

Preliminary Ecological Appraisal

Survey site:

Dene Holm, Deneholm, Road, Northfleet, Gravesend, DA11 8JY

Client:

Anchorage Prop Ltd

Survey date:

11th October 2024

Project:

This report is prepared to inform a planning application with the Gravesham Borough Council. The proposal is described as:

‘To convert the existing building to 23 x residential flats, with landscaping and new car parking spaces.’

Survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

The site survey was undertaken by Maddy Carter BSc (CL17 Bat Licence Accredited Agent)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
11/10/2024	9	96	100	14	Light Rain

Ecological Survey Factor	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.				
Conclusion, Impact or Recommendations					
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, photos in appendix 3 and proposal plan in appendix 4). Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).					
Summary of Survey Findings	Site Context The survey site is centred on National Grid Reference TQ 63448 72355 and has an area of approximately 0.47ha. The site consists of a care dwelling at the centre of the site, the associated concrete parking and pathways to provide access, and gardens. The site is in constant use and under frequent management. The underlying soil and geology of the site represent freely draining slightly acid loamy soils atop the Thanet formation – Sand. The wider landscape comprises residential and commercial development in close proximity to the A2. The northern landscape is dominated by residential development, but the southern landscape beyond the A2 comprises arable land. The nearest waterbody is Sawyer’s Lake located 1,535m northwest of the site. The River Thames is located 2,125m north of the site. A landscape map is provided in Appendix 3. On-site habitat descriptions <u>u1b5 – buildings.</u> There are three buildings on site; one is a residential dwelling, the second is a garage, and the third is a storage building. The proposed works include the conversion of the main building into flats meaning the works are entirely internal and no assessment for bats or birds within the building has been carried out to date.				

u1b6, 828 – other developed land, vegetated garden.

Surrounding the building and providing access throughout is a concrete driveway and pathways. These are bordered with vegetated gardens with ornamental plants such as red-hot pokers, cotoneaster, firethorn,

g3c, 32, 33 – other neutral grassland, scattered trees, line of trees.

Bordering the site are small areas of other neutral grassland. The vegetation is frequently managed in the rear garden, but other areas have been left with less management meaning the sward length varies from 15 – 40cm. The grass is dominated by Yorkshire fog, perennial rye and common bent. Cock's foot and timothy are frequent. There is an accompanying suite of herbaceous flora, including greater plantain [A], common ragwort [A], yarrow [F], white clover [F], creeping buttercup [F], dandelion [F], willowherb [O], common nettle [O], sweet violet [O], bedstraw [R] and purple deadnettle [R]. Throughout the grass lawns are scattered shrubs including dogwood, jasmine, lilac and clusterberry.

Neutral grassland condition assessment

- a) The habitat parcel does not represent a good example of its habitat type as described in the UKHab Handbook (UKHab Ltd., 2023).
- b) Sward height is varied.
- c) Cover of bare ground is <5%,
- d) Cover of bracken is less than <20%, and scrub cover (including bramble) is <5%.
- e) There is no extensive physical damage to the habitat parcel.
- f) No invasive plant species are present.
- g) There are estimated to be 4-5 vascular plant species per m².

Within the grassland there are 11 scattered trees. Additionally, there are multiple fruit trees (apple, cherry and pear) saplings throughout the garden but all of these measured below 7.5cm DBH. The tree species and their measurements are included within Table 1.

Table 1: Scattered trees on site

Tree	Species	Diameter at Breast Height [DBH] [CM]
T1	Cherry	15
T2	Sycamore	60
T3	Norway Maple	60
T4	Norway Maple	30
T5	Ash Leaved Maple	40
T6	Ash Leaved Maple	40
T7	Cherry	20

	<table><tr><td>T8</td><td>Elder</td><td>30</td></tr><tr><td>T9</td><td>Hawthorn</td><td>70</td></tr><tr><td>T10</td><td>Cypress</td><td>10</td></tr><tr><td>T11</td><td>Elder</td><td>15</td></tr></table> Within the garden in the southwestern corner of the site is a line of trees dominated by laurel and goat willow. Line of trees condition assessment a) Less than 70% of the trees are native species. b) Tree canopy is predominately continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5m wide. c) Multiple trees have natural ecological niches for vertebrates and invertebrates. d) There is not an undisturbed naturally vegetated strip of at least 6m either side. e) Over 95% of the trees are in healthy condition. Local notable habitats There are two notable habitats within 2km of the site, with the closest habitat being deciduous woodland located 520m northwest of the site. The other notable habitat is traditional orchards located 1,310m southwest of the site.	T8	Elder	30	T9	Hawthorn	70	T10	Cypress	10	T11	Elder	15
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T11	Elder	15											
Foreseen Impacts	On-site habitats The proposed development will result in the loss of a small area of other neutral grassland, the felling of a tree and some scattered shrubs. This could result in a net loss in biodiversity. Notable habitats No impacts are anticipated on any notable habitats as a result of the proposed development due to the small-scale and distance from these habitats.												
Recommendations	On-site habitats The development will be required to demonstrate a minimum 10% biodiversity net gain through use of the latest Defra Biodiversity Metric as to comply with legislation (Environmental Act 2021). It is noted that the development is not exempt from demonstrating a complaint biodiversity net gain, as per current Natural England Guidance https://www.gov.uk/guidance/biodiversity-net-gain-exempt-developments Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).												

	Suggested biodiversity enhancements Planting of native shrubs to create sheltering areas for wildlife.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	Statutory designated sites There is a single known statutory designated site within 2km of the site. Details of the sites and reasons for its designation is listed below. <u>Swanscombe Peninsula SSSI [located 1.785m west]</u> Swanscombe Peninsula SSSI is of special interest for the following nationally important features: - Populations of the plants divided sedge, yellow vetchling, slender hare's-ear, Bithynian vetch and round-leaved wintergreen. - Assemblages of invertebrates associated with bare sand and chalk, open short swards, open water on disturbed mineral sediments and saltmarsh and traditional brackish marsh. - Two diverse assemblages of breeding birds, one associated with lowland open waters and their margins, lowland fen and lowland damp grassland, the other with lowland scrub.
<i>Foreseen Impacts</i>	The site sits within the impact risk zone for multiple SSSI's, however, the proposed development is not listed as a possible high risk with regard to these designations. However, the site also lies within the zone of influence for recreation pressure impacts to one or more European Sites. Proposals for any net increase in residential units will have a likely significant effect on the qualifying features of the European Site through increased recreational pressure. The local authority has measures in place to manage these potential impacts through a strategic solution with Natural England considers will be effective in preventing adverse impacts on the integrity of the sites.
<i>Recommendations</i>	No further surveys required.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	No problematic invasive and non-native species recorded on site.
<i>Foreseen Impacts</i>	N/A
<i>Recommendations</i>	No further surveys but remain vigilant.

Invertebrates	
<i>Summary of Survey Findings</i>	On-site habitats The habitats present on site include a grass lawn, scattered trees and scattered shrubs, which likely provide common invertebrates with opportunities to forage and shelter. The site contains no notable habitats or features which may provide niches for specialised or protected invertebrates.
<i>Foreseen Impacts</i>	Grassland, scattered trees and shrubs will be removed during construction. The loss of such habitats is likely to be inconsequential to local invertebrate populations owing to their low value and the presence of more extensive habitat locally.
<i>Recommendations</i>	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development. Suggested biodiversity enhancements • Planting of native wildflower species, to provide foraging opportunities for pollinators. • Planting of wildflower lawns, sympathetic to the flora of local grasslands.
Bats	
<i>Summary of Survey Findings</i>	EPSL data No EPSL records for bats have been returned within 2km of the site. Roosting habitat <i>Tree 5</i> T5 is an Ash leaved maple located at TQ 63481 72342. It stands ~3m tall with a DBH of 40cm. Bat roosting features identified on the tree include lifted bark (~2m high at the base of the branches) and an animal hole (~2m high on the underside of a branch on the northern aspect). T5 is therefore categorised as PRF-M with regard to its bat roosting provision. <i>Tree 6</i> T6 is another Ash leaved maple located at TQ 63486 72346. It also stands ~3m tall with a DBH of 50cm. Bat roosting features identified on the tree include a dead branch with an animal hole around ~2.5m high. T6 is therefore categorised at PRF-M with regard to its bat roosting provision.

	<i>Other Trees</i> The remaining trees within the curtilage of the site have no roosting features. Consequently, these trees have negligible suitability for roosting bats (Collins, 2023). Foraging and commuting habitat The site provides suitable foraging and commuting habitat for bats within the scattered trees, scattered shrubs and line of trees. There is deciduous woodland located 520m northwest which is connected via scattered trees and residential gardens. There is a railway line located 885m south that extends to the west and north of the site. Railway lines act as dark commuting corridors throughout the wider landscape, allowing bats to disperse over great distances. They also provide foraging habitat. There is a lake 1,535m northwest as well. Waterbodies promote the presence of invertebrate prey, and consequently provide foraging opportunities for bats.
<i>Foreseen Impacts</i>	Roosting habitat The proposed development will not result in the felling of T5 or T6 so no impacts on roosting bats are anticipated. T1 is the only tree due to be felled and bats are very unlikely to be roosting within this tree and as such, there are not anticipated to be any impacts on roosting bats as a result. Foraging and commuting habitat The proposed development will result in the loss of small areas of grassland and one scattered tree but given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. Artificial lighting The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.
<i>Recommendations</i>	Roosting habitat In the unlikely event that a bat or evidence of bats is discovered during the development, all work must stop and a bat-licensed ecologist contacted for further advice. Artificial lighting A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2

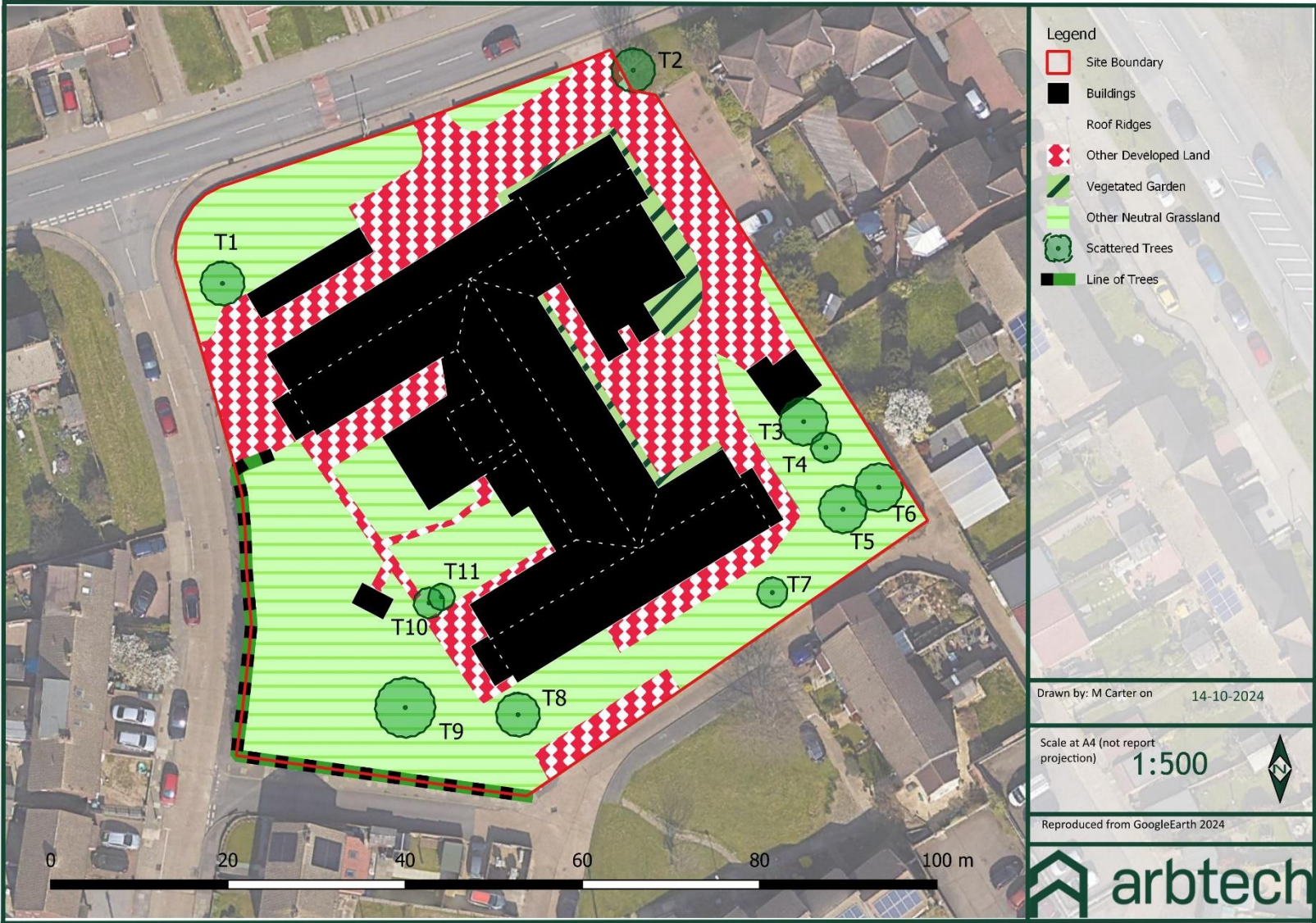
Birds	
<i>Summary of Survey Findings</i>	Buildings No evidence of nesting birds was identified on B1. B1 is deemed to provide negligible habitat value for nesting birds due to a lack of suitable nesting sites or access points. Trees A bird's nest was identified within T6 on a branch on the southern aspect of the tree. No other evidence of nesting birds was identified within the other trees; however, they all offer nesting opportunities and nest-building resources for birds.
<i>Foreseen Impacts</i>	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
<i>Recommendations</i>	Any vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. Suggested biodiversity enhancements - The installation of two small-hole bird boxes at the site, such as the Vivara Pro Seville 32mm WoodStone Nest Box or similar alternative brand, will provide additional nesting habitat for birds. → The boxes should be positioned 3m above ground level on the new dwelling, on a north or east elevation, where they will be sheltered from prevailing wind, rain and strong sunlight.
Reptiles	
<i>Summary of Survey Findings</i>	On-site habitats The grassland and scattered shrubs provide suitable commuting and foraging habitat for reptiles on site. There is no basking habitat or hibernacula on site. The site is open to the surrounding landscape, however, it is largely residential with no connectivity to further suitable reptile habitat. As such, the presence of protected reptiles on-site is considered unlikely.
<i>Foreseen Impacts</i>	No impacts are foreseen on reptiles as a result of the proposed development.

<i>Recommendations</i>	None.
Amphibians	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records, class licence returns or historic pond survey data for great crested newts within 2km of the site. On-site habitats The grassland and scattered shrub on site provide good terrestrial amphibian habitat but, similarly to reptiles, the residential nature of the local landscape makes it unsuitable for amphibians. Additionally, amphibians also require suitable aquatic habitat in which to breed. There are no known ponds 500m when consulting OS maps. Therefore, protected amphibians are likely be absent around the survey site year-round.
<i>Foreseen Impacts</i>	Given the lack of suitable breeding ponds within 500m of the site, the presence of GCN on-site is considered unlikely and therefore impacts to amphibians as a result of the proposed development are deemed to be acceptably low.
<i>Recommendations</i>	Further Surveys No further surveys are required.
Badger	
<i>Summary of Survey Findings</i>	On-site habitats No evidence of badgers (e.g. latrines, snuffle holes, hairs, mammal trails) or badger setts were identified on or within influencing distance (30m radius) of the site. The site is not considered to be suitable for future sett excavation due to the distance from suitable habitats in the local landscape, and the flat terrain.
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	None.
Riparian animals	
<i>Summary of Survey Findings</i>	There are no watercourses on or connected to the site.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.

<i>Recommendations</i>	N/A
Hazel dormouse	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned one granted EPSL record for hazel dormice within 2km. The record is located ~1,700m to the northwest of the site. On-site habitat Whilst there are some scattered trees and a tree line present on site, these do not provide sufficient habitat to support a dormouse population and have no connectivity to suitable areas of dormouse habitat in the wider landscape. Furthermore, urban infrastructure (such as roads and buildings) which surrounds the site creates barriers to dormouse dispersal.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None.
Other e.g. hedgehog and foxes	
<i>Summary of Survey Findings</i>	Hedgehogs The site provides suitable habitat for hedgehogs to forage, hibernate and commute. Additionally, the site is not fully enclosed meaning hedgehogs can move freely on and off site. Foxes Foxes were identified on site and anecdotal information from the residents implied that they have a den on site, or within the influencing area. The den is likely to be in the southwestern corner of the site or underneath the area of decking to the SW of the building.
<i>Foreseen Impacts</i>	A small area of grassland, scattered trees and scattered shrubs will be removed during the proposed works. Construction activities could result in the death or injury of mammals, if not mitigated for. Any foxes present underground during groundworks could be subject to unnecessary suffering by injury, entombment, or in the case of cubs, abandonment of the earth by parent animals.
<i>Recommendations</i>	No further surveys are required. However, the following recommendations are given in order to mitigate against potential harm to hedgehogs and foxes during the development works.

	• Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. Suggested biodiversity enhancements • Incorporation of fence gaps to allow hedgehogs and other small terrestrial species to roam freely through the garden landscape. • Placement of a hedgehog house in a sheltered and undisturbed area of the site. It should be durable and secure, such as a Woodstone hedgehog house, or similar alternative brand.
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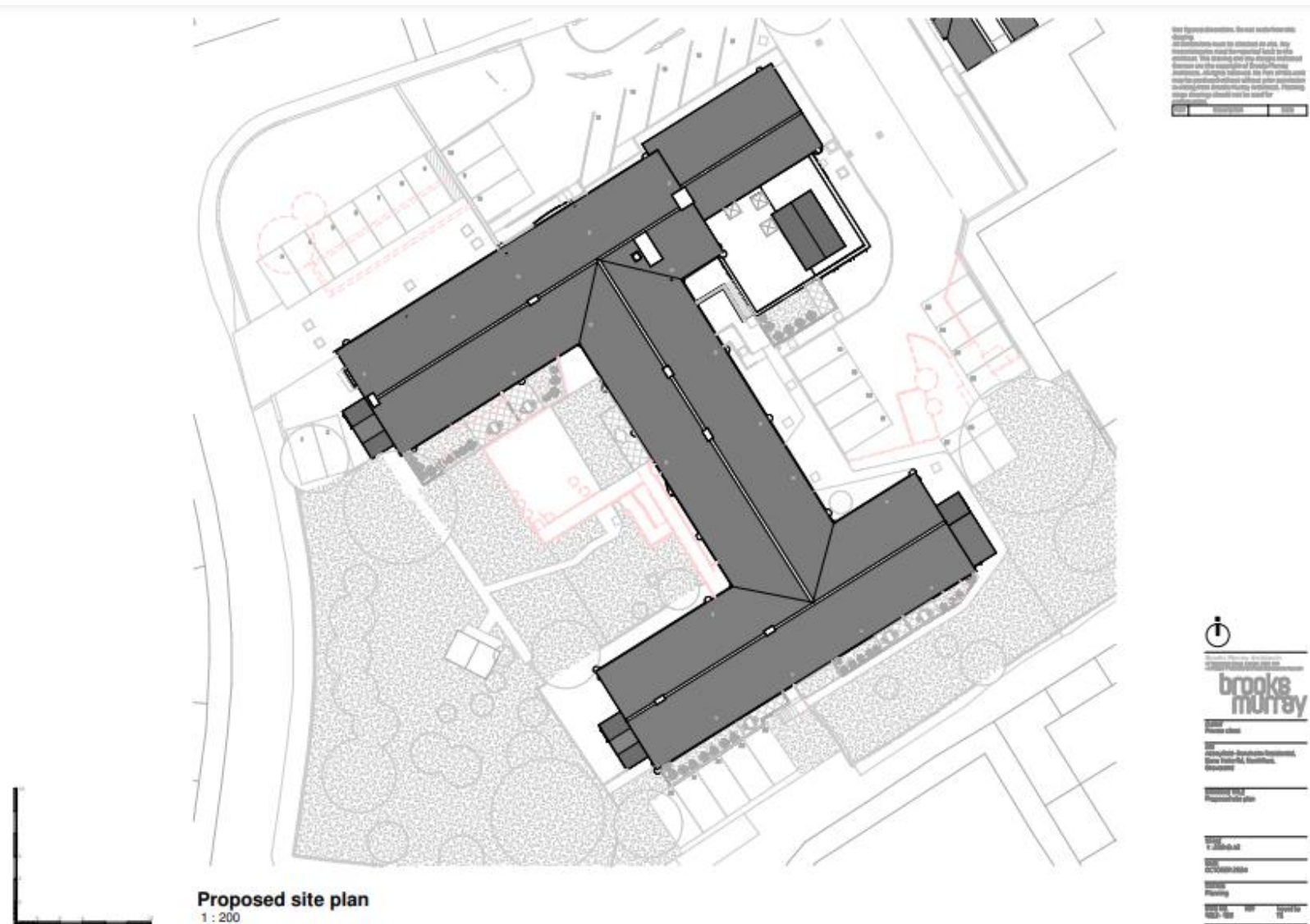
Appendix 1: Habitat map



Appendix 2: Location map



Appendix 3: Proposed plan



Appendix 4: Photos



Figure 1. The eastern aspect of the main residential building.



Figure 2. The western and southern aspect of the garage.



Figure 3. The grassland along the northern boundary of the site with scattered shrubs.



Figure 4. The grassland with scattered trees along the eastern boundary.



Figure 5. The grassland, scattered trees and tree line in the rear garden – to the southwest of the site.



Figure 6. T5 and T6 with the potential roosting features circled in yellow.



Figure 7. The hawthorn, T9, in the rear garden of the site.

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