

Dunsbury Hill Farm, Hampshire

Application for a Natural England Licence - Bats

ATKINS

Method Statement: Document 2

Delivery Information

Portsmouth City Council

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A. Mitigation and Compensation

A.1 Summary of Mitigation Strategy

Dunsbury Hill Farm is a proposed 20.2 hectare greenfield development site in the ownership of Portsmouth City Council, located on the western edge of Havant in Hampshire, at the following approximate and central National Grid Reference SU 69875 08940 (hereafter referred to as 'the site'). The proposed development will be constructed in several phases. In order to allow access into Dunsbury Hill Farm Site, a link road and associated roundabout will be constructed first. This work is planned to commence in 2014. The business park itself will then be constructed in two phases between 2014 and 2022.

Numerous bat surveys have been carried out on site between 2010 and 2013. Bat surveys undertaken in 2013 have found that two trees were used as a summer (non-maternity) bat roost by a small number of common pipistrelle bats *Pipistrellus pipistrellus*.

In order to facilitate the construction of the link road and associated ancillary services, vegetation clearance of the site is required and will involve the removal of approximately 77 trees of various sizes and ages, of which nine have been assessed as having low or medium potential to support roosting bats, and one has been confirmed as a summer (non-breeding) roost. Another tree confirmed as a summer (non-breeding) roost will be affected by tree surgery works due to its proximity to the working area (it must be noted that this tree was originally marked to be felled, however following its discovery as a roost, discussions took place between the ecologist, engineer and arboriculturalist, and it was agreed that the tree could be retained (with the features that provide roosting opportunities) through some arboricultural management).

This licence application covers the felling and the modification of the two trees confirmed as a bat roost, namely trees 781 (to be felled) and 795 (to be modified). However, considering the transitory nature of tree roosts and the difficulty in detecting tree roosts, the same precautionary felling approach will also be followed for the other nine trees with bat potential within the site to ensure reasonable precautions are taken to minimise the risk of adversely affecting bats.

This report aims to assess the impacts of the development and outline a strategy to avoid, mitigate or compensate the predicted impacts.

Portsmouth City Council have scheduled the vegetation clearance to commence in March 2014. No works likely to affect bats will be carried out until a European Protected Species (EPS) Licence has been obtained. In addition, due to the presence of dormice on site and in the same area to where the two known tree roosts are located, vegetation clearance will not start until a European Protected Species (EPS) Licence for dormice has been obtained (the trees to be felled for the link road fall within habitats used by dormice).

A requirement of the bat mitigation licence is that a mitigation strategy is applied. The mitigation strategy is designed to:

- Provide alternative roosting opportunities prior to tree felling;
- Minimise risks of injury and disturbance to individual bats during tree felling; and
- Provide long term roosting opportunities.

The mitigation strategy includes pre-works checks by the Named Ecologist or Accredited Agent and tool-box talks to contractors to reduce the risk of bats being killed or injured by the works. Alternative roost sites will be provided before works start, to ensure a continuity of roost sites.

An outline of the mitigation is given below.

A.1.1. Providing alternative roosting space prior to works commencing

- Prior to tree felling works, new replacement roosting opportunities suitable for crevice dwelling bats will be provided by the erection of a minimum of 15 woodcrete 'Schwegler' bat-boxes upon retained mature trees within Neville's Park East Wood SINC, and within Cherry Tree Row SINC (as shown in figures provided in Chapter C.1.4 below). The installation of bat boxes will be undertaken in the presence of the Named Ecologist or by an Accredited Agent to ensure suitable locations and positioning. This will be carried out as soon as possible in order for bats to become acclimatised to their presence, and will be far enough away so that noise should not cause disturbance during vegetation clearance and construction work should bats use them. They will be installed, wherever possible, either in pairs or in groups of threes, in a sheltered position and away from any light spill from the new link road, at a height of 4 to 6 m above ground level on the west, south and east aspects of the trees respectively, offering a range of internal microclimatic regimes that the bats can easily move between as necessary.
- Bat boxes will be a mixture of Schwegler Bat Box 2FN and 1FF. These types of boxes are suitable for pipistrelles, including the common pipistrelle which used the confirmed roosts. They are also suitable for brown long-eared bats, as well as for woodland bats like the noctule, which have been recorded in the Dunsbury Hill site. These boxes do not require cleaning as the opening is located at the bottom. A four seasons' bat box such as the Schwegler 1FW will also be provided.
- These bat boxes will provide some alternative roost sites within the site for the duration of the tree felling works and construction of the link road. It is also planned that these bat boxes remain permanently on site after construction works are completed, and therefore the location of the boxes has been considered carefully to avoid future disturbance. It is recognised by the developer that if the boxes are used by bats in the future they will become fully protected by European law.

A.1.2. Minimising disturbance, avoidance of killing and injury to bats

General measures that apply across the site

- Copy of the licence (and method statements) will be provided in the site induction documents for the vegetation clearance contractor, and will also be left in the site office for future reference throughout the works. An induction regarding bats will be given by the CDM coordinator to all personnel working on the project. This will make workers aware of the presence of bats, their legal protection and the requirements of the mitigation strategy outlined within the licence.
- In addition, Named Ecologist or Accredited Agent will give tool-box talks to contractors on site as necessary, including the information provided in the induction specifically relating to bats and conditions of the Natural England Licence. The phone numbers of the Named Ecologist and Accredited Agent(s) will be made available either as part of the induction pack, and/or in the site office.

Measures that apply to known bat roosts are to be carried out by the Named Ecologist or Accredited Agent

Two trees were identified as being used by a small number of common pipistrelles. One tree is to be felled (tree 781) and one tree is to be retained but modified (tree 795).

The method for felling tree 781 is described below.

- an internal endoscopic inspection of all features of potential use to roosting bats prior to the removal of tree 781 by an experienced tree climber under the watching brief of the Named Ecologist or Accredited Agent, although it is considered unlikely that bats will be present;
- sensitive tree-felling methods using a combination of section-felling and soft-fell techniques to avoid the killing or injuring of bats, under the watching brief of the Named Ecologist or Accredited Agent;
- any bats present that can be carefully removed from the roost by the Named Ecologist or Accredited Agent will be temporarily placed in a holding bag or suitable container before being moved immediately to the nearest bat box;
- in the unlikely event that bats are discovered and that the bat(s) cannot be removed without harm; then the section of tree containing bats will be strapped securely to a suitable receptor tree, with the roost entrance open to the surrounding environment, so that the bats can leave at will and find alternative roost sites. The Named Ecologist or Accredited Agent may decide to temporarily block the entrance to the roost to prevent bats flying out of the roost in the day-light and to prevent bats falling out of the roost during transport of the tree section;
- if the limb containing the bat cannot be strapped to a suitable receptor tree due to the limb being rotten or other health and safety constraints, then the limb will be carefully lowered down and will be left on site at least overnight, making sure the section is placed in such a manner that bats can escape from the cavity of their own accord, and is far enough away as to not be disturbed or damaged by other vegetation clearance works;
- once the limbs containing the known roost feature(s) from tree 781 have been lowered down on the ground, they will be assessed by the Named Ecologist or Accredited Agent and from guidance by the contractor's tree surgeon in order to determine whether it is possible to strap the limb or sections of the limb to a suitable retained tree. Care will be taken to replicate as much as possible the original height and orientation of the feature to maximise the chances of bats finding and using the roost again; and
- any individual bats which are found to be injured will be temporarily placed in a holding bag or secure container and taken to the Named Ecologist (Chloe Delgery) who is a bat carer from the Hampshire Bat Group for recovery. This has been agreed with the Named Ecologist.

The methodology for the arboricultural management required for tree 795 is described below:

- an internal endoscopic inspection of all features of potential use to roosting bats (namely several woodpecker holes along the stem) prior to tree surgery works on tree 795 by an experienced tree climber under the watching brief of the Named Ecologist or Accredited Agent, although it is considered unlikely that bats will be present;
- once the extent of the upper most woodpecker hole has been established and once it has been confirmed that no bats are present in the cavity, tree surgeon to reduce the height of the tree down to approximately 6 to 9 inches above the aforementioned woodpecker hole, ensuring that, if the cavity extends upwards, the cut is made well above it;
- any bats present that can be carefully removed from the roost by the Named Ecologist or Accredited Agent will be temporarily placed in a holding bag or suitable container before being moved immediately to the nearest bat box. As soon as the works to the tree are completed, the Named Ecologist or Accredited Agent will then return to the box where the bat was moved to, place the bat in a holding bag and take it back to the cavity where it was found;
- should bats be present and cannot be retrieved safely, the Named Ecologist may decide to temporarily block the woodpecker hole entrances during the work to prevent bats flying out of the roost in the day-light, unblocking them in the evening, once the vegetation clearance works have stopped for the day;

- using hand tools, monolith the tree (i.e. process by which a decaying tree is made safe by reducing its height and spread, but left to decay in a standing position);
- as a precaution and to protect the roost, erect a chestnut-pale fencing around the tree to keep site clearance and construction workers a safe distance from the tree. This needs to be done immediately after tree surgery works and will need to remain on site for the duration of the works.

By following this methodology, the potential consequence of tree failure will be reduced in line with the reduction in height and weight of the tree, thereby increasing the chance of survival of the roost features (if tree surgery was not carried out, there is a higher risk for the tree to fail and the roost features being lost due to its current poor structure and form).

Aside from the two known tree roosts, no other trees marked as being felled / modified for the link road showed signs of bat usage in the bat surveys carried out in 2012 and 2013. However, as best practice, information will be provided to the tree surgeon regarding the approach they take to fell. Sensitive tree-felling methods using a combination of section-felling and soft-fell techniques are a precautionary measure that will be taken to avoid the potential killing or injuring of bats that may be roosting in the trees. The section-felling of the nine trees assessed as having low and moderate bat roosting potential (namely 773, 751, 873, 882, 679, 815, 825, 807, and 790) will therefore be carried out by a competent tree surgeon in the presence of the Named Ecologist or Accredited Agent.

A.2 Timings of the Works

General measures

The removal of the trees and arboricultural management is currently timetabled for March 2014. A check will be made for occupied bird nests before any work, and work will be delayed if required to protect an occupied nest. It was considered that this early spring timing would avoid the disturbance of bats as bats are more likely to be present during the summer, based on the evidence of the surveys undertaken.

If a delay in the current programme occurs, then tree felling (and arboricultural management) would be carried out by mid May 2014, or from September to later October 2014. These periods are when bats are not breeding, making them less vulnerable to disturbance.

B. Work to be undertaken by the Ecologist

B.1 Capture and Exclusion

Before commencing any work on site, contractors will be inducted by the Named Ecologist or Accredited Agent to make them aware of the possible presence of bats, their legal protection and of working practices to avoid harming bats. This will ensure that all personnel are aware of the presence of the bat roost within trees 795 and 781, where bats are likely to be found within each tree, the legislation relating to bats and their roosts, and the appropriate action to take if a bat is encountered during the felling of the tree. The Named Ecologist or Accredited Agent will also provide toolbox talks prior to the start of work on each of the trees with bat potential and known roosts. A copy of the licence and Method Statement will be available on site at all times, and the contact details of the Named Ecologist and Accredited Agent(s) will be made available in the site office and induction pack.

The Named Ecologist or Accredited Agent will monitor and advise during the installation of bat boxes within retained mature trees to the south and east of the site (see section C.1.3).

Works will avoid encountering torpid bats by only working during periods when temperatures have not dropped below 7°C over four consecutive days and nights, where practicable. If unavoidable, and a torpid bat is discovered, it will be taken temporarily into care and fed until such a time when conditions are suitable (see heading below on grounded/torpid for more detail on how to proceed). The bat will then be carefully placed into one of the bat boxes erected on mature trees on site, and left to disperse of its own accord.

Two trees were identified as being used by a small number of common pipistrelles (tree no 795 and 781). The method for felling tree 781 is described below.

Prior to felling being carried out, a search for roosting bats will be made by undertaking internal inspections of all features of potential use to roosting bats, by an experienced tree climber under the watching brief of the Named Ecologist or Accredited Agent, using the following methods:

- holes/hollows/cavities and cracks or splits will be inspected with the aid of an endoscope, torch and mirror;
- any loose bark will be carefully peeled back;
- any dense, thick-stemmed ivy will be carefully stripped by hand.

Although it is not expected that any bats will be found during the internal inspections of the features, the tree climber will check the trees thoroughly.

If no fresh evidence of bats is found, the tree will be felled as follows, in the presence of the Named Ecologist or Accredited Agent:

- Sensitive tree-felling methods using a combination of section-felling and soft-fell techniques will be used to lower any branches with cavities/holes carefully to the ground in order to maintain the integrity of the features. It is possible that some features will be located in locations that are too dangerous to remove without risking accident to the tree surgeon (this is particularly relevant to the standing dead tree no 795). In these cases, limbs holding the feature will be cut in such a way that their fall is cushioned, e.g. by roping and tying off one end. The location of the cuts (both above and below the feature), and will be agreed on the day between the tree surgeon and the Named Ecologist or Accredited Agent.

- In addition, any cracks or splits which need to be section-felled will be cut in such a way so that the crack or split does not close under stress and crush any bats that may be present.
- Sections cut with cavities/holes present in limbs will be left on site at least overnight (making sure the section is placed in such a manner that bats can escape from any cavity).

Once the limbs containing the known roost features from trees 795 and 781 have been lowered down on the ground, they will be assessed by the Named Ecologist or Accredited Agent and from guidance by the contractor's tree surgeon in order to determine whether it is possible to strap the limb or sections of the limb to a suitable retained tree in the adjacent woodland (which is owned by PCC). Care will be taken to replicate as much as possible the original height and orientation of the feature to maximise the chances of bats finding the roost again. If the limb is rotten and there are health and safety constraints with strapping the limb then the limb will not be strapped to the retained tree.

Should a bat be found during the tree felling operations and can be retrieved without harm, it will be placed in a holding bag and taken to the nearest bat box (see section C.1.4 for location of bat boxes).

In the unlikely event that bats are discovered and that the bat(s) cannot be removed without harm, then work on this particular tree will be stopped until the next morning to allow for the bat(s) to disperse of their own accord. The area where the bat(s) was found will be inspected again in the morning before the works can resume. Should the bat(s) still be present, the section of tree containing bats will be strapped securely to a suitable receptor tree, with the roost entrance open to the surrounding environment, so that the bats can leave at will and find alternative roost sites. The Named Ecologist or Accredited Agent may decide to temporarily block the entrance to the roost to prevent bats flying out of the roost in the day-light and to prevent bats falling out of the roost during transport of the tree section. If the limb containing the bat cannot be strapped to a suitable receptor tree due to the limb being rotten or other health and safety constraints, then the limb will be carefully lowered down and will be left on site at least overnight, making sure the section is placed in such a manner that bats can escape from the cavity of their own accord, and is far enough away as to not be disturbed or damaged by other vegetation clearance works.

In addition, nine trees across the site support features suitable for roosting bats and were assessed as having low and moderate potential for roosting bats (namely 773, 751, 873, 882, 679, 815, 825, 807, and 790). No evidence of bats was found in these trees during the course of the various bat surveys in 2012 or 2013; however, the potential for bats to take up occupancy prior to felling cannot fully be discounted. Therefore, the felling of the aforementioned trees will be carried out by competent tree surgeons and under the watching brief of the Named Ecologist or Accredited Agent. If signs of bats are found in any of these trees, the felling method set out above for the known roosts would be followed. The tree felling contractor will be provided with the full tree survey information to allow them to cross-reference the trees planned to be felled with the trees identified as low to moderate bat roosting potential, in order to ensure that necessary the ecological supervision is undertaken.

Grounded / torpid bats

Should any bats be 'grounded' during any tree-felling operations / arboricultural management and are consequently injured, or otherwise incapacitated, the bats will be temporarily placed in a holding bag or a small, secure container, and will be taken to the Named Ecologist (Chloe Delgery) who is a bat carer from the Hampshire Bat Group, for recovery. This has been agreed with the Named Ecologist. Only when it is confirmed by the Named Ecologist or Accredited Agent that there are no bats present within the tree will the tree be removed and disposed off, along with any lowered sections, by the tree surgeon.

C. Works to be undertaken by the Developer/Landowner

C.1 Bat Roosts

C.1.1 In-situ retention of roost(s)

The methodology for the arboricultural management required on the confirmed roost in tree 795 in order to retain the roost is described below (the work will be carried out by the contractor's tree surgeon under advice from the Named Ecologist or Accredited Agent):

- an internal endoscopic inspection of all features of potential use to roosting bats (namely several woodpecker holes along the stem) prior to tree surgery works on tree 795 by an experienced tree climber/tree surgeon under the watching brief of the Named Ecologist or Accredited Agent, although it is considered unlikely that bats will be present;
- once the extent of the upper most woodpecker hole has been established and once it has been confirmed that no bats are present in the cavity, tree surgeon to reduce the height of the tree down to approximately 6 to 9 inches above the aforementioned woodpecker hole cavity, ensuring that, if the cavity extends upwards, the cut is made well above it;
- any bats present that can be carefully removed from the roost by the Named Ecologist or Accredited Agent will be temporarily placed in a holding bag or suitable container before being moved immediately to the nearest bat box. As soon as the works to the tree are completed, the Named Ecologist or Accredited Agent will then return to the box where the bat was moved to, place the bat in a holding bag and take it back to the cavity where it was found;
- should bats be present and cannot be retrieved safely, the Named Ecologist may decide to temporarily block the woodpecker hole entrances during the work to prevent bats flying out of the roost in the day-light, unblocking them in the evening, once the vegetation clearance works have stopped for the day;
- using hand tools, monolith the tree (i.e. process by which a decaying tree is made safe by reducing its height and spread, but left to decay in a standing position);
- as a precaution and to protect the roost, erect a chestnut-pale fencing around the tree to keep site clearance and construction workers a safe distance from the tree. This needs to be done immediately after tree surgery works and will need to remain on site for the duration of the works.

By following this methodology, the potential consequence of tree failure will be reduced in line with the reduction in height and weight of the tree, thereby increasing the chance of survival of the roost features (if tree surgery was not carried out, there is a higher risk for the tree to fail and the roost features being lost due to its current poor structure and form).

C.1.2 Modification of existing roost(s)

Not applicable. With regards to the modification of the roost itself in relation to temperature, humidity and exposure, due to the fact that the roost features (woodpecker holes) are located on the exposed side of the main stem which is mostly bare, it is believed that the removal of the limbs present around the rest of the stem through monolithing should not have a significant effect on the internal conditions of the roost.

C.1.3 New roost creation

Prior to the commencement of the felling of trees with bat roost potential, seven Schwegler 2FN woodcrete bat boxes, seven Schwegler 1FF woodcrete bat boxes; and one Schwegler 1FW four seasons' woodcrete bat box will be erected on suitable retained mature trees within Cherry Tree Row SINC and within Neville's Park Wood East SINC (Refer to **Figure C.1.4a** and **Figure 15.2 Rev D** below). The location where the bat boxes will be erected is considered to have sufficient distance from the site so that any displaced bats, will not be disturbed by the construction of the link road at this stage or at any later stages of the business park development, although close enough to the site to be within the range of bats using the site.

The bat box designs have been selected to provide summer and winter roosts appropriate for the common pipistrelle and other species recorded using the Site, such as brown long-eared bats and noctules.

- Schwegler 1FF bat boxes: these boxes are suitable for crevice-dwelling summer roosting bats. They not require cleaning as the opening is located at the bottom.
- Schwegler 2FN bat boxes: they have a domed roof to allow bats to cluster for more insulation. This type of box does not require cleaning as it has a second opening located at the bottom. It is very suitable for woodland species like the Noctule.
- Schwegler 1FW four seasons' woodcrete bat box

The number of boxes to be used is based on the following formula: three boxes per lost tree roost, and one box per tree with low/moderate bat roosting potential (totalling $6 + 9 = 15$). It must be noted that, although tree 795 will be retained and it is hoped that the tree management proposed will result in the retention of the roost, provision has been made to provide new roosting features should this not be successful. The calculations above are therefore based on the assumption that the roost will be lost.

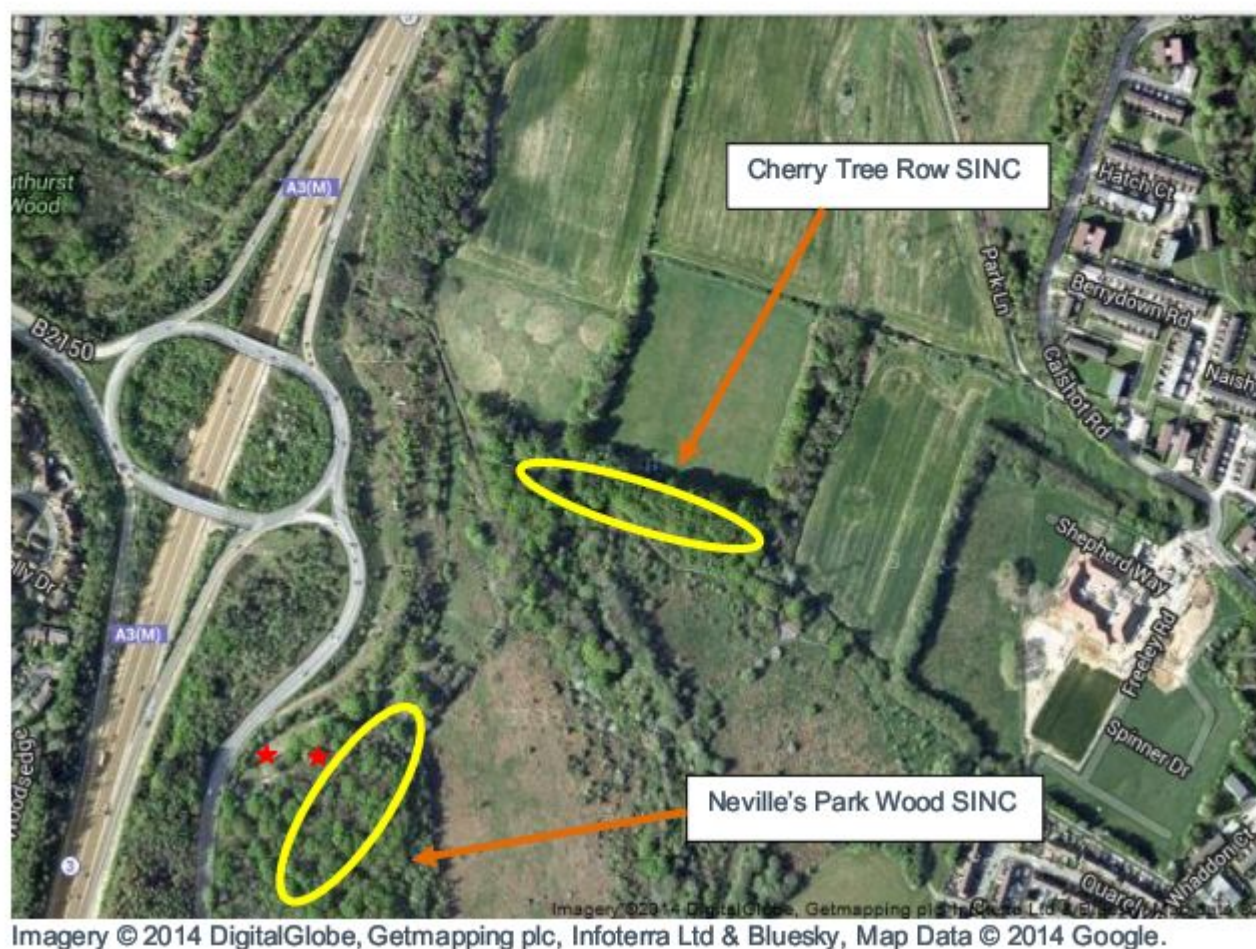
These bat boxes will provide some alternative roost sites within the site for the duration of the works. It is also planned that these bat boxes remain permanently on site after construction works are completed, therefore the location of the boxes will need to be considered carefully to avoid future disturbance. It is recognised that if the boxes are used by bats in the future they will become fully protected by European law.

Bat boxes will be installed in pairs or in groups of three boxes per tree, at least 4m above ground level to avoid any potential vandalism, and will be positioned so that the entrances face south, south-west and south-east.

A limb or section from 781 containing features suitable for roosting bats will be assessed by the Named Ecologist or Accredited Agent, and from guidance by the contractor's tree surgeon in order to determine whether it is possible to strap the limb or sections of the limb to a suitable retained tree. If the limb is rotten and there are health and safety constraints with strapping the limb then the limb will not be strapped to the retained tree.

C.1.4 Scaled maps/plans

Figure C.1.4a) Location of bat boxes (see yellow circles below). The indicative location of the two known tree roosts is shown by a red star.



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D. Post-development site safeguard

D.1 Habitat/site management and maintenance

The Site is currently owned and managed by Portsmouth City Council (PCC). It will remain in their ownership until the link road works have been completed. If the site is then sold on to a development company, all responsibility for the licence and mitigation will pass to them. PCC are providing all alternative roosting opportunities.

The owner will be responsible (both practically and financially) for the future management and maintenance of the new bat boxes. If the bat boxes erected on trees become damaged or are lost during the demolition works or in the future, they will be replaced at the expense of the landowner. The owner understands the necessity to retain the bat boxes, and understands that the licence conditions are legally binding.

The construction of the link road will result in the loss of foraging and commuting habitat within the Site. However, the area of foraging and commuting habitat to be lost is small in comparison to the foraging and commuting habitat available in the vicinity of the scheme. Alternative routes are available along existing landscape features (hedgerows and woodland edges, including the woodland where bat boxes will be installed so the Scheme will not result in severance that would affect bats' ability to commute between roosts and feeding areas. Furthermore, it is considered that, in the long-term, this impact will not be significant as ecological mitigation for the scheme involves planting of semi-mature trees either side of the new link road which will act as a bat hop-over in order to maintain connectivity between Cherry Tree Row and the long hedgerow which had been identified as an important commuting route. The proposed dormouse underpass and associated planting¹ will also provide new foraging habitat. Bat bricks (Schwegler 1GS) will also be installed on the new bridge supporting the link road to provide additional roosting opportunities. A Habitat Management and Maintenance Plan has been produced for the scheme² which outlines the management, maintenance and monitoring that will be carried out by the appointed Contractor during the Scheme's construction and establishment period.

Lighting during vegetation clearance and construction

There will be no lighting used during vegetation clearance. The use of artificial lighting will be avoided one hour prior to dusk until one hour after dawn between April – September during the construction phases of the works.

Lighting in relation to the wider development once the development is complete

As stated in the design for the new link road and associated ancillaries, the provision of new permanent lighting at the Site will be subject to the adopted highways specifications, and will aim to minimise the impact upon bats. Directional lighting will be used in particular to avoid light spill onto commuting routes and woodland edges. This is particularly important (but not limited to) around the edges of Cherry Tree Row SINC, and either side of the long hedgerow that crosses the site between Beech Wood East SINC and Park Lane. Lighting in the vicinity of habitat suitable for bats will include the use of the use of lamps with minimal ultraviolet light, reduced light spread and will also feature shields, louvers or shrouds fitted to minimise light spill. Hampshire County Council (HCC) specified that there would be no lighting between the new Hulbert Road roundabout and the mini roundabout for the proposed hotel facility. Lighting for the proposed hotel roundabout will be designed in such a way that there would be no light spill at the new bridge location (to the south of the roundabout), as the bridge could be used by bats as a commuting route under the link road. In addition, the lighting design will be coordinated with tree planting, such that the maximum predicted canopy

¹ These measures form part of a dormouse mitigation licence application which will be submitted to Natural England in early March 2014.

² Atkins (February 2014) Dunsbury Hill Farm Habitat Management and Maintenance Plan

spread will be no closer than 5 m to any lighting column. Where this is not possible recommendations in the Hampshire County Council Street Lighting Design Guide will be adhered to, to minimise light spill on trees.

D.2 Population monitoring, roost usage etc.

An appropriate level of monitoring will be undertaken and has been outlined below following advice from the Bat Mitigation Guidelines³ to record levels of bat activity on the site and use of the replacement roosts.

To assess the success of mitigation, a licensed bat worker appointed by Portsmouth City Council will carry out the checks of the bat boxes as well as the inspection of the retained roost in tree 795 and any strapped sections of trees. The methodology used to undertake the visual inspections and bat surveys will follow the guidelines stated in *The Bat Workers Manual* (Mitchell-Jones & McLeish, 2004~~Error! Bookmark not defined.~~) and BCT's *Bat Surveys Good Practice Guidelines* 2nd Edition (2012)~~Error! Bookmark not defined.~~.

The monitoring will be undertaken annually during the construction phase of the link road (i.e. from 2014 to 2016), and also during the following two years post-construction to monitor success during the establishment period. This will equate to 5 years of monitoring from 2014 to 2018 inclusive.

The monitoring will involve a single visit in September to each of the bat boxes that have been erected and to tree 795; the presence of bats or evidence of use by bats will be recorded. The timing of the inspections of the bat boxes and any strapped sections of trees will not disturb bats during the sensitive breeding and hibernation periods.

Records of bats will be passed to the local biological records office (Hampshire Biodiversity Information Centre) and the local bat group (Hampshire Bat Group). The information gathered will enable the effectiveness of the mitigation measures to be assessed in relation to the overall development. It will also provide data and enable ongoing population trends to be evaluated in relation to species distribution for bats within the local area.

If any bat boxes are damaged or vandalised during the monitoring period, the locations of the replacement bat boxes will be reviewed to ensure that future damage/vandalism is minimised.

D.3 Mechanism for ensuring delivery of post-development works

As the holder of the Natural England development licence, a representative from Portsmouth City Council will be responsible for making sure that all post development monitoring and maintenance works as described above are carried out and the records of monitoring made available to Natural England.

The licence holder of the site has read, understood and approved this Method Statement. He confirms this in signing the licence application form and understands that non-compliance with licence conditions is an offence under the current legislation.

The results of the monitoring will be reported to the Hampshire Bat Group, and the Hampshire Biodiversity Information Centre.

Mitigation and monitoring measures described above and also the wider habitat creation and enhancement outlined in the Dunsbury Hill ES (Atkins, 2012)⁴ will be implemented under the relevant Planning Conditions in order to ensure that the construction and operation of the Proposed Development complies with legislation relating to protected species.

³ Mitchell-Jones A. J. (2004) Bat Mitigation Guidelines. English Nature

⁴ Hundt. L. (2012) Bat Surveys: Good Practice Guidelines, 2nd Edition. Bat Conservation Trust

A Construction and Environmental Management Plan will be drawn up by the Contractor. This document will include a five-year post-construction monitoring plan which will be drawn up by a suitably qualified ecologist, in collaboration with a landscape architect.

E. Land ownership – Mitigation site(s)

E.1 Mitigation site ownership

All land within the planning application boundary, and the proposed habitat creation area and all the SINCs outside the planning application boundary referred to in this report, are owned and managed by Portsmouth City Council.

E.1.1.I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts onto land outside the applicant's ownership

–

Not applicable

E.1.2.I confirm that landownership consent/s has/have been granted to allow the creation of the proposed habitat compensation on land outside the applicant's ownership –

Not applicable

E.1.3.I confirm that consent/s has/have been granted by the relevant landowner/s for monitoring and maintenance purposes on land outside the applicant's ownership –

Not applicable

F. Timetable of works

Tree felling will not commence until a Natural England EPS bat mitigation licence has been received.

Table A- Development activities and timing

Proposed activity	Approximate Timing	Notes
Submission of Natural England Licence Application	March 2014	
Natural England Licence obtained	March/April 2014	
Installation of bat boxes	February-March 2014 (and before tree felling starts)	Provision of artificial bat roosts prior to commencement of works
Tool box talk to clearance contractors	Prior to tree felling	
Removal of tree no 781) supporting a bat roost (and nine other trees with potential for roosting bats), and arboricultural management to tree no 795	March/April/ early or mid May 2014	Loss of bat roost with inspection for the presence of bats prior to felling; trees to be felled using soft-fall techniques under watching brief by the Named Ecologist or Accredited Agent
ALTERNATIVE TIMING for of tree no 781) supporting a bat roost (and nine other trees with potential for roosting bats), and arboricultural management to tree no 795 should delay occur in the licence application or construction programme meaning that March/April / early or mid May would not be achievable	September to late October	Tool box talk to clearance contractors. Loss of bat roost with inspection for the presence of bats prior to felling; tree to be felled using soft-fall techniques under watching brief by the Named Ecologist or Accredited Agent
Construction of link road and bridge	June 2014 to December 2015	

Note: the term "Ecologist" used in the table above refers to either the Named Ecologist or Accredited Agent

Table B – Post- Development Monitoring

Proposed activity	Approximate Timing	Estimated duration
First annual monitoring inspection of bat boxes for presence of bats or evidence of use by bats during construction	September 2014	1 day per visit
Continued annual monitoring inspection of bat boxes	September 2015 and September 2018	1 day per visit

If there are any major variations in the timings as set out above, Natural England will be informed with a new timetable and a request to extend the licence if necessary.

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