

Preliminary Ecological Appraisal

Survey Site:

Land Adjacent to Gravesend Veterans Club, Clarence Place, Gravesend, Kent, DA12 1LB

Client:

Eddie Powell

Survey Date:

13th August 2024

Project:

This report is prepared to inform a planning application with the **Gravesham Borough Council**. The proposal is described as: *The construction of a single dwelling divided into flats.*

Survey methodology and legislation can be found in the Arbtech Supplement: **PEA Methodology and Legislation - 2024.**

The site survey was undertaken by Harry Switala, BSc, MSc.					
Date of Survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (BF)	Rain
13/08/2024	24	51	0	0	None

Ecological Survey Factor Conclusion, Impact or Recommendations	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within its 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. See habitat map in <i>Appendix 1</i>, location plan in <i>Appendix 2</i>, proposal plan in <i>Appendix 3</i>, and photos in <i>Appendix 4</i>.
Limitations	Biological records data from the Kent and Medway Biological Records Centre (KMBRC) has not been obtained. As there is limited habitat on site and no EPSLs located within a 2km radius of the site, this is not deemed a significant limitation to the assessment.
Habitats and Plants Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
<i>Summary of Survey Findings</i> <i>(UKHab codes used)</i>	The site is centred at National Grid Reference TQ 64871 73485 and has an area of approximately 0.0301ha. The site is characterized by an amenity garden with scattered trees located at the northern and southern peripheries of the site. The site is surrounded by residential areas, with flats located immediately east and west of the site. The wider landscape comprises urban-built up areas, with pockets of woodland copses and amenity parks interspersed throughout.

	<u>Grassland: Modified Grassland with Scattered Trees and Scattered Scrub – [g4 10 32] – Figures 1-13</u> The entirety of the site is dominated by a species poor modified grassland, exhibiting a uniform sward height (average ~ 5cm). Grass species present include DOMINANT perennial ryegrass and ABUNDANT false oat grass. Forb species are interspersed throughout and are comprised of FREQUENT creeping cinquefoil, rumpled cloverleaf, and yarrow; OCCASIONAL common daisy, dandelion and plaintain; RARE large leaved evans and common ragwort. There is a pile of compost and wood debris located at the southeastern corner of the grassland. Although connected to the adjacent grassland, the site is not associated to the adjacent building and is currently privately managed by the landowner. The total area of the modified grassland measures at 301m². <i>Figures 1&2.</i> Located along the eastern, northern and southern peripheries of the site is a 1m thick strip of scattered scrub, consisting of; ABUNDANT bramble and ivy; FREQUENT common nettle, white comfrey, Indian cluster berry, holly and green alkanet; OCCASIOANAL self-set maple, large leaved evans and great bindweed; and RARE self-set pincherry and self-set hazel. <i>Figures 3-5.</i> Condition Assessment (assessed using the 'Grasslands Low Distinctiveness' habitat type condition assessment sheet): A. There are 6-8 vascular plant species present per m². FAIL B. Varied sward height, with at least 20% less than 7cm and 20% more than 7cm. FAIL C. Any scrub present accounts for less than 20% of the total grassland area. FAIL D. Physical damage is evident in less than 5% of total grassland area. PASS E. Cover of bare ground is between 1% and 10%. PASS
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	F. Cover of bracken is less than 20%. PASS G. There is an absence of invasive non-native plant species. PASS Passes 4 of 6 criteria, excluding essential criterion A, therefore achieves POOR condition. There are 11no individual trees located at the northern and southern peripheries of the site. Species include 4 medium sized sycamore maple trees, 1 small sized sycamore maple tree, 1 small sugar maple tree and 5 small bay trees. <i>Figures 7-13.</i> Condition Assessment (assessed using the 'Individual Trees' habitat type condition assessment sheet): A. At least 70% within the block are native species. FAIL B. The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of the total area, and no individual gap being >5m wide. PASS C. More than 50% within the block are mature. FAIL D. There is little or no evidence of an adverse impact on tree health by human activities. PASS E. Natural ecological niches for vertebrates and invertebrates are present. PASS F. More than 20% of the canopy cover is oversailing vegetation beneath. PASS Passes 4 of 6 criteria, therefore achieves MODERATE condition. An arboricultural survey is set to be carried out on the site in due course. Details regarding the trees are subject to change following the arboricultural survey.
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	There are no notable habitats (i.e. protected or notable plant species) within the site, but three habitats are present within 2km of the site, the closest being deciduous woodland located 785m northeast of the site.								
<i>Foreseen Impacts</i>	Habitats on site comprise of a modified grassland, with scattered scrub and trees. Such habitats are common and widespread and have low ecological value. <i>Table 1: Priority habitats within 2km radius of the site</i> <table> <tr> <th>Priority Habitat</th><th>Distance from site (approximate)</th></tr> <tr> <td>Deciduous Woodland</td><td>785m northeast</td></tr> <tr> <td>Mudflats</td><td>900m north</td></tr> <tr> <td>Coastal and Floodplain Grazing Marsh</td><td>1900m east</td></tr> </table> No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the urban location of the site with surrounding physical barriers.	Priority Habitat	Distance from site (approximate)	Deciduous Woodland	785m northeast	Mudflats	900m north	Coastal and Floodplain Grazing Marsh	1900m east
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Deciduous Woodland	785m northeast								
Mudflats	900m north								
Coastal and Floodplain Grazing Marsh	1900m east								
<i>Recommendations</i>	Best practice measures to minimise the possibility of pollution must be implemented during construction. 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). A Construction Environment Management Plan (CEMP) may be required for this. A Biodiversity Net Gain (BNG) report may be required to discern the change in biodiversity value of the site as a result of the proposed development.								
Locality and Designated Sites									
<i>Summary of Survey Findings</i>	The site is not subject to any designation.								

	There are no statutory designated sites within a 2km radius. The site lies within the impact risk zone for the South Thames Estuary and Marshes Site of Special Scientific Interest (SSSI). The proposed development type is not listed as a possible high risk with regards to this designation. There are two European sites (Ramsar/SAC/SPA) located within a 5km radius of the site. Thames Estuary & Marshes (Ramsar) is located 2360m east of the site. This is comprised of a complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflats along the River Thames between Gravesend and Sheerness in Essex and Kent. The habitats support internationally important numbers of wintering waterfowl, and the saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates. The Thames Estuary & Marshes Special Preotection Area (SPA) is located 3380m east. The presence of non-statutory designated sites within a 2km radius of the site cannot be determined without biological records data from the Kent and Medway Biological Records Centre (KMBRC).
<i>Foreseen Impacts</i>	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.
<i>Recommendations</i>	N/A
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.

Bats	
<i>Summary of Survey Findings</i>	A review of the MAGIC database revealed no granted European Protected Species Licences (EPSLs) within a 2km radius. Modified grasslands, scattered scrubs and trees located on site provide suitable albeit limited habitats for foraging and commuting bats. These could also be used by bats dispersing from nearby roosts outside of the site and commuting around the area. However, the site is unlikely to represent a significant foraging or commuting resource for bats in the context of the wider landscape. Habitats in the wider landscape, such as woodland copses, tree-lined parks, and the Thames estuary and marshes, offer more ideal habitats for foraging and commuting bats. There are 11no trees located on site. A ground level tree assessment was undertaken on each tree to assess their suitability for roosting bats. T1-T11 have negligible value for roosting bats due to a lack of suitable roosting features. ❖ Any potential roosting features e.g identified knotholes are shallow, north and upwards facing, allowing the ingress of rain, sub optimal for bats. ❖ Two of the trees had light ivy coverage, not dense enough to conceal any suitable roosting features. The ivy stems were inspected and were identified to be too skinny to provide suitable roosting quality to the trees.
<i>Foreseen Impacts</i>	T4-T11: The proposed development will result in the removal of these trees. T4-11 have negligible value for roosting bats due to a lack of potential roost features.

	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>	T4-T11: In the unlikely event that a bat or evidence of bats is discovered during the felling of this tree, all work must stop and a bat licensed ecologist contacted for further advice. Lighting: A low impact lighting strategy will be adopted within the proposed development. This should be designed in accordance with Guidance Note GN08/23 Bats and Artificial Lighting at Night (Institution of Lighting Professionals, 2023). Enhancement opportunities for bats include: ❖ The installation of 2no. bat boxes, either integrated into the new buildings or fit on the facades of the new buildings, will provide additional roosting habitats for bats. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat boxes will be a specification suitable for crevice-dwelling species such as the Integrated Eco Crevice Bat Box (WildCare) or the Eco Crevice Bat Box (WildCare) suitable for crevice-dwelling species, or a similar alternative brand.
Birds	
<i>Summary of Survey Findings</i>	No evidence of nesting birds was found on site during the surveys; however, birds could use the onsite trees for nesting purposes. No habitat for schedule 1 birds was observed.
<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>	All building works/tree felling/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. Enhancement opportunities for birds include: ❖ Installation of 2no. bird boxes at the site – preferably 2no. integrated swift bricks (considered to be universal nest bricks for small bird species) within the fabric of the building during construction. To be suitable for swifts, they will need to be placed at least 5m above ground level under the eaves of a building. Integrated nesting bricks are preferable to bird boxes; even if it cannot fulfil the height requirement for swifts, it will still be suitable for other passerine species. If the building material does not allow for integrated nesting bricks, 2no. nest boxes mounted on the exterior of the building or on retained trees will also be acceptable. Nest bricks/boxes should be sheltered from prevailing wind, rain, and strong sunlight, and should be placed on an open aspect with no trees or large shrubs potentially obstructing flight paths.
Amphibians	
<i>Summary of Survey Findings</i>	A review of the MAGIC database revealed no granted European Protected Species Licences (EPSLs) within a 2km radius.

	There are no suitable breeding habitats within 500m of the site. Given the urban nature of the surrounding landscape (i.e. dominated by roads and hard standing which are sub-optimal for amphibians) it is unlikely that great crested newts will migrate on to site, reducing the likelihood of great crested newts being present on site and across the surrounding areas. Given the wider context of the surrounding habitat and the fidelity of great crested newts to ponds and the lack of connectivity of the site from such suitable breeding ponds, they are unlikely to be on site. Habitats on site are largely unsuitable for great crested newts due to their intensely managed nature and lack of connectivity to water features; notably, they are typically found within terrestrial habitats of up to 500m from breeding ponds (Langton et al., 2001). Common amphibian species such as frogs, on the other hand, have a wider terrestrial range in terms of movements and dispersal and are not as bound to ponds or water courses as great crested newts. Scattered scrub and compost piles on site provide suitable albeit limited habitats for foraging and sheltering amphibians. As such, the presence of common amphibians could not be discounted.
<i>Foreseen Impacts</i>	No impacts are anticipated on great crested newts, as a result of the proposed development as this species is unlikely to be on site. Small areas of modified grassland, scattered trees and scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local amphibian populations owing to their low value and the presence of more extensive habitat locally. However, site clearance could result in the death or injury of common amphibians, if present and crossing the construction zone.

<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures: ❖ A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any amphibians to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter amphibians from the working area. ❖ Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas. ❖ Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. ❖ Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians 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 common amphibians 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. ❖ In the unlikely event that a great crested newt is identified, works must cease and advice must be sought from a suitably qualified ecologist. No enhancement opportunities are applicable to the site due to the nature of the proposals.
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Reptiles	
<i>Summary of Survey Findings</i>	No EPSLs for reptiles were returned by MAGIC. Scattered scrub and compost piles on site provide suitable albeit limited habitats for foraging and sheltering reptiles. As such, the presence of reptiles during vegetation clearance of the small area of modified grassland could not be discounted.
<i>Foreseen Impacts</i>	Small areas of modified grassland, scattered trees and scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local reptile populations owing to their low value and the presence of more extensive habitat locally. However, site clearance could result in the death or injury of reptiles, if present and crossing the construction zone.
<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to reptiles, further surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: ❖ A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any reptiles to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter reptiles from the working area. ❖ Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent reptiles from utilising these areas. ❖ Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. ❖ Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.

	❖ In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist. No enhancement opportunities are applicable to the site due to the nature of the proposals.
Badger	
<i>Summary of Survey Findings</i>	Though such managed modified grasslands make for suitable foraging and commuting habitats, badgers are creatures of habit and no established mammal trails, evidence of latrines, or setts were found on or around the site. Furthermore, given the urban nature of the surrounding landscape (i.e. dominated by roads and hard standing which are sub-optimal for badgers) it is unlikely that badgers will migrate on to site, reducing the likelihood of badgers being present on site and across the surrounding areas. As such, the presence of badgers has been discounted.
<i>Foreseen Impacts</i>	No impacts are anticipated on badgers as a result of the proposed development.
<i>Recommendations</i>	N/A
Hazel Dormouse	
<i>Summary of Survey Findings</i>	No EPSLs were returned by MAGIC within a 2km radius. The site features no habitats which might provide opportunities for hazel dormouse, such as established woodland or mature, native hedgerows as it is based in an urban setting. Given the wider context of the surrounding habitats, hazel dormice are unlikely to be present on site.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	N/A
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
Invertebrates	
<i>Summary of Survey Findings</i>	Modified grasslands, scattered trees and scattered scrub are able to support an assemblage of common invertebrate species. The site is unlikely to support notable invertebrate species.
<i>Foreseen Impacts</i>	Small areas of modified grassland, scattered trees and scrub 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>	Enhancement opportunities for invertebrates include: ❖ Installation of insect hotels. ❖ Planting of native, pollinator-friendly (i.e. flowering and fruiting) species. ❖ Green roof on the roof space of the new extension.
Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	Hedgehogs are extremely mobile and highly adapted to urban landscapes. There is limited suitability for foraging, commuting, and sheltering hedgehogs on site within the scattered trees and scrub and their presence during works cannot be discounted.
<i>Foreseen Impacts</i>	Small areas of modified grassland, scattered trees and scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present and crossing the construction zone.
<i>Recommendations</i>	A precautionary working method will be implemented during construction, including the following measures:

	❖ A staged approach will be adopted for vegetation clearance, whereby the vegetation will be trimmed to 30cm and left overnight to allow any hedgehogs to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter hedgehogs from the working area. ❖ 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. Enhancement opportunities for hedgehogs include: ❖ Planting of fruit-bearing trees, shrubs, and hedgerows.
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Appendix 1: Location Map



Appendix 2: Survey/Habitat Map



Appendix 3: Proposed Plan

Not available at the time of writing. This report will need to be updated upon the completion of the proposed development plans.

Appendix 4: Photos



Figure 1. View of the site from the northern periphery facing south. Modified Grassland and trees T1-T3 located at the southern periphery can be seen.



Figure 2. View of the site from the southern periphery facing north. Modified Grassland and trees T4-T11 located at the northern periphery can be seen.



Figure 3. Scattered scrub located along the eastern periphery of the site.

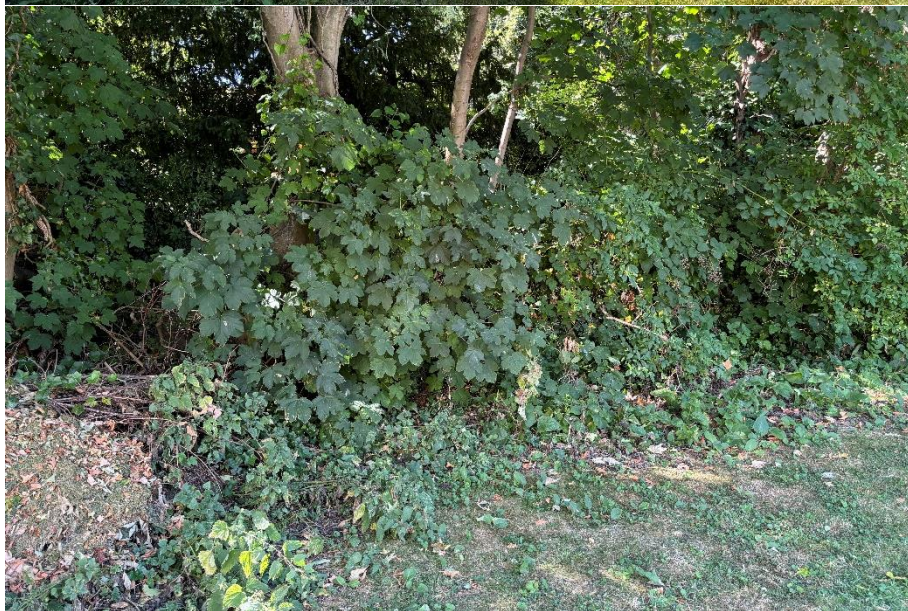


Figure 4. Scattered scrub located along the northern periphery of the site, below trees T1-T3.

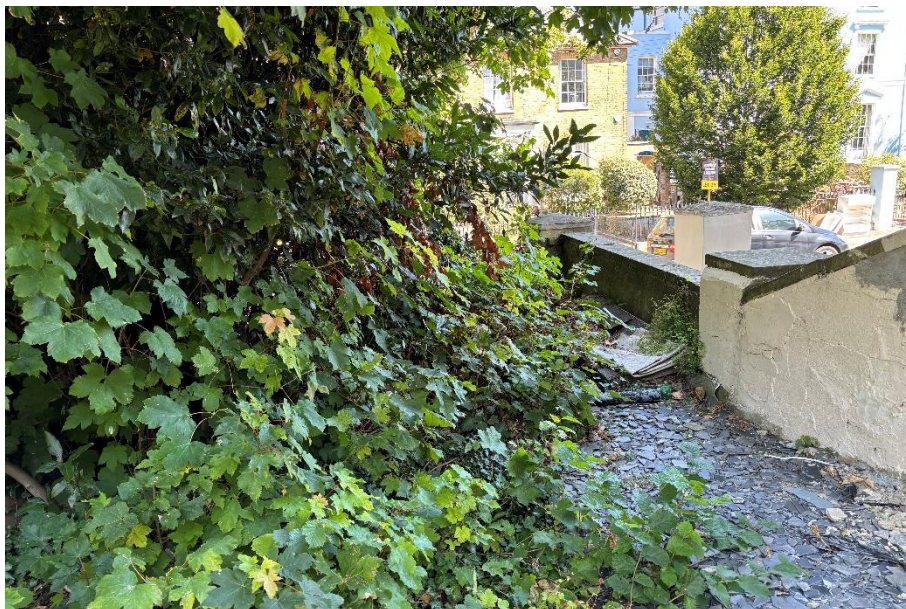


Figure 5. Scattered scrub located at the northeastern corner of the site, below trees T4-T11.

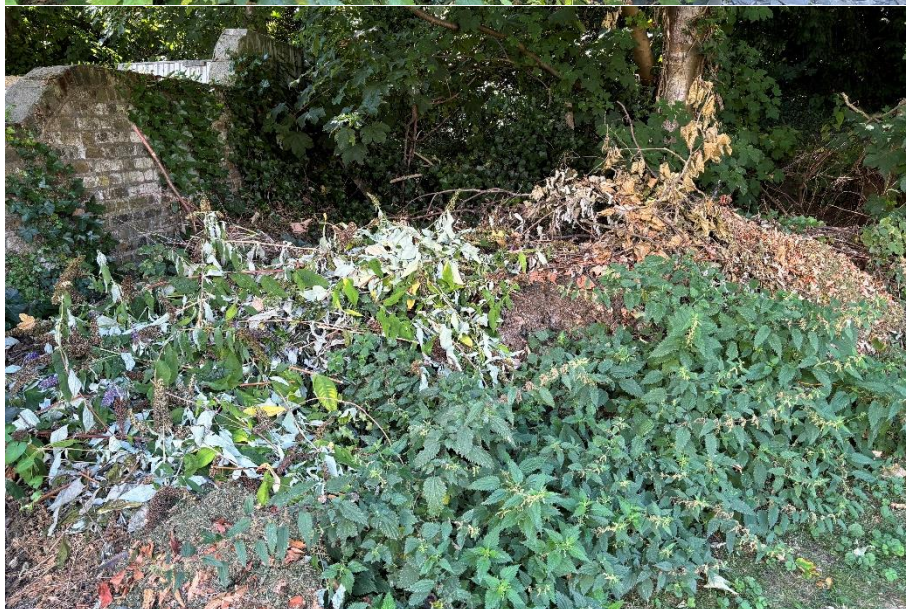


Figure 6. Compost/wood debris pile located at the south eastern corner of the site.



Figure 7 (opposite), figure 8 (bottom left) & figure 9 (bottom right)

T1 (figure 7). T2 left and T3 right (figure 8). Canopy cover of T1-T3 (figure 9).



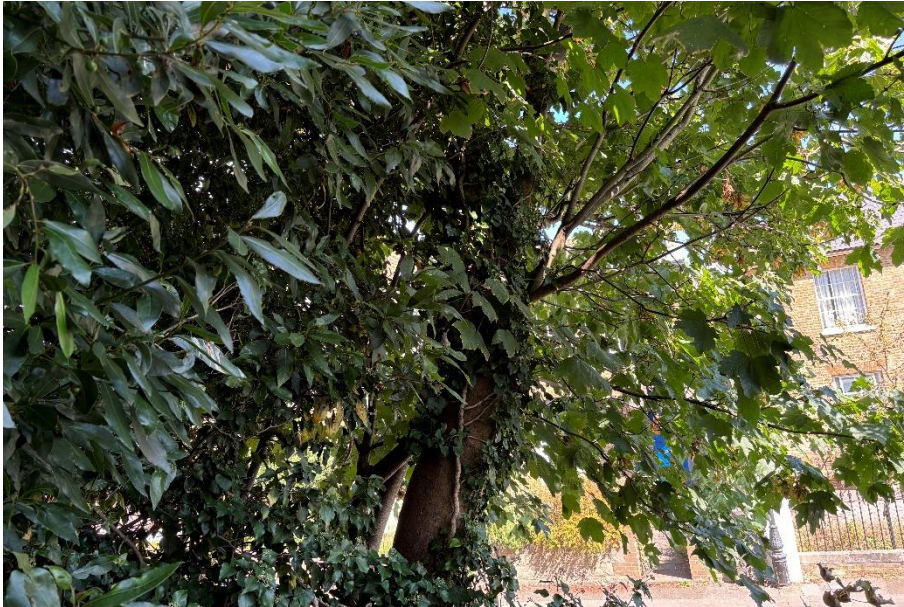


Figure 10 (opposite), figure 11 (bottom left) & figure 12 (bottom right)

T4 left and T5 right (figure 7). T6 (figure 8). T7-T11 (figure 9).





Figure 13. North and upwards facing knothole, identified on T2, sub optimal for roosting bats.

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Version Control			
Status	Issue	Name	Date
Draft	0.1	Harry Switala (BS, MRes DIC); Assistant Ecologist	16/08/24
Reviewed	0.2	Harley Stone, BSc (Hons), Consultant Ecologist Natural England Bat Licence Number: 2023-11031-CL17-BAT	22/08/2024
Reviewed	0.3	Mel Reid BSc (Hons) MRes MRSB, Senior Consultant	02/09/2024
Final	1.0	Harry Switala BSc (Hons), MSc; Assistant Ecologist	02/09/2024