

Pound Place, Angmering

Extended Phase I Habitat Survey, Bat Building Assessment and
Bat Emergence Survey

For and on behalf of

Hallmark Healthcare

March 2018

CORYLUS ECOLOGY

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1.0 INTRODUCTION

1.1 Corylus Ecology has been requested by Hallmark Healthcare to undertake an extended Phase I Habitat Survey of land at Pound Place, Angmering in West Sussex, hereinafter referred to as 'the Site'.

1.2 The Phase I Habitat Survey provides information relating to the habitats within the Site and identifies potential for and, if apparent, evidence of use by protected species. In addition, it provides recommendations for further surveys if required.

1.3 This report sets out the results of the Phase I Survey undertaken to assess the importance of the flora and habitats within the Site. The assessment also includes a survey of the buildings for bats which led to further surveys being undertaken and therefore this report includes the results of these surveys as well.

Scope of Survey

1.4 The objectives of the survey were to:

- Survey and map habitats within the Site boundary;
- Determine the potential for protected species to occur within the Site;
- Assess all trees within and close to the Site boundary for their potential to support roosting bats; and
- Assess the potential of the buildings on Site to support roosting bats.

2.0 METHODOLOGY

2.1 Preliminary Desk Study

- 2.1.1 A desk study was carried out in order to identify the types of habitat within the surrounding area and any statutory or non-statutory designated sites within 3km of the Site. In addition, information regarding European Protected Species Mitigation licences were searched for within 1km of the Site from the Multi-Agency Geographic Information for the Countryside (MAGIC) interactive mapping service (Natural England, 2016).

2.2 Extended Phase I Habitat Survey

- 2.2.1 The Site was subject to an extended Phase I Habitat Survey on 16th August 2017. The habitats present on the Site were mapped in accordance with the 'Handbook for Phase I Habitat Survey – a Technique for Environmental Audit' (Joint Nature Conservation Committee, 2003). Habitat areas and features of topographical and/or ecological interest were described in the form of target notes. These were later used to create botanical species lists by target note area and also to create a colour coded Phase I Habitat map, which is presented as Figure 1. All nomenclature follows Stace (2010). Non-native or invasive species were also identified and mapped where appropriate.

2.3 Protected Species Assessment

- 2.3.1 The Phase I Habitat survey included an assessment of the potential for the survey area to support protected species such as reptiles, bats, dormice, breeding birds and badger. This type of survey aims to assess the potential for protected species to occur due to the habitats present and does not include any species-specific survey methods designed to demonstrate whether the Site is in fact used by such species. Areas of potential for protected species have been marked on Figure 1.
- 2.3.2 A ground level survey of all trees within the Site was also undertaken looking for evidence of and potential to be used by bats. Bats may use any crack or hole (such as woodpecker holes), split or flaking bark as a roost site. Field signs to look for include dark streaking below holes and crevices, droppings under access points. Chattering noises emitted by bats may also be audible, particularly during the summer. Even where bats are known to occur, such signs may not always be evident.
- 2.3.3 Trees were placed into one of four categories as described below (Collins, 2016):

High: Trees with one or more potential roost sites that are obviously suitable for use by a larger number of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions and surrounding habitat;

Moderate: A tree with one or more potential roost sites that could be used by bats but which is unlikely to support a roost of high conservation status;

Low: A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential;

Negligible: Negligible features likely to be used by bats.

- 2.3.4 Trees were also noted if they supported ivy *Hedera helix*. Ivy can do one of two things: very old, dense ivy can provide cavities for bats between the thick interwoven stems and the tree trunk, or it can conceal features in the tree itself.

2.4 Bat Building Assessment

- 2.4.1 A full internal and external survey of the buildings was undertaken by Alex Watkinson (licence number 2016-19692-CLS) and Louise Ryan of Corylus Ecology on 16th August 2017. The external survey included an assessment of areas for potential for bats to roost, such as timber soffits, gable ends and roof tiles, and a search for evidence, such as droppings and staining immediately below potential roost areas and droppings around the base of the building for example on window sills.

- 2.4.2 The internal survey focused on roof voids and outbuildings looking for droppings, staining and bats themselves. Bat droppings were searched for on the top of beams (where they are less likely to have been disturbed/damaged) as well as on the ground below. A high powered Clulite torch was used in the search. Where suitable a Pro-Vision endoscope with halogen light, which can fit into cavities only 6mm wide, was used to look for signs of bats in any accessible cavities.

2.5 Bat Emergence Surveys

- 2.5.1 One evening emergence survey of the house was undertaken on 24th August 2017 and a second on 21st September 2017. The surveys commenced just before sunset and continued until 1½ hours after sunset. Both surveys were undertaken with three surveyors, positioned on the western elevation of the main house (S1), the south-western corner with a view of the western elevation and southern elevation (S2), and the eastern elevation of the main house (S3). S2 and S3 also had views of the swimming pool building. The surveyors were Alex Watkinson (licence number 2016-19692-CLS), Louise Ryan, Emma Waller and Helen Lucas of Corylus Ecology. The surveys were aided with the use of an infra-red video camera that was placed on the south-western corner of the swimming pool building.

3.0 RESULTS

3.1 Desk Study

3.1.1 The Site lies to the south-west of the South Downs National Park, approximately 300m beyond the boundary. There are no statutory habitats, such as Sites of Special Scientific Interest (SSSIs) or Special Areas of Conservation (SACs), within 3km of the Site. There are several SSSI Impact Risk Zones within 3km of the Site, although none of these zones include the Site itself or the surrounding urban areas. There are no non-statutory sites within 3km of the Site.

3.1.2 The Site is bordered to the north, south and east by areas mapped as being good quality semi-improved grassland, which is a Habitat of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This grassland priority habitat does not extend into the Site itself. The areas mapped as good quality semi-improved grassland immediately surrounding the Site have been developed on in recent years and now contain housing. The Site itself is listed on the Priority Habitats Inventory under 'other', with the description 'no main habitat but additional habitats present'. There are several areas of ancient woodland within 3km of the Site, the nearest of which are three small woodlands more than 1km to the north, west and east of the Site.

3.1.3 No European Protected Species licences have been recorded within 1km of the Site.

3.2 Extended Phase I Habitat Survey

3.2.1 The Site is located to the east of Angmering near Worthing in West Sussex and is situated close to the A280. The Site is a private dwelling house set within a large garden bordered by mature hedgerows. The Site is surrounded on all sides by new housing developments. The main survey area consists of the house, garden and hedgerows.

3.2.2 The habitats present are shown within Figure 1 with further details provided by way of specific Target Notes, denoted by the letters TN.

Scrub

3.2.3 The Site contains an overgrown area (TN5 on Figure 1), located at the eastern boundary of the Site. This area is dominated by common nettle *Urtica dioica* with bristly oxtongue *Helminthotheca echioides*, pendulous sedge *Carex pendula*, butterfly-bush *Buddleja davidii*, red dead nettle *Lamium purpureum*, bramble *Rubus fruticosus*, spear thistle *Cirsium vulgare* and Yorkshire fog *Holcus lanatus*. This area also includes spoil piles, a compost heap and log piles, with some open areas of unmanaged grass dominated by Yorkshire fog.

Scattered trees

- 3.2.4 In the centre of the grassland area to the west of the house is a cluster of silver birch *Betula pendula* trees (TN1). The Site contains other scattered trees, either singly or in small groups, including several ornamental maple trees *Acer* sp. to the west of the house, with cherry laurel *Prunus laurocerasus*, rose-of-Sharon *Hypericum calycinum*, Japanese euonymus *Euonymus japonicas* and pendulous sedge. There is further ornamental planting of apple *Malus* sp. and cherry *Prunus* sp. trees to the east of the house (TN4), with fuchsia *Fuchsia magellanica* and common ivy.

Semi-improved grassland

- 3.2.5 TN3 is a well-managed garden area of semi-improved grassland that is generally species poor and consistent with this type of habitat. No indicators of a more ecologically valuable grassland were recorded but species noted were daisy *Bellis perennis*, dandelion *Taraxacum officinale*, self-heal *Prunella vulgaris*, yarrow *Achillea millefolium*, perennial rye-grass *Lolium perenne*, smooth meadow-grass *Poa pratensis*, creeping buttercup *Ranunculus repens*, bristly oxtongue, common nettle, ground-ivy *Glechoma hederacea*, autumn hawkbit *Scorzoneroide autumnalis*, greater plantain *Plantago major*, creeping thistle *Cirsium arvense* and red fescue *Festuca rubra*. Several mole hills were also noted.

Tall Ruderal

- 3.2.6 At the eastern end of the Site is a mound of spoil (TN6) with freshly created brash in the middle covering 4m x 2m. This area includes common nettle, weld *Reseda luteola*, dandelion, butterfly-bush, creeping thistle, barren brome *Anisantha sterilis* and cleavers *Galium aparine*.
- 3.2.7 To the east of the swimming pool is an area of cut logs and tree trunks (TN7), vegetated with false oat grass *Arrhenatherum elatius*, rough meadow-grass *Poa trivialis*, dandelion, ash *Fraxinus excelsior* saplings, common ragwort *Senecio cineraria* and bristly oxtongue.

Boundaries

- 3.2.8 Running around all four sides of the Site are semi-mature non-native hedgerows of western red-cedar *Thuja plicata* (TN2).

3.3 Protected Species Assessment

Bat Habitat

- 3.3.1 The Site is a private garden which is relatively small in area and is surrounded by semi-mature coniferous hedgerows and urban areas beyond. The Site does not have good connectivity to surrounding countryside but it does contain features that provide shelter and some degree of habitat diversity, so it may support a reasonable invertebrate biomass. Two of the three buildings within the Site offer potential opportunities for crevice dwelling bats (see section 3.4). However, the Site itself is not

considered suitable for sustained foraging by large numbers of bats and is likely only to be used intermittently by small numbers and perhaps opportunistic foraging. Due to the small area and isolation the Site is classed as having 'Low' potential under the Bat Conservation Trust Survey Guidelines (Collins 2016).

Bat Tree Assessment

- 3.3.2 The Site contains a number of scattered trees which have been assessed for their potential to support bats. The silver birch trees of TN1 are semi-mature but no features suitable for roosting bats were evident. These trees have 'Negligible' potential to support bats.
- 3.3.3 The hedgerows surrounding the Site (TN2) are lines of semi-mature western red-cedar, all of which are multi-stemmed and not large enough to support bat roosting features. These boundary hedgerows are considered to have 'Negligible' potential for roosting bats.

Reptiles

- 3.3.4 The area of overgrown vegetation (TN5) has margins of unmanaged grassland and contains bramble scrub with spoil piles, a compost heap and log piles. Such areas could provide cover for common species of reptiles, such as slow worm, with grassland margins suitable for basking. However, the majority of the Site is comprised of closely mown lawn areas and, in addition, the Site is isolated from any other areas of suitable habitat for reptiles and is surrounded by a construction Site. Therefore, the potential of reptiles being present within the Site is considered low.

Badgers

- 3.3.5 Badger field signs were searched for within the Site and no evidence was found.

Dormice

- 3.3.6 There is no habitat within the development area which is suitable for dormice, particularly as the Site is entirely isolated from all other suitable areas of habitat for dormice in the surrounding countryside.

Amphibians

- 3.3.7 There are no ponds within the development area itself or within the area surrounding the Site. The only pond within 500m of the Site lies 300m to the north-east, beyond the A280. The Site does not support significant amounts of suitable terrestrial habitat for great crested newts. The habitat between the Site and the pond is primarily new housing development, with few areas for rest or shelter, and the A280 which is considered a barrier to potential amphibian movement. Therefore, it is considered unlikely for amphibians, namely great crested newts to be present within the Site.

Breeding Birds

- 3.3.8 The hedgerows on the boundaries and clusters of trees throughout the Site provide suitable habitat for breeding birds. The grassland within the Site is not suitable for ground nesting birds and none were heard during any of the Site surveys.
- 3.3.9 A wren was observed nesting at the eaves on the north-western corner of the main dwelling during the first bat emergence survey.

3.4 Bat Building Survey

- 3.4.1 The main building on the Site is a large detached two-storey property (B1), with a detached single-storey garage (B2) and a detached single-storey swimming pool building (B3).

Bat Building Surveys – Main House (B1)

- 3.4.2 The main house is constructed of brick, with a half-hipped pitched roof. The main roof has a north to south axis. The house has weatherboarding on the first floor; many of these boards are lifted and raised on all elevations. The roof has traditional clay tiles throughout, some of which are missing, raised or slipped. There are two single-storey extensions, on the eastern elevation and the northern elevation. Pipistrelle *Pipistrellus* spp. and long-eared bat *Plecotus* spp. droppings were found on the window frame on the eastern elevation.
- 3.4.3 Internally, there are no roof voids and any attic rooms have been converted into living spaces. No evidence of bats was found.
- 3.4.4 The main house is considered to offer 'Moderate' potential to support bats under the Bat Conservation Trust Survey Guidelines (Collins 2016).

Bat Building Survey – Garage (B2)

- 3.4.5 To the north west of the main house lies a detached single-storey detached garage constructed of brick. The roof is half-hipped and pitched, with an east to west axis. The roof has clay tiles, some of which are missing or raised. Along the northern side of the property there is dense hedgerow which restricted access during the survey. Internally, there is no roof space and no evidence of bats was found.
- 3.4.6 This building is considered to have 'Moderate' potential to support crevice dwelling bats.

Bat Building Survey – Swimming pool (B3)

- 3.4.7 To the south of the main house is a detached single-storey swimming pool building. This building has walls clad with vertical well-fitted weatherboarding and imitation slate tiles on the roof. The roof has a

low pitch and an east to west axis (as with B1), with raised tiles at the edge of the roof to the south. Any gaps under these tiles are moss filled, leaving no cavities suitable for use by bats. There are no suitable features to support a bat roost in the swimming pool, which is considered to have 'Negligible' potential to support bats.

3.5 Bat Emergence Survey

24th August 2017 – sunset 20:04 hrs

3.5.1 The conditions during this survey were dry, still (Beaufort 1) with 30% cloud cover. The temperature at the start of the survey was 17°C and this remained the same throughout the survey. Surveyor S1 was located on the western elevation of the main house, S2 on the south-western corner with a view of the western elevation and southern elevation and S3 on the eastern elevation of the main house. The garage was surveyed with a video camera which was placed on the south-western corner.

3.5.2 The first bat recorded during the emergence survey was a common pipistrelle *Pipistrellus pipistrellus* that was heard but not seen at 20:16 hrs, 12 minutes after sunset; this bat did not emerge from the property. During the survey occasional passes by common pipistrelle and long-eared bat were recorded. No bats emerged from any of the buildings during this survey.

21st September 2017 – sunset 19:03 hrs

3.5.3 The conditions during this survey were dry, still (Beaufort 1) with 30% cloud cover. The temperature at the start of the survey was 17°C and this dropped to 16°C by the end of the survey. The surveyors were positioned in the same locations as the first survey. The garage was surveyed with a video camera which was placed on the south-western corner.

3.5.4 The first bat recorded during the emergence survey was a common pipistrelle that was heard but not seen at 19:16 hrs, 13 minutes after sunset; this bat did not emerge from the property. During the survey occasional passes by common pipistrelle and long-eared bat were recorded. At 19:18 hrs, 15 minutes after sunset, a common pipistrelle was recorded emerging from the western elevation of the hipped roof at the southern end of the main house. No other bats were recorded emerging from the building.

4.0 EVALUATION AND RECOMMENDATIONS

- 4.1 The proposals for the Site include the development of a care home and parking, together with associated landscaping, which includes the retention of some of the semi-mature planting within the existing garden. These proposals will not result in any impact on the South Downs National Park or any statutory or non-statutory designated sites.

4.1 Phase I Habitat Survey

- 4.1.1 Although the Priority Habitats Inventory shows the Site to be surrounded by good quality semi-improved grassland, these areas have been lost to development in recent years and will therefore not be impacted upon by these proposals. Whilst the Site itself is listed on the Priority Habitats Inventory under 'other', with the description 'no main habitat but additional habitats present', the Phase I Habitat Survey has shown that the Site contains typical species-poor semi-improved grassland. Several common herb species were recorded within the sward but no rare or nationally scarce plants were recorded on Site. Overall the Site was found to support a range of plants and habitats commonly associated with gardens. No invasive, non-native plant species were identified within the survey area. The potential for protected species to occur was considered during the extended Phase I Habitat Survey and is discussed in the following paragraphs.

4.2 Bat Surveys

- 4.2.1 During the bat building survey evidence of pipistrelle and long-eared bats were found along with potential roosting features. As no roof spaces are present then there are no features suitable for void dwelling species and the potential is for crevice species only. The surrounding habitat is poor for bats and therefore the building was awarded 'Medium' potential under the BCT guidelines and this would equate to two surveys being undertaken between May and August.
- 4.2.2 Emergence surveys have confirmed the presence of a small roost of pipistrelle bats recorded under the roof tiles but this was only recorded during the second survey and therefore the roost is considered to be infrequently used. As the building will be demolished under the Site proposals then the Site would need to be registered under the Low Impact Bat Licensing scheme.
- 4.2.3 The surveys were undertaken in August and September and therefore outside the period recommended by the BCT guidelines. Due to the sub-optimal bat habitats within the Site and poor habitat associated with the neighbouring development, then it is concluded that the Site is not suitable to support a larger more significant bat roost such as a maternity colony. In addition, no bats were recorded during the August survey and should a maternity roost be present then it would be expected to record more activity during that survey, which was not the case. Therefore, it is not considered necessary to undertake an additional bat survey as it won't alter the impact assessment nor alter the design of the scheme. It is

considered that provided the recommendations in this report are followed then the continued ecological functionality of the roost can be sustained.

4.2.4 However, due to the requirements of the Bat Low Impact scheme, a second survey between May and August would be required but this is needed to satisfy the licence requirements rather than planning or design. In addition, a mitigation strategy would be required and this is provided in Chapter 5 which includes details of roost compensation and timings. With regard to compensation, as no roost of void dwelling species is present, then providing a cavity box would be sufficient even if the additional survey recorded more than a single bat emerging. A copy of the licence documentation can be submitted to the Local Planning Authority as evidence of compliance.

4.2.5 With regard to other buildings on-site, the garage was surveyed with a video camera during both emergence surveys but no bats were recorded. There is an external lighting column immediately to the south of the garage which comes on at dusk, is extremely bright and was on for the entirety of each survey. This reduces suitability of the potential bat roosting features on the southern pitch of the garage. The northern pitch is immediately adjacent to the overgrown hedgerow/tree line which would obscure bat flight lines. There are no suitable features to support a bat roost in the swimming pool and no further survey work is required.

4.3 Protected Species Assessment

Reptiles

4.3.1 Parts of the Site, particularly the area of overgrown vegetation (TN5) to the east of the Site, have potential to support common species of reptiles. However, as the majority of the Site is comprised of closely mown lawn and surrounded by development then it is considered unlikely reptiles are present within the Site. Therefore, no further surveys are recommended for reptiles.

Badgers

4.3.2 No evidence of badgers was found and no further surveys are recommended.

Dormice

4.3.3 The Site contains no areas of suitable dormice habitat and is entirely isolated from all other suitable areas of habitat for dormice in the surrounding countryside. Therefore, no further surveys for dormice are recommended.

Amphibians

4.3.4 There are no ponds within the development area itself or within the area surrounding the Site. No further surveys for amphibians are recommended.

Breeding Birds

- 4.3.5 The hedgerows on the boundaries and clusters of trees throughout the Site provide suitable habitat for breeding birds, although no nests were recorded during the survey. The grassland within the Site is not suitable for ground nesting birds and none were heard during any of the Site surveys. The buildings within the Site offer some potential for nesting birds; indeed, one wren was seen nesting on the main house during the surveys. It is therefore proposed to compensate for this loss by providing artificial nest boxes (such as the Schwegler 1ZA Wren Round House) as part of the design of the scheme.
- 4.3.6 All wild birds receive protection under the Wildlife and Countryside Act 1981 as amended and this includes disturbance while breeding. Any vegetation clearance should be undertaken outside of the breeding bird season limiting this work to between October and end of February. If these dates do not coincide with Site works then it is recommended that these areas are checked by a suitably experienced ecologist before the work commences. With regard to the building it has been recommended that the tiles are stripped by hand and supervised by the project ecologist and care will be taken not to disturb any active nests.

National Planning Policy Framework

- 4.3.7 The National Planning Policy Framework replaced the Planning Policy Statement 9 (2005) Biodiversity and Geological Conservation in March 2012 and sets out planning policies on protection of biodiversity and geological conservation through the planning system. Section 11 of the National Planning Policy Frameworkⁱ (NPPF) sets out the Government's current planning policy in relation to conserving and enhancing the natural environment. The NPPF states that "the planning system should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, geological conservation interests and soils;
- Recognising wider benefits of ecosystem services;
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."

- 4.3.8 With regard to providing a net gain for biodiversity, the following enhancements are recommended:
- The inclusion of one additional cavity mounted bat box (Schwegler 1FR bat tube) on the southerly or westerly elevation of the new building (see Figure 2).
 - The semi-mature silver birch trees TN1 be retained and enhanced where possible.
 - The landscape planting proposals for the Site to include appropriate locally sourced native trees and shrubs. Suitable species would include hawthorn *Crataegus monogyna*, blackthorn *Prunus*

spinosa, holly *Ilex aquifolium*, spindle *Euonymus europaeus*, hazel *Corylus avellana* field maple *Acer campestre*, dog rose *Rosa canina* and honeysuckle *Lonicera periclymenum* that all benefit small mammals and birds.

- Additional planting of native species should be added to the boundaries to increase species and structural diversity.
- In addition to the above it is recommended that nectar rich plants are considered for any landscape planting around the Site and where other opportunities may exist, for example, where any flower beds are to be created. A list of nectar rich species for bumblebees prepared by RHS is given as Appendix 1. It is essential that flowering plants are available for as long as possible through the seasons and a combination should be chosen from the plants recommended for spring, summer and late summer.

5.0 BAT MITIGATION STRATEGY

5.1 The following mitigation strategy for bats will be followed during the works at Pound Place, Angmering.

1. Prior to registering the Site under the project ecologist's Low Impact Licence one further survey will be carried out between May and August during the main bat active season.
2. No works to the external parts of the building can commence until the Site has been registered under the Bat Low Impact Licensing scheme.
3. Once planning has been granted and all conditions relating to wildlife discharged then the Site can be registered under the licence scheme. On receipt of the licence, the contractors will be given an induction by the project ecologist. This induction will include the location of the bat roost, timings of certain work as well as the design to ensure the roost is maintained.
4. The stripping of roof tiles will be supervised by the project ecologist. Once the tiles have been removed works to remove and replace the building can continue without interruption.
5. Any bats found will be checked over by the project ecologist for signs of any injury and standard parameters including species, sex and breeding status recorded. Any bats found will be either released that evening or placed in a bat box mounted to a nearby tree.

Timings

6. Under the Bat Low Impact Licensing scheme, the works to remove the roof tiles can be undertaken at any time of year.

Roost Compensation and Enhancements

7. Two cavity bat boxes (Schwegler 1FR bat tube) are proposed on the southern elevation (recommended locations are shown on Figure 2), one as compensation and one as an enhancement measure. The roost compensation and enhancement will be checked by the project ecologist prior to submitting the licence return.

Lighting

8. No lighting will be used that directly illuminates the bat boxes or adjacent flight lines. Should any lighting be required in these areas then the lights must be as low to the ground as possible with no vertical light spill.

6.0 CONCLUSIONS

- 6.1 The Phase I Habitat Survey identified no rare plants or habitats within the Site. The majority of the Site is species poor semi-improved amenity grassland with scattered trees, surrounded by non-native hedgerow planting.
- 6.2 No trees within the Site are considered to have potential to support bats and no further surveys of trees are recommended. The main house and garage are considered to have 'Medium' potential to support crevice dwelling bats; therefore, emergence surveys have been carried out. These surveys confirmed that the main house supports an infrequently used roost of common pipistrelle. The garage is well lit at night time which makes this building less suitable for use by bats. The swimming pool building is considered to have no potential to support bats.
- 6.3 As the main house supports a roost of low numbers of common bat species a Low Impact Bat Class Licence will be required from Natural England. This will require one further survey in May/June, but the proposed compensation for the loss of the roost will not change as a result of this further survey. Two cavity mounted bat boxes are proposed, one as compensation and one as an enhancement measure. These measures, and several others, are included within the Mitigation Strategy for bats which has been included in this report.
- 6.4 Habitat suitable for breeding bird has been identified within the Site, particularly the hedgerows and scattered trees, and precautions relating to removal of vegetation have been provided. As the main house was recorded to support one wren's nest, recommendations have been made for the provision of artificial nest boxes to compensate for this loss.
- 6.5 No evidence of other protected species was found during the surveys and the Site is not considered to have potential to support protected species such as reptiles, dormice or amphibians, partly because of the isolation of this Site from other areas of suitable habitat; the Site is surrounded by roads or new housing developments on all sides. No further surveys for protected species are recommended.
- 6.6 In addition, general recommendations for ecological enhancements have been made in relation to the National Planning Policy Framework.

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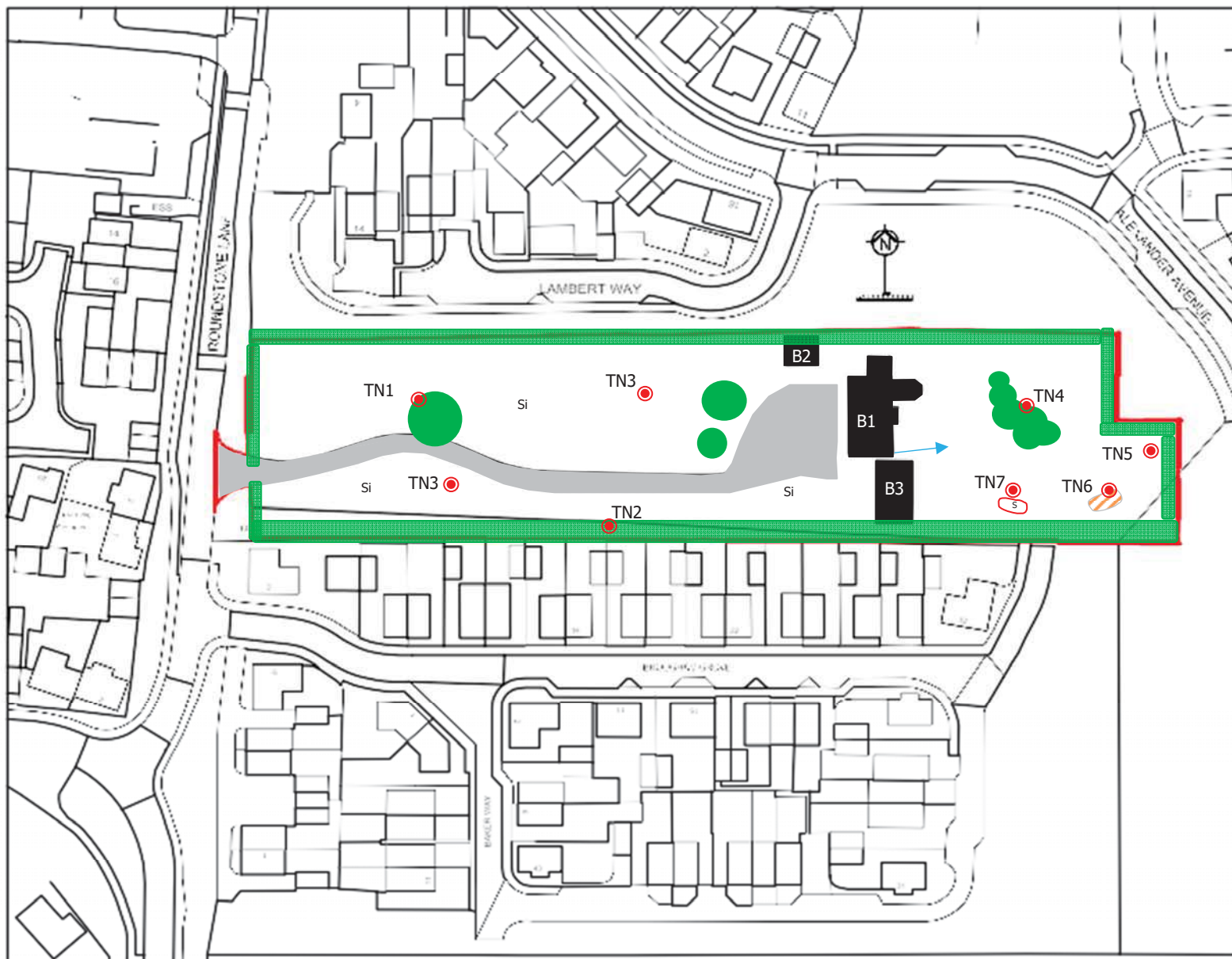
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FIGURES



Key

-  TN4 Target note
-  Scattered trees
-  Si Semi-improved grassland
-  Tall ruderal
-  Access drive
-  Spoil/log pile
-  Hedgerow
-  B1 Building number
-  Pipistrelle emergence

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Project:
Pound Place, Angmering

Title:
Phase I habitat and bat survey

status		drawing no. Pound Place Rev A			
scale NTS	size A4	Date 29/03/17	Drawn PS	Checked BD	
CAD filename					

Figure 2 - Location of bat boxes

BRUN DISTRICT COUNCIL A/3/21/PL



SOUTH ELEVATION to Brougham Grove



Two Schwegler 1FR Bat Tube. To be positioned on the southern elevation as close to the eaves as possible.



WEST ELEVATION to Roundstone Lane

Rev:	Desc:	By:	Date:	Chkd:
1				
Buckle Chamberlain Partnership Ltd. Architects & Architectural Technologists. Mill House, Llancayo Court, Llancayo, Llanelli, Carmarthenshire, NP15 1HY Tel: 01291 672264 Fax: 01291 675424 Email: enquiries@bucklechamberlain.co.uk				
Client	Hallmark Care Homes			
Project	Proposed Care Home Pound Place Roundstone Lane Angmering			
Drawing	South and West Elevations			
Date	March 2018	Scale	1:100 @ A1	
Drawn by	RAC	Drawing No	1388/202	
Checked by		Status	Preliminary	

Figure 3 - Annotated Photographs



Building B1 - main house



Building B1 - main house



Bat droppings - building B1



Building B1 - roof tile with gaps



Garage building - B3



Garage building - B3



Hedgerow - southern boundary TN2



Scattered trees - TN1



Sparse ground cover beneath boundary hedgerows



Overgrown tall ruderal vegetation TN5



TN5



Boundary trees close to pool house - B2

APPENDICES



Sharing the best in Gardening



RHS PERFECT FOR POLLINATORS WILDFLOWER LIST

SHORT GRASS, UP TO 15CMS

Ajuga reptans <i>bugle</i>	H
Bellis perennis <i>daisy</i>	H
Campanula rotundifolia <i>common harebell</i>	H
Hippocrepis comosa <i>horseshoe vetch</i>	H
Lotus corniculatus <i>bird's foot trefoil</i>	H
Potentilla anserina <i>silverweed</i>	H
Potentilla erecta <i>tormentil</i>	H
Potentilla reptans <i>creeping cinquefoil</i>	H
Primula veris <i>common cowslip</i>	H
Prunella vulgaris <i>selfheal</i>	H
Ranunculus repens <i>creeping buttercup</i>	H
Sanguisorba minor <i>salad burnet</i>	H
Taraxacum officinale <i>dandelion</i>	H
Thymus polytrichus <i>wild thyme</i>	H
Thymus pulegioides <i>large thyme</i>	H
Trifolium pratense <i>red clover</i>	H
Trifolium repens <i>white clover</i>	H
Veronica chamaedrys <i>germander speedwell</i>	H

HEDGES, SHRUB BORDERS AND WOODLAND EDGE

Acer campestre <i>field maple</i>	S or T
Alliaria petiolata <i>garlic mustard</i>	Bi
Allium ursinum <i>ramsons</i>	B
Aquilegia vulgaris <i>common columbine</i>	H
Ballota nigra <i>black horehound</i>	H
Berberis vulgaris <i>barberry</i>	S
Bryonia dioica <i>white bryony</i>	H/C
Buxus sempervirens <i>common box</i>	S

HEDGES, SHRUB BORDERS AND WOODLAND EDGE (cont.)

Campanula trachelium <i>nettle-leaved bellflower</i>	H
Clematis vitalba <i>old man's beard/traveller's joy</i>	C
Clinopodium vulgare <i>wild basil</i>	H
Cornus sanguinea <i>common dogwood</i>	S
Crataegus monogyna <i>common hawthorn</i>	S or T
Cytisus scoparius <i>common broom</i>	S
Digitalis purpurea <i>common foxglove</i>	Bi
Euonymus europaeus <i>spindle</i>	S
Fragaria vesca <i>wild strawberry</i>	H
Frangula alnus <i>alder buckthorn</i>	S
Galium mollugo <i>hedge bedstraw</i>	H
Galium odoratum <i>sweet woodruff</i>	H
Galium verum <i>lady's bedstraw</i>	H
Geranium robertianum <i>herb robert</i>	A/Bi
Geum urbanum <i>wood avens</i>	H
Hedera helix <i>common ivy</i>	C
Helleborus foetidus <i>stinking hellebore</i>	H
Hyacinthoides non-scripta <i>bluebell</i>	B
Ilex aquifolium <i>common holly</i>	T
Lamium album <i>white deadnettle</i>	H
Lamium galeobdolon <i>yellow archangel</i>	H
Ligustrum vulgare <i>wild privet</i>	S
Lonicera periclymenum <i>common honeysuckle</i>	C
Malus sylvestris <i>crab apple</i>	T
Malva sylvestris <i>common mallow</i>	H
Myosotis sylvatica <i>wood forget-me-not</i>	H
Primula vulgaris <i>primrose</i>	H
Prunus avium <i>wild cherry/gean</i>	T
Prunus padus <i>bird cherry</i>	T
Prunus spinosa <i>blackthorn/sloe</i>	S

Natural England states: You can legally collect small quantities of wildflower seed for your own use, but you must get permission from the land's owner, tenant or other authority, as necessary. Although seed collecting is allowed, you should not dig up native plants – many rare species are protected by law. You can collect seed of even rare plants, but cannot sell/trade seed or progeny.

KEY

ARUN DISTRICT COUNCIL 14/02/2019

T = tree; **S** = shrub; **C** = climber; **B** = bulbs and corms; **A** = annual; **Bi** = biennial; **H** = herbaceous perennial

RHS PERFECT FOR POLLINATORS WILDFLOWER LIST

HEDGES, SHRUB BORDERS AND WOODLAND EDGE (cont.)

Ranunculus ficaria <i>lesser celandine</i>	H
Rhamnus catharticus <i>Purging buckthorn</i>	S
Rosa canina <i>Dog rose</i>	S
Rosa rubiginosa <i>sweet briar</i>	S
Rubus fruticosus <i>blackberry</i>	S
Salix atrocinerea <i>grey willow</i>	S - male forms best
Salix caprea <i>goat willow</i>	S - male forms best
Sanicula europaea <i>sanicle</i>	H
Sedum telephium <i>orpine</i>	H
Silene dioica <i>red campion</i>	H
Silene latifolia subsp. <i>alba</i> <i>white campion</i>	H
Smyrniolus olusatrum <i>alexanders</i>	Bi
Sorbus aria <i>common whitebeam</i>	T
Sorbus aucuparia <i>rowan/mountain ash</i>	T
Sorbus torminalis <i>wild service tree</i>	T
Stachys officinalis <i>betony</i>	H
Stellaria holostea <i>greater stitchwort</i>	H
Symphytum officinale <i>common comfrey</i>	H
Teucrium scorodonia <i>wood sage</i>	H
Tilia cordata <i>small-leaved lime</i>	T
Viburnum lantana <i>common wayfaring tree</i>	S
Viburnum opulus <i>guelder rose</i>	S
Vicia cracca <i>common tufted vetch</i>	H
Vicia sativa <i>common vetch</i>	H

DISTURBED GROUND

Agrostemma githago <i>corncockle</i>	A
Anchusa arvensis <i>bugloss</i>	A
Anthemis arvensis <i>corn chamomile</i>	A
Anthemis cotula <i>stinking chamomile</i>	A
Centaurea cyanus <i>cornflower</i>	A
Cichorium intybus <i>chicory</i>	H
Dipsacus fullonum <i>common teasel</i>	Bi
Echium vulgare <i>viper's bugloss</i>	Bi
Glebionis segetum <i>corn marigold</i>	A
Iberis amara <i>wild candytuft</i>	A
Lamium amplexicaule <i>Henbit deadnettle</i>	A
Matricaria recutita <i>scented mayweed</i>	A

DISTURBED GROUND (cont.)

Mentha arvensis <i>corn mint</i>	H
Myosotis arvensis <i>field forget-me-not</i>	A/H
Myosotis arvensis <i>Common forget-me-not</i>	A
Onopordum acanthium <i>cotton thistle</i>	Bi
Papaver dubium <i>long-headed poppy</i>	A
Papaver rhoeas <i>common poppy</i>	A
Sinapis arvensis <i>charlock</i>	A
Sonchus arvensis <i>perennial sowthistle</i>	H
Tussilago farfara <i>coltsfoot</i>	H
Verbascum thapsus <i>great mullein</i>	Bi

FLOWER BEDS

Calluna vulgaris <i>heather / ling</i>	S
Erica ciliaris <i>Dorset heath</i>	S
Erica cinerea <i>bell heather</i>	S
Erica tetralix <i>cross-leaved heath</i>	S

LONG GRASS, ABOVE 50CMS

Arctium minus <i>lesser burdock</i>	Bi
Carduus crispus <i>welted thistle</i>	Bi
Carduus nutans <i>musk thistle</i>	Bi
Chamaenerion angustifolium <i>rosebay willowherb</i>	H
Cirsium arvense <i>creeping thistle</i>	H
Cirsium vulgare <i>spear thistle</i>	Bi
Conopodium majus <i>pignut</i>	H
Cynoglossum officinale <i>hound's tongue</i>	H
Daucus carota <i>wild carrot</i>	Bi
Geranium pratense <i>meadow cranesbill</i>	H
Heracleum sphondylium <i>hogweed</i>	Bi
Hypericum perforatum <i>perforate St John's wort</i>	H
Knautia arvensis <i>field scabious</i>	H
Lathyrus pratensis <i>meadow vetchling</i>	H
Pastinaca sativa <i>wild parsnip</i>	Bi
Succisa pratensis <i>devil's bit scabious</i>	H
Tanacetum vulgare <i>tansy</i>	H

KEY

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RHS PERFECT FOR POLLINATORS WILDFLOWER LIST

LONG GRASS, ABOVE 50CMS (cont.)

Thalictrum flavum <i>meadow rue</i>	H
Tragopogon pratensis <i>goat's beard</i>	Bi
Verbascum nigrum <i>dark mullein</i>	Bi/H

MEDIUM HEIGHT GRASS, UP TO 50CMS

Achillea millefolium <i>common yarrow</i>	H
Achillea ptarmica <i>sneezewort</i>	H
Agrimonia eupatoria <i>agrimony</i>	H
Anthyllis vulneraria <i>kidney vetch</i>	H
Armeria maritima <i>thrift/sea pink</i>	H
Blackstonia perfoliata <i>yellowwort</i>	A
Campanula glomerata <i>clustered bellflower</i>	H
Centaurea nigra <i>common knapweed/hardheads</i>	H
Centaurea scabiosa <i>greater knapweed</i>	H
Centaureum erythraea <i>common centaury</i>	Bi
Echium vulgare <i>viper's bugloss</i>	Bi
Erigeron acris <i>blue fleabane</i>	A/H
Filipendula vulgaris <i>dropwort</i>	H
Helianthemum nummularium <i>common rockrose</i>	H
Hypochaeris radicata <i>cat's ear</i>	H
Inula conyzae <i>ploughman's spikenard</i>	H
Leontodon autumnalis <i>autumn hawkbit</i>	H
Leontodon hispidus <i>rough hawkbit</i>	H
Leucanthemum vulgare <i>ox-eye daisy</i>	H
Linaria vulgaris <i>common toadflax</i>	H
Malva moschata <i>musk mallow</i>	H
Ononis repens <i>common restharrow</i>	H
Origanum vulgare <i>wild marjoram</i>	H
Pilosella officinarum <i>mouse-ear hawkweed</i>	H
Ranunculus acris <i>meadow buttercup</i>	H
Ranunculus bulbosus <i>bulbous buttercup</i>	H
Reseda lutea <i>wild mignonette</i>	Bi/H
Rhinanthus minor <i>yellow rattle</i>	A
Scabiosa columbaria <i>small scabious</i>	H
Silene vulgaris <i>bladder campion</i>	H
Solidago virgaurea <i>goldenrod</i>	H

PONDS, POND MARGINS AND WET SOILS

Alisma plantago-aquatica <i>water plantain</i>	H
Angelica sylvestris <i>wild angelica</i>	Bi
Butomus umbellatus <i>flowering rush</i>	H
Caltha palustris <i>marsh marigold</i>	H
Cardamine pratensis <i>cuckoo flower/lady's smock</i>	H
Cirsium dissectum <i>meadow thistle</i>	H
Epilobium hirsutum <i>great willowherb</i>	H
Eupatorium cannabinum <i>hemp agrimony</i>	H
Filipendula ulmaria <i>meadowsweet</i>	H
Galium palustre <i>marsh bedstraw</i>	H
Geum rivale <i>water avens</i>	H
Hypericum tetrapterum <i>square-stalked St John's wort</i>	H
Iris pseudacorus <i>yellow iris</i>	H
Lotus pedunculatus <i>greater bird's-foot trefoil</i>	H
Lychnis flos-cuculi <i>ragged robin</i>	H
Lycopus europaeus <i>gypsywort</i>	H
Lysimachia nummularia <i>creeping Jenny</i>	H
Lysimachia vulgaris <i>yellow loosestrife</i>	H
Lythrum salicaria <i>purple loosestrife</i>	H
Mentha aquatica <i>water mint</i>	H
Menyanthes trifoliata <i>bogbean</i>	H
Myosotis scorpioides <i>water forget-me-not</i>	H
Nasturtium officinale <i>common watercress</i>	H
Nuphar lutea <i>yellow water lily</i>	H
Nymphaea alba <i>white water lily</i>	H
Oenanthe aquatica <i>fine-leaved water dropwort</i>	A/Bi
Oenanthe crocata <i>hemlock water dropwort</i>	H
Persicaria amphibia <i>amphibious bistort</i>	H
Persicaria bistorta <i>common bistort</i>	H
Polemonium caeruleum <i>Jacob's ladder</i>	H
Pulicaria dysenterica <i>common fleabane</i>	H
Ranunculus aquatilis <i>common water crowfoot</i>	A/H
Ranunculus flammula <i>lesser spearwort</i>	H
Ranunculus fluitans <i>river water crowfoot</i>	H
Ranunculus lingua <i>greater spearwort</i>	H
Ranunculus sceleratus <i>celery-leaved buttercup</i>	A
Sagittaria sagittifolia <i>arrowhead</i>	H
Sanguisorba officinalis <i>great burnet</i>	H
Scrophularia auriculata <i>water figwort</i>	H

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RHS PERFECT FOR POLLINATORS WILDFLOWER LIST

PONDS, POND MARGINS AND WET SOILS (cont.)

Scutellaria galericulata <i>common skullcap</i>	H
Stachys palustris <i>marsh woundwort</i>	H
Valeriana officinalis <i>common valerian</i>	H
Veronica beccabunga <i>brooklime</i>	H

SHINGLE/GRAVEL GARDEN

Cakile maritima <i>sea rocket</i>	A
Crambe maritima <i>sea kale</i>	H
Crithmum maritimum <i>rock samphire</i>	H
Eryngium maritimum <i>sea holly</i>	H
Glaucium flavum <i>yellow horned-poppo</i>	Bi/H
Sedum acre <i>siting stonecrop</i>	H
Sedum album <i>white stonecrop</i>	H
Silene uniflora <i>sea campion</i>	H

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