

Barratt David Wilson

**Land at Forty Acre Farm,
Havant Road, Havant**

Bat Activity and Emergence Survey Report

April 2018

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Contents

Executive Summary.....	1
1.0 Introduction	2
1.1 Background	2
1.2 Site Location.....	2
1.3 Proposed Development.....	2
1.4 Survey & Reporting Objectives.....	2
2.0 Planning Policy & Legislation	4
2.1 Planning Guidance: Natural England's Standing Advice	4
2.2 Legislation	5
3.0 Methodology	7
3.1 Desk Study	7
3.1.1 Previous Reports.....	7
3.1.2 Local Records Centre	7
3.1.3 Online Resources	7
3.2 Field Surveys	8
3.2.1 Bat Activity Survey Methodology	8
3.2.2 Automated Bat Activity surveys	9
3.2.3 Bat Emergence Return Surveys of B4	9
3.2.4 Value of the on-site protected species population in a wider ecological context	9
3.2.5 Survey Limitations	12
4.0 Survey Results	13
Bat Activity Surveys - Transects	13
4.1 5 th May 2016	13
4.2 15 th June 2016.....	13
4.3 4 th July 2016.....	13
4.4 10 th October 2016	14
Bat Activity Surveys – Automated Detector	14
4.5 May 2016	14
Bat Emergence Surveys.....	14
4.6 15 th June 2016.....	14
4.7 4 th July 2016.....	15
4.8 10 th October 2016	15
5.0 Constraints & Opportunities	16
5.1 Designated Sites	16
5.2 Habitats	16
5.3 Species.....	17
6.0 References	18



Executive Summary

Contents	Summary
Site Location and Proposals	Land at Forty Acre Farm, located to the south west of Havant in Hampshire. The central OS grid reference for Land at Westways, Havant is SU692057. The site mainly consists of large arable fields with dense scrub and planted trees field boundaries. An industrial area with building structures and hardstanding present along the southern extent of the site and improved grassland with clover leys present; c. 22.9 hectares in extent. Directly south of the site is a railway line and beyond this is the A27 and Chichester and Langstone Harbour, a designated RAMSAR Site, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). Solent and Isle of Wight Lagoons a Special Area of Conservation (SAC) lies 280m south. Solent Maritime (SAC) lies 180m south of the site. South west of the site lies Farlington Marshes, a designated Local Nature Reserve (LNR). Directly west of the site lies Farlington residential dwellings and East Lodge Farm, East Lodge Playing Field. To the north of the site lies the A2030 Havant Road and further north lies the residential area of Farlington along with an arable field. North east of the site is a major junction of the A3 with the A3 slip road extending south along the eastern boundary of the site. The western extent of the site has been designated as a Sites of Importance for Nature Conservation (SINC), known as Forty Acre Farm B, due to the historical presence of dark-bellied brent goose (<i>Branta bernicla bernicla</i>). The proposed development is for 320 dwellings (including a 30% provision of affordable homes), 66 bed care home, provision of public open space, habitat mitigation zone, allotments, community building and associated infrastructure.
Previous Reports / Surveys	An extended Phase 1 habitat survey was conducted in February 2016 which identified suitable foraging and commuting habitat around the peripheries of the site as well as low bat roosting potential in building B04 of the industrial area on site. It was recommended that a suite of bat activity and bat emergence/ return surveys be completed.
This Survey(s)	WYG were commissioned to undertake a suite of bat activity surveys between May and October 2016. Bat emergence/ return surveys were likewise completed between May and October 2016.
Results	Four species of bat were noted on site utilising the peripheries and vegetation boundaries during the bat activity surveys in low numbers. Species comprised common pipistrelle, soprano pipistrelle, serotine and noctule. No roosting was confirmed within B04.
Recommendations	Avoidance - Peripheries of the site boundary will be retained. Mitigation - The southern boundary will be retained as open space. - The eastern extent of the site will be retained as a brent goose mitigation area. Enhancements - The open space area will be enhanced for bats through native species planting. Scrapes and waterbodies will be created. - Bat boxes will be incorporated to increase availability of potential roost sites.



1.0 Introduction

1.1 Background

WYG was commissioned by Barratt David Wilson in February 2016 to undertake bat activity and bat emergence/return surveys at Land at Forty Acre Farm, Havant Road, Havant (referred to as the "site") to support a planning application for the site. The site location is shown in Figure 1. These followed the identification of habitats with low suitability for foraging and commuting bats and a building (B04) with low suitability for roosting bats.

1.2 Site Location

The site covers approximately 22.9 hectares, located to the south west of Havant in Hampshire, centred on Ordnance Survey grid reference SU692057. Directly south of the site is a railway line and beyond this is the A27 and Chichester and Langstone Harbour, a designated RAMSAR Site, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). A component of the Solent and Isle of Wight Lagoons Special Area of Conservation (SAC) lies 280m south of the site and the Solent Maritime SAC lies 180m south of the site. South west of the site lies Farlington Marshes, a designated Local Nature Reserve (LNR). Directly west of the site lies the residential area of Farlington along with East Lodge Farm and East Lodge Playing Field. To the north of the site lies the A2030 Havant Road beyond which lie further residential areas along with arable fields. North east of the site is a major junction of the A3 with the A3 slip road extending south along the eastern boundary of the site. The western extent of the site has been designated as a Site of Importance for Nature Conservation (SINC), known as Forty Acre Farm B, due to the historic presence of dark-bellied brent geese (*Branta bernicla bernicla*).

1.3 Proposed Development

The proposed development comprises a maximum of 315 units of residential properties with associated landscaping and access infrastructure. This will include the demolition of the industrial area and associated buildings at Forty Acre Farm.

1.4 Survey & Reporting Objectives

The proposed development is for 320 dwellings (including a 30% provision of affordable homes), 66 bed care home, provision of public open space, habitat mitigation zone, allotments, community building and associated infrastructure.



The scope of work comprised:

- A desk study to obtain existing information on the use of the site and nearby habitats by bat populations;
- Three bat activity surveys to assess the numbers and species making use of the site and adjacent habitats. During these surveys, data was collected on the frequency and nature of these disturbance events.
- A suite of bat emergence/ return surveys completed on Building B04.
- An assessment of the potential ecological constraints to and impacts from the proposed development along with recommendations for further survey(s), avoidance, mitigation and enhancement where appropriate.



2.0 Planning Policy & Legislation

2.1 Planning Guidance: Natural England's Standing Advice

The National Planning Policy Framework (NPPF) sets out the principles to which Local Planning Authorities (LPA's) should adhere to when considering planning applications. These include:

- *Planning decisions should be based upon up-to-date information about the environmental characteristics of their areas. These characteristics should include the relevant biodiversity and geological resources of the area. In reviewing environmental characteristics local authorities should assess the potential to sustain and enhance those resources.*
- *Planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests. In taking decisions, local planning authorities should ensure that appropriate weight is attached to...protected species; and to biodiversity and geological interests within the wider environment.*
- *The aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests. Where granting planning permission would result in significant harm to those interests, local planning authorities will need to be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm. In the absence of any such alternatives, local planning authorities should ensure that, before planning permission is granted, adequate mitigation measures are put in place. Where a planning decision would result in significant harm to biodiversity and geological interests which cannot be prevented or adequately mitigated against, appropriate compensation measures should be sought. If that significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.*

The NPPF also provides the following advice:

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.

Natural England's standing advice to LPAs follows the principles and advice set out in the NPPF.

Where there is a reasonable likelihood that a protected species being present, sufficient information (in the form of species surveys) should be undertaken before the planning application is considered.

Furthermore, in terms of national conservation policy, six of the 18 British species of bat are Priority Species; common pipistrelle (*Pipistrellus pipistrellus*), barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), serotine (*Eptesicus serotinus*), greater horseshoe bat (*Rhinolophus ferrumequinum*) and grey long-eared bats (*Plecotus austriacus*).

The effects of development proposals should be considered when assessing the impact of the maintenance of favourable conservation status of local bat populations. The presence of bat species is a material consideration in determining a planning application and it is therefore appropriate for the LPA to ensure that these species are not adversely affected by development.

2.2 Legislation

All British bat species are listed in Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and under Schedule 2 of the *Conservation of Habitats and Species Regulations 2017* as European protected species. Furthermore, the *Countryside and Rights of Way Act 2000* (Schedule 12, Paragraph 5) has amended Section 9 of the 1981 Act. They are, therefore, fully protected under Section 9 of the 1981 Act and under Regulation 41 of the *Conservation of Habitats and Species Regulations 2017* which transposes the Habitats Directive into UK law.

This makes it an offence to:

- Deliberately capture, injure or kill any bat;
- Deliberately disturb bats, in particular where it is likely to:
 - Impair their ability to breed or reproduce, or to rear or nurture their young;
 - Impair their ability to hibernate or migrate; or
 - Affect significantly the local distribution or abundance of bats.
- Intentionally or recklessly damage, destroy or obstruct the access to the place of shelter or protection; and



- Damage or destroy a bats breeding site or resting place.

Unmitigated removal of linear corridors such as sections of hedgerows and increases in habitat disturbance (through lighting, noise and vibration impacts) during construction and operational phases of a proposed development could indirectly impact bats that use the site to forage and commute. Furthermore direct impacts to bats may occur through road traffic mortalities in the operational phase.



3.0 Methodology

3.1 Desk Study

A review of readily available ecological information and relevant environmental databases (i.e. the Multi Agency Geographic Information for the Countryside and Nature on the Map) was undertaken for the site and general environs. This provided the overall ecological context for the site and surrounding areas.

The data search covers:

- Statutory nature conservation designations, such as National Nature Reserves and Sites of Special Scientific Interest;
- Non-statutory nature conservation designations, such as Wildlife Sites;
- Protected and notable bat species; such as those listed in the national and local Biodiversity Action Plans (BAP's).

3.1.1 Previous Reports

An extended Phase 1 was carried out by WYG in 2016 at the site which identified foraging and commuting as well as roosting habitats suitable for bats.

3.1.2 Local Records Centre

Site and species specific information has been sourced through direct consultation with Hampshire Biological Records Centre (Hampshire BRC). HBIC provided information in relation to the presence of protected species, designated sites and areas of particular regional, national or international importance.

3.1.3 Online Resources

A search for designations was made using the Multi Agency Geographic Information for the Countryside database (MAGIC).



3.2 Field Surveys

3.2.1 Bat Activity Survey Methodology

With reference to the Bat Conservation Trust Bat Surveys: Good Practice Guidelines available at the time (Hundt, 2012), the site is categorised as a medium-sized site (site area >15ha). The habitat on site was considered to be of 'low quality' during the extended Phase 1 habitat survey (February 2016), due to a matrix of habitats including linear belts of trees, peripheries of semi-improved grassland, and hedgerows which could potentially provide suitable habitat for foraging and commuting bats. Under subsequent guidelines (Collins 2016) the site was considered to be of low suitability for foraging and commuting.

During the surveys two surveyors were on site, walking the periphery of the transect route which incorporated all boundary features between May – October 2016. The initial suite of three surveys was completed on 5th May, 15th June and 4th July 2016. An additional survey was completed on 10th October to make sure one visit was completed each season (Spring, Summer and Autumn) in accordance with Collins (2016) recommendations for a low suitability site.

Surveys commenced fifteen minutes prior to sunset and concluded approximately two and three quarter hours after sunset.

Weather conditions (temperature, precipitation and wind speed) were recorded on each survey. All surveys were completed in suitable weather conditions (not in heavy rain, low temperatures or strong winds) as recommended within Collins 2016.

The surveyors recorded bat activity, using both visual observation and audio bat detectors to identify foraging and/or commuting behaviour. Surveyors recorded the time of activity and made detailed notes on the nature of the activity. Where bats were visually observed, the flight patterns and directions were also recorded. All surveyors were qualified ecologists with experience in conducting bat surveys. Surveyors utilised Elekon Batlogger (time expansion) bat detectors to record calls and walked along the transect route at a steady pace. The transect route was walked, and surveyors also stopped at listening points along the transect route at different times during each survey visit. Bat calls were recorded by the detector, and these recordings later analysed using Bat Explorer software. The analysed recordings and field notes were combined to help build a picture of bat use across the site and to identify areas of heightened activity.



3.2.2 Automated Bat Activity surveys

With reference to Hundt (2012) and Collins (2016), an automatic bat detector (Song Meter SM2 or Anabat Express) were deployed on the transect routes during each survey month between May and October for five consecutive nights. The bat detector was placed at ground level with microphones pointing outwards along the linear belt of trees in the centre of the site. The captured recordings were analysed to gain further information on the species present and relative amount of activity through the night.

Data was collected from the May survey period. However, the June automated detector was stolen from the site. Subsequently no further automated detectors were placed in order to prevent further loss of equipment as the site could not be secured.

3.2.3 Bat Emergence Return Surveys of B4

The purpose of nocturnal emergence return surveys were to determine if any bats were roosting in the building B4 on site, which was considered to hold low potential for roosting bats. Surveys were each completed with two surveyors on 15th June, 4th July and 10th October 2016. Originally one survey was proposed however additional visits were completed as a possible emergence was observed during the 15th June survey.

All surveyors used a Batbox Duet (frequency division and heterodyne) bat detector or an Elekon Batlogger (time expansion). This allowed ultrasonic frequencies to be monitored and recorded simultaneously and allows the surveyor to passively scan ultrasonic frequencies during the survey to identify bat species. The nocturnal emergence surveys commenced approximately thirty minutes before sunset and lasted for approximately one and half hours after sunset. During the return surveys, undertaken at dawn, each surveyor returned to the same positions one and half hours before sunrise, to determine if any bats were returning to the building. The surveyors remained in position until after sunrise.

Survey effort and methodology was in accordance with Collins (2016).

3.2.4 Value of the on-site protected species population in a wider ecological context

The assessment of the value of the bat population on site is based on the article in the Chartered Institute of Ecology and Environmental Management (CIEEM) In Practice magazine – *Valuing Bats in Ecological Impact Assessment*, No. 70, December 2010 (Wray *et al.* 2010). Where bats (species and

number) are found using certain habitats (to roost, commute or forage) their population is assigned a relative ecological value. The value to the species is partly based upon how well used a habitat is and also upon how rare the bat species is. In the case of commuting routes or foraging areas the number of roosts nearby is also a factor. Once the value of the bat population has been calculated, robust mitigation for any impact on the bats can be determined.

British bat species have been subdivided into groups, dependant on how common they are: common, rarer and rarest. These have been further subdivided based upon the location surveyed. Table 1 presents the rarity categorisation of bats in England. The tables in the following sections have been adapted from *Valuing Bats in Ecological Impact Assessment* (Wray *et al.* 2010).

Table 1: Categorising Bats by Distribution and Rarity in England

Rarity	Country England
Rarest	Greater horseshoe Bechstein's Alcathoe Greater mouse-eared Barbastelle Grey long-eared
Rarer	Lesser horseshoe Whiskered Brandt's Daubenton's Natterer's Leisler's Noctule Nathusius' pipistrelle Serotine
Common	Common pipistrelle Soprano pipistrelle Brown long-eared

The value assigned for rarity is combined with the type of roost found to give a value for bats as an ecological receptor, as detailed in Table 2.

Table 2: Valuing Bat Roosts

Geographic frame of reference	Roost types
District, Local or Parish	Feeding perches (common species) Individual bats (common species) Small numbers of non-breeding bats (common species)



Geographic frame of reference	Roost types
	Mating sites (common species)
County	Maternity sites (common species) Small number of hibernating bats (common and rarer species) Feeding perches (rarer/rarest species) Individual bats (rarer/rarest species) Small numbers of non-breeding bats (rarer/rarest species)
Regional	Mating sites (rarer/rarest species) including well-used swarming sites Maternity sites (rarer species) Hibernation sites (rarest species) Significant hibernation sites for rarer/rarest species or all species assemblages
National/UK	Maternity sites (rarest species) Sites meeting Sites of Special Scientific Interest (SSSI) guidelines
International	Special Areas of Conservation (SAC) sites

To calculate the score for either commuting routes or foraging areas the numerical values from each column below are added together. These are detailed in Table 3 and 4.

Table 3: Valuing Commuting Routes

Species	Number of bats	Roosts/potential roosts nearby	Type and complexity of linear features
Common (2)	Individual bats (5)	None (1)	Absence of (other) linear features (1)
-	-	Small number (3)	Unvegetated fences and large field sizes (2)
Rarer (5)	Small number of bats (10)	Moderate number/Not known (4)	Walls, gappy or flailed hedgerows, isolated well grown hedgerows, and moderate field sizes (3)
-	-	Large number of roosts or close to a SSSI (5)	Well grown and well connected hedgerows, small field sizes (4)
Rarest (20)	Large number of bats (20)	Close to or within a SAC for the species (20)	Complex network of mature well-established hedgerows, small fields and rivers/streams (5)

Table 4: Valuing Foraging Areas

Species	Number of bats	Roosts/potential roosts nearby	Foraging habitat characteristics
Common (2)	Individual bats (5)	None (1)	Industrial or other site without established



Species	Number of bats	Roosts/potential roosts nearby	Foraging habitat characteristics
			vegetation (1)
-	-	Small number (3)	Suburban areas or intensive arable land (2)
Rarer (5)	Small number of bats (10)	Moderate number/Not known (4)	Isolated woodland patches less intensive arable and/or small towns and villages (3)
-	-	Large number of roosts or close to a SSSI (5)	Larger or connected woodland blocks, mixed agriculture and small villages/hamlets (4)
Rarest (20)	Large number of bats (20)	Close to or within a SAC for the species (20)	Mosaic of pasture, woodlands and wetland areas (5)

Finally, for commuting routes and foraging areas the ecological value is based upon the following scoring system.

Table 5: Scoring system for valuing commuting and foraging bats

Geographic frame of reference	Score
International	>50
National	41-50
Regional	31-40
County	21-30
District, local or parish	11-20
Not important	1-10

3.2.5 Survey Limitations

These surveys will remain valid for two years (until October 2018) before an up to date assessment is made of the site's potential to support bats is made. The absence of automated detector data after May is a minor limitation but not considered to be significant given the low value of the habitats on site. All surveys were completed in suitable conditions.



4.0 Survey Results

Bat Activity Surveys - Transects

4.1 5th May 2016

Four species of bats were recorded during the survey. The first bat, a noctule, was heard commuting at 20:52. At 21:08 a common pipistrelle was heard but not seen and then at 21:14 and 21:19, common pipistrelle was seen commuting up and down hedgerow.

Soprano pipistrelle was heard foraging at 21:20. Common pipistrelle was heard commuting at 21:30. Common pipistrelle was heard and seen commuting up and down hedgerow. At 21:33 serotine was heard commuting. Common pipistrelle was heard commuting at 21:37. At 21:42 common pipistrelle was heard commuting faintly. At 21:42 common pipistrelle was heard commuting faintly. Common pipistrelle was heard commuting at 21:43.

4.2 15th June 2016

Two species of bat were recorded within the site; predominantly common pipistrelle and one pass of noctule during the survey. Bats were recorded utilising all peripheries and boundary vegetation of the site. A common pipistrelle was seen commuting along the tree line towards the southern boundary towards the western extent of the site. Two common pipistrelle were seen commuting down the tree line from north to south and back. Common pipistrelle was seen hanging up in the tree halfway down tree line. Common pipistrelle was seen commuting and foraging along the tree line from north to south and then back south to north. A noctule was heard commuting towards the southern extent of the site. Common pipistrelle was seen foraging and commuting along the southern boundary of the site on multiple occasions. Common pipistrelle was seen commuting towards the industrial area and back again along the southern boundary. Common pipistrelle was heard commuting down the tree line running north to south of the site along the eastern extent of the site. The last bat, a common pipistrelle was heard faintly at 23:25, commuting along the northern boundary adjacent to the A2030.

4.3 4th July 2016

One species of bat was recorded during the survey; common pipistrelle. The first bat was heard commuting north to south of the tree line separating the two fields on the eastern extent of the site at 21:42. A common pipistrelle was seen foraging whilst flying westwards along the northern boundary. Common pipistrelle was seen commuting and foraging in the south eastern corner of the site. Common pipistrelle was heard foraging in the south eastern corner along the southern boundary.



Common pipistrelle was seen foraging just east of the industrial area along the southern boundary. Common pipistrelle was heard intermittently along the northern boundary in the centre of the site along the track. Common pipistrelle was heard commuting along the tree line separating the western arable fields of the site. Common pipistrelle was seen commuting and foraging along the southern boundary along the western extent of the site. The last bat, common pipistrelle was seen as well as foraging in the south west corner at 23:15.

4.4 10th October 2016

No bats were recorded during the October activity survey.

Bat Activity Surveys – Automated Detector

4.5 May 2016

Table 6: Automated detector data – May 2016

Date	Species	Number
5 th May	Common pipistrelle Soprano pipistrelle	73 2
6 th May	Common pipistrelle Soprano pipistrelle	10 1
7 th May	Common pipistrelle	10
8 th May	None	0
9 th May	None	0
10 th May	None	0
11 th May	None	0

Bat Emergence Surveys

4.6 15th June 2016

A moderate level of activity was recorded during the survey, although the majority were heard but not seen registrations of common pipistrelle. A single common pipistrelle was recorded at 21:47 (approximately 30 minutes after sunset) flying south from the building. It was not seen by the surveyor to the north and was listed as a possible emergence (although no suitable features were



located at the area it was observed). Following this, two further visits were proposed in order to add further certainty regarding the presence or likely absence of a roost.

4.7 4th July 2016

A low level of activity was recorded, with six passes by common pipistrelles. All were observed foraging around the buildings on site, however none were observed emerging from B04.

4.8 10th October 2016

A low level of activity was recorded, with two passes by serotine (heard not seen) and one by a soprano pipistrelle (approximately 1.5 hours after sunset). No bats were observed emerging from B04 and all recordings were too late (the earliest a serotine 1 hour after sunset) to be likely roosting on site.



5.0 Constraints & Opportunities

5.1 Designated Sites

Farlington Marshes (LNR) is a species rich grazing marsh of international importance for the waders and wildfowl that it supports. Chichester and Langstone Harbour (RAMSAR, SPA and SSSI) lies 145m south of the site, designated for supporting populations of European importance. The site itself, Forty Acre Farm is designated as a SINC for Brent Geese.

5.2 Habitats

The site comprises short stubble arable crops, improved and semi improved short grassland, planted alder trees and scattered ash and elm trees with continuous dense understory scrub.

The habitats identified on site were common and of limited floral value. No priority habitats were identified on site. The proposed development has an opportunity to enhance retained vegetated areas through increasing species diversity and biodiversity value. The open space south of the site will be planted with a species rich mixture and managed as grassland, sown with wildflower seed mixture in the Autumn ready for the following Spring. The open space area will also be enhanced for wildlife with the creation of ponds and scrapes.

Hedgerows will be in-filled with native species and planting of native scattered trees, however with the aim of maintaining the open nature of the site. These enhancements will increase the suitability for wading birds such as curlew and oystercatcher found on site, nesting birds and other species such as bats and invertebrates; as well as providing an aesthetic wildlife area for residents, dog walkers and visitors to the site.

It is recommended that sympathetic, species rich planting is implemented as a part of a wider landscaping scheme in order to increase the suitable post-construction habitat for wildlife. A list of recommended species can be provided on request; locally native species would be preferred although, in this instance, cultivars of native species and other non-native but wildlife friendly trees and shrubs would provide value for wildlife without impacting on the character of the area.

In addition to the open space area, on the eastern extent of the site an area enhanced purely for brent geese will be designated. The brent geese mitigation area will be separated from the development by a species rich native hedgerow screen planted directly adjacent to the edge of the development on the eastern side and the screen will run north to south up to the southern boundary. This species rich native hedgerow will provide foraging and commuting opportunities for bat species



utilising the site. Grassland margins around the edge will be planted with insect friendly species rich grass species to enhance suitability for notable bat species.

The development presents opportunities to enhance the existing open space along the southern boundary of Forty Acre Farm. It is recommended that existing gaps in hedgerows are filled and new areas of scattered trees and scrub are created with native species incorporating berry and seed producing species such as rowan, blackthorn, hawthorn, guelder rose, hazel and field maple would also provide additional nesting, roosting and foraging potential for birds. Areas of scrub buffers and road verges can be enhanced through infilling and sowing appropriate wildflower mixes which will provide seeds and invertebrates as a food source for bats.

5.3 Species

Foraging and commuting bats

Only four species were recorded on site; common pipistrelle, soprano pipistrelle, noctule and serotine. Common pipistrelle was the most commonly recorded species. Using the tables in Section 3.2.4, the foraging and commuting assemblage is assessed as being of District, Local or Parish level, albeit at the lower end of this scale (13 – rarer species, individual bats, no nearby roosts, large field sizes/intensive arable).

Given this assessment, the proposed habitat mitigation and enhancement discussed in 5.2 is considered to represent a significant increase in the suitability of habitats on site for foraging. The south, east and west boundaries of the site will be retained and lighting will be designed to make sure there is no light spill above 1 lux on these habitats. There will therefore be no significant change in the ability of bats to commute across the site.

Roosting Bats

Following the emergence/return surveys completed for B04, no confirmed emergences have been recorded. It is therefore concluded that roosting bats are likely absent from the site. It is recommended that a precautionary check of B04 is completed by a licenced bat worker using an endoscope prior to demolition in order to be sure that bats remain absent from the structure.

Bat boxes will be installed on retained trees to provide roosting opportunities post-development. A total of 10 boxes will be installed at a minimum height of 4m and oriented between south east and south west. These should be Schwegler 2FN or similar.



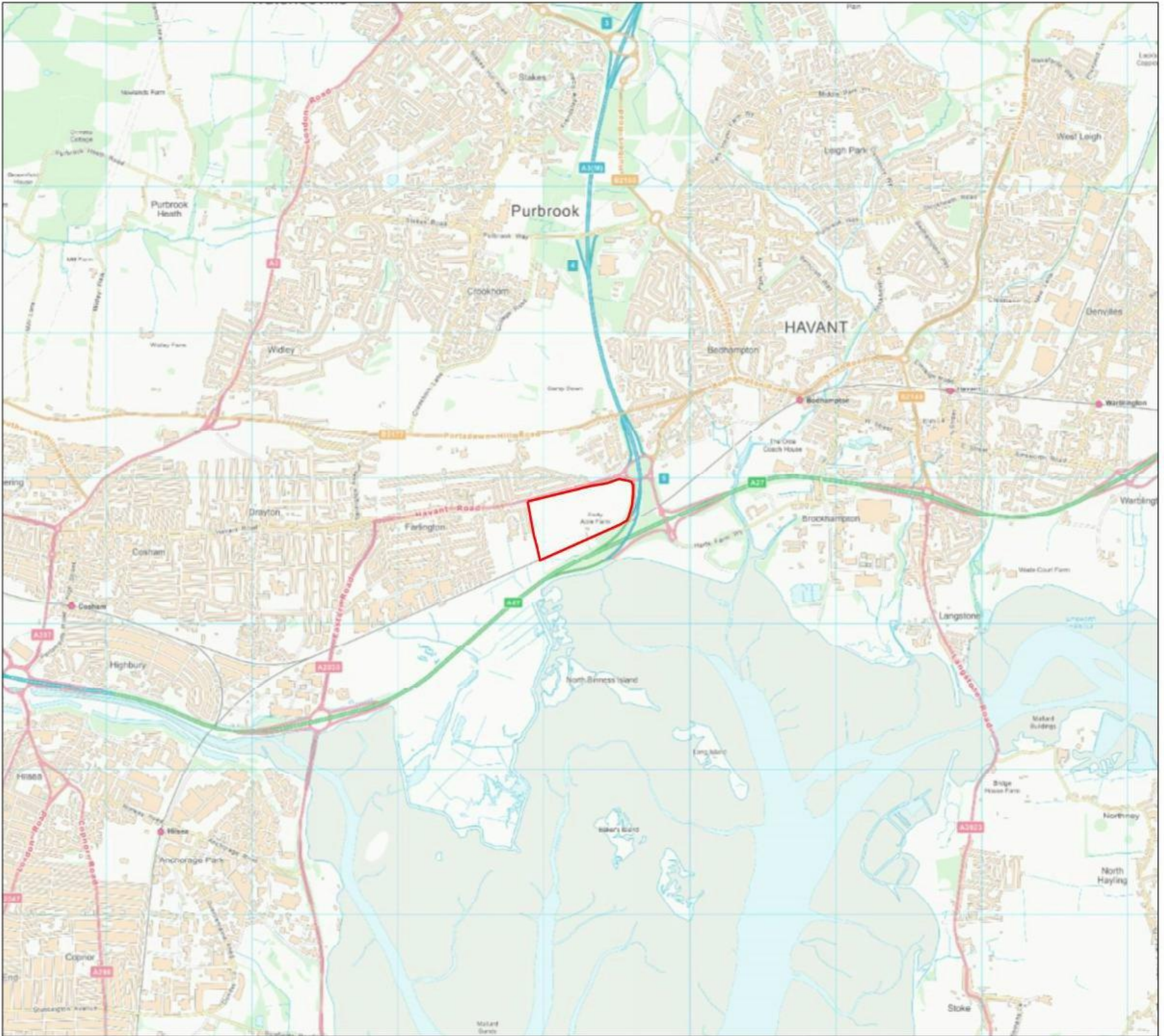
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FIGURES

Figure 1 – Site Location Plan



Rev	Date	Notes
A	27/04/18	Initial map production

Legend

— Site boundary

0 250 500 1,000 Metres



Site Location Plan

Land at Forty Acre Farm
Barratt David Wilson

Scale at A3: 1:25,000	Project No: A095024	Drawing No: Figure 1	Revision: A
Drawn by: Ben Blowers	Drawn date: 27/04/2018	Approved by: David West	

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