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Ecological Report by Tim Moya Associates

Ecological Report

Extended Phase 1 Habitat Assessment
Bat Scoping Assessment

Sittingbourne Adult Education Centre
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Sittingbourne
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January 2018

171102-ED-01

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Project	Sittingbourne AEC
Report Type	Phase 1 Habitat Assessment
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Original Report Date	31/01/18
Updates	

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NON-TECHNICAL SUMMARY

This report assesses the ecological value of the proposed development site at Sittingbourne Adult Education Centre. The proposed development involves redevelopment of the adult education centre as a residential development.

The site survey included an assessment of the habitats found within the site and the likely impact of the proposed development on habitats of ecological value and protected and notable species.

Results:

A number of buildings and trees within the site were assessed as having features with potential for roosting bats, particularly the Main Building, due to its large size and clay-tiled roof.

The scrub habitats surrounding the field in the west of the site offer moderate-suitability habitat for reptiles, particularly slow-worms.

Recommendations (see report for details):

- The row of mature trees and scrub surrounding the western part of the site should be retained within the proposed development in order to preserve its function as a significant ecological corridor.
- To avoid an impact on reptiles, precautionary working methods and timing are recommended for removal of small areas of scrub. If removal of large areas of scrub are required, it is recommended that reptile surveys are undertaken. To prevent colonisation of the field by reptiles, grassland vegetation should be mown regularly. Storage of rubble, spoil and other materials close to the periphery of the site should be avoided.
- Features suitable for bats are present within the buildings on site. To confirm whether bat roosts are present, further emergence/re-entry surveys should be undertaken on three occasions between May and September (inclusive).
- An internal bat inspection must be undertaken of the ‘Small shed’, ‘Ivy-covered shed’, ‘Garage’ and Main Building Basement. If inspection of the basement is not feasible (due to asbestos), an automated bat detector survey should be undertaken instead.

- Some of the trees within the site include features suitable for roosting bats. Individual recommendations for each tree are given in Appendix 5.
- In order to avoid an impact on commuting and foraging bats, it is recommended that lighting is restricted to minimise illumination of suitable habitats.
- Care should be taken when removing scrub/shrub vegetation to avoid harm to hedgehogs.
- Dead wood should be retained within the development where possible for the benefit of invertebrates.
- To avoid destroying active bird nests, suitable vegetation and buildings should be removed outside the nesting season, which runs from March to August inclusive. Vegetation and buildings may only be removed during the nesting season if it has been checked by an ecologist and no nests are present.
- Two invasive plant species were recorded within the site – *Cotoneaster horizontalis* and snowberry. To avoid spreading these plants, they should be disposed of responsibly.
- Recommendations are included at the end of this report for measures to enhance the site for local biodiversity.

1 INTRODUCTION

Background

1.1 This report has been instructed by Gen^2 Property Limited on behalf of Kent County Council.

1.2 The proposed development involves the redevelopment of the adult education centre as a residential development, including the construction of residential properties on the existing grassed area, conversion of the main building into apartments and the demolition of existing outbuildings.

Purpose of the report

1.3 This report assesses the ecological interest of the site and the potential impacts of the proposed development on biodiversity.

1.4 TMA have been instructed to undertake an Extended Phase 1 Habitat Survey - a method of ecological assessment outlined in the JNCC Handbook for Phase 1 Habitat Survey a technique for environmental audit (2010). These guidelines state that the aim of the Phase 1 Survey is to observe, map and catalogue "*the potential value of the habitat.*" Since its publication the ecological consultancy industry has adapted the survey to make recommendations for further survey work as appropriate.

1.5 This report aims to satisfy the requirements of the National Planning Policy Framework (NCLG, 2012), identifying ecological features or protected species within or near the site that could potentially be impacted by the proposed development and opportunities for incorporating biodiversity enhancements into the development proposals.

1.6 This report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM, 2013) and with Biodiversity - Code of Practice for Planning and Development (BSI, 2013).

1.7 To provide information to support the ecological assessment, a bat scoping survey has also been undertaken.

Limitations

1.8 The site was surveyed during January, a time when some plant species may not be evident. However, extensive stands of invasive species such as Japanese

knotweed (*Fallopia japonica*) or giant hogweed (*Heracleum mantegazzianum*) would be expected to be evident. Where further botanical or invasive species surveys are considered necessary, these have been recommended within this report.

1.9 Access to inspect buildings for potential bat roost features was limited. Access was not permitted into the roof space of the main building, other than the area directly surrounding the loft hatch (centre of roof), due to safety concerns. Access into the basement was not permitted due to the presence of asbestos. Access into the following outbuildings was not possible due to the absence of keys (see Appendix 1 for building locations): Outbuilding 3, 'Small shed', 'Ivy-covered shed' and 'Garage'. Where access to inspect buildings was not possible, a precautionary principal has been applied and further surveys or inspections have been recommended accordingly.

Information supplied

1.10 This report has been prepared with reference to the following supplied plans, showing extent of the site boundary:

- Sittingbourne AEC Site Plan, Kent County Council, Jun 2015 (drawing no. TQ8962/1M).

Site location

1.11 The proposed development site is located on the border between suburban land to the east and agricultural land to the west. Directly to the north-west and south-west are large allotments. Directly to the south is a fruit farm and directly to the north-east and south-east are residential areas.

1.12 The central grid reference for the site is TQ 89453 63011. The surveyed site covers approximately 1.9 hectares.

2 SURVEY METHODOLOGY

Data Searches

2.1 The government's MAGIC search tool was searched for statutory sites designated for nature conservation interest, and for records of European Protected Species licences.

2.2 Kent and Medway Biological Records Centre (KMBRC) was consulted for records of non-statutory sites designated for nature conservation interest and for historic records of protected or notable species within 2 km of the site.

Phase 1 Site Survey

2.3 The survey was undertaken on 8th January 2018 by Simon Thomas of Tim Moya Associates, an experienced ecological consultant and Full Member of the Chartered Institute for Ecology and Environmental Management (CIEEM). During the survey the weather conditions were not considered to pose any limitations to the survey.

2.4 The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (JNCC, 2010). Dominant plant species were recorded for each habitat present.

2.5 The site was inspected for evidence of and its potential to support protected or notable species, especially those listed under the *Conservation of Habitats and Species (Amendment) Regulations 2012,* the *Wildlife & Countryside Act 1981* (as amended), including those given extra protection under the *Natural Environment and Rural Communities (NERC) Act 2006* and *Countryside & Rights of Way (CRoW) Act 2000*, and listed on the UK and local Biodiversity Action Plans. Such species include amphibians, reptiles, bats, badgers, birds, dormice and water voles. Evidence of badgers was searched for throughout the site, including setts, footprints, feeding signs, hairs and droppings.

2.6 The site was searched for evidence of invasive plant species, such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), horizontal/wall cotoneaster (*Cotoneaster horizontalis*) and floating pennywort (*Hydrocotyle ranunculoides)*.

2.7 As the attributes of the site and its potential for protected, notable and invasive species may change over time, this report is broadly considered valid for a duration

of two years, after which time it is recommended that an update site assessment is undertaken. In some cases, protected or invasive species' use of a site may change over a shorter timescale, for instance the use of a badger sett by badgers, which may change month to month. In such cases, appropriate precautionary advice or recommendations for update surveys are given within this report.

Bat Scoping Survey

2.8 The survey was undertaken in accordance with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016). The buildings were inspected externally from all angles using binoculars and then internally using a high-powered torch to inspect loft spaces (where access was available). Trees were inspected from ground level, using binoculars where needed and a high-powered torch to inspect potential bat roost features. Where possible, a ladder was used to inspect features within 3 m of ground level. An endoscope was used to investigate cavities where possible. Wherever visibility was restricted (e.g. due to ivy or lack of access), this is stated in the report.

2.9 Evidence searched for included bat droppings, feeding remains, staining from urine or grease marks and potential access points into roosting cavities. Features indicating potential for bat roosts included missing roof tiles, weatherboarding and/or hanging tiles with gaps, poorly maintained roof structures, holes in tree trunks, cracks in major limbs, loose bark and dense ivy growth.

3 DESK STUDY RESULTS

Designated Sites

3.1 The site itself is not covered by any statutory or non-statutory nature conservation designations.

3.2 There is one statutory and two non-statutory designated sites within 2 km of the site, as follows:

Table 1. Statutory designated sites of nature conservation interest

Site name	Designation	Distance and direction from proposed works (km)	Description
The Swale Estuary	MCZ	1.65 NE	An important spawning and nursery ground for various fish species. Includes important seabed habitats such as sand and sediments.
Key: MCZ – Marine Conservation Zone			

Table 2. Non-statutory designated sites of nature conservation interest

Site name	Designation	Distance and direction from proposed works (km)
Highstead Quarries	LWS	1.20 SE
Milton Creek	LWS	1.94 NE
Key: LWS – Local Wildlife Site		

Historic Species Records

3.3 Local Ecological Records Centre data searches return hundreds of species records. The table below summarises records of key protected species considered to be most sensitive to impact from proposed developments. Numerous additional notable species records were returned for the 2 km radius, which are considered unlikely to be impacted by the proposed development and are therefore not summarised

below. For instance, species for which no suitable habitat is present close to the site.

Table 3. Existing protected species records

	Local Ecological Records Centre			EPS Licences granted
Species	**Number of records within 2 km**	**Closest record to site (km) and orientation**	**Most recent record**	**No. within 2 km**
Great crested newt (*Triturus cristatus*)	1	1.51 E	1983	0
Common lizard (*Zootoca vivipara*)	12	0.41 W	2005	N/A
Slow—worm (*Anguis fragilis*)	55	0.44 SE	2014	N/A
Adder (*Vipera berus*)	1	1.11 SE	2005	N/A
Bat species (*Chiroptera* sp.)	213 records; 7 species	Common pipistrelle, 0.28 NE	2016 – brown long-eared	1 licence, 1.05 km west: 2009 – destruction of a resting place of common pipistrelle, soprano pipistrelle, brown long-eared and Natterers.
Dormouse (*Muscardinus avellanarius*)	1	Approx. 2.0 SE	2000	0
Badger (*Meles meles*)	2	1.85 SW	2007	N/A
Hedgehog (*Erinaceus europaeus*)	26	1.13 E	2016	N/A
Stag beetle (*Lucanus cervus*)	73	Directly adjacent (north) (2002)	2016	N/A
No records were returned of the following key protected/notable species: Grass snake (*Natrix natrix*); Water vole (*Arvicola amphibius*); Otter (*Lutra lutra*)				

4 RESULTS OF PHASE 1 HABITAT SURVEY

Habitats and Vegetation

4.1 A Phase 1 Habitat Plan can be found in Appendix 1 illustrating the habitats present. Photographs of the site are contained in Appendix 2.

Table 4. Habitats present within the site

Habitat type	Description	Dominant plant species	Overall biodiversity value*	UK BAP?**	Kent BAP?	Additional Notes
Buildings and hard standing	The eastern part of the site is dominated by buildings and hard standing used for parking.	None	Negligible, other than potentially for roosting bats and nesting birds	No	No	Bat roost and nesting bird potential are assessed in Table 5, below.
Amenity grassland	The western part of the site consists largely of an open field of closely mown amenity grassland used by dog-walkers. Small areas of amenity grassland are present amongst buildings in the east of the site.	Cocksfoot (*Dactylis glomerata*)	Low	No	No	

Habitat type	Description	Dominant plant species	Overall biodiversity value*	UK BAP?**	Kent BAP?	Additional Notes
Trees and scrub	The western part of the site is surrounded by a single row of mature trees with an understorey of scrub. A further group of trees is present within the eastern extent of the field (see Appendix 1).	Horse chestnut (*Aesculus hippocastanum*), sycamore (*Acer pseudoplatanus*) with an understorey of bramble (*Rubus fruticosus* agg.), holly (*Ilex aquifolium*) and ivy (*Hedera helix*).	Moderate	No	No	Each tree has been assessed individually for its potential for roosting bats (see Appendix 5).

*Overall biodiversity value of a habitat is guided by the criteria listed in section 3.20 of the Guidelines for Ecological Impact Assessment (CIEEM, 2016), which include habitats required by rare or uncommon animal or plant species, habitat connectivity and species-rich assemblages of plants.

** UK Biodiversity Action Plan – for details see Appendix 6- Wildlife Law and Planning Policy.

Protected/Notable Species Potential

4.2 Table 5, below, details the suitability of habitats within the site for key protected/notable species.

4.3 Species not detailed below are considered unlikely to be significantly impacted by the proposed works.

Table 5. Protected species potential

Species group	Strict Protection*	UK BAP?**	Kent BAP?	General habitat requirements	Suitable habitat within site	Additional notes (e.g. evidence of species)

Species group	Strict Protection*	UK BAP?**	Kent BAP?	General habitat requirements	Suitable habitat within site	Additional notes (e.g. evidence of species)
Great crested newt (GCN)	Yes	Yes	Yes	Breed in ponds and other waterbodies. Terrestrial habitat includes woodland and grassland.	The scrub areas surrounding the site provide suitable terrestrial habitat for GCN, but no ponds were identified within 500 m of the site.	
Reptiles	Yes	Yes – all reptiles	Sand lizard only	Long grass, scattered scrub, hedgerows, rubble and log piles.	Scrub, field edge and adjacent allotments offer moderate habitat for reptiles, particularly slow-worm.	
Bats	Yes	Yes - 7 species	Common and soprano pipistrelle	Roost in buildings, tree cavities and caves.	Refer to Section 5 of this report. The buildings and a number of trees include features with potential for roosting bats.	
Dormouse	Yes	Yes	Yes	Hedgerows, dense scrub, deciduous woodland with connected canopy and good ground flora	The scrub and tree belt in the west of the site is of moderate suitability for dormice but has no connection to suitable habitats in the wider landscape.	
Water vole	Yes	Yes	Yes	Rivers, streams, wet ditches.	No suitable habitats	
Otter	Yes	Yes	Yes	Rivers and lakes	No suitable habitats	

Species group	Strict Protection*	UK BAP?**	Kent BAP?	General habitat requirements	Suitable habitat within site	Additional notes (e.g. evidence of species)
Badger	Yes	No	No	Woodland, dense scrub, meadows, field edges.	The peripheries of the western part of the site are suitable for badger setts but no evidence of badgers was found during the survey, including setts, footprints, latrines, feeding evidence or hairs.	
Hedgehog	No	Yes	No	Woodland, hedgerow, gardens, parks	The large field and peripheral scrub vegetation offer optimal habitat for hedgehogs.	
Stag beetle	No	Yes	No	Woodland, hedgerow, orchard, parks	The mature trees and scrub surrounding the western part of the site offer a good resource for invertebrates such as stag beetles.	
Other invertebrates	No	Various	45 species	Species-dependent. High invertebrate diversity is favoured in sites with a mosaic of habitats and diverse plant assemblage.	The site is lacking in diverse habitats or flora that would encourage a diverse assemblage of invertebrates.	
Song thrush	While nesting	Yes	Yes	Woodland, shrubbery, hedgerows, lawns	The field and trees/scrub in the western part of the site offer optimal habitat for song thrush.	Song thrushes were noted on the north-western boundary of the site during the survey.

Species group	Strict Protection*	UK BAP?**	Kent BAP?	General habitat requirements	Suitable habitat within site	Additional notes (e.g. evidence of species)
Other nesting birds	While nesting	Various	11 species including song thrush	Trees, shrubs, scrub, hedgerows, cavities within buildings, waterbodies, arable fields, bare/stony ground.	Scrub, shrubs and trees, particularly where vegetation is dense and undisturbed	A colony of house sparrows was noted in the northern corner of the site during the survey.
Invasive Plant Species	No	No	No	Species-dependent: Waste land, railway verges, river banks, waterbodies	*Cotoneaster horizontalis* and snowberry (*Symphoricarpos albus*) were present within the site.	*Cotoneater horizontalis* is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as invasive plant species. Snowberry is not but is known to be invasive in some circumstances.

*Strict Protection – species for which individuals and/or their habitats are protected against harm/destruction/disturbance by European or UK Law – for details see Appendix 6- Wildlife Law and Planning Policy.

** UK Biodiversity Action Plan – for details see Appendix 6- Wildlife Law and Planning Policy.

5 RESULTS OF BAT SCOPING ASSESSMENT

Buildings

5.1 Building names and locations are shown on the Phase 1 Habitat Plan (Appendix 1). Target Notes have been used to identify features such as potential bat access points. Target Notes are shown on the Target Note Plan (Appendix 3). Full details of the Bat Scoping Survey findings are contained in Appendix 4, including building descriptions and inspection findings.

5.2 Roof voids are not the only area of a building that may be used by roosting bats. Bats often roost underneath roof tiles, inside cavity walls and amongst brickwork. In these locations, evidence of a bat roost may be concealed.

5.3 As outlined in Section 1.9 of this report, access to inspect buildings for potential bat roost features was limited.

5.4 The Main Building was assessed as having **Moderate** potential for roosting bats, due to its large size and the presence of potential roost features, including a large clay-tiled roof.

5.5 Outbuildings 1, 2 and 3 were assessed as having **Low** potential for roosting bats, due to the potential for bats to roost between the corrugated asbestos roof and wooden boarding below.

5.6 Bat roosting could not be ruled out within the ‘Small shed’, ‘Ivy-covered shed’, ‘Garage’ and Main Building Basement, due to lack of access for inspection. As such, these buildings were assessed as having **Low** potential for roosting bats, pending further investigation.

Trees

5.7 There are a number of trees within the site boundary, ranging from those with no potential for roosting bats to those with a number of highly suitable features.

5.8 Tree dimensions, inspection notes and recommendations for each tree are listed in Appendix 5 of this report.

Foraging and commuting habitat

5.9 The location of the site is considered to be of **Moderate** value for commuting and foraging bats. The surrounding landscape is devoid of significant areas of woodland

and is dominated by suburban development and arable farmland. However, the row of trees surrounding the western part of the proposed development site is likely to be used as a corridor for foraging and commuting bats, which are known to be present in the wider area.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 For any constraints identified, mitigation options should follow the Mitigation Hierarchy as set out in British Standard BS42020 (BSI, 2013). This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures.

Designated sites

6.2 One statutory designated site is located at 1.65 km from the proposed development site and two non-statutory designated sites are located at 1.20 km and 1.94 km.

6.3 The scale of the proposed development is such that there is considered unlikely to be a direct impact on these or any other designated sites.

Habitats and Vegetation

6.4 The proposed development site does not contain a wide variety of habitats, or any habitats listed as Priority Habitats on the UK or Kent Biodiversity Action Plans.

6.5 However, the row of trees and scrub vegetation surrounding the western part of the site is considered to offer in important wildlife corridor for a variety of species, which may include bats, birds, stag beetle and other invertebrates, hedgehogs and potentially reptiles.

6.6 Recommendation: The row of mature trees surrounding the western part of the site should be retained within the proposed development. It is recommended that the scrub understorey is also retained in order to preserve its function as a significant ecological corridor.

Protected and Notable Species

Great crested newts

6.7 Great crested newts have previously been recorded as close as 1.51 km from the proposed development site. However, no ponds were identified within 500 m of the site and the site is largely surrounded by suburban development. Therefore, it is considered unlikely that great crested newts will be impacted by the proposed development and no further surveys are recommended.

Reptiles

6.8 Slow-worm, common lizard and adder have all been previously recorded within 2 km of the site. The scrub habitats surrounding the field in the west of the site offer moderate-suitability habitat for reptiles, particularly slow-worms.

6.9 Recommendation: To avoid an impact on reptiles, scrub vegetation surrounding the field in the western part of the site should be retained within the proposed development.

6.10 Where removal of small areas of scrub are necessary (up to approx. 500 m^2 total), habitat manipulation techniques will be appropriate to minimise the risk of harm to reptiles, as follows:

6.11 Recommendation: If removal of small areas of scrub are required, to avoid harm to reptiles (if present) it is recommended that scrub (e.g. bramble) should be strimmed carefully, using hand tools, in 2 phases. The habitat should be strimmed outwards toward the site boundary, to flush any reptile species into the adjacent habitats. The first pass should be cut to a height of no less than 150 millimetres. After the first strim, the area should be left for two days to allow any remaining animals to move into surrounding habitats. The second phase should be cut down to ground level under ecological supervision. Any sheltering places such as log piles or animals' burrows must be dismantled by hand under ecological supervision, to remove any reptiles present. This approach can only be undertaken between **March and October** inclusive (when temperatures are not below 10°C) when reptiles are active.

6.12 If removal of greater areas of scrub are required, it is recommended that a reptile survey is undertaken, as follows:

6.13 Recommendation: If removal of large areas of scrub are required, to ascertain whether reptiles are present within the site, it is recommended that reptile surveys are undertaken. The surveys should be undertaken over seven occasions during the reptile survey season (March-September). The results will inform mitigation, if required, which may involve capture and exclusion of reptiles from working areas.

6.14 The field itself is currently unsuitable for reptiles as the grass is cut short, offering no shelter for reptiles. Rubble and spoil piles, if created temporarily during construction, may become colonised by reptiles.

6.15 Recommendation: In order to prevent colonisation of the field by reptiles prior to completion of the development, it is recommended that grassland vegetation is mown regularly to keep it to a height of no more than 15 cm. Additionally, during the construction process, it is recommended that storage of rubble, spoil and other materials close to the periphery of the site should be avoided.

Roosting bats - buildings

6.16 The Main Building was assessed as having **Moderate** potential for roosting bats. Outbuildings 1, 2 and 3 were assessed as having **Low** potential for roosting bats.

6.17 Recommendation: In order to ascertain whether the buildings are used by roosting bats, in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), it is recommended that the buildings are subject to nocturnal emergence/re-entry (also known as dusk/dawn or presence/absence) surveys, as follows:

6.18 The Main Building should ideally be surveyed at **dawn on two occasions**, with an additional dusk survey of any features confirmed as bat roosts. Dawn surveys are considered optimal in this case due to the size and complexity of the building. Dawn surveys give the best chance of pinpointing bat roosts. The number of surveyors required will depend on the extent to which the building is due to be impacted by proposed works. Appendix 1 indicates suggested surveyor locations. Up to 10 surveyor locations may be necessary to cover the whole building.

6.19 Outbuildings 1, 2 and 3 should be surveyed at **dusk or dawn on one occasion**. Two, three and one surveyors are required to cover each of these buildings respectively (see Appendix 1 for proposed surveyor locations).

6.20 If the surveys confirm the use of any buildings by roosting bats, additional emergence/re-entry surveys will be required (three total).

6.21 Any works likely to disturb bats or bat roosts may only be undertaken once a Natural England Mitigation Licence has been obtained. This may require the provision of alternative roosting features within the development site.

6.22 Bat roosting could not be ruled out within the ‘Small shed’, ‘Ivy-covered shed’, ‘Garage’ and Main Building Basement, due to lack of access for inspection. As such, these buildings were assessed as having **Low** potential for roosting bats, pending further investigation.

6.23 Recommendation: An internal inspection must be undertaken to ascertain whether any potential for roosting bats exists within the ‘Small shed’, ‘Ivy-covered shed’, ‘Garage’ and Main Building Basement. If inspection of the basement is not feasible (due to asbestos), an automated bat detector survey should be undertaken instead.

Roosting bats - trees

6.24 All trees within and adjacent to the site have all been assessed for their potential for roosting bats. Many trees were assessed as having **Negligible** potential to support bats, due to the absence of features such as cracks, crevices or dense ivy growth. These trees can be removed if needed without risk to roosting bats.

6.25 Recommendation: Where trees were assessed as having features suitable for roosting bats, Appendix 5 gives a recommendation specific to each tree. The number of trees requiring further survey will depend on the final layout for the proposed development and the extent to which trees are due to be impacted. The requirement for further bat surveys will be minimised if trees with **Moderate/High** bat potential can be left in place within the proposed development.

<u>Soft-fell method</u>

6.26 For some trees (see Appendix 5), it is recommended that a precautionary ‘soft-fell’ method is used in order to minimise the risk of harm to bats, as follows:

1) During felling, trees or limbs must be lowered carefully to the ground using ropes.
2) If any cracks or fissures are observed, cross-cutting these features must be avoided.
3) Trees and limbs must left on the ground for 24 hours, to allow any bats to escape if present, although this is considered unlikely.

<u>Elevated inspection</u>

6.27 For some trees (see Appendix 5), it is recommended that further elevated/climbed inspection is undertaken to investigate potential bat roost features closely, using an endoscope to search for evidence of bats and investigate the extent of potential bat roost features. Elevated inspections must usually be undertaken by ecologists licensed to use endoscopes to investigate potential bat roosts. Access by ropes or mobile platforms is required. Elevated inspection can be undertaken at any time of year and in many cases can rule out the need for further survey. In some cases, elevated inspection will show that a potential roost feature does not extend into a

cavity and therefore is not of roosting potential. In such cases the tree may be removed without further constraints. Where elevated inspection shows that cavities are extensive, or finds evidence of roosting bats, emergence/re-entry surveys may still be required.

Emergence/re-entry surveys

6.28 Emergence/re-entry surveys are recommended for tree T5 (if works to the tree are required), which has features with a high suitability for roosting bats (see Appendix 5). This tree should be surveyed on three occasions, to include at least one dawn and one dusk survey. The surveys should be undertaken between May and September, inclusive.

6.29 If bats are found to be roosting within trees, any works likely to disturb bats or bat roosts may only be undertaken once a Natural England Mitigation Licence has been obtained. This may require the provision of alternative roosting features within the development site.

Foraging and commuting bats

6.30 Due to the habitats present within the site and the local landscape, it is considered likely that foraging or commuting bats use the site.

6.31 Recommendation: In order to avoid a detrimental impact on bats using the site, there should be no increased light spillage on to suitable habitats, particularly on the periphery of the site, where bats are most likely to forage and commute. Lighting should be restricted to the interior of the site and should be kept to a low level. The following measures should be implemented within the lighting scheme:

- Minimise light spill, through use of lighting hoods, and setting the height and angle appropriately;
- Reduce the light intensity to the minimum required for safety and security;
- Set lighting curfews, e.g. lights off at night
- Where security lamps are used these should use a trigger to illuminate them (e.g. infra-red detector), and switch off after a short period, rather than remaining on all night.

Dormice

6.32 Due to the limited extent of suitable habitats present and poor connectivity with suitable habitats in the local area, dormice are considered unlikely to be present.

The proposed development is considered unlikely to impact dormice and no further surveys are recommended.

Water Vole and Otter

6.33 No habitat suitable for water voles or otters is present within or adjacent to the site. The proposed development is considered unlikely to impact these species and no further surveys are recommended.

Badger

6.34 Due to the lack of evidence of badgers within the site, the proposed development is considered very unlikely to impact badgers and no further surveys are recommended.

Hedgehog

6.35 The site includes habitats suitable for hedgehogs to be present.

6.36 Recommendation: Care should be taken when removing scrub/shrub vegetation to avoid harm to hedgehogs which may be present. Once vegetation has been removed to a height of 150-300 mm, it should be checked by a member of site staff to ensure that no hedgehogs are present. If any hedgehogs are present, they may be moved to suitable habitat nearby. Section 7 of this report includes measures to enhance the development for hedgehogs.

Invertebrates

6.37 The mature trees and scrub surrounding the western part of the site offer a good resource for invertebrates such as stag beetles, which have previously been recorded directly adjacent to the site (2002).

6.38 Recommendation: Where possible, it is recommended that dead wood is retained within the development and not cleared from the site. Where additional dead wood is created (e.g. through tree felling if necessary), log piles should be created (see Section 7) to enhance the habitat for invertebrates.

Nesting birds

6.39 The site includes trees, scrub and buildings, all of which are suitable for nesting birds during the nesting season (March to August inclusive).

6.40 Recommendation: To avoid destruction of active bird nests, it is recommended that vegetation and building removal is only undertaken outside the nesting season. Vegetation and building removal may only be undertaken during the nesting season

if a careful check by a suitably experienced ecologist can confirm that no active bird nests are present. If bird nests are present within vegetation to be removed, they must be left *in situ* and not disturbed until all the young have fledged and cease to return to the nest.

Invasive plant species

6.41 *Cotoneaster horizontalis* and snowberry were recorded within scrub vegetation surrounding the field (see target notes, Appendix 1).

6.42 *Cotoneaster horizontalis* is listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as invasive plant species. It is prohibited to plant or otherwise cause this species to grow in the wild.

6.43 Snowberry is not listed under Schedule 9, but is known to be invasive in some circumstances (Natural England, 2011).

6.44 Recommendation: These plants are unlikely to cause problems in their current location within the site, but their spread should be avoided. If removal of these plants is required as part of the works, they should be disposed of responsibly (e.g. mulching, burning on site or removal to landfill) so that the plants cannot spread.

7 OPPORTUNITIES FOR BIODIVERSITY ENHANCEMENT

7.1 In accordance with NPPF, suggested opportunities for biodiversity enhancement (above and beyond those required to mitigate for the identified impacts) are set out below. Any additional measures pending the results of the recommended bat surveys should be incorporated as necessary. The below recommendations may not all be feasible within the final development and alternative enhancements should also be considered.

Pond

7.2 If feasible, a new pond may be included in the proposed development. Ponds create a significant habitat enhancement for a wide range of wildlife including plants, invertebrates, amphibians, reptiles, bats and birds. Ponds also help with flood water retention. Ponds should include at least one shallow-sloped bank and should include a variety of wildlife-friendly planting (either planted or naturally colonising).

Tree and shrub planting

7.3 Additional tree and shrub planting is recommended throughout the site which will increase connectivity for dispersing wildlife including bats, birds and invertebrates. Native species should be used within planting schemes. Species such as blackthorn (*Prunus spinosa*), crab apple (*Malus sylvestris sens.str*), elder (*Sambucus nigra*), field maple (*Acer campestre*), guelder rose (*Viburnum opulus*), hawthorn (*Crataegus monogyna*), honeysuckle (*Lonicera periclymenum*), holly (*Ilex aquifolium*) and English oak (*Quercus robur*) could be used to provide known benefit to wildlife.

Grassland planting

7.4 Wherever possible, areas of informal ‘meadow’ grassland should be included, seeded with a species-rich wildflower grassland mix to provide foraging opportunities, particularly for pollinating invertebrates. Areas of longer informal grassland also offer shelter for reptiles, amphibians and small mammals. Recommended grassland species are included in the Royal Horticultural Society’s ‘Perfect for Pollinators’ lists.

Bird boxes

7.5 Installation of bird boxes increases nesting opportunities for bird species. A variety of bird box designs are available, for installation on existing mature trees, on external building walls, or to be in-built into the structure of new buildings. Bird

boxes should be installed at least 2 m in height facing north and east, thus avoiding strong sunlight and wet winds.

7.6 During the survey, a colony of house sparrows (*Passer domesticus*) was present in bramble scrub and nearby vegetation on the site's northern boundary. House sparrows nest colonially and their populations have fallen dramatically across the UK. The proposed development offers an opportunity to increase nesting habitats for this species. It is recommended that at least two 'sparrow terrace' bird boxes are built into buildings towards the northern boundary of the site (facing north or east). The boxes are designed to be incorporated into the fabric of a building as it is built and are unobtrusive in appearance.

Bat boxes

7.7 The inclusion of bat boxes provides new roost sites for bats within the local area. A variety of bat box designs are available, for installation on existing mature trees, on external building walls, or to be in-built into the structure of new buildings. Bat boxes should be located in sheltered spots away from artificial lighting and placed at a height of at least 3 metres from the ground, ideally facing south.

Hedgehog boxes/corridors

7.8 In order to enhance the site for hedgehogs, it is recommended that hedgehog nest boxes/domes are installed in undisturbed locations within the site.

7.9 In order to allow hedgehogs to pass through the site, it is recommended that all garden fences include a gap of at least 13 cm x 13 cm at ground level.

Log Piles

7.10 To enhance the site for invertebrates such as the stag beetle (*Lucanus cervus*), it is recommended that log piles, 2 m width/length and 1 m in height, are created in shaded and undisturbed locations, within the site.

8 REFERENCES

- British Standards Institution (2013). BS42020 – Biodiversity – Code of practice for planning and development.
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- Chartered Institute of Ecology and Environmental Management (2013). Guidelines for Preliminary Ecological Appraisal.
- CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester
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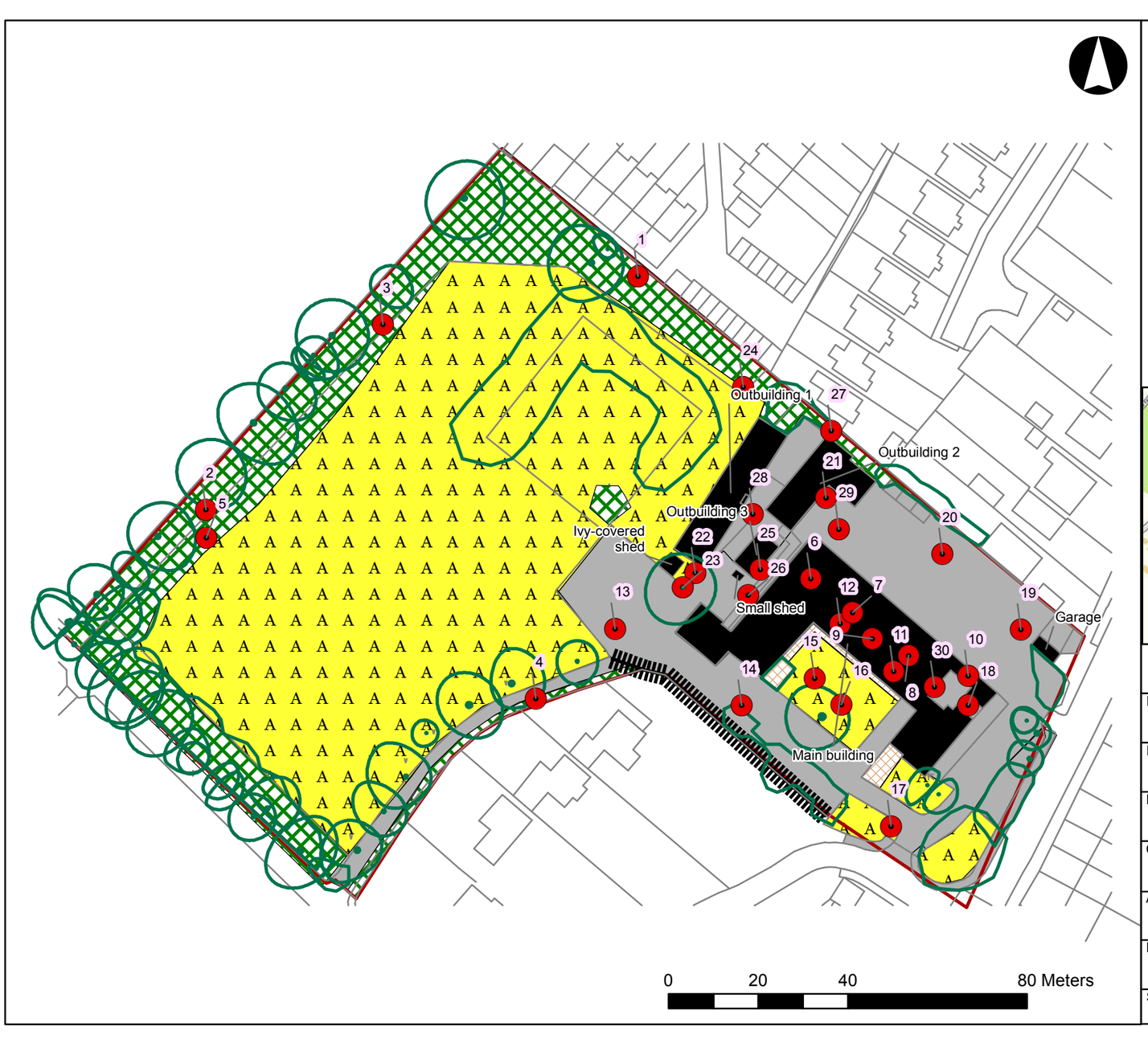
9 APPENDICES

Appendix 1 - Phase 1 Habitat Plan



Legend

- TargetNote
- Tree
- Fence
- Boundary
- TreeGroup
- Building
- Scrub - dense/continuous
- Amenity grassland
- Introduced shrub
- Hardstanding

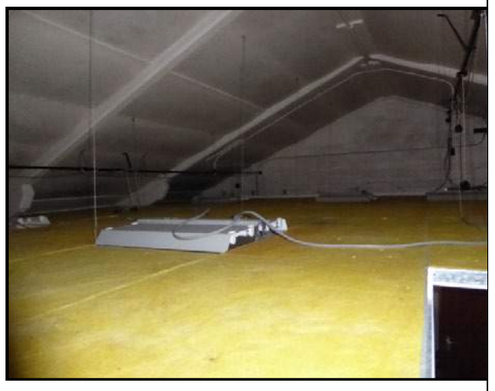
TIM MOYA ASSOCIATES
ARBORICULTURE • LANDSCAPE • ECOLOGY

Project Name:	Sittingbourne AEC
Drawing title:	Phase 1 Plan
Drawing number:	171102-E-01
Client:	Gen2
Agent:	Tim Moya Associates
Date:	31/01/2018
Drawn by:	BP
Scale:	1:1,100

Appendix 2 - Photographs

Photo 1 – Field in west of site	Photo 2 – Scrub in northern corner of field
	
Photo 3 – Snowberry (see target note 3)	Photo 4 – Tree group in north-east of field
	
Photo 5 – Main building (southern corner)	Photo 6 – Main building (south-west side)
	

Photo 7 – Main building (north-east side)	Photo 8 – Dormer structures offering potential bat roost features
	
Photo 9 – Outbuilding 1	Photo 10 – Outbuilding 2
	
Photo 11 – Outbuilding 3 and small shed	Photo 12 – Ivy-covered shed
	

Photo 13 – Roof space of main building	Photo 14 – Roof of main building
	
Photo 15 – Main building basement	Photo 16 – Roof space of Outbuilding 2
	

Appendix 3 - Target Notes

Target notes

Object ID	Type	Notes and findings
1	Bird evidence	Colony of house sparrows.
2	Bird evidence	Song thrush present in tree.
3	Invasive plant species	Snowberry
4	Invasive plant species	Cotoneaster horizontalis.
5	Habitat description	Bramble scrub provides potential habitat for reptiles, particularly slow-worm.
6	Potential Bat Roost Feature (PRF)	Hanging tiles on dormer struture.
7	Potential Bat Roost Feature (PRF)	Hanging tiles on dormer struture.
8	Potential Bat Roost Feature (PRF)	Hanging tiles on dormer struture.
9	Potential Bat Roost Feature (PRF)	Hanging tiles on dormer struture.
10	Potential Bat Roost Feature (PRF)	Missing roof tiles.
11	Potential Bat Roost Feature (PRF)	Hanging tiles on dormer struture.
12	Potential Bat Roost Feature (PRF)	Hanging tiles on dormer struture.
13	Surveyor position	Suggested bat surveyor position - main building.
14	Surveyor position	Suggested bat surveyor position - main building.
15	Surveyor position	Suggested bat surveyor position - main building.

Target notes

Object ID	Type	Notes and findings
16	Surveyor position	Suggested bat surveyor position - main building.
17	Surveyor position	Suggested bat surveyor position - main building.
18	Surveyor position	Suggested bat surveyor position - main building.
19	Surveyor position	Suggested bat surveyor position - main building.
20	Surveyor position	Suggested bat surveyor position - main building.
21	Surveyor position	Suggested bat surveyor position - main building.
22	Surveyor position	Suggested bat surveyor position - main building.
23	Surveyor position	Suggested bat surveyor position - outbuilding 1.
24	Surveyor position	Suggested bat surveyor position - outbuilding 1.
25	Potential Bat Roost Feature (PRF)	Damage to soffit allows potential entry into roof space.
26	Surveyor position	Suggested bat surveyor position - outbuilding 3.
27	Surveyor position	Suggested bat surveyor position - outbuilding 2.
28	Surveyor position	Suggested bat surveyor position - outbuilding 2.
29	Surveyor position	Suggested bat surveyor position - outbuilding 2.
30	Potential Bat Roost Feature (PRF)	Visible gap in mortar at top of wall.

Bat Building Assessment Summary

TIM MOYA ASSOCIATES
ARBORICULTURE • LANDSCAPE • ECOLOGY

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171102ED-11

Object ID REF	Storeys	Use of Building	Roof type Condition	Materials	Cellars	Chimneys	Roof void present	Bats evidence	Bat roost potential	Hibernation pot.	Internal Inspection	Potential bat access points Potential bat roost features	Recommendations	Ecological notes	Survey date
1 Main building	3	Educational and offices	Pitched Medium	Roof external: Clay tiles Roof internal: Canvas lining, chipboard or wooden sarking, where viewed. Wall: Brick	Y	4	Y	N	M	L	Limited	Roof materials - gaps in mortar. Roof materials - gaps under lead flashing. Tiles - gaps between. Tiles - gaps under hip tiles. Tiles - gaps under ridge tiles. Tiles - missing Roof beams - joints (e.g. mortise joints). Roof materials - gaps between wooden boarding and roof tiles. Roof materials - gaps under lead flashing. Roof void. Tiles - gaps under hip tiles. Tiles - gaps under ridge tiles. Tiles - gaps under roof tiles	Emergence / return surveys (May to September), if bat roost features are due to be impacted. Dependent on proposed works. Recommend 2 x dawn surveys to identify roost areas and 1 x additional dusk survey on any confirmed features. Inaccessible areas/features yet to inspect. Internal basement inspection required if possible to rule out presence of bats. Automated bat detector survey. If basement inspection not feasible.	Roof inspection limited to view from central loft hatch (adjacent to external clock). Basement inspection limited to view from doorway.	08/01/2018
2 Outbuilding 1	1	Former educational	Pitched Medium	Roof external: Corrugated asbestos Roof internal: Wooden boards Wall: Clay block	N	0	Y	N	L	N	Yes	Eaves - gaps under roof eaves. Tiles - gaps between. Tiles - gaps under ridge tiles Cladding - cement. Roof materials - gaps between wooden boarding and roof tiles. Tiles - gaps under ridge tiles	Emergence / return surveys (May to September), if bat roost features are due to be impacted. 1 survey, 2 surveyors.	Asbestos cladding on gable ends. Suspended ceiling for part of roof, majority open into roof.	08/01/2018
4 Outbuilding 2	1	Former educational	Pitched Medium	Roof external: Corrugated asbestos Roof internal: Wooden boards. Wall: Not known - clay block?	N	0	Y	N	L	N	Yes	Eaves - gaps under roof eaves. Tiles - gaps between. Tiles - gaps under ridge tiles Roof materials - gaps between wooden boarding and roof tiles. Tiles - gaps under ridge tiles	Emergence / return surveys (May to September), if bat roost features are due to be impacted. 1 survey, 3 surveyors.	Suspended ceiling throughout. Can view roof through gaps.	08/01/2018

Bat roost and Hibernation potential

C - Confirmed H - High M - Moderate L - Low N - Negligible

Generated By MyTREES tree management software

Printed on 23/01/18 (Building Assessment)

171102 - Sittingbourne AEC

171102ED-11

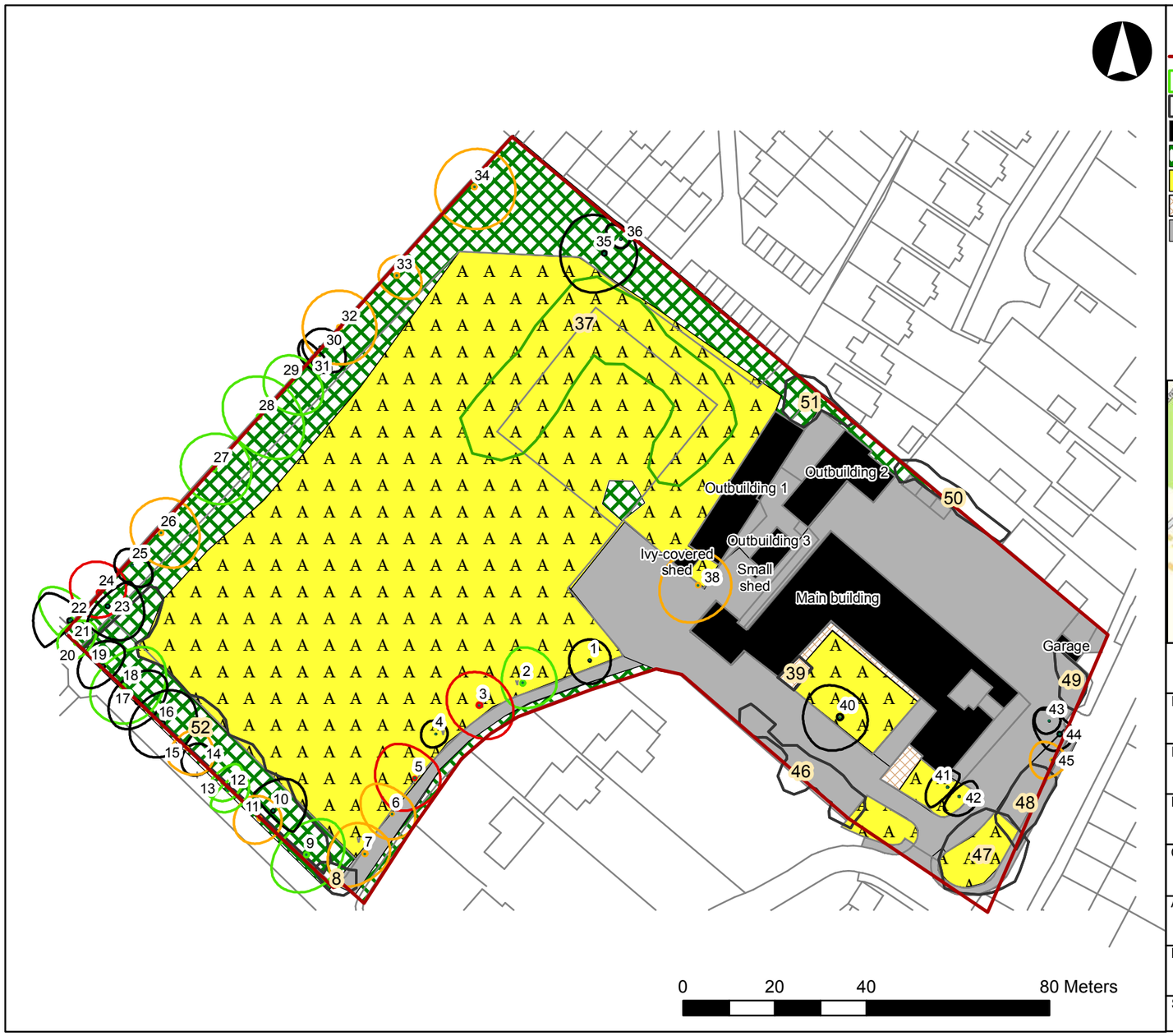
Object ID REF	Storeys	Use of Building	Roof type Condition	Materials	Cellars	Chimneys	Roof void present	Bats evidence	Bat roost potential	Hibernation pot.	Internal Inspection	Potential bat access points Potential bat roost features	Recommendations	Ecological notes	Survey date
5 Outbuilding 3	1	Former educational	Pitched Medium	Roof external: Bitumen felt Roof internal: Unknown Wall: Wooden with wooden cladding	N	0	Y	N	L	N	No	Eaves - gaps behind soffit boxes Eaves - gaps behind soffit boxes. Roof void	Emergence / return surveys (May to September), if bat roost features are due to be impacted. 1 survey, 1 surveyor.	Suspended ceiling. No access into building.	08/01/2018
7 Ivy-covered shed	1	Storage	Flat Medium	Roof external: Unknown Roof internal: Unknown Wall: Concrete	N	0	N	N	L	L	No		Inaccessible areas/features yet to inspect. Internal inspection required to rule out presence of bats.	No access into building. Structure totally covered in ivy. No visible bat access points due to dense ivy.	08/01/2018
8 Small shed	1	Unknown	Flat Medium	Roof external: Corrugated asbestos Roof internal: Unknown Wall: Concrete block	N	0	N	N	L	L	No	Eaves - gaps under roof eaves	Inaccessible areas/features yet to inspect. Internal inspection required to rule out presence of bats.	No access into building.	08/01/2018
9 Garage	1	Garage	Pitched Medium	Roof external: Corrugated asbestos Roof internal: Unknown Wall: Concrete	N	0		N	L	L	No	Tiles - gaps between Other internal roost feature	Inaccessible areas/features yet to inspect. Internal inspection required to rule out presence of bats.	No access into building.	08/01/2018

Bat roost and Hibernation potential

C - Confirmed H - High M - Moderate L - Low N - Negligible

Generated By MyTREES tree management software

Appendix 5 – Bat Scoping Assessment (Trees)



Legend

- Boundary
- Tree Group Bat Potential- L (Low)
- Tree Group Bat Potential - N (Negligible)
- Building
- Scrub - dense/continuous
- Amenity grassland
- Introduced shrub
- Hardstanding

Tree Bat Potential

- H (High)
- M (Moderate)
- L (Low)
- N (Negligible)

TIM MOYA ASSOCIATES
ARBORICULTURE • LANDSCAPE • ECOLOGY

Project Name:	Sittingbourne AEC
Drawing title:	Tree Bat Potential Plan
Drawing number:	171102-E-02
Client:	Gen2
Agent:	Tim Moya Associates
Date: 31/01/2018	Drawn by: BP
Scale:	1:1,100

171102 - Sittingbourne AEC

171102-ED-12

Tree No.	Species	Tree Height (m)	Age Class	BCT Category (explanation at end of schedule)	Notes	Recommendations
1	Aesculus hippocastanum Horse Chestnut	8.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
2	Aesculus hippocastanum Horse Chestnut	8.0	Early Mature	Low	Rot holes present on main stem, south side, 3.5 m.	Climbed inspection if felling or pruning required.
3	Aesculus hippocastanum Horse Chestnut	17.0	Early Mature	High	Large wounds in upper crown. Woodpecker holes in upper south-facing limb.	Climbed inspection if felling or pruning required.
4	Aesculus hippocastanum Horse Chestnut	8.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
5	Acer pseudoplatanus Sycamore	17.0	Mature	High	Numerous woodpecker holes, particularly on north facing limb at 9-10m.	3 x emergence/return survey.
6	Ailanthus altissima Tree Of Heaven	17.0	Mature	Moderate	One woodpecker hole on main stem south-facing at 10 m.	Climbed inspection if felling or pruning required.
7	Aesculus hippocastanum Horse Chestnut	17.0	Mature	Moderate	Small hole at 2 m, main stem. Broken large branch in crown at 12 m. Hole inspected with endoscope - no bats visible.	Climbed inspection if felling or pruning required Reinspect hole and inspect broken branch.
8	Acer pseudoplatanus Sycamore	10.0	Semi Mature	Negligible	No notable features of bat roost potential visible.	No further bat surveys recommended.
9	Acer pseudoplatanus Sycamore	18.0	Mature	Low	Occasional minor holes in small branches.	Precautionary soft-fell if felling required If holes present in branches to be removed.
10	Quercus ilex Holm Oak	12.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.

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171102-ED-12

Tree No.	Species	Tree Height (m)	Age Class	BCT Category (explanation at end of schedule)	Notes	Recommendations
11	Acer pseudoplatanus Sycamore	15.0	Mature	Moderate	Moderate ivy covering may obscure bat roost features.	Climbed inspection if felling or pruning required Ideally preceded by ivy severance at base.
12	Acer pseudoplatanus Sycamore	12.0	Early Mature	Low	Moderate ivy covering but trees are of size and form that bat roost features are considered unlikely.	Other ecological recommendation No further bat surveys recommended.
13	Acer pseudoplatanus Sycamore	12.0	Early Mature	Low	Moderate ivy covering but trees are of size and form that bat roost features are considered unlikely.	Other ecological recommendation No further bat surveys recommended.
14	Ilex aquifolium Holly	5.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
15	Acer pseudoplatanus Sycamore	12.0	Mature	Moderate	Ivy covering. Bat roost features could be concealed by ivy.	Climbed inspection if felling or pruning required Ideally preceded by ivy severance at base.
16	Platanus x hispanica London Plane	17.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
17	Acer pseudoplatanus Sycamore	17.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
18	Aesculus hippocastanum Horse Chestnut	17.0	Mature	Low	Cavity on south-west branch (over road) at 6 m.	Climbed inspection if felling or pruning required.

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171102-ED-12

Tree No.	Species	Tree Height (m)	Age Class	BCT Category (explanation at end of schedule)	Notes	Recommendations
19	Acer pseudoplatanus Sycamore	17.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
20	Tilia x vulgaris Common Lime	16.0	Mature	Low	2 small cavities facing north-west at 6 m.	Climbed inspection if felling or pruning required.
21	Populus tremuloides American Aspen	18.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
22	Populus tremuloides American Aspen	18.0	Mature	Low	Conjoined branches at 8 could form bat roost feature.	Climbed inspection if felling or pruning required.
23	Acer pseudoplatanus Sycamore	18.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
24	Aesculus hippocastanum Horse Chestnut	18.0	Mature	High	Woodpecker hole on main stem at 12 m. Deadwood and hazard beam adjacent to this.	Climbed inspection if felling or pruning required.
25	Acer pseudoplatanus Sycamore	6.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
26	Acer platanoides Norway Maple	15.0	Mature	Moderate	Decay at top of main stems.	Climbed inspection if felling or pruning required.
27	Acer pseudoplatanus Sycamore	18.0	Mature	Low	No potential bat roost features visible on south-east side. Views of tree limited - bat roost features may exist on far side.	Other ecological recommendation If works to trees are required, they should first be inspected from all sides for potential bat roost features.
28	Acer platanoides Norway Maple	17.0	Mature	Low	No potential bat roost features visible on south-east side. Views of tree limited - bat roost features may exist on far side.	Other ecological recommendation If works to tree are required, it should first be inspected from all sides for potential bat roost features.

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171102-ED-12

Tree No.	Species	Tree Height (m)	Age Class	BCT Category (explanation at end of schedule)	Notes	Recommendations
29	Tilia x vulgaris Common Lime	17.0	Mature	Low	No potential bat roost features visible on south-east side. Views of tree limited - bat roost features may exist on far side.	Other ecological recommendation If works to tree are required, it should first be inspected from all sides for potential bat roost features.
30	Taxus baccata Yew	7.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
31	Ulmus procera English Elm	7.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
32	Acer pseudoplatanus Sycamore	18.0	Mature	Moderate	Holes visible on various branches and main stem.	Climbed inspection if felling or pruning required.
33	Acer platanoides Norway Maple	7.0	Late Mature	Moderate	Dense ivy totally obscures tree. Potential bat roost features may be visible. Notable fungus on stem at 3 m.	Climbed inspection if felling or pruning required. Must be preceded by ivy severance at base to enable inspection.
34	Acer pseudoplatanus Sycamore	17.0	Mature	Moderate	Large cavity visible at 4 m, main stem. Further cavities may exist out of view in crown.	Climbed inspection if felling or pruning required.
35	Acer platanoides ‘Crimson King’ Red Norway Maple	15.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
36	Crataegus monogyna Common Hawthorn/Quick/May	5.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
37	Acer pseudoplatanus Sycamore	14.0	Early Mature	Low	Moderate ivy covering but trees are of size and form that bat roost features are considered unlikely.	No further bat surveys recommended.
38	Tilia x vulgaris Common Lime	17.0	Mature	Moderate	Woodpecker hole on main stem north side at 6 m. Various other minor features visible on main stem 5-8 m height.	Climbed inspection if felling or pruning required.

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171102-ED-12

Tree No.	Species	Tree Height (m)	Age Class	BCT Category (explanation at end of schedule)	Notes	Recommendations
39	Laurocerasus officinalis Cherry Laurel	4.0	Early Mature	Negligible	No notable features of bat roost potential visible.	No further bat surveys recommended.
40	Thuja plicata Western Red Cedar	17.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
41	Taxus baccata Yew	8.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
42	Taxus baccata Yew	7.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
43	Taxus baccata Yew	5.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
44	Acer pseudoplatanus Sycamore	17.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
45	Acer platanoides Norway Maple	12.0	Mature	Moderate	Numerous woodpecker holes.	Climbed inspection if felling or pruning required.
46	Ulmus procera English Elm Sambucus nigra Elder Acer pseudoplatanus Sycamore	5.0	Semi Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
47	Populus tremuloides American Aspen	15.0	Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.

171102 - Sittingbourne AEC

171102-ED-12

Tree No.	Species	Tree Height (m)	Age Class	BCT Category (explanation at end of schedule)	Notes	Recommendations
48	Acer pseudoplatanus Sycamore Ulmus procera English Elm Crataegus monogyna Common Hawthorn/Quick/May	10.0	Semi Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
49	Padus avium Bird Cherry	4.0	Early Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
50		4.0	Semi Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
51		4.0	Semi Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.
52	Ulmus procera English Elm Crataegus monogyna Common Hawthorn/Quick/May Acer pseudoplatanus Sycamore	6.0	Semi Mature	Negligible	No notable potential bat roost features visible.	No further bat surveys recommended.

Bat Potential

Negligible - Negligible habitat features on site likely to be used by roosting bats.

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

Moderate - A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.

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

Roost - A known or confirmed bat roost.

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).
The Bat Conservation Trust, London.

Appendix 6 - Wildlife Law and Planning Policy

Statutes and English Law

Reptiles

All species of native reptiles are protected against killing or injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) are further protected under The Conservation of Habitats and Species Regulations 2017 against capture or disturbance and the places they use for breeding, resting, shelter and protection are protected from being damaged or destroyed.

Great Crested Newts

The great crested newt and its habitat are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. This legislation makes it an offence to deliberately kill, injure or capture a great crested newt; deliberately disturb a great crested newt; damage, destroy or obstruct access to a structure used for shelter or protection by a great crested newt; or possess or transport a great crested newt.

Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone intentionally to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992 which makes it an offence to kill, injure or possess a badger; interfere with, damage or destroy a badger sett including obstructing access to a badger sett; cruelly treat or harm a badger; or disturb a badger in a sett.

Otters

Otters and their resting places are protected under the Wildlife and Countryside Act 1981 (as amended) and the The Conservation of Habitats and Species Regulations 2017. This legislation makes it an offence to deliberately kill, injure or capture an

otter; deliberately disturb an otter in their breeding or resting places; damage, destroy or obstruct access to their resting or breeding places.

Water Voles

Water voles are protected under the Wildlife and Countryside Act 1981 (as amended) from killing or taking by certain prohibited methods. Their breeding and resting places are fully protected from damage, destruction or obstruction; it is also an offence to disturb them in these places.

Dormice

Hazel dormice are protected under both the The Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). Dormice and their breeding sites and resting places are fully protected. Without a licence it is an offence for anyone to deliberately disturb, capture, injure or kill them. It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess, or sell a wild dormouse.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to kill, injure or take wild birds; take, damage or destroy the nest of wild birds while it is in use or being built; or take or destroy the eggs of wild birds.

Certain bird species are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (as amended). Under this legislation they are afforded the same protection as all wild birds and are also protected against **disturbance** whilst building a nest, or on or near a nest containing eggs and or unfledged young.

Invasive Plant Species

It is prohibited to plant or otherwise cause to grow in the wild any species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The Environmental Protection Act 1990 also classifies certain invasive plants as controlled waste which must be disposed of safely at an appropriately licensed landfill site (e.g. Japanese knotweed).

Under section 57 of the Anti-social Behaviour, Crime and Policing Act 2014, if an individual or an organisation fails to control an invasive plant species which is having a detrimental effect on the quality of life of those in the locality. A notice can

be issued after a mandatory written warning has been served. Breach of this notice, without reasonable excuse, would be a criminal offence, subject to fixed penalty notice (a penalty of £100) or prosecution. On summary conviction an individual could be liable to a level 4 fine and an organisation (e.g. a company) could be liable to a fine not exceeding £20,000.

Planning Policy

In addition to the statutes described above, various planning policy imposes duties upon planning applicants to take account of protected species and habitats at sites of proposed development and in particular, protected species. The objective of this policy is to prevent a net loss of species and habitats diversity identified as priorities for the U.K. as a consequence of development activity.

National Planning Policy Framework (NPPF)

The NPPF (DCLG, 2012) aims to minimise impacts on biodiversity and provide net gains where possible. Planning policies should promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

Natural Environment and Rural Communities Act (NERC Act)

The NERC Act (2006) states that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

Priority Habitats and Species

Priority habitats and species are defined (NPPF, 2012) as ‘Species and Habitats of Principle Importance included in the England Biodiversity List published by the Secretary of State under Section 41 (S41) of the Natural Environment and Rural Communities Act 2006 (NERC Act)’. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

These species and habitats were subject to conservation action under the UK Biodiversity Action Plan (UK BAP). The 'UK Post-2010 Biodiversity Framework', published in July 2012, has succeeded the UK Biodiversity Action Plan (UK BAP). However, the UK BAP lists of priority species remain important and valuable reference sources.

Fifty-six **habitats** of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels.

There are 943 **species** of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

ODPM Circular 06/2005

This Government Circular entitled 'Biodiversity and Geological conservation – Statutory obligations and their impact within the planning system' (ODPM, 2005) provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

The potential effects of a development, on habitats or species listed as priorities in the UK Biodiversity Action Plan (BAP), and by Local Biodiversity Partnerships, together with policies in the England Biodiversity Strategy, are capable of being a material consideration in the preparation of regional spatial strategies and local development documents and the making of planning decisions.

The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional

circumstances, with the result that the surveys are carried out after planning permission has been granted. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development. Where this is the case, the survey should be completed and any necessary measures to protect the species should be in place, through conditions and/or planning obligations, before the permission is granted.

- Habitat Surveys (Extended Phase 1/ Walkover/ Botanical)
- Protected Species Surveys
- Ecological Mitigation & Licencing
- BREEAM & CFSH
- Ecological Management Plans
- Hedgerow Surveys
- Landscape Analysis
- Arboricultural & Ecological Reports for Planning
- Feasibility Tree Surveys
- British Standard 5837 Tree Surveys
- Tree Constraints Reports & Drawings
- Appeal Statements & Proofs
- Expert Witness
- Evidence at Hearings & Public Inquiries
- Method Statements to Satisfy Planning Conditions
- Design Solutions
- Landscape Plans
- Tender Documents & Drawings
- Supervision & Inspection of Works
- Contract & Project Management
- Health & Safety Surveys
- GPS Surveys
- Computerised Tree Population Surveys
- CAD Plans & Consultancy
- Subsidence Risk Assessments
- Mortgage & Insurance Reports
- TPO Review
- Local Government Officer Contracts

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