

Dunsbury Hill Farm, Hampshire Application for a Natural England Licence – Bats

Bat Master Plan

Portsmouth City Council

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ATKINS

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A. Introduction

A.1 Background and proposed works

Dunsbury Hill Farm is located on land between Waterlooville and Leigh Park on the north western side of Havant Borough in Hampshire. The site lies immediately to the east of the A3 (M) motorway Junction 3. The site is bordered by deciduous and mixed semi-natural woodlands to the west, south and east. The north of the site is bordered by the verge of the A3 (M) which consists of long grasses and small individual mixed trees. The site consists mainly of arable fields with a number of hedgerows. It also includes areas of semi-improved neutral grassland and mixed scrub with scattered bracken. A public access track (Park Lane) runs south-east to north-west across the site and crosses the A3 (M) via a footbridge to the north. The Hermitage Stream runs across the south-west boundary of the site from the A3 (M) and follows the edge of an area of woodland and semi-improved neutral grassland.

The Dunsbury Hill Farm Development is a proposed 20.2 hectare (50 acre) greenfield development site in the ownership of Portsmouth City Council. A hybrid planning application was submitted, comprising a detailed planning application for an access road (known as the link road hereafter), and an outline planning application for the whole site development (business park and hotel facility). The planned development is in accordance with Havant Borough Core Strategy Policy CS18¹. An Environmental Statement was produced in March 2012 by Atkins and the hybrid planning application for the site was submitted on 30th March 2012 and registered on 16th January 2013. The planning application boundary and proposed phasing layout is shown in **Figure 15.2 Rev D** below (which also includes a summary of the ecological mitigation strategy for all target habitats and species including bats).

Several bat surveys have been carried out at Dunsbury Hill Farm in 2010/2011, and their presence and use of the site for foraging and commuting was taken into account and potential impacts on them were considered in the Environmental Statement (ES). Additional surveys were subsequently undertaken in 2012 and 2013, during which two trees were identified as occasional summer roosts used by a small number of common pipistrelles.

On the 19th February 2014, full planning permission was granted for the access link road, and outline planning permission was granted for the employment site and hotel with conference facilities.

Further reserved matters applications will need to be made for the employment site phases within the business park. Only at this time will it be possible to fully discharge some of the conditions attached to the consent that apply to the site as a whole.

Conditions relating to ecological mitigation are based on the implementation of the mitigation outlined in the Environmental Statement and Ecological Mitigation Strategy agreed as part of the planning application. The Condition pertinent to bats is as follows:

Condition A18 Ecology – Bats

Prior to the commencement of any development activities a detailed scheme of bat mitigation measures shall be submitted to, and agreed in writing by, the Local Planning Authority. Such details shall be broadly in accordance with the outline mitigation, compensation and enhancement measures detailed within Chapter 15 of the 'Dunsbury Hill Farm Environmental Statement Volume 1' (Atkins, March 2012) and the 'Phase 2 Bat Survey' report (ECOSA, August 2013) and will include (but not necessarily be restricted to) such matters as: results of updating Phase 1 and Phase 2 bat roosting and activity surveys; assessment of likely impacts to roosting, foraging and commuting bats; measures for the enhancement of the site for bat species (e.g. protected/enhanced flight routes, new roosting opportunities etc.). The development shall only be carried out in accordance with the approved mitigation measures unless otherwise agreed in writing by the Local Planning Authority.

There is also a similar Condition for dormice (Condition A17).

Both Conditions require compliance with approved mitigation measures during construction. [add sentence to confirm conditions have been discharged by LPA once a letter has been received]

¹ Havant Borough Core Strategy (March 2011):
<http://www.havant.gov.uk/sites/default/files/documents/ADOPTED%20CORE%20STRATEGY%20FINAL%20VERSION.pdf>

This master plan document sets out the various phases of the Dunsbury Hill overall development in the view to help assess the overall impacts of the proposed development on the bat population, and the future mitigation across the whole project.

LEAVE BLANK FOR INSERTION OF Figure 15.2 Rev D

A.2 Phases of the development

The overall development will be constructed in phases over a number of years as follows (see Fig. 15.2 rev D for the location of the phased plots):

Link Road Phase

The link road was the subject of the detailed planning application within the hybrid application. The proposal for the link road comprises of the following:

- A four arm standard roundabout on Hulbert Road;
- A lay-by accessed off the fourth arm of the roundabout on Hulbert Road;
- Joining into the existing roundabout on Woolston Road;
- Two way single lane carriageway between the proposed new roundabout on Hulbert Road and Woolston Road;
- A bridge over the Hermitage Stream;
- A 3 m wide shared footway/cycleway to the north and a 2 m footway to the south of the link road between the hotel roundabout and Woolston Road roundabout, along with a 3.5 m wide swale;
- A bus stop in each direction (located within lay bys between the hotel roundabout and the Woolston Road roundabout);
- A bus gate at the Woolston Road roundabout to prevent access to the Proposed Development by general traffic.

It is also proposed to naturalise the culverted section of the Hermitage Stream as part of this phase.

Business Park Phase 1 (13.2 ha)

The hybrid planning permission will provide outline permission for this Phase, but a reserved matters application will be required. The Proposed Development for the first phase of the business park comprises the following principal elements (Phase 1 is shown in light pink on Fig. 15.2 rev D):

- Employment uses (B1, B2 and B8) including an Enterprise Centre (46,450m²) in Phase 1;
- A hotel with conference facilities (5,574m²);
- Retention of existing trees and hedgerows where possible.

Business Park Phase 2 (7 ha)

The hybrid planning permission will provide outline permission for this Phase, but a reserved matters application will be required. The Proposed Development for the second phase of the business park comprises the following principal elements (Phase 2 is shown in light purple on Fig. 15.2 rev D):

- Creation of an additional 15,329 m² of employment floor space (B1, B2 and B8);
- Provision of a 150-180m wide landscaped gap between the A3(M) and the Proposed Development and east – west green finger providing landscape structure to the site;
- Retention of existing trees and hedgerows where possible.

A.3 Programme of Works

The link road is the first phase of the development and the main construction works for this phase will begin in early 2014. The construction works for this Phase are anticipated to take approximately 18 months.

Following this, the first phase of the business park development will then be constructed (providing reserved matters planning permission is obtained). These construction works are anticipated to take 1.5 years to complete and it is likely that they would start whilst the link road is being constructed.

It is not yet known when the Business Park Phase 2 development will begin, although it is anticipated to start in 2020. The existing Park Lane bridleway/cycleway/footpath which crosses the site and divides Phase 1 and Phase 2 will also be maintained and improved.

B. Site Description

B.1 Description of areas and habitat types

The land within the Dunsbury Hill Farm development site consists predominantly of arable fields and their associated margins, hedgerows, areas of scrub, and is surrounded by locally designated sites (Sites of Importance for Nature Conservation, SINC). The majority of these SINC are woodlands, which were designated for being either ancient woodlands or woodlands where there is an element of surviving ancient semi-natural woodland.

The arable fields provide poor foraging habitat for bats. The field margins, hedgerows, woodland (particularly Cherry Tree Row and Beech Wood East SINC), grassland and Hermitage Stream provide good habitats for bats. These habitats attract insects which are prey for bats. In addition, tree lines, woodland edges and hedgerows in particular are used as flight lines for both commuting and foraging. Areas of woodland immediately surrounding the development Site have the potential for roosting and hibernating bats, particularly where mature trees have features, such as cracks, woodpecker holes, loose bark and dense ivy covered limbs.

Numerous trees across the Site have been identified as having medium to high bat roosting potential. These include veteran trees within all surrounding SINC, mature oak trees along Park Lane and along the bridleway to the north of the site that leads into Dunsbury Hill Wood, and individual mature oak trees located within the footprint of the proposed link road.

Two important commuting routes in the context of the development site have been identified during the transect surveys, namely the long hedgerow that crosses the site between Park Lane and the edge of Beech Wood East SINC (between Phase 1 plots), and along a bridleway that runs west to east from Park Lane into Dunsbury Wood SINC (immediately north of Phase 2).

Figure 14.1 in Annex I includes a Phase 1 habitat map with associated target notes of the Dunsbury Hill Farm development site.

C. Habitat losses

C.1 Link Road Phase

The Link Road phase will involve the removal of approximately 77 trees of varying species and ages, including the loss of one confirmed tree roost and tree surgery on a tree containing another tree roost (not directly affecting the roost feature), and some bramble and blackthorn scrub between Hulbert Road and the Hermitage Stream bridge. In addition to this, an existing gap will be widened at the southern tip of long hedgerow that crosses the site between Park Lane and the edge of Beech Wood East SINC to incorporate the proposed link road. Bramble scrub will also be removed from the section of the proposed link road connecting to Woolston Road roundabout on the east of the site.

The re-alignment of the culverted section of the Hermitage Stream is currently being investigated. Should this go ahead (and in compliance with Planning Condition A8), vegetation clearance would be required, and would consist mainly of scrub clearance. Three mature trees would require felling due to their location in relation to the proposed re-alignment (tree 3027, 3028 and 0481), and two mature trees would require pollarding to ensure their longevity post-works (tree 0478 and 3029). These trees have been the subject of a ground assessment and subsequent tree climbing surveys, and bat emergence/re-entry surveys have been recommended to take place in April/May 2014 due to the fact that trees 0478 and 3029 have bat roosting potential. Since detailed design has not been approved for this Phase and since additional bat surveys are pending, it cannot be confirmed at the current time if the stream re-alignment will need to be subject to a Bat Mitigation Licence from Natural England.

C.2 Business Park Phase 1

The Business Park Phase 1 will result in the loss of a small section of the long hedgerow that crosses the site between Park Lane and the edge of Beech Wood East SINC. It will also result in the loss of the majority

of two large arable fields. It is not anticipated that Phase 1 would be subject to a Bat Mitigation Licences from Natural England; however, detailed design has not been undertaken for this Phase so this cannot be confirmed at the current time.

C.3 Business Park Phase 2

The Business Park Phase 2 is expected to result in the loss of the majority of one large arable field, as well as some isolated trees being felled if they cannot be retained. It will also result in the loss of a short section of hedgerow along Park Lane to allow a proposed access road into the development plot.

It is not anticipated that any further hedgerows would be cleared for the development, although the details of this remaining phase of the development are not fully known. Detailed design has not been undertaken for this Phase so it cannot be confirmed at the current time if Phase 2 will need to be subject to a Bat Mitigation Licences from Natural England. Detailed surveys of the trees and update bat activity surveys will be required for this phase once a detailed design is made available.

D. Impacts caused by all phases of the development *in the absence of mitigation*

D.1 Link Road Phase

In the absence of mitigation, two confirmed tree roosts would be destroyed by the proposed link road, and bats potentially injured and/or killed.

There are currently no existing barriers to foraging and dispersal routes for bats within the Site. The field and woodland margins provide good foraging habitats whilst the hedgerows and woodland edges provide good commuting routes. The proposed link road would reduce the linkage between woodlands on either side of the road, and is especially likely to reduce connectivity between Cherry Tree Row SINC and the long hedgerow that crosses the Site to the west of Park Lane. New lighting will be required along the new link road, and construction close to the edges of woodland and either side of the long hedgerow that crosses the Site would reduce the amount of feeding habitat in the short term, until replacement habitat has established.

D.2 Business Park Phases 1

The proposed access route between the development plots west of Park Lane would sever the long hedgerow that crosses the site between Park Lane and the edge of Beech Wood East SINC (between Phase 1 plots). This hedgerow was identified as an important commuting route during the bat activity surveys carried out for the EIA. Lighting of the Phase 1 plots could also have an adverse effect on bats in the absence of a sensitive approach to lighting location and light spill.

D.3 Business Park Phase 2

It is anticipated that the Business Park Phase 2 will result in the loss of a short section of hedgerow along Park Lane to allow a proposed access road into the development plot. The remainder of the proposed development for Phase 2 will be within an existing field and would involve some isolated trees being felled where they cannot be retained.

D.4 Combined Indirect Impacts of all Phases

There will be an increase in lighting across the Site, mainly from the new junction to Hulbert Road, the roundabout leading to the hotel, and from the business park. In addition, 24 hour security lighting would be required at compound sites during the construction phase as well as during the operation of the site. Lighting is known to have adverse impacts on some bat species.

E. Habitat compensation

Mitigation measures relating to reducing risks of harm to individual bats are not described in this document, because they are specific to the individual development phase and are not influenced by the fact that each phase forms part of a larger development site. Compensation measures for bats within the wider Dunsbury Hill Farm development have been designed to ensure that the Proposed Development would not compromise the Conservation Status of bats in this part of their natural range and include:

- Erection of bat boxes within woodland SINC's to provide alternative roosting opportunities prior to the works commencing, as well as providing long-term roosting sites through the retention and maintenance of the boxes;
- Measures to minimise risks to individual bats during tree felling and subsequent construction;
- Measures to protect retained woodland from accidental incursion during site works;
- Enhancement of field margins, woodland edges and hedgerows;
- Habitat creation (including erection of two bat brick roost boxes on the new road bridge);
- Restriction of new lighting; and
- Measures to encourage bats to use new features to cross the link road

Lighting

Adverse impacts caused by light pollution will be minimised by restricting new road lighting to major junctions. Following Hampshire County Council's recommendations, there will be no lighting between the Hulbert Road roundabout and the roundabout to the hotel. Impacts would be further reduced in the vicinity of habitat suitable for bats by the use of lamps with minimal ultraviolet light, reduced light spread and will also feature shields, louvers or shrouds fitted to minimise light spill. Temporary lighting design will minimise light spill in areas that could be used by bats during construction.

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, either side of the long hedgerow that crosses the Site between Beech Wood East SINC and Park Lane, and along the bridleway that connects Park Lane to Dunsbury Hill Wood SINC. Lighting for the proposed hotel roundabout should 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 over the Hermitage Stream could be used by bats as a commuting route under the link road.

New Planting

Traffic on the new road could contribute to bat mortality. However, the commercial use of the proposed Site would mean that night-time traffic would be less than daytime use during the seasons when bats are active. Risks of mortality will be reduced further by the planting of semi-mature trees to encourage bats to cross the road at a higher level, reducing the risk of collisions (these are referred to as "bat hop-overs" in the summary of mitigation strategy).

All vegetation to be planted for this link road will be maintained in order for it to become established; and the planting will be monitored during the establishment period and any failing/dead plants must be replaced with the same native species. The above vegetation planting will be undertaken post construction of the proposed link road, and will be planted during the appropriate planting season (November - March);

At each phase, compensatory habitat enhancement and creation will be proportional to the loss expected during that phase. New planting will be carried out as far in advance as possible prior to habitat loss during each phase (except as stated previously during the construction of the link road and Hulbert Road roundabout) and compensation measures will ensure that there is no net loss of bat habitat during each phase as well as providing measures to ensure that connectivity is maintained and enhanced. There will also be buffer planting at edges, described in more detail under 'general measures'.

As the habitat creation areas mature, foraging, commuting and roosting potential for bats would improve, but this would be compensation for the construction phase habitat loss.

Additional beneficial general measures

In addition to this, further enhancement measures will be incorporated. Such measures are likely to involve the following:

Management of Beech Wood East SINC: A woodland management plan (which would be incorporated as part of the Habitat Management Plan) for the whole development site) will be prepared by a suitably experienced ecologist and the agreed measures implemented. This management plan will include details of how this ancient woodland will be managed to ensure the enhancement and long-term survival of the habitats present. Portsmouth City Council, as land owner, will be consulted in order to agree any management methods for this woodland (and the corresponding SINC designation). Management will aim to maintain a healthy ancient woodland habitat, maintain canopy linkages and increase species and structural diversity. Details will be provided in the Habitat Management Plan.

Buffer Planting, and Retention, Enhancement and Creation of Hedgerows: Additional buffer planting as described in the Dunsbury Hill Environmental Statement under the woodland mitigation section (Paragraphs 15.108 – 15.109), and the hedgerow strengthening mentioned under the hedgerow mitigation section (Paragraphs 15.112 – 15.116) will provide habitat for a diverse range of insects which will in turn provide additional food for foraging bats, by including a diverse range of species such as hazel, bramble, honeysuckle, blackthorn and elder. A Habitat Management and Maintenance Plan² will be set up for the buffer planting, semi-mature native tree planting, translocated hedgerow and new hedgerows to ensure that there is sufficient survival of individual plants, and in particular that the planted hedgerows and translocated hedgerow remain intact along their length. It will also be necessary to monitor the diversity of the new hedgerows to ensure that the species diversity is at least equal to that of the hedgerows they have replaced. Corrective measures will be taken should gaps appear in the hedgerows or woody species are lost from them.

Hedgerow Management: Hedgerows will be managed to maintain and enhance species and structural diversity, which will benefit bats by maintaining and creating strong landscape features for foraging and commuting. The newly planted hedgerows will be allowed to establish for at least five years. During this time they will be checked on a yearly basis to check growth and establishment of shrubs. If necessary, weed control (through spot spraying) will be carried out twice a year (early/mid spring and late summer). The newly planted hedgerows will only be cut once they are substantial enough (this may take longer than five years). Hedgerows (including new hedgerows once substantial enough and existing hedgerows) will be cut annually. Ideally only one side of the hedgerow will be cut each year. This will be completed outside of the bird breeding season (which runs from March to August). Once the hedgerows are mature enough they will be subject to laying to improve their structure. For newly planted hedgerows this is likely to be done when they are 15 years old. For existing hedgerows it may be possible and advantageous to lay them immediately, and this will be factored into the management plan. However, hedge laying will be undertaken in phases to ensure that a variety of hedge structure is created across the site.

Figure 15.2 Rev D provided in a previous chapter shows the key areas of habitat to be created and enhanced and green infrastructure to be provided within the site to ensure that there is continued connectivity of habitats within, and also importantly, adjacent to the site, including the hedgerows and trees to be retained, enhanced and planted within the wider Dunsbury Hill Farm development. The full Landscape Masterplan is included within the Environmental Statement (Atkins, 2012).

F. Proposed Receptor Sites

It is not expected that any bats will be encountered during the works as mitigation measures for each phase where bats are expected will be designed to ensure sensitive clearance of vegetation in appropriate seasons. Bat boxes will be erected prior to any tree felling so that if bats are encountered unexpectedly there will be a safe location within the site to which they can be moved. Detailed mitigation measures will be provided within the Method Statement Document 2 of each Bat Mitigation Licence Application.

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

G. Mechanisms to ensure site safeguard and post-development works

G.1 Long term management arrangements

The long term management arrangement will be undertaken by a private management company.

The contractual and legal arrangements of the management company are to be devised. It is envisaged that the company will be limited by guarantee, managed in line with best practice, with each property on the estate effectively a member of the company. A means of service charge would be established, potentially a covenant contained as part of the transfer or sale of the property, which enables the levy of a service charge. Any requirements for liabilities and insurances of the management company would be agreed at the time of establishment.

It is envisaged that the management company will implement maintenance in line with landscape and ecological objectives of:

- Havant Borough Council in relation to the open space provision, equipment and management regimes;
- Hampshire & Isle of Wight Wildlife Trust in relation to protected species and any associated ongoing mitigation strategies;
- The Environment Agency in relation to the appropriate regimes associated with water features, retention basins and swales.

Implementation will be subject to a hard and soft defects liability period.

The scope of works envisaged to be undertaken by the management company could include for:

- Maintenance of hard and soft landscape areas;
- Implementation of ongoing ecological measures;
- Reinstatement of failed soft landscaping;
- Inspection of irrigation and sprinkler systems;
- Water supply for irrigation purposes;
- General repairs; and,
- Reserve funds for longer term costs, (exceeding each year's planned works).

H. References

Atkins (March 2012). Dunsbury Hill Farm Environmental Statement Volume 1

Atkins (March 2012). Dunsbury Hill Farm Environmental Statement Highway Design Report Version 4

Havant Borough Core Strategy (March 2011):

<http://www.havant.gov.uk/sites/default/files/documents/ADOPTED%20CORE%20STRATEGY%20FINAL%20VERSION.pdf>

I. Annexes (Figures)

Figure 14.1 Phase 1 habitat map of Dunsbury Hill Farm Development site with target notes

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Target Notes associated with Figure 14.1_ Phase 1 Habitat Survey Map

T1: Badger scat by highways boundary fence

T2: Potential otter resting site and slide by Hermitage Stream although likely to be from a dog (otter survey later confirmed no evidence of otters)

T3: Ancient hedgebank and dry ditch within Cherry Tree Row SINC

T4: Reed warbler calling within area of willowherb and scrub

T5: Standing dead oaks by Hermitage Stream and Cherry Tree Row SINC

T6: Slow worms and common lizards in grassland and scrub on highways verge

T7: Fragments of grass snake egg in grassland and scrub on highways verge

T8: Common lizard within grazed grassland with rush species

T9: Mammal track in grassland and scrub towards Dunsbury Hill Wood SINC

T10: Mature oaks with bat roost potential

T11: Gap in hedgerow

T12: Arable field and set-aside with potential for ground-nesting birds

T13 – Neville's Park Wood West SINC. Mixed species woodland with larch interspersed with ash, hazel, pedunculate oak, silver birch, holly and Scot's pine. Some ancient woodland indicator species present e.g wood anemone, wood spurge, butcher's broom and enchanter's nightshade. Potential habitat for dormice, badgers, terrestrial amphibians and breeding birds. Aerial linkage for dormice across Hulbert Road to Neville's Park Wood East SINC as branches touching in a number of places. This woodland is directly linked to Department of Transport land and the highways verge of the A3/M.

T14 – Department for Transport land. Predominantly semi-natural broad leaved woodland with immature pedunculate oaks, hazel, field maple, ash, silver birch, alder and willow. Ground flora similar to Neville's Park Wood East SINC with pendulous sedge, grass sp., fern sp., bramble and wood spurge. Open areas within this woodland have blackthorn and hawthorn scrub along with immature Scot's pine and gorse. An area of blackthorn, hawthorn and bramble scrub lies to the east of the woodland leading to an area of semi-improved neutral grassland. The woodland has potential for dormice, badgers, terrestrial amphibians and breeding birds. This woodland is directly linked to Neville's Park Wood West SINC and the highways verge of the A3/M.

T15 - Semi-improved neutral grassland on Department for Transport land. An area of rough grassland with neutral grassland species such as yarrow, interspersed with bramble and bordered by blackthorn and hawthorn scrub. The grassland and scrub habitat has potential for reptiles and invertebrates.

Note: Target Notes T1 to T12 originated from the initial phase 1 walkover survey in July/August 2010. T13 to T15 were generated following the walkover survey of the land west of Hulbert Road in September 2011

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