass
35. *Lactuca serriola* Wild Lettuce
36. *Phleum pratense* Large Timothy Grass
37. *Epilobium ciliatum* American Willowherb
38. *Helminthotheca hieracioides* Hawkweed Ox Tongue
39. *Brassica napus* Oil Seed Rape
40. *Sagina procumbens* Procumbent Pearlwort
41. *Tripleurospermum inodorum* Scentless Mayweed
42. *Papaver rhoeas* Common Field Poppy
43. *Hordeum murinum* Wall Barley
44. *Bromus racemosus* Smooth Brome Grass
45. *Prunus spinosa* Blackthorn seedling
46. *Melilotus albus* White Melilot

There are no rare or uncommon plants within the area of the highway and visibility splay; the plant community here is one of erratic ruderal weeds, primary colonisers, species from road transport but no recognized halophytes.

#### 4 The pond area; aquatics and marginals

1. *Ranunculus scleratus* Celery Leaved Crowfoot
2. *Juncus effuses* Soft Rush
3. *Typha latifolia* Bulrush
4. *Ranunculus repens* Creeping Buttercup
5. *Berula erecta* Lesser Water Parsnip
6. *Calla palustris* Bog Arum
7. *Urtica dioica* Common Stinging Nettle
8. *Spyrogyra* sp. Blanket Weed
9. *Lemna minor* Common Duckweed
10. *Lemna minima* Least Duckweed plant body elliptical with small longitudinal ridge
11. *Solanum dulcamara* Bittersweet

As of November 2019, several of these species had been removed to re-dig and clear the pond after the summer drying out. The concern at present is that the *Typha latifolia* will hasten the progression of the hydrosere and the eventual extinction of the pond by this natural process.

By the 2023 / 2024 survey period, the pond had been refurbished and extended. None of these common aquatic plants were present. Many of them will return naturally possibly within the next two years?

5 Public Footpath No 109. This is largely unchanged from the 2018/2019 list in 2024.

To the west of the northern section of Public Footpath No. 109 there is a row of *Populus nigra* ssp *betulifolia*, native Black Poplars. They all appear to be female and probably planted. They can become enormous trees with a substantial lean; the waterbody is too close to the carriageway to recommend this species for the development planting scheme. It was pleasing to read that Roydon Parish secured a Lottery Grant to plant more of these extremely rare trees.

1. *Lolium perenne* Perennial Ryegrass
2. *Arrhenatherum elatius* False Oat Grass
3. *Sonchus oleraceus* Smooth Sow Thistle
4. *Rubus fruticosus* agg Bramble
5. *Hedera helix* Ivy
6. *Taraxacum officinale* agg Dandelion
7. *Alliaria petiolata* Garlic Mustard
8. *Ranunculus repens* Creeping Buttercup
9. *Poa trivialis* Rough Meadow Grass
10. *Urtica dioica* Common Singing Nettle
11. *Sambucus nigra* Elder
12. *Crataegus monogyna* Common Hawthorn
13. *Rumex obtusifolius* Broad Leaved Dock
14. *Lamium galeobdolon* Yellow Archangel garden origin
15. *Bellis perennis* Daisy
16. *Geum urbanum* Herb Benet
17. *Heracleum sphondylium* Hogweed
18. *Galium aparine* Common Cleavers
19. *Dipsacus fullonum* Common Teasel
20. *Dactylis glomerata* Cock'sfoot Grass
21. *Sonchus asper* Prickly Sow Thistle
22. *Carduus crispus* Welled Thistle
23. *Cirsium vulgare* Spear Thistle
24. *Lepidium didymum* Lesser Swinecress
25. *Potentilla reptans* Creeping Cinquefoil
26. *Stachys sylvatica* Hedge Woundwort
27. *Acer pseudoplatanus* Sycamore seedling
28. *Holcus lanatus* Yorkshire Fog Grass
29. *Anthriscus sylvestris* Cow Parsley
30. *Convolvulus arvensis* Field Bindweed
31. *Cirsium arvense* Creeping Thistle
32. *Arctium minus* agg Lesser Burdock
33. *Arum aculatum* Cuckoo Pint
34. *Symphoricarpos album* Snowberry
35. *Poa annua* Annual Meadow Grass
36. *Plantago major* Greater Plantain
37. *Ulmus minor* type Smooth Leaved Elm sapling
38. *Anisantha sterilis* Sterile Brome Grass
39. *Geranium dissectum* Cut Leaved Crane'sbill
40. *Achillea millifolium* Yarrow
41. *Silene latifolium* White Champion
42. *Lapsana communis* Nipplewort
43. *Armoracia rusticana* Horseradish

#### 44. *Kindbergia praelonga* Common Feather Moss

Despite the addition of a proposed boundary hedge along the length of the western boundary, the species concerned in this list should have enough light and water to survive.

#### Conclusion

A lot of research, fingertip and destructive searches were necessary for this application. Records for this precise area are not well documented. The two-phase survey period in 2018 and 2019 concluded that there were no rare or protected species. This updated report 2023 and 2024 concurs and concludes the same.

The restriction of the new development to two detached dwellings, with gardens enriched in native trees and shrubs, has allowed the biodiversity enhancement plan to satisfy all current legislation, NPPF 2023, for sites with no existing priority habitats etc. and an area of less than 5000 square metres.

The new pond, which is still in its infancy and at present, appears to support very little, needs to be protected during construction if planning permission is granted.

In the absence of any records of rare or uncommon species that currently occupy this site, the largest factor in this application is the removal of the four small trees. It is with much regret in the 21<sup>st</sup> Century that Tree Preservation Orders are mostly based on the amenity value of the trees concerned not their contribution to the biodiversity of a particular site. The biodiversity enhancement plan attached to this application is an uncompromising effort to boost the number of native invertebrate food plants. Pollen and nectar plants are simply not good enough; the bottom two rungs of the food chain ladder are so vitally important. Introduced plants like *Acer pseudoplatanus* do not provide what is required.

One would advise, as it has been standard practice for several years, that a light pollution plan is submitted as a condition. Once the two existing buildings have been demolished, the design of any external lighting should follow the advice given in the Bat Conservation Trust and Institute of Lighting Professionals. 'Bats and artificial lighting at night', published in August 2023.

I can see no reason why this application should currently be refused on ecological grounds.

A. R. Arbon MBE,  
Consultant Ecologist,  
1, Wren Park,  
Whittlesford,  
Cambridge.  
CB22 4LY

27<sup>th</sup> January 2024

Ordnance survey Licence/Customer Account Number (100061317)  
There are 70 other supporting photographs.