

# SGN Gasholder No 4, Kenavon Drive

Preliminary Ecological Appraisal

A Report for Danescroft (Kenavon Drive  
Project Management) LLP

October 2018



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# SGN Gasholder No 4, Kenavon Drive

## Preliminary Ecological Assessment

October 2018

Controlled Copy

01 of 02

01 Danescroft (Kenavon Drive Project Management) LLP

02 Greenspace Ecological Solutions Ltd

This report was written by Tanya Rowlinson and proof read by James Johnston

*The content of this report is the responsibility of Greenspace Ecological Solutions Ltd.  
It should be noted that whilst every effort has been made to meet the client's requirements, no site survey can ensure complete assessment or prediction of the changeable onsite environment. Furthermore, should more than 12 months elapse between the date of this survey and any subsequent development, it may be necessary to consider the need for an update survey to be undertaken.*

Report Number J20563

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## 1 PROJECT OVERVIEW

Client: Danescroft (Kenavon Drive Project Management) LLP

Site Address: SGN Gasholder No 4, Kenavon Drive, Reading RG1 3DH.

Attending Ecologists: James Johnston

Survey Date: 04<sup>th</sup> July 2018

Site Proposals: Redevelopment of an existing contaminated brownfield site and new residential development with associated parking.

Associated Planning Reference Number: Not yet Submitted

Source of Relevant Documents:

| Document:           | Source:                                                            |
|---------------------|--------------------------------------------------------------------|
| Site Location Plan: | Google Earth Pro                                                   |
| Desk Study:         | Thames Valley Environmental Records Centre (TVERC)<br>Magic.gov.uk |
| Site Plans:         | Collado Collins Architects                                         |

## 2 INTRODUCTION

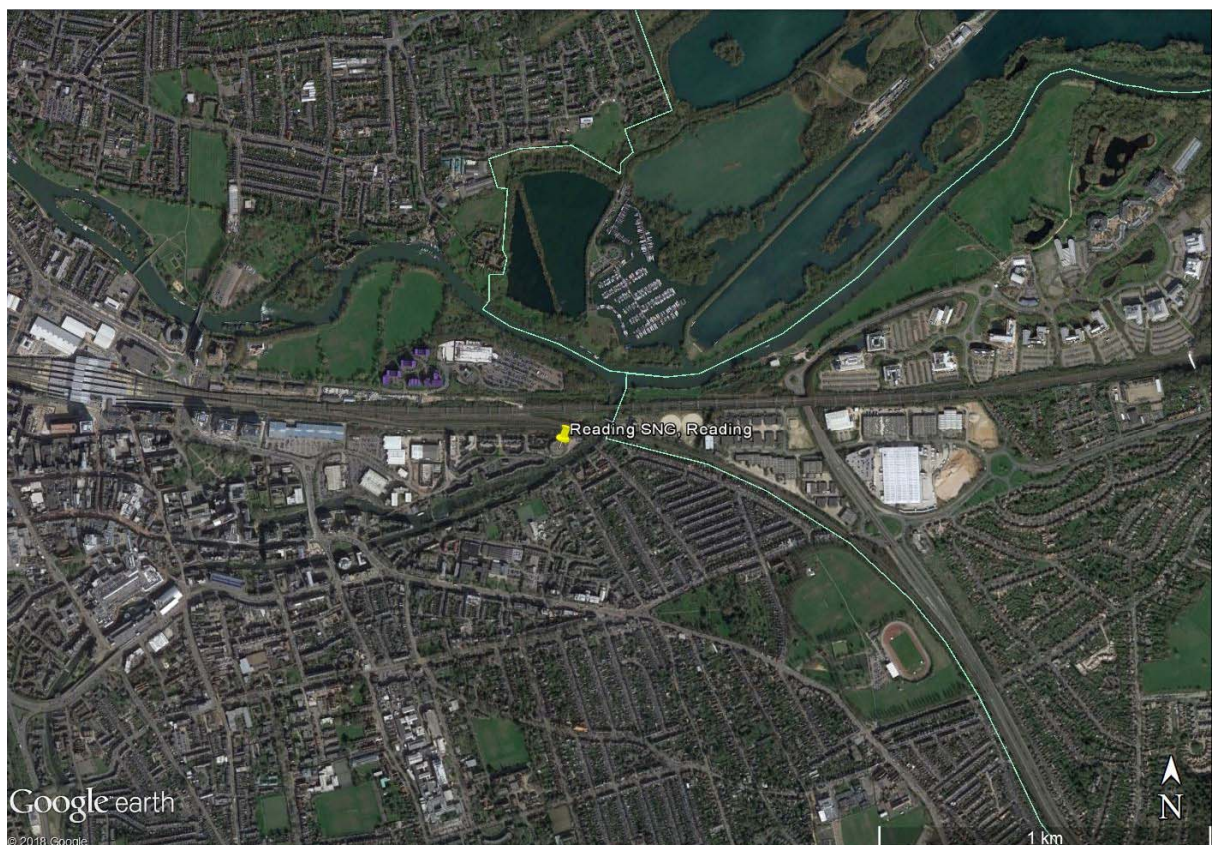
### 2.1 Context

2.1.1 In response to the redevelopment of the SGN Gasholder No 4, Kenavon Drive, a Preliminary Ecological Appraisal (PEA) has been undertaken of the land to be affected. Henceforth referred to as 'the site', formal proposals for the site have not been submitted but residential development options are being explored.

2.1.2 The site's potential to support protected species and habitats has been assessed and appropriate recommendations have been provided. Trees and buildings likely to be affected have been assessed for their potential to support roosting bats. Ecological features of interest are depicted in Figure 1.

### 2.2 Site Location

2.2.1 The site is located on the eastern edge of the town of Reading, Berkshire, at National Grid Reference SU 728 736. The location of the site is depicted in Image 1.



*Image 1 – Site Location of SGN Reading*

## 2.3 Site Description

- 2.3.1 The site occupies approximately 0.71ha and comprises of areas of scrub, scattered trees and buildings within areas of hard standing. A prominent gasholder can be found within the site.
- 2.3.2 The site is bound by residential dwellings to the east; the River Kennett to the south and east; and the National railway to the north. The wider landscape is one of industrial units to the east and west and pockets of scrubland to the north, beyond the railway.

## 2.4 Legislation and Policies

### *National Planning Policy Framework*

- 2.4.1 The main legislation that applies to ecological issues within England and Wales are:
- The Conservation of Habitat and Species Regulations 2010 transposes European Union Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. These regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' and the adaptation of planning controls for the protection of such sites and species. Under the regulations, public bodies have a duty in exercising their functions to have regard to the EC Habitats Directive.
  - The Wildlife and Countryside Act 1981 (as amended) provides detail on a range of protection and offences relating to wild birds, other animals, and plants. The level of protection depends on which Schedule of the Act the species is listed on. Licences are available for specific purposes to permit actions that would otherwise constitute an offence in relation to species.
  - The Natural Environment and Rural Communities (NERC) Act 2006 imposes an obligation on all public bodies, including local authorities, to consider whether their activities can contribute to the protection of wildlife. The duty is created by section 40(1) of the Act, which 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."
  - Hedgerows Regulations Act 1997 serves to; enforce under the Environment Act 1995, restrict the removal of hedgerows, or parts of hedgerows which are over 20m in length. In this case, removal includes digging up and replanting elsewhere, as well as removing from the land completely or destroying in the course of other actions. This includes developments or activities which destroy the roots, causing the vegetation to die.

- The Protection of Badgers Act 1992 exists for welfare reasons, to protect badgers (*Meles meles*) from cruelty. Under the act it is a criminal offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so, or to intentionally or recklessly interfere with a sett.

2.4.2 The above summary serves as guidance only – the reader is referred to the original legislation for definitive interpretation.

#### *UK Planning Policy*

2.4.3 The recommendations of this report are in line with the key principles of the National Planning Policy Framework (ref. 1) and Government Circular 06/05 (ref. 2).

2.4.4 Local planning policies relating to ecology are invariably based on the conservation of species protected under the above legislation, including species and habitats of principal importance listed under Section 41 of the NERC Act 2006; and the protection of designated sites. All of these features are considered within the scope of this preliminary ecological appraisal and therefore any recommendations made herein are likely to be in line with this policy.

## **2.5 Objectives of the Survey**

2.5.1 The objectives of the survey were to:

- Classify the main habitats present within the site;
- Evaluate the ecological importance of these habitats;
- Assess buildings and trees for their potential to support roosting bats;
- Evaluate the potential for other protected species to occur within the site; and
- Provide appropriate recommendations for further surveys and mitigation where required.

## **2.6 Survey Constraints**

2.6.1 Access to the interior of buildings B1 and B2 was not possible and these structures were assessed from the exterior only.

2.6.2 All measurements and indications of area given within this report are approximate.

### 3 SURVEY METHODOLOGY

#### 3.1 Desk Study

3.1.1 A desk study was undertaken to determine the presence of sites and habitats of conservation importance together with historical records of protected and notable species within a 2km radius of the site.

3.1.2 The following bodies were consulted for the desk study:

- Magic.gov.org
- Thames Valley Environmental Records Centre (TVERC)

#### 3.2 Preliminary Ecological Appraisal

##### *Habitats*

3.2.1 The site was surveyed using the methodology outlined in 'The Handbook for Phase I Habitat Survey: A Technique for Environmental Audit' (JNCC, 2010). This involves identifying the main plant communities present on the site and classifying the habitat types following the JNCC methodology. This technique provides an inventory of the basic habitat types present and enables areas of greater botanical interest which may require further, more detailed, surveys to be identified. Any occurrences of recognised invasive species as listed on Schedule 9 of the Wildlife and Countryside Act (as amended) were also noted.

3.2.2 A map of the habitats and areas of interest (using a variation of the JNCC 2010 protocol for Phase I Habitat plans) is provided in Figure 1. Photographs of features of interest are presented in Appendix A.

##### *Protected Species*

3.2.3 The Phase I Habitat Survey was extended to include an assessment of the site's potential to support protected and notable species. This involved assessing the suitability of the habitats present on the site for these species as well as connectivity to the site from other areas of potentially suitable habitat nearby.

##### *Badger*

3.2.4 Evidence of badger activity on site (and where possible within the distance generally considered to be the zone of disturbance) was assessed by searching for signs such as:

- Presence of setts, indicated by suitably sized holes or burrows
- Evidence of badger latrines, badger hair and/or footprints
- Evidence of well-used runs supported by secondary evidence such as foraging signs

*Bats*

- 3.2.5 Specific survey work was undertaken on the buildings and trees to assess their suitability to support roosting bats. In this instance, a high-powered torch was used to search for any bat roosting features.
- 3.2.6 The results of a scoping survey enable the buildings and trees to be categorised as having Confirmed, High, Moderate, Low or Negligible potential to support roosting bats. An outline of categorisation procedure for classifying bat potential is presented in Appendix B.
- 3.2.7 In accordance with current best practice guidance (Collins, 2016), the level of potential determines the need or not for further summer emergence surveys. Although left to the discretion of the appointed ecologist, in most instances High potential requires three, Moderate potential requires two and Low potential requires one evening emergence or pre-dawn re-entry survey/s (although trees with Low potential do not require further emergence or pre-dawn re-entry surveys). Greater detail on the minimum number of surveys recommended in most instances is presented in Appendix C.

*Birds*

- 3.2.8 The site was assessed for its potential to support nesting and breeding birds. Factors considered include suitable cover and feeding habitat, the presence of used and disused nests and birds displaying nesting characteristics.

*Dormouse*

- 3.2.9 The site was surveyed for suitable dormouse habitat, such as the presence of a well-connected understorey broadleaf habitat, hedgerows and suitable food sources such as oak, hazel and other nut-bearing trees, fruiting trees and shrubs, flowers and invertebrates.

*Great Crested Newt*

- 3.2.10 No waterbodies were identified within 250m of the site during the desk study. Therefore, no further reference to great crested newts is included within this report.

*Reptiles*

- 3.2.11 The site was assessed for its potential to support reptile populations. Suitable habitat for reptiles includes long grass, scrub, woodland and hedgerow borders and wood/rubble piles that act as hibernacula.

*Other species*

- 3.2.12 Consideration was given to the site's suitability to support other protected and notable species.

## 4 SURVEY RESULTS

### 4.1 Desk Study

#### *Designated Sites*

- 4.1.1 There are no statutory designated sites within 2km of the site.

#### *Non-statutory Designated Sites*

- 4.1.2 Non-statutory designated sites within 2km of the site are provided below in Table 1.

*Table 1 – Non-Statutory Designated Sites*

| Site Name                                   | Distance from site |
|---------------------------------------------|--------------------|
| The Coal, Kennetmouth and Kings Meadow East | 0.2km N            |
| Henley Road Gravel Pit                      | 0.3km NE           |
| Reading Cemetery                            | 0.6km SE           |
| Whiteknights Park                           | 1.6km SE           |
| Thames Valley Park                          | 1.7km NE           |
| River Kennet/ Kennet and Avon Canal         | 1.8km SW           |
| Whitley Park Farm/St Patricks Hall Pond     | 2km S              |
| Holy Brook                                  | 2km SW             |

#### *Ancient Woodland*

- 4.1.3 There are 2 areas of Ancient Semi-Natural Woodland (ASNW) within 2km of the site. The nearest ancient woodland is located approximately 1.2km north-east of the site.

#### *UK BAP Priority Habitats*

- 4.1.4 UK BAP Priority Habitats within 2km of the site are listed below in Table 2.

*Table 2 – UK BAP Priority Habitats*

| Site Name                            | Distance from site |
|--------------------------------------|--------------------|
| Deciduous Woodland                   | 0.1km N            |
| Good quality semi-improved grassland | 0.9km NW           |
| Wood-pasture and Parkland            | 1.3km SE           |
| Lowland ferns                        | 1.9km NE           |

*Protected or Notable Species**Bats*

4.1.5 Table 3 provides details of the species records closest to the site.

*Table 3 – Bat Species Recorded within 2km of the site*

| Species               | Scientific Name                  | Legal Protection / Conservation Priority Status           |
|-----------------------|----------------------------------|-----------------------------------------------------------|
| Common pipistrelle    | <i>Pipistrellus pipistrellus</i> | HabDir:A4; Berne:A3; Bonn:A2; WCA5                        |
| Soprano pipistrelle   | <i>P. pygmaeus</i>               | HabDir:A4; Berne:A2; Bonn:A2; BAP; S41; WCA5              |
| Brown long-eared bat  | <i>Plecotus auritus</i>          | HabDir:A4; Berne:A2; Bonn:A2; BAP; S41; WCA5; KRDB2       |
| Long-eared bat        | <i>Plecotus</i>                  | HabDir-A4; HabReg-Sch2; WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b |
| Noctule               | <i>Nyctalus noctula</i>          | HabDir:A4; Berne:A2; Bonn:A2; BAP; S41; WCA5; KRDB2       |
| Lesser bat            | <i>N. leisleri</i>               | HabDir:A4; Berne:A2; Bonn:A2; WCA5; KRDB1                 |
| Daubenton's bat       | <i>Myotis daubentonii</i>        | HabDir:A4; Berne:A2; Bonn:A2; WCA5                        |
| Serotine              | <i>Eptesicus serotinus</i>       | HabDir-A4; HabReg-Sch2; WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b |
| Nathusius pipistrelle | <i>Pipistrellus nathusii</i>     | HabDir-A4; HabReg-Sch2; WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b |

*Other Mammals*

4.1.6 Table 4 below provides details of those records closest to the site.

*Table 4 – Relevant other mammals Records within 2km of the Site*

| Common Name         | Scientific Name            | Legal Protection / Conservation Priority Status | Closest record | Date |
|---------------------|----------------------------|-------------------------------------------------|----------------|------|
| Eurasian Badger     | <i>Meles meles</i>         | Bern_III, Badger Act                            | 0.94km NE      | 2009 |
| European Otter      | <i>Lutra lutra</i>         | HabDir-A2np; HabDir-A4                          | 0.3km S        | 2016 |
| European Hedgehog   | <i>Erinaceus europaeus</i> | Bern_III                                        | 1km E          | 2006 |
| European Water Vole | <i>Arvicola amphibius</i>  | WACA-Sch5-s9.4a/s9.4b/s9.4c                     | 1.3km NE       | 2012 |

*Birds*

- 4.1.7 Recorded species of conservation concern of potential relevance to the site are presented in Table 5.

*Table 5 – Relevant Bird Records within 2km of the Site*

| Common Name    | Scientific Name            | Legal Protection / Conservation Priority Status     |
|----------------|----------------------------|-----------------------------------------------------|
| Yellow Wagtail | <i>Motacilla flava</i>     | BAP; Berne:A2; BoCC4:Red; S41; KRDB2                |
| Grey Wagtail   | <i>Motacilla cinerea</i>   | Berne:A2; BoCC4:Red                                 |
| Dunnock        | <i>Prunella modularis</i>  | BAP; Berne:A2; BoCC4:Amber; S41                     |
| Tawny Owl      | <i>Strix aluco</i>         | Berne:A2; BoCC4:Amber; Bonn:A2; KRDB3               |
| Mistle Thrush  | <i>Turdus viscivorus</i>   | Berne:A3; BoCC4:Red; BirdsDir:A2.2                  |
| Song Thrush    | <i>Turdus philomelos</i>   | BAP; Berne:A3; BoCC4:Red; BirdsDir:A2.2; KRDB2; S41 |
| Redwing        | <i>Turdus iliacus</i>      | Berne:A3; BoCC4:Red; BirdsDir:A2.2; WCA1            |
| Starling       | <i>Sturnus vulgaris</i>    | BAP; BoCC4:Red; BirdsDir:A2.2; S41; KRDB2           |
| House Sparrow  | <i>Passer domesticus</i>   | BAP; BoCC4:Red; KRDB2; S41                          |
| Tree Sparrow   | <i>Passer montanus</i>     | BAP; Berne:A3; BoCC4:Red; KRDB2; S41                |
| Kestrel        | <i>Falco tinnunculus</i>   | BirdsDir-A1; WACA-Sch1-p1                           |
| Linnet         | <i>Carduelis cannabina</i> | BAP; Berne:A2; BoCC4:Red; KRDB2; S41                |
| Bullfinch      | <i>Pyrrhula pyrrhula</i>   | BAP; Berne:A3; BoCC4:Amber; S41                     |
| Red Kite       | <i>Milvus milvus</i>       | BirdsDir-A1; WACA-Sch1-p1                           |
| House Martin   | <i>Delichon urbica</i>     | Berne:A2; BoCC4:Amber                               |

*Amphibians*

- 4.1.8 Amphibian species of conservation concern that are likely to utilise the site are presented in Table 6.

*Table 6 – Relevant Amphibian Records within 2km of the Site*

| Species            | Scientific Name             | Legal Protection / Conservation Priority Status | Closest Record | Date |
|--------------------|-----------------------------|-------------------------------------------------|----------------|------|
| Grass snake        | <i>Natrix natrix</i>        | Bern_III, WCA5(p)                               | 0.41km NW      | 2008 |
| Slow-worm          | <i>Anguis fragilis</i>      | Bern_III, WCA5(p)                               | 0.89km W       | 1982 |
| Great crested newt | <i>Triturus cristatus</i>   | ECH_II, Bern_II, WCA5, CRoW                     | 0.94km NW      | 2017 |
| Smooth Newt        | <i>Lissotriton vulgaris</i> | Bern_III, WCA5(p)                               | 1.3km N        | 1988 |

*Reptiles*

4.1.9 Reptile records closest to the site are presented in Table 7.

*Table 7 – Relevant Reptile Records within 2km of the Site*

| Species       | Scientific Name         | Legal Protection / Conservation Priority Status | Closest record | Date |
|---------------|-------------------------|-------------------------------------------------|----------------|------|
| Adder         | <i>Vipera berus</i>     | Bern_III, WCA5(p)                               | 1.7km N        | 2008 |
| Common Lizard | <i>Zootoca vivipara</i> | Bern_III, WCA5(p)                               | 1.78km NE      | 2013 |

*Invertebrates -*

4.1.10 BAP priority species of potential relevance to the site that were highlighted within the desk study area are presented in Table 8.

*Table 8 – Invertebrates within 2km of the Site*

| Common Name | Scientific Name       | Legal Protection / Conservation Priority Status |
|-------------|-----------------------|-------------------------------------------------|
| Stag Beetle | <i>Lucanus cervus</i> | Notable-B, UKBAP_P, NERC_S.41                   |

## 4.2 Phase I Habitat Survey

4.2.1 The following habitat types were recorded within the site:

- Hardstanding
- Dense scrub
- Trees
- Buildings

*Hardstanding*

4.2.2 The majority of the site is covered by hardstanding. Totalling an area of approximately 6,700m<sup>2</sup>, this habitat is in reasonable condition and is subject to regular use by SGN workers. An access track leads to the areas of hardstanding and buildings currently used by SGN. The hardstanding has become vegetated in places and species identified include buddleia *Buddleja davidii*. These areas are, however, trimmed regularly.

*Dense scrub*

4.2.3 An area of approximately 340m<sup>2</sup> of dense scrub is present along the southern boundary of the site. This area is dominated by bramble *Rubus fruticosus*, ivy *Hedera helix*, dogwood *Cornus*

*sp.*, buddleia and herb Robert *Geranium robertianum*. A small area of scrub (50m<sup>2</sup>) comprising buddleia is present in the north-western corner of the site.

#### *Trees*

- 4.2.4 Mature trees are present on the sites southern boundary. Species recorded include sycamore maple *Acer pseudoplatanus*, rowan *Sorbus aucuparia*, elm *Ulmus sp.*, common alder *Alnus glutinosa*, silver birch *Betula pendula* and Norway maple *Acer platanooides*. There is an area of bare ground beneath the trees.

#### *Buildings*

- 4.2.5 Five buildings are present on site. These are described in more detail in section 4.3 below.

### **4.3 Protected Species**

#### *Badgers*

- 4.3.1 No evidence of badgers was noted during the survey.

#### *Bats Roosting Habitat - Buildings*

##### Building 1

- 4.3.2 B1 is a single storey building measuring approximately 7.5m x 4.8m in size. The walls are of brick construction to a height of 3.8m and the roof has a covering of concrete tiles. Overall the walls, fascia's and roof are in good condition. However, Potential Roosting Features (PRF) and access points for bats are present within the building's exterior in the form of raised tiles and gaps under the soffits.

- 4.3.3 Access to the interior of the building was not available during the survey.

##### Building 2

- 4.3.4 B2 is a single storey building measuring approximately 7.5m x 4.8m in size. The walls are of brick construction to the height of 4m with a concrete tiled flat roof. The walls, soffits, fascia's and roof are in good condition. PRF's and access points for bats are limited to a single hole in the brick work.

- 4.3.5 Access to the interior of the building was not available during the survey.

##### Building 3-5

- 4.3.6 B3-B5 are single storey buildings. B3 is a sub station and B4-B5 are used by SGN staff as an office. None offer any PRF for bats.

#### *Bats Roosting Habitat - Trees*

- 4.3.7 Trees with potential to support roosting bats are described in Table 10 below. Tree locations are provided in Figure 1. For clarity tree numbers are matched to those in the associated

arboricultural report (J20563\_Arb). All other trees present within the site are healthy and in good condition and show no potential bat roosting features.

*Table 9 – Tree Survey Results*

| Tree No. | Species  | DBH / mm | Description of features                                      | Level of Potential |
|----------|----------|----------|--------------------------------------------------------------|--------------------|
| T2       | Sycamore | 600      | Old pollard. WPH on eastern aspect at 5 metres - may extend. | Moderate           |

*Foraging and Commuting Habitat*

- 4.3.8 The site offers limited habitat for foraging. However, its immediate surroundings offer suitable foraging habitat and commuting routes in the form of the tree/vegetation lines on the northern and southern boundaries. The site is well connected to suitable foraging areas in the wider landscape including the River Kennett to the south and the railway line to the north.

*Birds*

- 4.3.9 Suitable nesting habitat is limited to the area of scrub and the vegetated boundaries. No evidence of nesting birds was recorded during the survey.

*Dormouse*

- 4.3.10 No suitable dormouse habitat is present within the site. The scrub and boundary vegetation are too fragmented to offer suitable habitat and the wider landscape is also unsuitable.

*Great Crested Newt*

- 4.3.11 No waterbodies are mapped within 250m and so no assessment of the terrestrial habitat was required.

*Reptiles*

- 4.3.12 The site offers a limited area of suitable reptile habitat. The adjacent railway which runs along the sites northern boundary provides suitable reptile habitat and connectivity to areas of reptile habitat in the wider landscape.

*Other species*

- 4.3.13 No evidence of other protected species was recorded.

## 5 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Designated Areas

- 5.1.1 No statutory designated sites are located within 2km of the site and none will be affected by the proposed.
- 5.1.2 The closest non-statutory site is 0.2km north of the site and lies beyond the railway line. The small-scale and localised nature of development is not considered likely to adversely impact this site or any other designated site.

### 5.2 Ancient Woodland

- 5.2.1 The nearest ancient woodland site is located 1.2km from the site, which is well beyond the 15m buffer recommended by Natural England the Forestry Commission when working near ancient woodland sites. The development of this site will have no detrimental impact on any area of ancient woodland.

### 5.3 Habitats and Botanical Species of Interest

- 5.3.1 The closest UK BAP priority habitat is 0.1km from the site and beyond the railway line. As a result, it will not be affected by the development.
- 5.3.2 The habitats within the site are common and widespread and no further botanically specific surveys are required in this instance.
- 5.3.3 Should any boundary trees require removal, it is recommended that they are compensated by like-for-like replacement within the site. Should any non-native trees require removal, compensatory planting using UK native tree species is recommended. Some suitable tree species are provided in Section 6 below.
- 5.3.4 Protection of retained trees is discussed in the associated arboricultural report (J20563\_Arb).

### 5.4 Protected Species

#### *Badger*

- 5.4.1 No evidence of badger was recorded and no historical evidence of badgers has been reported within or in close proximity to the site. No further surveys for badgers are required.

#### *Bats*

#### *Roosting Habitat- Buildings*

- 5.4.2 PRF recorded on the building denoted B1 were limited and in isolation the structure would be considered Negligible for its suitability to support roosting bats. However, historical records of nine species of bat exist within the desk study area and the foraging and commuting habitat

in the form of the river and railway which lies adjacent to the site, offer excellent habitat for bats. Consequently the building denoted B1 has **'Negligible/Low'** suitability. As a precautionary measure, to determine its use by roosting bats, should this building be affected by the development, it should be subject to a single evening emergence survey.

5.4.3 As development of the site will likely result in the loss and/or disturbance of any bat roost present in B1, no works to B1 should take place until further survey for bats has been undertaken.

5.4.4 No further surveys are required for buildings B2-B5, which have been classified as having **'Negligible'** potential.

#### *Roosting Habitat- Trees*

5.4.5 Potential roosting features for bats have been identified in the tree T2 and should this tree require removal and/or works that are likely to impact on the woodpecker hole of interest, it should be subject to an elevated inspection, prior to the start of works. Note: tree roosts for bats are highly dynamic and application of climb and inspect would ideally be conducted <6 months prior to commencement of works that will impact the tree. Consequently, application of this survey should not be considered restrictive to approval of the planning application.

5.4.6 Should evidence of bats or features suitable to support bats be identified during the elevated inspection, then further surveys and/or a European Protected Species Mitigation Licence may be required prior to the start of works.

#### *Bats – Foraging and Commuting Habitat*

5.4.7 Foraging and commuting habitat is present in the form of tree/vegetation lines on the northern and southern boundaries. Should any boundary tree or vegetation require removal, it is recommended that additional boundary planting is undertaken to maintain the continuity of this habitat.

5.4.8 Although best set out upon completion of the above mentioned bat survey, lighting can be detrimental to how bats use a site for foraging and commuting and consideration to a sensitive lighting strategy should be implemented within the design.

#### *Birds*

5.4.9 Suitable nesting habitat is present on site in the form of trees, scrub and buildings.

5.4.10 As all breeding birds are protected under the Wildlife and Countryside Act 1981 (as amended) it is recommended that works to these areas and any other areas deemed suitable for nesting

birds, such as trees, are conducted outside the core breeding period for birds of Late February – August inclusive.

- 5.4.11 Should this timeframe be unobtainable, a thorough search for the presence of breeding birds should be conducted by a suitably experienced ecologist prior to the start of works. Should evidence of breeding birds be recorded, works within 5m of the nest, or works that have potential to destroy the nest, should stop until the eggs have hatched and the chicks fledged, or the nest is deemed by a suitably experienced ecologist to have been abandoned.

*Dormouse*

- 5.4.12 No suitable dormouse habitat is present and no historical records of dormice were identified within the desk study area. No further dormouse surveys are required.

*Great Crested Newt*

- 5.4.13 Although a restricted area of suitable terrestrial habitat exists within the site, the site and wider area lack the network of waterbodies that great crested newts require to breed. Great crested newts are therefore considered unlikely to be present on the site. No further surveys for the species are required.

*Reptiles*

- 5.4.14 A small area of scrub in the south of the site provides suitable reptile habitat and historical records of reptiles exists within the wider area. However, the suitable habitats lack connectivity with the railway and or alternate suitable habitats and reptiles are considered likely to be absent. No further surveys for reptiles are required.

*Other species*

- 5.4.15 There are no obvious and immediate issues regarding other protected species on the site and no further surveys to determine the presence of other protected species is required in this instance.
- 5.4.16 However, should at any point during the development a protected or notable species be identified within the site, then all works should **stop** and the appointed ecologist consulted on the appropriate manner in which to proceed.

## 6 ECOLOGICAL ENHANCEMENTS

6.1 Opportunities to include biodiversity enhancements within the proposed development exist and in accordance with the requirements of the NPPF the following recommendations are considered appropriate for this site:

- To benefit a diversity of bird species 5 x integrated bird boxes, such as those provided by <http://www.habibat.co.uk/category/bird-boxes> should be erected into the elevations of the proposed buildings. To maximise suitability the boxes should be installed on sheltered aspects close to vegetation at a height of 2-3m, preferably on north, north-east or north-west facing elevations.
- To benefit a diversity of bat species 5 x integrated bat boxes, such as those provided by <http://www.habibat.co.uk/category/bat-boxes> should be erected into the elevations of the proposed buildings. To maximise suitability the boxes should be installed on sheltered aspects close to vegetation at a height of 3 - 8m, preferably on north, east or west facing elevations.
- The incorporation of a native wildlife-friendly planting scheme within the grounds post-development would be of benefit to invertebrates, and subsequently species such as amphibians, birds and bats.
- The boundary vegetation should be enhanced through the planting of native species rich hedgerows and trees.
- All tree planting should be undertaken using native species such as pedunculate oak, small leaved lime *Tilia cordata*, black poplar *Poplar nigra*, wild service tree *Sorbus torminalis* or similar.
- To account for the nearby historical record of hedgehog, the incorporation of hedgehog boxes at suitable locations within vegetated areas of the site would provide an enhancement for this species. Boxes should ideally be located within the northern or southern boundary vegetation. The design of the houses should loosely follow those available at the following link; <https://www.britishhedgehogs.org.uk/hedgehog-homes/>

## 7 SUMMARY

- 7.1 In response to proposed development at SGN Gasholder No 4, Kenavon Drive, Berkshire, the site has been subject to a Preliminary Ecological Appraisal.
- 7.2 The site's potential to support protected species and habitats has been assessed and appropriate recommendations provided.
- 7.3 The small-scale, localised development is considered unlikely to result in a negative impact to designated sites, ancient woodland or priority habitats.
- 7.4 Like-for-like replacement planting is recommended for any trees lost to the development. Should any non-native trees require removal, compensatory planting using UK native tree species is recommended
- 7.5 B1 and T2 has potential to support roosting bats and to determine their suitability for the species further surveys / inspections have been recommended. B1 requires 1 x emergence survey as a precaution. Should it be affected by the proposed, T2 requires an elevated inspection ideally no more than 6 months prior to commencement of associated works.
- 7.6 Suitable nesting habitat for birds will be affected. Consequently, recommendations in regard to timings and methods of best practice for breeding birds have been provided.
- 7.7 The likelihood of other protected and notable species to occur within the site is considered negligible and no further surveys for other protected species are required. However, should at any point during the development a protected or notable species be identified within the site then all works should stop and the appointed ecologist consulted on the appropriate manner in which to proceed.
- 7.8 In accordance with the requirement of the NPPF, recommendations to enhance the site's suitability for wildlife have been provided.

## 8 REFERENCES

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

JNCC (2010). Handbook for Phase I Habitat Survey; A Technique for Environmental Audit. Peterborough.

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[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/740441/National\\_Planning\\_Policy\\_Framework\\_web\\_accessible\\_version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740441/National_Planning_Policy_Framework_web_accessible_version.pdf)

Natural Environment and Rural Communities (NERC) Act 2006.

<http://www.legislation.gov.uk/ukpga/2006/16/contents>

Protection of Badgers Act (1992). <http://www.legislation.gov.uk/ukpga/1992/51>

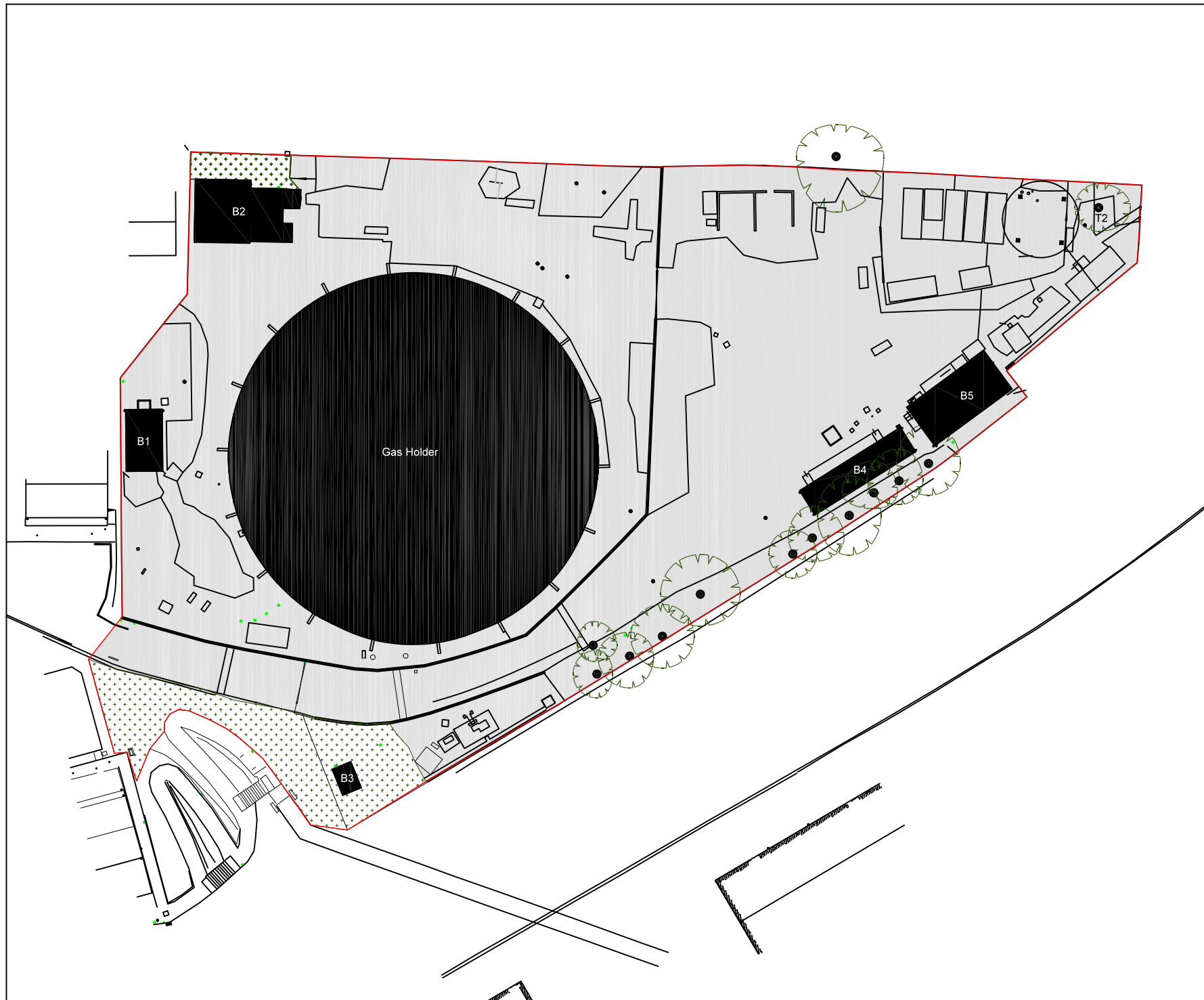
Stace (2010). New Flora of the British Isles (Third Edition). Cambridge University Press

The Conservation of Habitats and Species Regulations (Habitats Regulations) 2017.

<http://www.legislation.gov.uk/uksi/2017/1012/made>

Wildlife and Countryside Act (as amended) 1981. <http://jncc.defra.gov.uk/page-1377>

# Figures



## Legend

-  Site Boundary
-  Hardstanding
-  Building
-  Scrub
-  Tree



Job Reference : J20563

Project Title  
Reading SGN Site

Drawing Title  
Figure 1: Site Boundary

Date : 21-09-18 Checked : GN

Drawn : JJ Approved : N/A

Status : Final Scale : NTS

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# Appendices

## APPENDIX A – PHOTOGRAPHS



Plate 1. Areas of vegetated hard standing



Plate 2. Gasholder located within the site



Plate 3: Building 2



Plate 4. Building 2



Plate 5. Area of dense scrub

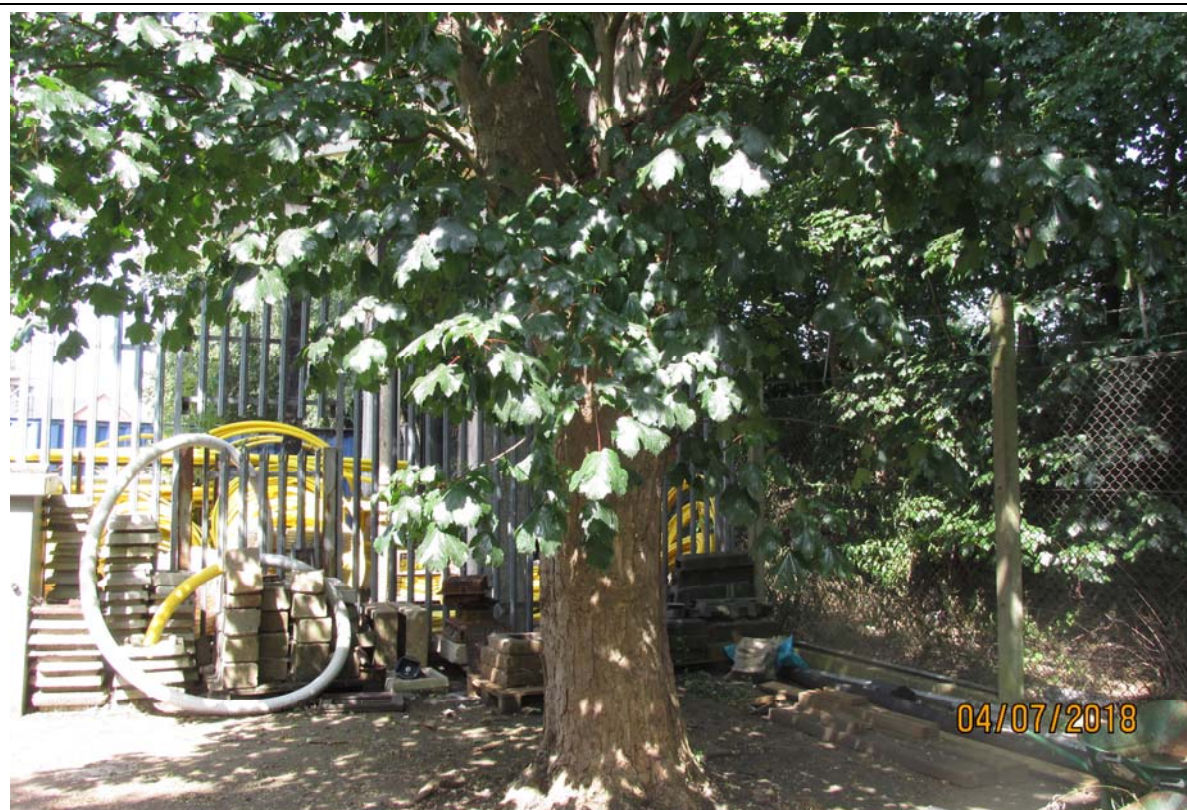


Plate 6. T2

## APPENDIX B

### Categories of Bat Roost Potential

| Roost type<br>Level of potential | Summer Roost used by Non- Breeding Bats                                                                                                                              | Maternity Roost                                                                                                                                                                         | Hibernation Roost                                                                                                                                                                             |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Confirmed roost                  | Presence of bats or evidence of bats identified. Confirmation of a roost will likely require further surveys.                                                        |                                                                                                                                                                                         |                                                                                                                                                                                               |
| High                             | Building/Structure or tree with multiple opportunities for one or more species of roosting bat. Optimal orientation. Good connectivity to optimal foraging habitats. | Building/Structure or tree with multiple roosting opportunities for pregnant female bats and young pups. Optimal orientation. Good connectivity to optimal foraging habitats.           | Building/Structure or tree that has suitable thermal stability and levels of humidity to support torpid bats throughout the winter months.                                                    |
| Moderate                         | Building/Structure for tree with some opportunities for roosting bats. Preferable orientation. Connectivity to moderate to high quality foraging habitat available.  | Building/Structure or tree with some roosting opportunities for pregnant female bats and young pups. Good orientation. Good connectivity to moderate to high quality foraging habitats. | Building/Structure or tree that has suitable thermal stability and levels of humidity to support torpid bats for some of the winter months. Moderate connectivity to suitable foraging areas. |
| Low                              | Building/Structure or tree with limited opportunities for roosting bats. Poor connectivity to foraging habitat.                                                      | Building/Structure or tree with limited opportunities for breeding bats. Poor connectivity to foraging habitat.                                                                         | Building/Structure or tree with limited potential to support hibernating bats due to instable environmental conditions.                                                                       |
| Negligible                       | Building/Structure or tree with no or very limited opportunities for roosting bats. Little to no connectivity to foraging habitat                                    | Building/Structure or tree with no or very limited opportunities for breeding bats. Little to no connectivity to foraging habitat.                                                      | No suitable roosting opportunities for hibernating bats.                                                                                                                                      |

## APPENDIX C

### **Minimum Number of Bat Surveys Required in Most Instances**

| Negligible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Low roost potential                                                                                                                                                                                                             | Moderate roost potential                                                                                                                                                                        | High roost potential*                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dusk emergence and/or pre-dawn re-entry surveys unlikely to be required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Structures: 1 survey visit. 1 dusk emergence or pre-dawn re-entry survey<sup>a</sup>.</p> <p>To be conducted during May – August.</p> <p>Trees: Dusk emergence and/or pre-dawn re-entry surveys unlikely to be required.</p> | <p>2 separate survey visits. 1 dusk emergence survey and 1 pre-dawn re-entry survey<sup>b</sup>.</p> <p>To be conducted during May-September with at least one of the surveys May – August.</p> | <p>3 separate survey visits. At least 1 dusk emergence survey and a separate pre-dawn re-entry survey. The third visit could be either a dusk or dawn survey<sup>b</sup>.</p> <p>To be undertaken during May-September with at least two of the surveys between May and August.</p> |
| <p><sup>a</sup> Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case by case basis. If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.</p> <p><sup>b</sup> Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; It is recommended that surveys are spaced out at least two weeks apart, preferably more. A dawn survey immediately after a dusk survey is considered one visit. If there is potential for a maternity colony, then consideration should be given to seasonal detectability and the ecologist should use their professional judgement to design the most appropriate survey regime.</p> <p>*For the purpose of this exercise a confirmed roost is considered under the criteria of 'High roost potential'</p> |                                                                                                                                                                                                                                 |                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                     |