

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

2 Delamere Avenue, Whitefield, Manchester, Bury, Greater Manchester, M45 7WJ

Client:

Mr & Mrs K & A Gardner

Survey date:

3rd October 2025

Project:

This report is prepared to inform a planning application with the Bury Metropolitan Borough Council. The proposal is described as:
Demolition of existing three-bedroom domestic dwelling. Construction of new build three-bedroom domestic dwelling.

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

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

The survey results and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion

Site Location and Context					
The survey site is centred on National Grid Reference SD 8005 0092 and has an area of approximately 0.1ha. The site comprises a residential dwelling and associated garden. It is situated within the residential area of Bury. There are scattered trees within the site and extending into the local garden landscape. Aerial imagery shows the local landscape to have a residential character, with urban green spaces in close proximity to the site such as golf courses and recreational grounds. Water bodies can be found nearby, such as River Irwell located ~1km to the north. Such features likely enhance the area for a variety of species, including bats, amphibians and reptiles.					
Survey Details					
The site survey was undertaken by Kayleigh Davies BSc, MSc, Accredited on Natural England Bat Licence (details on request.) and holder of Natural England Level 1 Great Crested Newt License (details on request).					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
03/10/2025	14	65	100	6	Light rain
Executive Summary					
No works to the property that may block or remove potential roosting features should be carried out until the required surveys have been completed. Undertaking such work beforehand could unlawfully affect bats if present and may compromise the validity of the surveys and hinder the planning application process. - Three Bat Emergence Surveys (BES) are required for B1 to characterise the roost present and to inform a license application to Natural England. Biological Record Data and DNA of the droppings found is also required to inform the license. - Two BES is required on B2 and one on B1 to assess the presence or absence of roosting bats within these buildings. - Biodiversity Net Gain (BNG) is required for the site unless the site falls under one of the listed exemptions. - Precautionary working methods is required for protected species and described throughout the report.					
Survey limitations					
It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.					

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

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, proposal plan in appendix 3 and photos in appendix 4). 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>	The site does not contain any habitats listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Other habitats within the site are common and widespread and have low ecological value. Notable habitats are present within 2km. On-site habitat descriptions <u>u1b</u> – Developed land/sealed surface The site consists of cement paths and driveway with no observed vegetation, surrounding the dwelling and to the south of the site. <u>u1</u> - Built-up areas and gardens [vegetated garden 828, introduced shrubs 847] The site consists of modified grassland lawns and introduced shrubs. The lawn consists of regularly managed grassland lawn with species present including perennial rye grass (<i>Lolium perenne</i>) (D), Yorkshire fog (<i>Holcus lanatus</i>) (A), daisy (<i>Bellis perennis</i>) (A), dandelion (<i>Taraxacum officinale</i>) (F), ribwort plantain (<i>Plantago lanceolata</i>) (O), and sow thistle (<i>Sonchus oleraceus</i>) (R). The lawn is well managed, with no observed bare ground and no invasive species observed. The lawn has no observed areas of damage and the grass is uniform length ~10 cm. There are introduced shrubs throughout the northern and southern garden. Species present include cherry laurel (<i>Prunus laurocerasus</i>) (D), mophead hydrangea (<i>Hydrangea macrophylla</i>) (A), fuchsia (<i>Fuchsia magellanica</i>) (F), holly (<i>Ilex aquifolium</i>) (O), and heather (<i>Calluna vulgaris</i>) (R). No Schedule 9 plant species observed. <u>u1b5</u> – Buildings

	There is three onsite buildings, as described in full in the bat roost assessment portion of the report. H2b - Non-native hedgerow There is a small beech (<i>Fagus sylvatica</i>) hedgerow along the western boundary of the northern garden of the site. This hedgerow is approximately 1.4 m in height and 1 m wide, with no gaps. The hedgerow is subject to regular maintenance and cutting. The basal gap is less than 20 cm, and no invasive species are present. <u>Scattered trees 32</u> There is one scattered tree within the southern garden, located adjacent to the south of the garage, and two scattered trees within the northern garden on the northern boundary within the lawn. The southern tree is a silver birch (<i>Betula pendula</i>), measuring approximately 20 cm DBH. The northern trees are also silver birch (<i>Betula pendula</i>), each measuring approximately 20 cm DBH. All trees show no observed damage and no ecological niches. Condition assessment: 1. At least 70% of the trees are native – PASS 2. The tree canopy is not predominantly continuous – FAIL 3. More than 50% of the trees are not mature – FAIL 4. Little to no evidence of adverse impact – PASS 5. Natural ecological niches are not present – FAIL 6. More than 20% of the tree canopy is oversailing vegetation beneath – PASS This habitat parcel passes all 6 of its criteria and scores moderate. <u>Line of trees 33</u> There is a line of trees surrounding the south, west, and east boundaries of the southern garden, and the east boundary of the northern garden. Tree species present include Lawson's cypress (<i>Chamaecyparis lawsoniana</i>) (D), field maple (<i>Acer campestre</i>) (A), cherry laurel (<i>Prunus laurocerasus</i>) (F), beech (<i>Fagus sylvatica</i>) (O), silver birch (<i>Betula pendula</i>) (O), and apple (<i>Malus domestica</i>) (R). The trees are all young or semi-mature, with DBH ranging from approximately 15–35 cm. The base of the trees consists of soil with introduced shrubs. Condition assessment: 1. At least 70% of the trees are native – FAIL 2. Tree canopy is predominantly continuous with gaps in canopy making up >10% - PASS 3. More than one have ecological niches for wildlife – PASS 4. There is not an undisturbed naturally vegetated strip of at least 6m on both sides – FAIL 5. At least 95% of the trees are healthy – PASS This habitat parcel passes four of its criteria and scores moderate.
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	Local notable habitats The following are priority habitats within 2km as returned from MAGIC: • Lowland Dry Acid Grassland - ~1.5km west. • Ancient woodland - ~closest ~1.15km south. • Deciduous woodland – closest ~170m southeast
<i>Foreseen Impacts</i>	On-site habitats The proposed development will result in the loss of vegetated garden. This is likely to have a minimal impact on biodiversity due to the low ecological value of these habitats. Notable habitats No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to deciduous woodland (~170m southeast), indirect effects (e.g. pollution, dust, litter, surface run off, etc.) could occur during construction.
<i>Recommendations</i>	On-site habitats Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction - Recommendations" (BS 5837) (2012). Notable habitats Best practice measures to minimise the possibility of pollution affecting the nearby deciduous woodland must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required for this. Biodiversity net gain The Environment Act (2021) requires all developments (excluding exemptions) to deliver a 10% net gain in biodiversity. Therefore, the planning application must be accompanied by a biodiversity net gain calculation to ensure the proposed development delivers a 10% net gain.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	On-site designations The site is not subject to any designation. Statutory designated sites (within 2km) There are 4 statutory sites within 2km of the site, as detailed below:

	• Springwater Park (Local Nature Reserve – LNR) - ~770m north – <i>river Irwell flows along the northern boundary ponds with invertebrate life: meadow butterflies, woodland birds and bats</i> • Chapelfield (LNR) - ~1.03km northwest - <i>birds, waterfowl, dragonflies and other aquatic fauna</i> • Philip's Park (LNR) - ~1.5km south - <i>Semi-natural woodland with wildflowers characteristic of ancient woodlands. Some open glades have remnant heathland. Species rich meadows with willow scrub. There are 4 mill lodges, 2 mill ponds and some seasonal ponds. The woodland is dominated by oak, sycamore, birch, hawthorn and holly with willow and alder in the valley bottom. The species rich meadows include cuckoo flower, common spotted orchid, black knapweed, tufted vetch, and bird's foot trefoil. Butterflies such as orange tip and meadow brown are abundant.</i> • Mere Clough (LNR) - ~1.7km south - <i>Large woodland, important for bird life.</i> The site lies within the impact risk zone for Nob End SSSI (Site of Special Scientific Interest). Non-statutory designated sites The presence of non-statutory designated sites within 2km of the site cannot be established without data from Greater Manchester Local Record Centre.
<i>Foreseen Impacts</i>	On-site designations No impacts foreseen. Statutory and non-statutory designated sites 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. The site lies within the impact risk zone for Nob End SSSI. The proposed development type is not listed as a possible high risk for this designation.
<i>Recommendations</i>	On-site designations None required. Statutory and non-statutory designated sites None 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>	The habitats present on-site, including lawns, ornamental shrubs and trees, likely provide common invertebrates with opportunities to forage and shelter. The site contains no further notable habitats which may provide niches for specialised or protected invertebrates.
<i>Foreseen Impacts</i>	Vegetated garden and trees 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 further surveys. Suggested biodiversity enhancements The incorporation of bee bricks (e.g. Ibstock BeeHabitat or similar alternative brand) into the fabric of the new buildings would provide sheltering opportunities for pollinators. These should be installed 0.5m above ground level on a south-facing elevation with no obscuring vegetation. Insect hotels, log piles or deadwood will further enhance the site for invertebrates. The site could be further enhanced via the provision of native wildflowers or wildflower turf, which would provide foraging opportunities for invertebrates.
Bats	
<i>Summary of Survey Findings</i>	EPSL data A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. No EPSLs are present within a 2km radius of the site. There are no Special Areas of Conservation designated for bats within 10km of the site. Foraging and commuting habitat Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of vegetated garden and trees. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn

			provide foraging opportunities for local bat populations. The lines of trees onsite extend beyond the site adding to the continuity of vegetated linear features present in the wider landscape. Bats are well known to utilise linear features to aid navigation whilst travelling between foraging resources and roost sites. Roosting habitat Buildings and trees to be impacted by the proposed development are assessed for their suitability to support roosting bats below. There are a total of 3 buildings on site: the main residential dwelling (B1), and one outbuilding (B2) and a garage (B3). All buildings were surveyed as will be impacted by the proposed development. No evidence of roosting bats was identified on or within B2 & B3 or any of the surveyed trees on-site. The trees onsite are all young and observed to have no roosting features suitable to support roosting bats.
B1 Building description			Photographs
<i>Summary</i> B1 is a single storey, residential dwelling, with a hipped roof and two gables to the north of the building. The roof is constructed of cement tiles, with a brick and rendered walls. There is a plastic sheeting lean to on the west of the building. A small flat roof section is on the southern elevation, with a bitumen lined roof. There is one loft space present within the building. ~50 droppings were found on external walls below a gap in the soffit on B1. The building has high habitat value and is a confirmed roost.			
Feature	Materials	Condition/description/suitability	Photograph(s)

Walls	Render and brick	Condition/description The walls are well sealed with no observed cracks or crevices. Suitability/access/evidence of bats No observed roosting features for crevice dwelling bats.		
Roof	Cement	Condition/description The roof is overall well sealed, with tiles lying flush together. There are occasional lifted tiles to the north and the south of the building. The observed gaps are typically observed to be too small to offer roosting features for bats. Suitability/access/evidence of bats The gaps between the tiles are considered too small to offer roosting features for bats.		

Eaves	Overhanging	Condition/description There is a gap in the eaves to the left of the top of the window on the southern elevation. This gap is observed to lead further into the roof space. Suitability/access/evidence of bats The gap allows internal access into the roof space. There are ~50 bat droppings below this feature, on the walls and the window which suggest recent use of this feature by bats.	
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Internal voids	Timber rafters and ridge beam.	Condition/description The loft is separated into two voids via wooden boarding and a doorway. Void 1: walls are wooden, with a wooden boarding on the ceiling and wooden boarded floors. This void is utilised for storage and has artificial lighting present. The void is ~8m long, ~2.3m height and ~6.4m in width. Void 2: the second void is unboarded, with exposed beams and lining. The lining present is a mix of breathable membrane and bitumen felt. The insulation is mineral wool and is located along the floor of the void. The void further wraps around the building. Measurements are ~2.4m in height, ~10m in width (widest point) and ~12.7m length (longest point). The average temperature internally was ~21°C and 76% humidity. Suitability/access/evidence of bats There are sections of sagging in the lining present within the loft space which would allow ingress into the void for bats. Furthermore, void 2 has uncluttered space with no storage items present that would allow flight room for bats. No evidence such as droppings or bats themselves were observed internally.	
B2 Building description			Photographs

Summary

B2 is a small single storey outbuilding, with a sloped roof. The roof is slate tiles, the walls brick and the doors are wooden. There are no loft spaces present.

B2 is **moderate** for roosting bats.



Feature	Materials	Condition/description/suitability	Photograph(s)
Walls	Brick	Condition/description There are several observed gaps between the bricks with damaged and missing mortar. Suitability/access/evidence of bats The crevices observed between the bricks allow for low number of bats for roosting.	A close-up photograph of the brick wall, highlighting the gaps between the bricks and the damaged mortar. The wall is made of red brick, and the mortar is crumbling in several places.

Roof	Slate	Condition/description There are several lifted tiles throughout the roof on B2. Suitability/access/evidence of bats The lifted tiles allow ingress internally and allow for crevices suitable for low number of bats. There is no lining present below the tiles and therefore the tiles do not lead to a large void for a large number of bats.		
Internal voids	Timber rafters and ridge beam. Open floor to ridge.	Condition/description The internal of B2 is utilised for storage, with unlined roof and brick walls. There is damage present to the roof of B2 which allows ingress into the building. There are 3 internal voids of B2, with each void measuring ~1m wide, ~1.4m in length and ~2m in height. The internal measures ~14°C and 66% in humidity. Suitability/access/evidence of bats The roof allows ingress into the building, with the space not regularly disturbed which allows suitable roosting habitat for void dwelling bats.		
B3 Building description			Photographs	

<i>Summary</i> B3 is a single storey garage, with a large garage door on the north of the building, The walls are pebble dashed, with plastic bargeboard. There is ivy present on the west of the building. B3 is low for roosting bats.				
Feature	Materials	Condition/description/suitability	Photograph(s)	
Walls	Pebble dash	Condition/description There are no observed roosting features on the wall of the building. However, there is a high level of ivy on the east of the building that may obscure features. Suitability/access/evidence of bats The ivy on the eastern elevation may observed suitable roosting features or may offer a roosting feature for bats.		
Roof	Bitumen felt	Condition/description The roof is flat with bitumen felt lining. The roof is observed to be in overall good condition with no observed damage. Suitability/access/evidence of bats No observed roosting features on the roof on B3.	N/A	

Eaves	Plastic	Condition/description No observed gaps or crevices below the bargeboard on B3. Suitability/access/evidence of bats No observed roosting features within the eaves on B3.	
Internal voids	Timber boarding	Condition/description No observed ingress points observed internally. The void is measured to be ~7m long, ~4m wide and ~2.5m in height. The internal is measured to be 14°C and 67% humidity. Suitability/access/evidence of bats No observed points of ingress observed internally for bats. There is a large window on the eastern elevation which allows in high levels of sunlight which would likely deter bats from utilising the interior for roosting.	
Foreseen Impacts		No works to the property that may block or remove potential roosting features should be carried out until the required surveys have been completed. Undertaking such work beforehand could unlawfully affect bats if present and may compromise the validity of the surveys and hinder the planning application process. Roosting habitat [Buildings] The proposed development will result in the demolition of this building. This could result in the destruction of any bat roosts present and could cause disturbance, death or injury to bats.	

	Roosting habitat [Trees] A small number of trees will be felled to facilitate the development. No features were identified on this tree and as such there are unlikely to be any impact to bats as a result of felling. Foraging and commuting habitat The proposed development will result in the loss of small areas of vegetated garden and trees but given their low value and 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 [Buildings] B1: Three bat emergence/re-entry surveys are required on B1 during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building. These survey visits should be completed during the optimal survey period mid-May to August inclusive. The survey visits should be at least three weeks apart. Sub-optimal: early May and September. Would require greater justification of timing e.g., weather conditions, known local bat activity. Three surveyors are required to provide full coverage of the building's elevations to look for emerging/re-entering bats. An infrared camera should also be employed at each position as part of the survey to see where any specific roost locations are located. Lighting mitigation may be required based on the outcome of the night bat survey(s). An EPSL application to Natural England will be required. The EPSL application requires that all surveys have been undertaken within the most recent active bat season and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission. B2: Two bat emergence/re-entry surveys are required on B2 during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building. These survey visits should be completed during the optimal survey period mid-May to August inclusive. The survey visits should be at least three weeks apart. Two surveyors are required to provide full coverage of the building's elevations to look for emerging/re-entering bats. An infrared camera should also be employed at each position as part of the survey to see where any specific roost locations are located.

	B3: One bat emergence/re-entry surveys are required on B3 during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building. These survey visits should be completed during the optimal survey period mid-May to August inclusive. The survey visits should be at least three weeks apart. Sub-optimal: early May and September. Would require greater justification of timing e.g., weather conditions, known local bat activity. One surveyor and one unmanned infrared camera are required to provide full coverage of the building's elevations to look for emerging/re-entering bats. An infrared camera should also be employed at each position as part of the survey to see where any specific roost locations are located. Roosting habitat [Trees] 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. Foraging and commuting habitat No further surveys are required. 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 Suggested biodiversity enhancements Enhancements are dependent on the outcome of further surveys.
Birds	
<i>Summary of Survey Findings</i>	Buildings No evidence of nesting birds was identified on or within B1, however the building is considered suitable for nesting. Trees and vegetation No bird nests were identified within the vegetation on-site, however they all offer nesting opportunities and nest-building resources for birds. Barn owls

	The site does not appear to provide any suitable nesting sites for barn owls. Overwintering birds Due to the small size of the site and the extent and type of the habitats recorded, the site not considered suitable to support a significant assemblage of protected and/or notable birds.
<i>Foreseen Impacts</i>	Buildings/trees The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests. Barn owls None foreseen. Overwintering birds None foreseen.
<i>Recommendations</i>	Buildings/trees Any building or 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. Barn owls None required. Overwintering birds None required. Suggested biodiversity enhancements The installation of a minimum of two bird boxes on mature trees around the site boundaries or on retained buildings will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box (buildings)

	Schwegler 1SP Sparrow Terrace (buildings) Schwegler 1B Nest Boxes (trees) Schwegler 2H Robin Boxes (trees) Woodstone Nest Box (buildings or trees) Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole. Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
Reptiles	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site. Habitat suitability There is no suitable habitat present on site for reptiles due to a lack of habitats such as scrub and rank grassland which would offer refuge for these species. Further, the site is surrounded by urban development (i.e. roads and buildings) which is considered sub-optimal for reptile migration and therefore reptiles are considered unlikely to migrate from any nearby suitable habitats to the development site. As such it is likely that reptiles are absent from the development site. Wider landscape The site is surrounded by urban development consisting of residential development of gardens and roads, with pathways. To the north of the site, there is a large golf, consisting of managed grassland and scattered trees and lines of trees. The golf course offers limited suitable habitat for reptiles. The management of the grassland will likely deter reptiles from using this land. Furthermore, the remainder of the wider context of the site consists of urban development which would deter reptiles from commuting further if present. Therefore the risk of reptiles in the surrounding habitat is low.
<i>Foreseen Impacts</i>	No impacts are anticipated on reptiles as a result of the proposed development.
<i>Recommendations</i>	A precautionary working method will be implemented for widespread reptiles during construction, including the following measures: • Vegetation will be maintained at a short sward (5cm) to discourage reptiles. • 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 habitats. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any reptiles 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 reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist. Suggested biodiversity enhancements The site could be enhanced for reptiles post-development with the inclusion of log piles (created from felled materials) and planting of areas of native shrubs, to provide sheltering opportunities.
Amphibians	
<i>Summary of Survey Findings</i>	EPSL and survey data A review of the MAGIC database returned no granted EPSL records for great crested newts within 2km of the site. However, the MAGIC database did return evidence indicating the presence of great crested newts resulting from historic pond surveys undertaken in 2016. These records are located 1.07km west, ~1.4km west and 6 x ~1.77km south. Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton <i>et al.</i> 2001). As such, the great crested newt metapopulation known to be present 1.07km west, ~1.4km west and 6 ~1.77km south are not suitably connected to the site. Aquatic habitat suitability (including ponds within 500m) A review of the Magic.gov.uk database and aerial imagery indicates that there is a waterbody located ~280m south of the site. However, upon review of google maps, this waterbody was assessed to be a water fountain within a residential area surrounded by cement roads and paths and is therefore suboptimal for amphibians. No ponds are present on site or within 500m of the site. Terrestrial habitat suitability Areas of shrubbery may provide foraging and sheltering opportunities for amphibians. No hibernation opportunities were identified on-site.
<i>Foreseen Impacts</i>	Given the lack of suitably connected 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>	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: • 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. Suggested biodiversity enhancements The site could be enhanced for amphibians post-development through creation of amphibian hibernacula using rubble and logs from site clearance. Information on how to construct a hibernaculum can be found here: https://www.wiltshirewildlife.org/hibernaculum
Badger	
<i>Summary of Survey Findings</i>	No badger setts were noted on site or within a 30m radius of the site. The site is considered unsuitable for badgers given the lack of suitable sett excavation areas/ground. Further, there is limited suitable badger foraging habitat on site given the lack of fruiting trees/scrub. The site is also surrounded by urban development (i.e. roads and buildings), which is sub-optimal habitat therefore reducing the likelihood of badgers being present within the surrounding area of the site.
<i>Foreseen Impacts</i>	No works will be undertaken within 30m of a badger sett. Vegetated garden will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger 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 badgers, if present.

<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: - 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 badgers could use. - 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 badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist. Suggested biodiversity enhancements Planting fruit bearing trees and species-rich grassland to increase foraging opportunities for badgers.
Riparian animals	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site. There are no water courses on or connected to the site. There are also no riparian habitats present on site or within an influencing distance.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.
<i>Recommendations</i>	None required.
Hazel dormouse	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for hazel dormice within 2km of the site. Habitat suitability The site lies outside of the known current range for hazel dormice and there are no suitable habitats within the development area. As such it is considered likely that hazel dormice are absent from site.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None foreseen.

Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	The vegetated garden onsite provides limited foraging and commuting opportunities for hedgehogs, with woodland habitat nearby.
<i>Foreseen Impacts</i>	Vegetated garden and trees 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.
<i>Recommendations</i>	Similar to the badgers, a precautionary working method will be implemented during construction, including the following measures: • 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 The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting species-rich grassland to increase foraging opportunities. • Creation of brash piles or installation of hedgehog houses in shady areas. • Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.

Appendix 1a: PEA Map



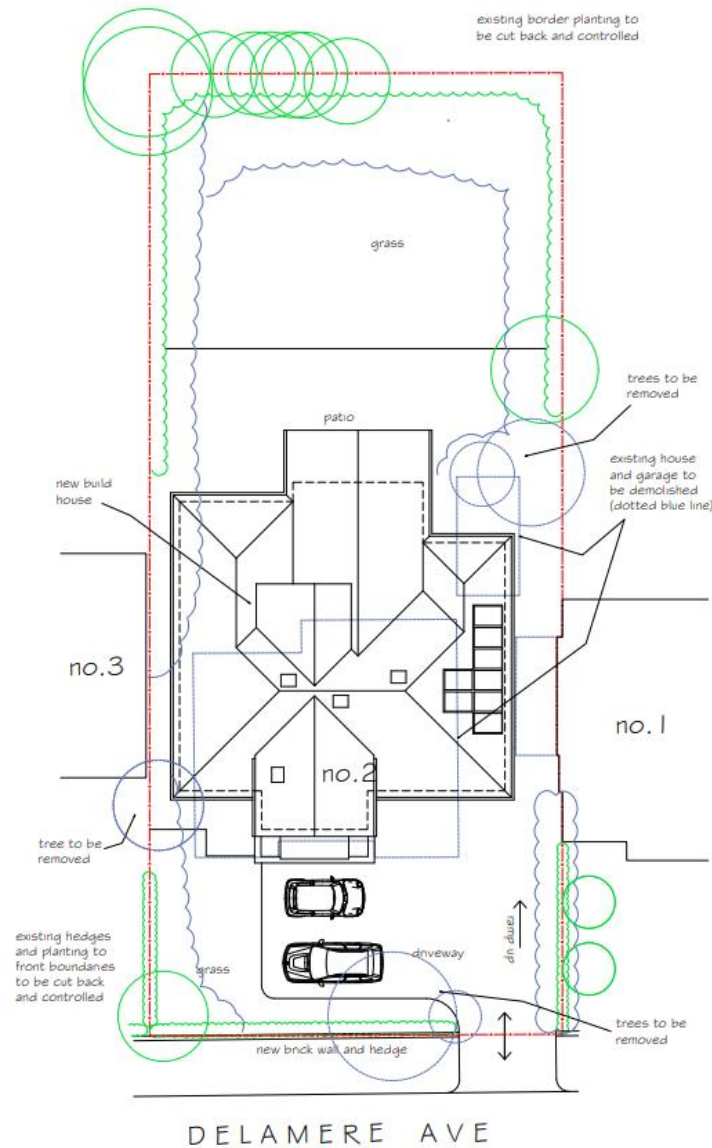
Appendix 1b: PRA and BERs Map



Appendix 2: Location map



Appendix 3: Proposed plan



Appendix 4: Habitat Photos

Vegetated garden	
Photograph	Description
	Fig 1 – the northern garden onsite.
Lines of trees	
Photograph	Description
	Fig 2 – the lines of trees surrounding the southern garden.
Scattered trees	
Photograph	Description

		Fig 3 – example of scattered tree to the south of B3.	
Non-native hedgerow			
Photograph		Description	
		Fig 4 – non native beech hedgerow to the north.	

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