

# Policeman's Lane Western and Eastern Parcels

**Preliminary Ecological Assessment** 

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# **Conclusion and Executive Summary**

Ecological Planning & Research Limited (EPR) was commissioned by Wyatt Homes to carry out a Preliminary Ecological Impact Assessment of proposed allocations for residential development on two parcels at Policeman's Lane, Upton, Dorset, centred on OS Grid reference SY 966 930. In this report these are referred to as the western and the eastern parcels. EPR provided the ecological information for Phase 1 in 2014. The proposals are illustrated in Appendix 1.

The proposed development is likely to trigger biophysical changes. Many of the consequent ecological effects will extend no further than the boundary of the development site. The exceptions include contributions to the cumulative effects on European Sites which have been predicted in the 2015 Habitats Regulations Assessment of the Partial Review of Purbeck's Local Plan (the HRA). These were therefore considered in Section 3 of this assessment.

The illustrative proposals demonstrate that development in these parcels can be designed to accommodate 90 and 15 houses respectively, whilst according with the impact avoidance measures set out in the HRA. This includes an expansion of the Suitable Alternative Natural Greenspace (SANG) agreed for Phase 1 and the western parcel by 2.37ha. The only predicted effect on European Sites which cannot be designed out of the proposals is increased risk of pollution entering Poole Harbour during construction. This can be dealt with by applying normal pollution prevention measures, as set out in government guidance. Purbeck District Council can therefore be confident that the proposed allocations can be delivered without contravening the Conservation of Habitats and Species Regulations 2010 (as amended).

This assessment concludes that the proposal for 90 houses in the western parcel is also very unlikely to trigger unavoidable effects on any other important ecological features.

The proposal for the eastern parcel has been designed to minimise effects on the important ecological features within the zone of influence: aged and old oak trees along the boundaries; the local assemblage of bats and a species poor rush pasture and swamp. These features have not been fully surveyed, but the preliminary assessment is that they are of at least Local value and that, taken as a whole, the field may be of District value.

Given the opportunities for habitat restoration and creation in the expanded SANG, it is likely that it would be possible to design a scheme which would avoid significant effects on the bats. The change from intensive dairy farm to housing is likely to reduce Nitrate input to Poole Harbour and to improve the quality of the water feeding the wetland features in the eastern parcel. The design of a sustainable drainage system to supply adequate clean water to the wetland features is key to the protection of the wetland habitats. PFA has illustrated a swale below the access road, which could collect and clean surface water before it enters the wetlands.

# **Policeman's Lane – Western and Eastern Parcels** Preliminary Ecological Assessment

# <u>Contents</u>

1.	Introduction	1
2.	Nature and Extent of Predicted Biophysical Changes	3
3.	Scheme Design to Avoid Likely Significant Effects on European Sites	4
4.	Other Ecological Features	5
5.	Identification of Potential Impacts	7
6.	Measures to Avoid or Reduce Impacts, Provide Compensation and Deliver Biodiversity Gain	8
7.	Preliminary Ecological Assessment	9
8.	Legal Considerations	11
9.	Further Actions in the event of a planning application	12

# <u> Maps / Drawings</u>

- Map 1 Framework Masterplan
- Map 2 Land Budget
- Map 3 Ecological Context
- Map 4 Habitats and Ecological Features

# Appendices

- Appendix 1 Relevant Legislation and Policy in Dorset
- Appendix 2 Statement of Common Ground, 2012
- Appendix 3 Vegetation Note
- Appendix 4 Note of Bat survey
- Appendix 5 Note of GCN surveys
- Appendix 6 Nitrogen Off-setting

# 1. INTRODUCTION

#### Commission

1.1. Ecological Planning & Research Limited (EPR) was commissioned by Wyatt Homes to carry out a Preliminary Ecological Impact Assessment of proposed allocations for Phases 2 and 3 of residential development at Policeman's Lane, Upton, Dorset, centred on OS Grid reference SY 966 930. EPR provided the ecological information for Phase 1 in 2014.

#### Proposals

1.2. The Proposals are for 90 residential units in the western parcel and 15 in the eastern parcel, as illustrated in **Map 1**. In addition to the housing and associated infrastructure, the proposals also include 2.37ha of additional Suitable Alternative Natural Greenspace (SANG), as shown on **Map 2**.

#### **Study Area**

- 1.3. As is shown on Map 3, the development sites are part of French's Farm, which lies on the South Dorset coastal plain, immediately to the south-west of Upton. Poole Harbour Special Protection Area (SPA), Ramsar Site and Site of Special Scientific Interest (SSSI) lies 400m to the east and south. The Dorset Heaths SPA, Ramsar Site and Special Area of Conservation (SAC) is also close-by.
- 1.4. As Shown on **Map 4**, the western parcel comprises most of a semi- improved grass field, which has been used for storage of plant and materials during the construction of Phase 1. A drainage pond has been dug in the southern part of this field.
- 1.5. The eastern parcel comprises the western part of a field which grades from dry disturbed ground in the north, through semi-improved neutral grassland and rush pasture, to a swamp in the south. The wetter areas are moderately species rich, but do not appear to meet the criteria for SNCI selection. There are numerous old Oak trees along the western boundary of the eastern parcel and a few more mature trees grouped in the southern part of the field. The eastern part of this field will form part of the SANG.

#### Scope

- 1.6. This assessment aims to provide sufficient information to inform the selection of housing sites in the emerging Local Plan, including the SEA and HRA of that Plan. It also advises on further work to provide the information that:
  - the LPA may require to determine an application, and to discharge their Biodiversity Duties in determining a planning application;
  - Natural England requires to determine an application for a European Protected Species licence;
  - The applicant needs to conform with other biodiversity legislation.

- 1.7. EPR's approach takes account of the Chartered Institute of Ecology and Environmental Management's (CIEEM) advice in Guidelines for Ecological Impact Assessment in the UK and Ireland (Jan 2016).
- 1.8. Where relevant, legislative and policy instruments are considered, including:
  - the Conservation of Habitats and Species Regulations 2010 (as amended); and
  - the Wildlife and Countryside Act 1981 (as amended);
  - Paragraph 118 of the National Planning Policy Framework;
  - Purbeck District Council's adopted policies, as set out in the 2012 Local Plan;
  - Purbeck District Council's emerging policies, as set out in the June 2016 Partial Review.
- 1.9. The relevant extracts from these and other relevant documents are set out in **Appendix 1**.

#### Consultation

- 1.10. After consultation with the LPA, RSPB and Natural England, a Statement of Common Ground was agreed relating to the measures to protect the nearby European Sites for Phase 1 (**Appendix 2**).
- 1.11. Through the Local Plan review process, Natural England has confirmed that the western parcel can come forward in the Local Plan, with further details to be agreed regarding the SANG and nutrient neutrality arrangements (See the proposed policy for Site 7 in the Partial Review of the Local Plan, set out in **Appendix 1**).

# **Methods and Constraints**

- 1.12. EPR has collected data on the site and surroundings through data trawls and site survey since 2011. In June, 2017 the site was re-visited to identify any changes and to scope the further work need to inform this assessment of the western and eastern parcels. The features flagged for further investigation were:
  - Vegetation in the eastern parcel. See **Appendix 3** for details.
  - Bats. See Appendix 4 for details.
  - GCN in Qoin Cottage pond. See Appendix 5 for details.
- 1.13 All surveys were conducted within the optimum season, with no material constraints.

# 2. NATURE AND EXTENT OF PREDICTED BIOPHYSICAL CHANGES

2.1. Certain activities associated with the preparation, construction and operation of the Proposal are likely to generate biophysical changes. These changes, the timescales and the Zone of Influence over which they are likely to occur, are summarised in **Table 2.1** below.

Table 2.1: Summary of predicted changes and Zone of Influence

Predicted Change	Zone of Influence
Vegetation clearance during site preparation	Site
Changing quantity and pattern of surface water drainage (during site preparation, construction and operation)	Site
Increased risk of water pollution and siltation during site preparation and construction.	Adjoining watercourses and Poole Harbour
Lighting (during construction and in operation)	Site and immediate surrounds
Increased noise and movement (during construction and operation)	Site and immediate surrounds
Increased recreational demand (during operation)	Up to 5km from Site
Landscape planting (during operation)	Site
Increased numbers of predatory pets (during operation)	Up to 400m from the site
Increased risk of urbanisation effects (during operation)	Up to 400m from the site
Change in discharge of Nitrates (during operation).	Poole Harbour

2.2. Many predicted changes will extend no further than the boundary of the development site. The exceptions include cumulative effects on European Sites which have been predicted in the 2015 Habitats Regulations Assessment of the Partial Review of Purbeck's Local Plan. These are discussed below.

# 3. SCHEME DESIGN TO AVOID LIKELY SIGNIFICANT EFFECTS ON EUROPEAN SITES

- 3.1. Section 4 of the 2015 Habitats Regulations Assessment of the Partial Review of the Local Plan discusses the measures required to avoid significant effects on European Sites from the predicted biophysical changes arising from the plan's housing policies. This advice is consistent with the requirements of adopted Local Plan Policies DH *Dorset Heaths* and PH *Poole Harbour*. Where applicable, these requirements have been integrated into the scheme design as follows:
  - No houses are proposed within 400m of the Dorset Heaths, to avoid effects from increased predation and urbanisation;
  - Suitable Alternative Natural Greenspace (SANG) is offered, to avoid effects from increased recreational demand on the Dorset Heaths. As set out in the policy for Site 7 in the emerging Local Plan (see Appendix 1) Natural England has agreed that the original 4.80ha SANG for Phase 1 has the capacity to avoid the effects of up to 100 households in the western parcel. Assuming an occupancy rate of 2.42 people per household, this indicates that NE is satisfied with 11.7ha/1000 new residents. As shown on Map 2, the original SANG has been extended by 2.37ha, to provide additional capacity for the 5 additional houses in Phases 2 and 3. Overall, the larger 7.17ha SANG will provide 17.5ha/1000 for the 408.87 predicted new residents in Phases 1, 2 and 3.
  - The improvement of signs and fencing to avoid effects from increased recreational demand on the Dorset Heaths and Poole Harbour, as agreed in the Statement of Common Ground in **Appendix 2**;
  - As shown in **Appendix 6**, overall the three phases of development of this intensive dairy unit will result in a decreased Nitrate load entering Poole Harbour. This is consistent with Purbeck District Council's requirements, set out in: *Nitrogen Reduction in Poole Harbour* SPD Adopted on 01.04.17.
- 3.2. Therefore, most significant adverse effects on European Sites have been avoided through scheme design. The only remaining predicted effect, that of pollution of watercourses flowing into Poole Harbour during construction, can be avoided by measures set out in Section 6 below.

# 4. OTHER ECOLOGICAL FEATURES

4.1. French's Farm lies on the sand, silt and clay deposits which form the coastal plain north of Lytchett Bay in Poole Harbour. From reviewing old maps, the lanes and field boundaries have clearly been constants for centuries. The farm is an intensively managed dairy unit. Most of the grass fields were ploughed during World War 2 and have been fertilised to improve productivity. This has reduced the ecological diversity of the fields and the water courses which drain them, but several important features have survived, as described below. The conservation status of these features has been assessed with reference to the Dorset Biodiversity Strategy, produced by the Dorset Biodiversity Partnership in 2003.

#### Aged trees, Tree-lines and hedges

4.2. As can be seen on Map 4 and described in Appendix 3, most of the south-eastern boundary of the western parcel and all except the short northern boundary of eastern parcel are marked by mature, diverse hedgerows and tree lines. As set out in the Dorset Biodiversity Strategy, ancient and species rich hedges are a UK Priority Habitat (aka Habitats of Principal Importance) which is in decline in Dorset. Natural England advises that oaks that are 1.5m and greater diameter at breast height (dbh) are 'aged' trees of conservation interest and those that are 1m+ dbh are 'old' trees which have conservation potential. As Map 4 shows, there is one aged tree on the eastern boundary of the western parcel, two along the western and southern boundaries of the eastern parcel and twelve of conservation potential along the boundaries of the eastern parcel. Individual trees may support important assemblages of invertebrates and lower plants, as well as bats and nesting birds. Further survey is therefore required to evaluate these features. They are of at least Local value and, as a group, may be higher.

# Neutral grassland/rush pasture/swamp transition

- 4.3. As described in **Appendix 3**, the eastern parcel comprises a transition from disturbed dry grassland at the northern end, nearest the centre of the farm, through species-poor, semiimproved neutral grassland to rush pasture and swamp. The extent of the rush pasture is likely to vary over time, depending on rainfall, surface water run-off from the catchment and the flow of water through the outlet at the southern end of the field. However, as is clear from the old maps and air photographs in Appendix 3, this habitat has been in this field for decades, if not centuries. It depends on water and soil conditions. It is probable that the intensive nature of the farming enterprise has caused high nutrient levels to enter the water and soil, depressing the biodiversity of these habitats. From the surveys conducted so far, the rush pasture and swamp are apparently a species poor example of a UK Priority Habitat which is in decline in Dorset, as set out in Section 2.3.2 of the Dorset Biodiversity Strategy. The wetland habitats do not meet the botanical criteria for SNCI selection, but further surveys of aquatic invertebrates are required to properly evaluate these habitats. They are of at least Local value and may be higher.
- 4.4. Taken as a whole, the eastern parcel field may be of District value.
- 4.5. The following Protected and Priority Species were scoped out after investigation for the 2014 Ecological Impact Assessment for Phase 1: Dormice, Water Voles and Wintering Birds. Given the earlier findings, it is unlikely that this proposal for further development in the area could be materially constrained by these species.

4.6. However, the following species have been investigated further:

#### Bats

As described in Appendix 4, an assemblage of five common and widespread species was recorded, comprising Common and Soprano Pipistrelles, Noctule, Serotine and a Myotis species. No bats were seen to emerge from the dead oaks in the treeline along the western boundary of the eastern parcel, but many bats used this treeline for foraging and commuting. The records search shows that a bat roost has been recorded in the vicinity since 2005. The eastern parcel is likely to provide foraging for the bats using this roost. The species recorded are similar to those recorded in the surveys for Phase 1 and there is no reason to revise the Local level evaluation of the assemblage.

#### **Great-crested Newts**

- Whilst there are no bodies of standing water suitable for breeding Great Crested Newts within the site, the eastern parcel supports suitable terrestrial habitat for this species and lies within 250m of a pond in the garden of Qoins Cottage. The pond was therefore checked for evidence that this species breeds there, as described in Appendix 5. Both the Habitat Suitability Index assessment and the eDNA tests were negative. It is therefore very unlikely that this species is could be affected by the proposed development.
- 4.7. Further surveys will be required to inform the planning application, as explained in the **Section 9**.

# 5. IDENTIFICATION OF POTENTIAL IMPACTS

5.1. In the absence of avoidance or mitigation measures, the Proposal has the potential to generate significant effects upon the Important Ecological Features identified in Section 4, as set out below. In some instances, further investigations are required to evaluate features and design mitigation.

#### European Sites (and inflowing water courses)

5.2. The only remaining issue is that of the potential pollution of Poole Harbour during site preparation and construction.

#### Hedges/Tree lines/Aged trees and associated species

- 5.3. Most of these features will be retained, but it will be necessary to remove sections of the hedgerow/tree lines along either side of Watery Lane, to gain access into Phases 2 and 3. Without mitigation, this would result in the fragmentation of the hedgerow network, and consequently a loss of connectivity for animals travelling through the landscape.
- 5.4. As individual trees may support important assemblages of invertebrates and lower plants, as well as bats and nesting birds, further surveys are required to find the least damaging places to locate the access roads.
- 5.5. The long-term future of trees which adjoin gardens is questionable, as residents frequently object to the shade and other effects of large trees close to their living space.

#### Neutral grassland/ rush pasture/swamp transition

- 5.6. Further survey is required to properly characterise and value these features, particularly of aquatic invertebrates, which are known to be important in this area. The scheme illustrated on **Map 1** has been designed to retain the area with most of the rush pasture and all of the swamp.
- 5.7. To maintain the rush pasture and swamp at their current conservation status, they will require sufficient clean surface water run-off. Further investigations are necessary to assess the likely effects of the proposals on surface water flows and to design the necessary sustainable drainage solution. The *Preliminary Surface Water Drainage Strategy* (W521/03) illustrated in Appendix 6 of the *Flood Risk Assessment* shows a swale below the road which could collect and clean surface water before releasing it into the wetland.

# Bats

- 5.8. Further survey is required prior to the removal of any trees with potential for roosting bats.
- 5.9. The introduction of lighting and disturbance could affect the bats using the hedgerows and tree lines. This may be difficult to mitigate effectively where gardens back onto the tree-lines, as shown in **Map 1**. However, the expanded SANG provides opportunities for compensation, as set out in the following section.

# 6. OPPORTUNITIES TO AVOID OR REDUCE IMPACTS, PROVIDE COMPENSATION AND DELIVER BIODIVERSITY GAIN

- 6.1. All agreed mitigation measures will be combined into a Biodiversity Mitigation and Management Strategy, which will be submitted to the LPA for approval prior to the start of works on the site. This will include habitat creation and management within the SANG and other open spaces.
- 6.2. Wyatt Homes has agreed to the following measures which will avoid or reduce the impacts predicted in Sections 3 and 5:
  - Implementation of government guidance: <u>www.gov.uk/guidance/pollution-prevention-for-businesses</u> to avoid effects from increased risk of pollution entering Poole Harbour via adjoining watercourses during site preparation and construction;
  - Retention of most of the tree-lines and hedgerows, including most of the aged trees;
  - Retention of most of the rush pasture and the swamp; Further investigations are required to design a sustainable drainage scheme that provides sufficient surface water flow to maintain the rush pasture and swamp at their current conservation status;
  - Application of an agreed lighting strategy to reduce impact on bat foraging and flight line features. Further investigations are required to inform the detailed layout;
  - Creation and long-term management of compensation and new habitats within the SANG.
- 6.3. The extended 7.17 ha SANG and other areas of open space provide opportunities for the long-term retention and management of ancient features, as well as the creation of new ones (such as hedges and tree-lines) in accordance with local biodiversity objectives. Watery and Slough Lanes and most of their associated aged trees will be retained. The Biodiversity Mitigation and Management Strategy would include a strategy to address the conflict between the retention of dead wood in trees and the need to provide safe public open space. The grassland/rush pasture, swamp and ditches will no longer be subject to polluting agricultural inputs, which may allow for restoration of these habitats.
- 6.4. The further surveys which the LPA and Natural England may require to inform their determination of a planning application and, if necessary, an EPS licence application, are discussed in **Section 9** below. Any associated Method Statement agreed with Natural England will be incorporated into the Biodiversity Mitigation and Management Strategy.

# 7. PRELIMINARY ECOLOGICAL ASSESSMENT

- 7.1. At this stage the LPA is simply required to consider whether an allocation is unavoidably likely to have a significant effect on the conservation status of Important Ecological Features, including European Sites and Protected Species.
- 7.2. The predicted residual impacts on Important Ecological Features following the application of the avoidance and mitigation measures identified in Section 6 are set out below, together with an initial assessment of their likely significance.

# **European Sites**

7.3. No significant adverse effects on the Dorset Heaths or Poole Harbour European Sites are predicted. In fact, the change from intensive dairy to residential use is likely to benefit Poole Harbour, by reducing Nitrate inputs.

# Hedgerows/tree-lines/aged trees

- 7.4. **Map1** shows that the access into both parcels would require the removal of sections of the tree line/ hedgerows along Watery Lane. In the case of the western parcel, this would not affect any important trees. It would be necessary to agree mitigation to reduce fragmentation and lighting effects (see discussion under Bats below). This is not likely to present an unavoidable significant effect on an important feature.
- 7.5. **Map 1** shows that the access into the eastern parcel has been selected to minimise effects, passing through a narrow gap between old trees of conservation potential. It also shows that many of the old and aged trees forming the western boundary of the eastern parcel would be on the edge of proposed gardens, shading them from the west and north-west. These large trees will cast long shadows over the gardens, drop branches and leaves and create very dry ground conditions. It is probable that some of the new residents will, in the medium to long term, seek to remove these trees. If residents are concerned about safety or health, it will be difficult to resist their concerns.
- 7.6. Purbeck's adopted policy on Biodiversity specifies that development should be able to demonstrate that it avoids significant adverse effects on aged and aged trees. This is consistent with national government policy set out in paragraph 118 of the NPPF. The development illustrated on **Map1** can be managed to minimise risks to these trees during construction of the access road, but unavoidably increases the risks from concerned residents during the operation. This constitutes a significant adverse effect on a feature protected by national and local policy. These features cannot be replaced within a short or medium timespan. In the long term (over 100 years) medium aged trees.

# Neutral grassland/rush pasture/swamp transition

7.7. **Map 1** shows that part of the access road in the eastern parcel would be located in the area which the July 2017 botanical survey shows is rush pasture, on the shallow inflow to the wetland system. The remainder is situated on grassland which slopes down towards the rush pasture and swamp. Without a carefully engineered solution, this could cause the retained wetland habitats to dry out and/or become polluted. The *Preliminary Surface Water Drainage Strategy* illustrates a possible solution. Much of the proposed new road

and swale is very close to the swamp and there would be a risk of damage and contamination during construction.

7.8. Current information indicates that this is a species poor example of a Priority Habitat. The Dorset Biodiversity Strategy states there should be no loss of extent or quality of this habitat. Purbeck's adopted Biodiversity policy states that new development needs to demonstrate that it avoids significant adverse impacts on such habitats. The scheme illustrated on **Map 1** would remove a small part of the rush pasture. However, the *Preliminary Surface Water Drainage Strategy* demonstrates that it may be possible to use cleaned surface run-off to maintain appropriate water levels for the retained wetland. The cessation of agricultural chemical input to the system is likely to be beneficial. Providing a satisfactory sustainable drainage strategy is feasible, it may be possible to avoid a significant adverse effect.

#### Bats

- 7.9. Surveys during July 2017 have shown that the tree-line/ hedgerows along Watery Lane are used by an assemblage of bats for foraging and as a flight-line. If the access is kept as narrow as possible and the road lighting is directed away from the hedge, the effects associated with the western parcel are unlikely to be significant.
- 7.10. However, **Map 1** shows that the treeline in the eastern parcel would be at the end of the proposed gardens. It would therefore be difficult to control lighting, as it would be determined by individual residents. The proposed development of the eastern parcel would therefore increase the risk to the assemblage of bats of local importance. Further survey is required to assess the significance of this effect.

# 8. LEGAL CONSIDERATIONS

- 8.1. The Framework Masterplan demonstrates that a scheme for 105 houses can be accommodated in the western and eastern parcels at Policeman's Lane, in accordance with the requirements of Section 4 of the 2015 Habitats Regulations Assessment of the Partial Review of the Local Plan. This, together with the availability of normal pollution avoidance measures, as set out in <u>www.gov.uk/guidance/pollution-prevention-for-businesses</u>, confirms that the proposed allocation of further housing development at Policeman's Lane would not contravene the Conservation of Habitats and Species Regulations 2010 (as amended) with respect to effects on European Sites.
- 8.2. Further survey work is needed to assess the potential effects on bats, both those which may be roosting in the old and aged trees and those using the flight line along the western edge of the eastern parcel. If it is likely that roosts would be disturbed, it will be necessary to apply for a European Protected Species license. However, it is likely that any such application would be successful, as it would be possible to design a layout which would accord with the protection of European Protected Species required by the Conservation of Habitats and Species Regulations 2010 (as amended).
- 8.3. It is very unlikely that other European Protected Species will be unavoidably affected by the proposals, but further survey work may be needed in the event of new information becoming available.
- 8.4. Surveys will be required to inform the design of strategies to protect birds and reptiles, in accordance with the Wildlife and Countryside Act 1981 (as amended).

# 9. FURTHER ACTIONS IN THE EVENT OF A PLANNING APPLICATION

9.1. Whilst not relevant to Purbeck District Council's consideration of the suitability of the proposed allocations, Table 9.1 notes the recommended actions before a planning application is determined.

# Table 9.1: Further actions

Action	Timing
Survey old and aged trees for lichens and bryophytes	Any time
Survey all affected trees with bat roost potential.	May - August
Consider need for further surveys to inform an application for an EPS license	May - August
Survey wetland features and old trees for invertebrates	April - September
Devise a drainage and mitigation strategy to feed appropriate quantities of clean water into the wetland features	Any time
Depending on conditions at the time and the results of the records search, reconsider potential for impacts on dormice, otters and water voles.	If Water Vole surveys required: March - October
Depending on conditions at the time and the results of the records search, consider potential for effects on breeding birds and reptiles.	If breeding bird surveys required: March – August If wintering bird surveys required: October – March If reptile surveys required; April – June, or September

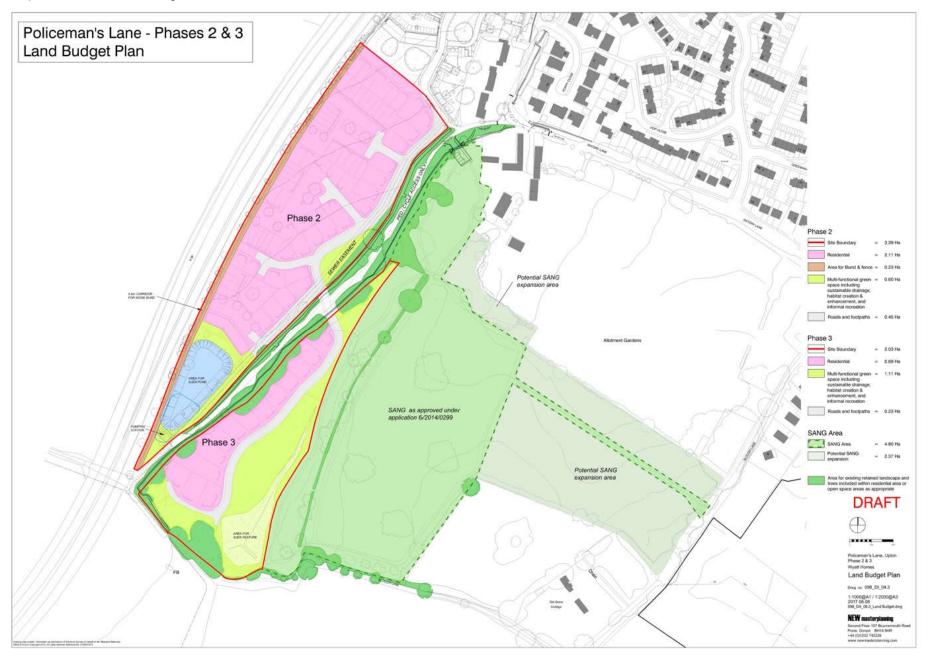
# Maps

# Framework Masterplan

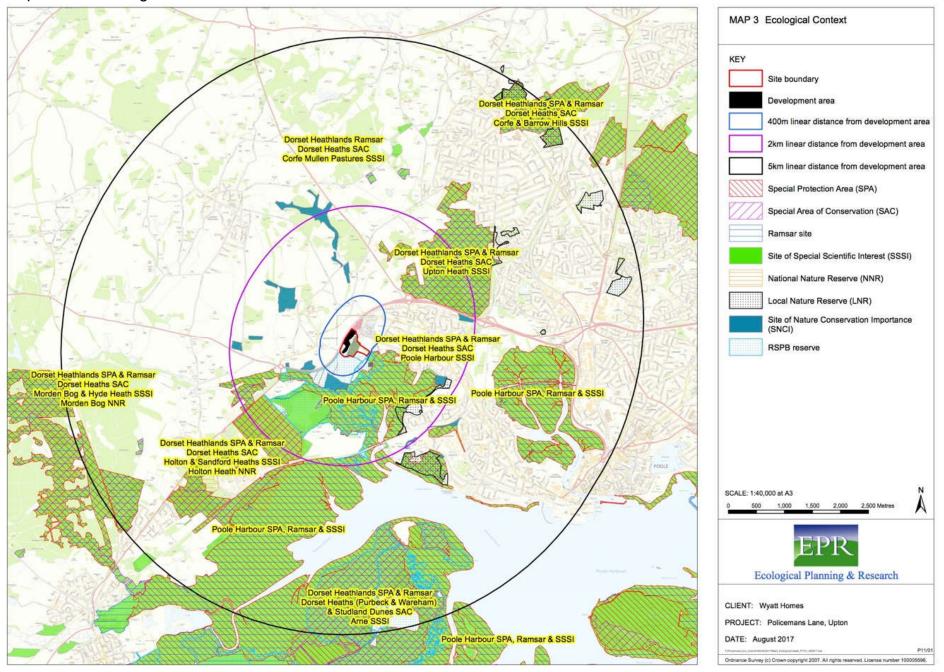


Map 1

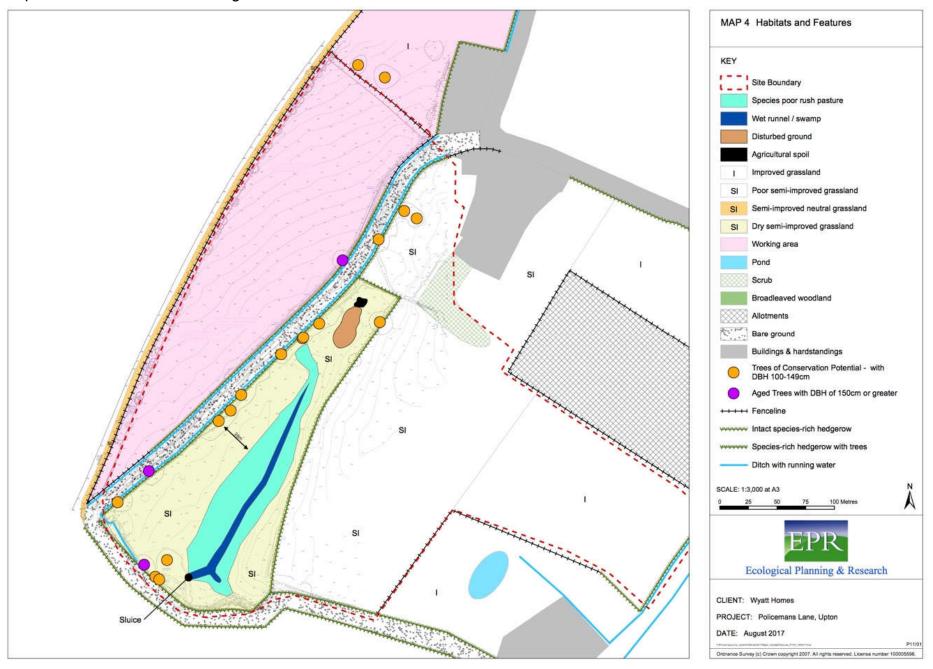
# Map 2 Land Budget



# Map 3 Ecological Context



# Map 4 Habitats and Ecological Features



# 1. KEY LEGISLATION

# 1.1 Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010<sup>i</sup> (known as the "Habitats Regulations") transpose the European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive") into UK legislation. The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) Regulations 2012.<sup>ii</sup>

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which form part of the Natura 2000 network of protected areas across Europe. The Regulations also prohibit certain actions relating to European Protected Species (EPS), which include *inter alia* Hazel Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, European Otter *Lutra lutra* and all native species of bat.

Further information on SPAs, SACs and European Protected Species is provided in the relevant sub-sections of this Note.

# 1.2 Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981<sup>iii</sup> is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table 1**) in the section of this Note dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.
Schedule 9a	Allows environmental authorities to issue species control orders to landowners, obliging them to control/eradicate invasive and/or non-native species.

**Table 1**: Key Schedules of the Wildlife & Countryside Act 1981 (as amended)

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Note.

# 1.3 Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000<sup>iv</sup> have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

# 1.4 The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006<sup>v</sup> was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England. This was published in 2007 and is commonly referred to as the "S41 list". Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on Species and Habitats of Principal Importance is provided in the relevant sub-sections of this Note.

# 1.5 The Water Environment (Water Framework Directive) Regulations 2003

Currently, the overriding legislation relating to freshwater is the EU Water Framework Directive (WFD), which was enacted into law in England and Wales through the Water Environment Regulations<sup>vi</sup> in 2003. The Directive sets out objectives to deliver a better water environment based upon achieving a 'good status' for freshwater bodies. The new concept of 'good status' is a more rigorous measure of environmental quality than previous measures, which now takes into account not just the chemical status but also the ecological health and the extent of artificial physical modification to rivers.

The WFD is based upon the concept of protecting water through the management of river basin districts (RBDs), and requires the implementation of River Basin Management Plans (RBMPs). Regulation 17 of the WFD requires local authorities to 'have regard' of the RBMP when making planning decisions, for example through the granting of planning permission with appropriate planning conditions and/or obligations. These could require measures to be implemented (e.g. Sustainable Urban Drainage Systems (SUDS), grey water recycling etc.) or funds to be provided for habitat enhancement schemes.

The WFD also affects planning policy through the implementation of Programmes of Measures for each river basin district. This involves bringing together funding from various sources and co-ordination of the activities of organisations with an interest in the use of land and water, including developers.

# 2 SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory (legal) protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

# 2.1 Statutory Sites: International

# 2.1.1 Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2010 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in Great Britain.

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the European Habitats Directive 92/43/EEC . SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the European Birds Directive 2009/147/EC. Together, SACs and SPAs make up the Natura 2000 network of Sites of Community Importance throughout Europe. They are often referred to as "European sites".

Ramsar sites are wetlands of international importance and are, as a matter of national planning policy, subject to the same strict protection as SACs and SPAs. The majority of terrestrial Ramsar sites in England are also notified as SPAs and/or Sites of Special Scientific Interest (SSSIs).

# Any plan or project considered likely to affect a SAC, SPA or Ramsar site must be subject to a Habitats Regulations Assessment (HRA), as set out under Regulation 61 (and Regulation 102 in respect of Land Use Plans) of the Habitats Regulations 2010 (as amended).

The local authority (or other 'competent authority') carries out the HRA, but the onus is on the developer to provide the necessary information to inform this process, usually in the form of a report.

Under the Habitats Regulations 2010 (as amended), the competent authority must determine in the first instance whether a proposed development is likely to have a significant effect on the European or Ramsar site, either alone or in combination with other plans and projects. This stage of the HRA process is known as 'screening'.

If a likely significant effect cannot be precluded (screened out) on the basis of objective information, the competent authority must undertake an 'Appropriate Assessment' to fully assess these implications against the site's conservation objectives. A precautionary approach must be taken with respect to determining whether or not there would be a significant effect, and the appropriate nature conservation body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed, the competent authority may not undertake or authorise the plan or project until they have established (based on the conclusions of the Appropriate Assessment)

that the activity will not adversely affect the integrity of the European or Ramsar site. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

# 2.2 Statutory Sites: National

Nationally important sites include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). A development proposal that is likely to affect a nationally important site will be subject to special scrutiny by the local planning authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites, as set out in Section 11 of the National Planning Policy Framework (NPPF).

# 2.2.1 Sites of Special Scientific Interest

The Wildlife and Countryside Act 1981 (as amended) and the CRoW Act 2000 provide the primary legal basis for the protection of Sites of Special Scientific Interest (SSSIs). These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity.

# 2.2.2 National Nature Reserves

National Nature Reserves (NNRs) are declared under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. NNRs represent the very best parts of England's SSSIs. The majority of NNRs also have European nature conservation designations.

# 2.3 Statutory Sites: Regional/Local

# 2.3.1 Local Nature Reserves

Local Nature Reserves (LNRs) are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

# 2.4 Non-Statutory Sites

# 2.4.1 Local Wildlife Sites

Local planning authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites', 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local and structure plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of

sites as set out above. Further information is typically provided in local level planning policy.

# 2.5 Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

# 2.5.1 Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Although these habitats are not legally protected, the NPPF, Government Circular 06/05, good practice guidance and the NERC Act place a clear responsibility on planning authorities to further the conservation of these habitats. **They can be a material consideration in planning decisions,** and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

The S41 list also includes species as explained below under 'Species of Principal Importance in England'.

# 2.5.2 Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

# 2.5.3 Hedgerows

Hedgerows can act as wildlife corridors that are essential for migration, dispersal and genetic exchange of wild species. Hedgerows that qualify as a Habitat of Principal Importance under S41 of the NERC Act 2006 are a material consideration in the planning system.

Under the Hedgerow Regulations 1997, it is an offence to remove a hedgerow without submitting a notice to the Local Planning Authority and waiting for their decision. The Regulations are aimed at countryside hedges and do not apply to hedges around private dwellings or where planning permission has been granted for a project that includes hedge removal. Hedgerows that satisfy wildlife, archaeological, historical or landscape criteria qualify as 'important' under the Regulations. If a hedgerow is not important, the Local Planning Authority may not prevent its removal; however, Local Planning Authorities are required under the Regulations to protect and retain Important hedgerows unless satisfied that the circumstances justify its removal.

# 2.5.4 Tree Preservation Orders

Tree Preservation Orders (TPOs) may be declared under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999 to protect individual trees and woodlands from development and cutting. TPOs are designed to preserve amenity or landscape conservation. The important of trees as

wildlife habitat may be taken into account, but alone is not sufficient to warrant a TPO. For this reason, TPOs do not fit comfortably under the remit of nature conservation and are generally dealt with by an arboricultural consultant rather than an ecologist. Further guidance on TPOs in relation to development is available from the Department for Communities and Local Government<sup>vii</sup>.

# 2.5.5 Ancient Woodland & Veteran Trees

Ancient woodlands are defined as areas continuously wooded for at least 400 years. Even an ancient wood which has been replanted may still have remnants of ancient woodland wildlife and historical features and has potential to be restored. Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are advised under the NPPF and National Planning Practice Guidance (NPPG) not to grant planning permission for any development that would result in the loss or deterioration of ancient woodland or veteran trees unless the need for, and benefits of, the development outweigh the loss. Local Planning Authorities must take into account Natural England and the Forestry Commission's *Standing Advice for Ancient Woodland and Veteran Trees.*<sup>viii</sup>

# 2.5.6 Surface & Ground Waters

Surface waters (including flowing and standing water) and ground water can directly and indirectly impact upon the conservation of nature.

Guidance on pollution prevention is hosted on the Government's website<sup>ix</sup> and focuses on regulatory requirements. This covers topics including the prevention of pollution if you are a business, managing business and commercial waste, oil storage, working on or near water, and managing water on land. Careful planning and the application of these guidelines can help reduce the risk of construction and maintenance work causing pollution to surface and ground waters. Some activities with the potential to impact watercourses or groundwater may require consent under the Water Resources Act 1991.

# 2.5.7 Water Resources Act (WRA) 1991

Under the WRA<sup>x</sup> there is strict regulation of discharges (including sediment, chemicals, nutrients) to rivers, lakes, estuaries and groundwaters. It also aims to ensure that polluters cover the costs associated with pollution incidents.

# **3** SPECIES PROTECTION

#### 3.1 Legally Protected Species

The species listed in the following subsections are protected by law in England. When preparing a planning application, it is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by a proposed development. This can best be achieved by undertaking surveys early in the planning process. Avoidance and/or mitigation measures may be required to address any predicted impacts upon protected species and may necessitate a licence. The Government website offers standing advice from Natural England and DEFRA which can be applied to planning applications that affect protected species.<sup>xi</sup>

#### 3.1.1 Bats

There are 18 species of bat in the UK, seven of which are Species of Principal Importance in England. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitats Regulations 2010 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species mitigation licence from Natural England.

# 3.1.2 Great Crested Newt

The Great Crested Newt *Triturus cristatus* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2010 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Great Crested Newts;
- Intentionally, deliberately or recklessly disturb Great Crested Newts in such a way as to be likely to significantly affect the ability of any significant group of Newts to survive, breed, or rear or nurture their young or the local distribution of or abundance the species;

- Intentionally or recklessly damage, destroy or obstruct any place used by Great Crested Newts for shelter or protection, or intentionally or recklessly disturb a Great Crested Newt whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Great Crested Newt; and
- Possess, sell or transport a Great Crested Newt, or anything derived from it.

Development proposals affecting the Great Crested Newt require a European Protected Species mitigation licence from Natural England.

Intentional or reckless behaviour leading to an offence being committed as detailed above may result in maximum penalties of:

- Up to £5,000 fine per offence committed;
- A custodial sentence of up to six months instead of, or in addition to, a fine; and/or
- Items of equipment involved in committing the offence may be seized and detained.

In addition to the above penalties, it is likely that any EPS mitigation licence obtained for a site will be revoked whilst any wildlife offence is investigated. This will lead to immediate temporary and, depending on investigation outcomes, possible permanent restrictions on site works, as well as associated cost.

# 3.1.3 Hazel Dormouse

The Hazel Dormouse *Muscardinus avellanarius* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2010 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Dormice;
- Intentionally, deliberately or recklessly disturb Dormice in such a way as to be likely to significantly affect the ability of any significant group of Dormice to survive, breed, or rear or nurture their young or the local distribution of or abundance of the species;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Dormice for shelter or protection (whether occupied or not) or intentionally or recklessly disturb a Dormouse whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Dormouse;
- Possess or transport a Dormouse (or any part thereof) unless under licence; and
- Sell or exchange Dormice.

Development proposals affecting the Dormouse require a European Protected Species mitigation licence from Natural England.

# 3.1.4 European Otter

The European Otter *Lutra lutra* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2010 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Otters;
- Intentionally, deliberately or recklessly disturb Otters in such a way as to be likely to significantly affect the ability of any significant group of Otters to survive, breed, or rear or nurture their young or the local distribution of or abundance of Otters;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Otters for shelter or protection (whether they occupied or not) or intentionally or recklessly disturb an Otter whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of an Otter;
- Possess or transport an Otter (or any part thereof) unless under licence; and
- Sell or exchange otters.

Development proposals affecting the Otter require a European Protected Species licence from Natural England.

# 3.1.5 Reptiles

All four of the widespread British species of reptile, namely the Common Lizard *Lacerta vivipara*, Slow-Worm *Anguis fragilis*, Grass Snake *Natrix natrix* and Adder *Vipera berus*, are Species of Principal Importance in England. They are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife & Countryside Act 1981 (as amended) from intentional killing, injury and trade. The habitat of the four widespread reptiles is not legally protected; however the replacement of habitat lost through development may be required through the planning system. Mitigation for these species is not subject to licensing by Natural England but should nonetheless be planned to minimise disturbance and potential project delays.

The Smooth Snake *Coronella austriaca* and the Sand Lizard *Lacerta agilis* are the rarest reptile species in Britain. In addition to the protection that is afforded to the widespread species of reptile listed above, these species are protected further under Schedule 5 (Sections 9.4b and 9.4c) of the Wildlife and Countryside Act 1981 (as amended). They are also European Protected Species protected under the Habitats Regulations 2010 (as amended). This legislation makes it an offence to:

• Intentionally or deliberately kill, injure or capture Sand Lizards or Smooth Snakes;

- Intentionally, deliberately or recklessly disturb Sand Lizards or Smooth Snakes in such a way as to be likely to significantly affect the ability of any significant group of Sand Lizards or Smooth Snakes to survive, breed, or rear or nurture their young or the local distribution or abundance of either species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Sand Lizards or Smooth Snakes for shelter or protection, or intentionally or recklessly disturb a Sand Lizard or Smooth Snake whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Sand Lizard or Smooth Snake;
- Keep, sell, or exchange Sand Lizards or Smooth Snakes or their eggs; and
- Deliberately take or destroy their eggs.

Development proposals affecting Smooth Snake or Sand Lizard require a European Protected Species mitigation licence from Natural England.

# 3.1.6 Water Vole

The Water Vole *Arvicola terrestris* is a Species of Principal Importance in England. The legal protection for Water Voles was increased in 2008 to fully cover the species under Section 5 of the Wildlife and Countryside Act 1981 (as amended). The legislation makes it an offence to:

- Intentionally or deliberately (but not recklessly) kill, injure or take Water Voles;
- Intentionally, deliberately or recklessly damage, destroy or obstruct access to any structure or place used by Water Voles for shelter or protection;
- Intentionally, deliberately or recklessly disturb Water Voles whilst they occupy a structure or place used for that purpose;
- Sell Water Voles or offer or expose for sale or transport for sale; and
- Possess or control live or dead Water Voles or derivatives.

Developers who wish to maintain, build on or alter areas used by Water Voles must ensure that unnecessary damage is avoided and all reasonable steps are taken to minimise impacts on Water Voles and their burrows. The Wildlife and Countryside Act provides a defence against the offences listed above, provided the action is the incidental result of an otherwise lawful operation and could not reasonably have been avoided. A licence to displace Water Voles must be obtained from Natural England before conducting any activities involving displacement operations.

# 3.1.7 Birds

49 species of bird are listed as Species of Principal Importance in England. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) affords extra protection for certain species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependent young, constitutes an offence.

# 3.1.8 European Badger

The Protection of Badgers Act 1992 offers considerable protection to both badgers and badger setts. This legislation was enacted to protect the European Badger *Meles meles* against baiting and not as a means of species recovery as it is common in England. It is an offence to cruelly treat, kill or take Badgers, but it is also illegal to intentionally or recklessly damage or disturb a badger sett while it indicates signs of current use by a Badger.

The Government website contains information to help developers and their proponents avoid sett disturbance and to identify setts that are in current use<sup>xii</sup>. It is important to maintain adequate foraging territory in development proposals affecting badgers as the destruction or severance of large areas of foraging territory could also be taken to include habitat loss. Licences to disturb Badgers and their setts in respect of development may be issued by Natural England provided provisions are made to minimise disturbance.

# 3.1.9 Wild Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

# 3.2 Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set out in the legislation, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

# 3.2.1 European Protected Species Mitigation Licences

A European Protected Species mitigation licence (EPSL)<sup>xiii</sup> is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitats Regulations 2010 (as amended); including *inter alia* all species of bats, Hazel Dormouse, Great Crested Newt and European Otter. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

- The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- 2. There is no satisfactory alternative; and

3. The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

# 3.2.2 Badger Licences

Licences to disturb Badgers and their setts in respect of development may be issued by Natural England<sup>xiv</sup>, provided provisions are made to minimise disturbance.

# 3.3 Species of Principal Importance in England

943 species have been identified as being of Principal Importance for the conservation of biodiversity in England under Section 41 (S41) of the NERC Act 2006. The S41 list includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier). While many of these species may not be legally protected (some are protected under the legislation described above), there is a clear responsibility on local planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species, and to enhance their habitats where possible. Additional guidance to developers is typically provided in local level planning policies.

# 3.4 Invasive Non-Native Species

There are a number of species not ordinarily resident in the UK, such as Japanese Knotweed. Those which pose a significant threat, if uncontrolled, to our ecology and economy are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). For an offence to be committed, a species must be released or allowed to escape into the wild. For example, if a plant listed on Schedule 9 is not adequately controlled by a land owner, once they are aware that it is present, and the species is allowed to spread into adjoining areas, then this could constitute an offence.

# 4 PLANNING POLICY & GUIDANCE

This section set out the main planning policy and government guidance that relates to the conservation of nature at all levels of government.

# 4.1 National Level

#### 4.1.1 National Planning Policy Framework

The National Planning Policy Framework(NPPF)<sup>xv</sup> sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 14), with a requirement to consider its economic, social and environmental dimensions. This does not apply where development requiring Appropriate Assessment under the Habitats Directive is being considered, planned or determined (paragraph 119).

Section 11 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and replaces the preceding *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation.* It specifies that when determining planning applications, local planning authorities should aim to **conserve and enhance biodiversity** by applying the following principles:

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including **ancient woodland** and the loss of aged or **veteran trees** found outside ancient woodland;
- development proposals where the primary objective is to conserve and enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged.

In the case of SSSIs and irreplaceable habitats, exceptions *may* be made if it can be clearly demonstrated that the benefits of the development, at this particular site, outweigh the costs in terms of loss or adverse impacts.

Section 11 also specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

# 4.1.2 Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05<sup>xvi</sup> to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of

being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence or otherwise of protected species, and the extent to which thy may be affected by the proposed development, must be established before permission is granted;
- Given 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.

#### 4.1.3 DCLG Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG)<sup>xvii</sup> was launched by the Department for Communities and Local Government (DCLG) as a web-based tool in March 2014 to accompany the NPPF. The webpages are set out in a Q&A format. The PPG consolidates and supersedes existing guidance on a range of planning-related topics, clarifies some of the statements made in the NPPF, and provides links to relevant legislation and other sources of advice.

The Guidance outlines a number of important principles in relation to nature conservation and biodiversity, including the need to integrate biodiversity into all stages of the planning process and to consider opportunities to enhance biodiversity and contribute to the Government's commitments and targets set out in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services.* 

The guidance also requires that "an ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate", and recommends that "local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development."

#### 4.1.4 Other guidance

In addition to the Planning Practice Guidance, various other forms of guidance and standards are available in relation to biodiversity and the development process. Of particular note is *British Standard BS42020:2013 Biodiversity* – Code of practice for planning and development,<sup>xviii</sup> published in August 2013, which replaces *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom.* 

This document is designed to complement the NPPF and is aimed at organisations concerned with ecological issues throughout the planning process, including local

authorities, developers, planners and ecological consultants. It sets out step-bystep recommendations on how to incorporate biodiversity considerations at all stages of the planning process, with a focus on the provision of consistent, high quality and appropriate ecological information, effective decision making, and high standards of professional conduct and competence.

#### 4.2 Local Level

The most relevant policy from Purbeck District Councils Adopted Local Plan (2012) is:

# Policy BIO: Biodiversity and Geology

Purbeck's biodiversity and geodiversity will be protected, managed and enhanced through:

- The promotion of Strategic Nature Areas as identified on the Nature Map (Map 3);
- Efforts to enhance, link and create habitats to enable adaptation to climate change;
- Projects associated with the Purbeck Nature Improvement Area and the achievement of 'Wild Purbeck';
- Encouraging development proposals to incorporate biodiversity having regard to District design guidance;
- Maintaining regionally important geological and geomorphological sites (RIGS) for their scientific and educational value; and
- Allowing natural processes to continue along the coast in order to protect any wildlife and geological features maintained by active erosion, as reflected in the Shoreline Management Plan policy. New Development New development:
- Will need to ensure that there are no adverse effects upon the integrity of European protected sites (SPA, SAC, Ramsar, possible SAC, potential SPA).
- Within the vicinity of areas that support nationally significant numbers of Annex 1 bird species (nightjar and woodlark), undertake a risk based approach to ensure that there is no significant adverse effect upon these species and their habitats.
- Will need to ensure that there are no adverse impacts upon SSSI, for example an indirect effect of disturbance from increased public access.
- Will need to demonstrate that it avoids significant adverse impacts upon Sites of Nature Conservation Interest (SNCI), National Nature Reserves (NNR), Local Nature Reserves (LNR), Ancient Woodland, aged or veteran trees, wetland interests (for example, watercourses, ponds, reedbeds), and Habitats of Principal Importance. Any significant adverse impacts on these sites and features which cannot be avoided through location on an alternative site, must be adequately mitigated, or, as a last resort, compensated.

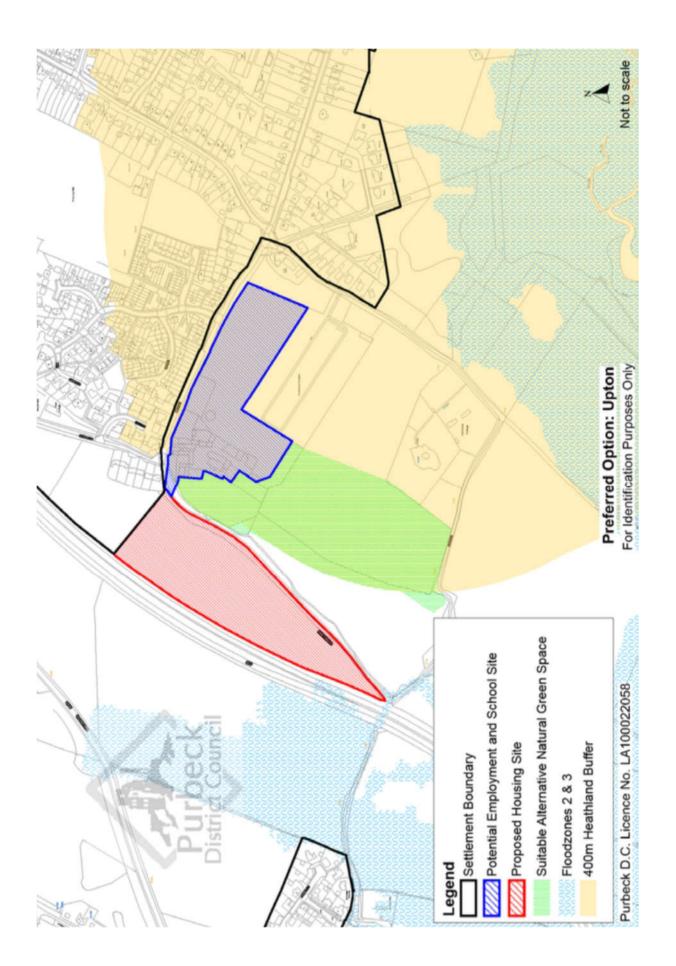
• Should incorporate any opportunities for biodiversity in and around the development In considering the acceptability of proposals, the Council will assess their direct, indirect and cumulative impacts relative to the significance of the nature conservation value, and balance them against other sustainable development objectives.

Purbeck District Council is in the process of reviewing their adopted plan and in 2016 published a partial review. The policy for Site 7 (Policeman's Lane at Upton) is relevant:

#### Site 7 - Upton

The Council's preferred option is for this site to provide around 100 homes. It would adjoin an existing site to the north, which is already allocated through the PLP1 for 70 homes......

Natural England has confirmed that open space (SANG) could be delivered using the existing SANG shown on the map [below]. This SANG has been designated to mitigate the impacts of the already allocated Policeman's Lane site and it has sufficient capacity to mitigate the impacts of this additional site.....



# 5 BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to "promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets" (paragraph 117). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level.

An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

#### 5.1 National level

The UK Biodiversity Action Plan 2007 (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framework<sup>xix</sup>* and individual national biodiversity strategies. The UK Framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010.

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*<sup>xx</sup> is the national biodiversity strategy, which has the stated mission "(...)to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people." In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets out objectives relating to terrestrial and marine habitats and ecosystems, species and people.

#### 5.2 Local level

Local Biodiversity objectives are set out in the 2003 Dorset Biodiversity Strategy. This identifies habitats and species which are important both at the national and local level.

# **6 REFERENCES**

<sup>1</sup> The Conservation of Habitats and Species Regulations 2010. Available from: <u>http://www.legislation.gov.uk/uksi/2010/490/contents/made</u>

<sup>1</sup> The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from: <u>http://www.legislation.gov.uk/uksi/2012/1927/contents/made</u>

<sup>1</sup> The Wildlife and Countryside Act 1981. Available from: <u>http://www.legislation.gov.uk/ukpga/1981/69/contents</u>

<sup>1</sup> The Countryside and Rights of Way (CRoW) Act 2000. Available from: <u>http://www.legislation.gov.uk/ukpga/2000/37/contents</u>

<sup>1</sup> The Natural Environment and Rural Communities Act 2006. Available from: <u>www.legislation.gov.uk/ukpga/2006/16/contents</u>

<sup>1</sup> The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003. Available from: <u>http://www.legislation.gov.uk/uksi/2003/3242/contents/made</u>

<sup>1</sup> Office of the Deputy Prime Minister (2000). Tree Preservation Orders: A Guide to the Law and Good Practice. Available from:

http://www.communities.gov.uk/publications/planningandbuilding/tposguide

<sup>1</sup> Natural England and the Forestry Commission (2014). Standing Advice for Ancient Woodland and Veteran Trees. Available from: <u>https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences</u>

<sup>1</sup> Environment Agency (2014). Pollution Prevention Guidance. Available from: <u>https://www.gov.uk/government/collections/pollution-prevention-guidance-ppg</u>

<sup>1</sup> Water Resources Act 1991. Available from: <u>http://www.legislation.gov.uk/ukpga/1991/57/contents</u>

<sup>1</sup> Natural England and DEFRA (2016). Protected species: how to review planning applications. Available from: <u>https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications</u>

<sup>1</sup> Natural England and DEFRA (2015). Badgers: Surveys and mitigation for development projects. Available from: <u>https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects</u>

7 <sup>1</sup> NATURAL ENGLAND (2015). EUROPEAN PROTECTED SPECIES: APPLY FOR A MITIGATION LICENCE. AVAILABLE FROM: <u>HTTPS://WWW.GOV.UK/GOVERNMENT/PUBLICATIONS/EUROPEAN-PROTECTED-SPECIES-APPLY-FOR-A-MITIGATION-LICENCE</u>

<sup>1</sup> Natural England (2015). Badgers: licence to interfere with setts for development purposes. Available from: <u>https://www.gov.uk/government/publications/badgers-licence-to-interfere-with-setts-for-development-purposes</u>

<sup>1</sup> DCLG (2012). *National Planning Policy Framework*. Available from: <u>https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/6077/21169</u> <u>50.pdf</u> <sup>1</sup> ODPM (2005). *Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System.* Available from: <u>http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity</u>

<sup>1</sup> DCLG (2014). Planning Practice Guidance. Available from: <u>http://planningguidance.planningportal.gov.uk/</u>

<sup>1</sup> The British Standards Institution (2013). BS42020:2013 Biodiversity – Code of practice for planning and development. Available from: <u>http://shop.bsigroup.com/ProductDetail/?pid=00000000030258704</u>

<sup>1</sup> JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *The UK Post-2010 Biodiversity Framework*. Available from: <u>http://jncc.defra.gov.uk/pdf/UK\_Post2010\_Bio-Fwork.pdf</u>

<sup>1</sup> DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <u>https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services</u>

Dorset Biodiversity Partnership (2003) Dorset Biodiversity Strategy. Available from: https://www.dorsetforyou.gov.uk/media/185863/AD.ENV1-Dorset-Biodiversity-Strategy/pdf/AD.ENV1\_Dorset\_Biodiversity\_Strategy.pdf The following statement has been prepared by Purbeck District Council, Natural England and Wyatt Homes to set out areas of agreement in relation to the mitigation of European protected sites from any potential adverse effects of development of 70 dwellings at Policeman's Lane, Upton

At a meeting on 2 March 2012 additional detail was agreed between the parties to address the requirement for the development to avoid harm to European protected sites including heathland and Poole Harbour. Parties agreed on two aspects:

(1) Suitable Alternative Natural Green Space (SANGS) to mitigate visitor impacts to Dorset Heathlands SPA and Ramsar and Dorset Heaths SAC and Poole Harbour SPA, Ramsar

(2) Mitigating harm caused by nitrates in Poole Harbour SPA, Ramsar

(1) Parties agreed to the principle of providing SANGS to the south of Policeman's Lane. The Council will amend the Core Strategy as follows:

Policy NE:

- "New public open space at French's Farm and screening/signage on the fringe of Poole Harbour to mitigate potential impact upon nearby heathland in accordance with para 7.4.8;"

Addition of the following text to para 7.4.8:

"The SANGS comprises fields to the south of the housing site south of Frenches Farm between Watery Lane and Slough Lane which extend to approximately 4.7 hectares. The principal point of access should be to the south east of the housing development adjacent to Frenches Farm. There should be second access on Slough Lane to the south of the SANGS. There should be a third access from Slough lane to the east of the SANGS and south of the allotments. This path should be at least 6 metres in diameter screened on the northern side by the allotments and open on the southern side, possibly through the use of small wooden posts to demarcate the edge of the path. If the field is stocked with animals a livestock fence could be added at a later date. The access should be wide to allow a dog to be taken off the lead. Ensure paths have a semi natural feel (e.g. mown grass), but the use of an all weather surface around the principal access by Frenches Farm will encourage dog walking all year. A small informal car park should be provided by Frenches Farm with space for 2-3 cars. The SANGS should deflect people away from heathland and Poole Harbour to the south east of Upton to ensure there is not an increase in visits and associated disturbance to nesting birds. The use of screening, a ditch or signage could help in diverting people off the track to the sewage treatment works and into the SANGS. Views of Poole Harbour should be maintained if possible. A pond could be provided in the south west corner of the SANGS providing interesting destination for walks."

Wyatt Homes has prepared a masterplan for the SANGs, which forms part of this statement of common ground. It has also been agreed in principle by Council officers and Natural England

(2) The parties agreed that the proposal should be nitrogen neutral, thereby not having adverse effect from nitrates leaching into Poole Harbour. Sufficient land will be taken out of agricultural use by the housing development and the SANGS to offset the increase in nitrates from sewerage resulting from the 70 dwellings. Natural England have used standard levels of N2 arising from residential properties of 1.2kg/N/PE/yr and a standardised N reduction figure available in the draft Strategy for Managing Nitrogen in the Poole Harbour Catchment to 2035 (23 Jan 2012, v10). It has not yet been signed off by Natural England and the Environment Agency. Natural England advise that the applicant will be required to secure more accurate details of the Nitrogen diverted which are specific to the land put

forward, as detailed applications are brought forward. Natural England has calculated that 7ha of intensive grassland becoming 7ha of rough pasture/woodland/housing would equate to a reduction in N2 equivalent to 55 to 72 dwellings.

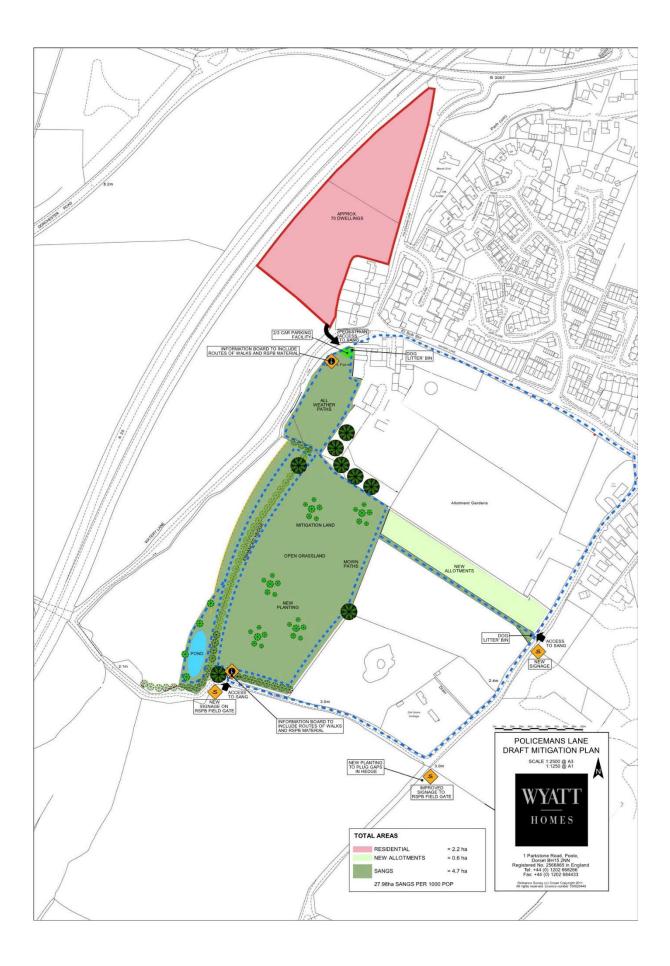
The following changes will be made to the Core Strategy: Add to Policy NE under the bullets for the Policeman's Lane housing allocation:

"Mitigation measures that will ensure the development including the SANGS are nitrogen neutral"

Add to para 7.4.8. Addressing Impacts on European protected habitats and wildlife as follows:

"(iii) ensuring new development is nitrogen neutral" and "Early indications are that the change of use of agricultural land to provide the settlement extension and the accompanying SANGs will offset the increase in nitrates from sewerage resulting from new dwellings, thereby ensuring the development is nitrogen neutral with no adverse harm upon water quality in Poole Harbour."

Purbeck District Council. Core Strategy DPD Examination. April 2012



# Eastern parcel, Policeman's Lane: Appendix 3

#### Note on Vegetation Survey and Conservation Status

P H and K A Colebourn of EPR visited the eastern parcel shown on **Map 4**, on 4 and 18 July 2017. The vegetation of the field was surveyed, and informal quadrats taken from 4 identified homogenous communities. The purpose was to identify any Priority Habitats and assess their botanical value and conservation status. Whilst the survey was done within the optimum flowering period, it is very unlikely that the species list is exhaustive.

# Topography, Drainage, and Soils

As can be seen from **Map 4** the parcel occupies a small valley, which forms the floodplain of a significant runnel arising in the north of the enclosure, south west of French's Farm, and leads beneath Slough Lane towards the coastal marsh at the edge of Poole Harbour Special Protection Area and Ramsar Site.

The fields to the west, across Watery Lane, and east towards the Qoins land, are at a somewhat higher elevation. The topographical survey shows that the slope down to the runnel on its west is shallow, whereas that on the east is steeper. Outside the field on its west, is a drainage ditch along the edge of Watery Lane, which appears to be somewhat below the level of the western edge of the meadow.

The soils are sandy clay, and increasingly black and humose both towards the south and towards the centre of the watercourse, where the soil is deep and organic. Even in much of the drier areas there is a humic content to the sandy soils, suggesting regular if infrequent flooding, and it is the extent of this that probably defined the ancient management unit.

#### History and Boundaries

The old maps copied at the end of this note show that Watery and Slough Lanes (which form the western and southern borders of the field respectively) are clearly shown on the original Ordnance Survey Drawing by Charles Budgen, dated 1805 (Map A), 1811 published O.S (Map B), and 1<sup>st</sup> Edition 25" O.S. map, of 1886 (Map D). They are likely to have been medieval trackways used to drive cattle from Lytchett Minster to the marshes around Lytchett Bay. They have changed remarkably little over the intervening years.

On the 1936 Land Utilisation Survey (Map E) this field, and the larger one to the east, were pasture or meadow. The 1940's air photo (Map F) shows that most of the land in French's Farm was ploughed during the war, but this wet field remained as grassland. This is significant because it means that the vegetation and soils were not disturbed by wartime ploughing. The War Agricultural Boards required the ploughing of meadows wherever possible for arable food production. Any field that escaped this process is very likely to have been considered impossible to plough.

#### North-West

The north-west boundary of the parcel, along the eastern edge of Watery Lane, is formed of an ancient hedgebank and ditch. The trees flagged up on **Map 4** because their diameter at

breast height (dbh) is greater than 1.0m, are clearly shown individually on the 1<sup>st</sup> Edition 25" O.S. map, of 1886 (Map D).

In fact most of this boundary is very strongly treed, with a large number of Pedunculate Oak, some of which are very old standards, and some of which are apparently re-growth from coppice – although also now very old. Blackthorn, Hazel, and Hop and Brambles, are also present.

Using Natural England's on-line guidance on the Management of Veteran Trees, (<u>http://publications.naturalengland.org.uk/publication/75035</u>) one of the aged oaks is likely to be of conservation interest and 9 more are potentially valuable. The location of these trees is shown on **Map 4**. Some of the aged oaks have suffered die back, but have revived, and have thereby become 'stag-headed' – a feature typical of aged oaks that in this instance probably results from changes in soil water levels.

These trees provide abundant dead wood for invertebrates, holes providing niches for birds and bats to shelter, and continuity for lower plants, and are therefore potentially of high conservation value. Further survey is needed to assess this, but it is likely that they are of at least Local value.

#### South-West

The southwestern boundary and ditch along Slough Lane also contains numerous large Pedunculate Oaks, Blackthorn and much English Elm *Ulmus procera*, and these species have colonised the field margin. The old maps show that there was a small conifer plantation along the central part of this boundary, where the runnel emerges under the lane, but no conifers remain. Again, the aged oaks are shown on the 1886 map. One is greater than 1.5m dbh and 3 others are greater than 1.0m.

The hedge and ditch vegetation includes Great Willowherb, Hemlock Water-dropwort *Oenanthe crocata*, and Wild Plum. To the south of Slough Lane is a large field under RSPB management with extensive stands of Corn Marigold *Glebonis* (*Chrysanthemum*) segetum (Red Data, GB and England: listed as Vulnerable) and other arable weeds such as *Anchusa arvensis*. It is not clear whether they are of natural origin or have been sown.

# East

The long east boundary is also a bank, shown on the earliest detailed map of 1886, with an abundance of English Elm regeneration, signifying that this is probably an anciently planted hedge line. At its northern end is an aged Oak of almost 1.5m dbh, which was also plotted on the 1886 25" map.

# North

The short northern boundary, although somewhat disturbed, has a number of semi-mature Ash. This boundary also appears on the 1<sup>st</sup> Edition O.S. 6" map, ca 1880.

# Vegetation

The parcel is a pasture, recently grazed by cattle. The most prominent feature of the vegetation is the large central flushed area. South of the disturbed dry ground near the gate

from French's Farm, the wetland forms a runnel and swamp with standing water still present in July. Extensive areas of rush pasture, flank the runnel and swamp and clearly drain into it. This grades into dry grasslands nearer the higher field margins,

Four vegetation communities can be distinguished:

- 1. Rush Pasture
- 2. Runnel and Swamp
- 3. Dry Grassland
- 4. Disturbed dry grassland

#### 1. Rush Pasture

The rush pasture forms broad strips flanking the Runnel, and differs from the dry grassland (3, below) particularly in the presence, and in some areas preponderance, of Soft Rush *Juncus effusus*.

An informal quadrat **Q3** taken within the rush pasture community showed dominance by *Lolium perenne* and *Ranunculus repens*, but with abundant *Juncus effusus* tussocks, increasing in density towards the flush, and substantially increased cover of Crested Dogstail *Cynosurus cristatus*, Yorkshire Fog *Holcus lanatus* and the sedge *Carex hirta*, and with Lesser Spearwort *Ranunculus flammula* becoming frequent to abundant.

This vegetation conforms very well to National Vegetation Classification community **MG10** <u>Holcus lanatus - Juncus effusus rush-pasture</u>

#### 2. Runnel and Swamp

The wettest part of the field is the central depression that runs south-south-west, forming a runnel that gradually widens and deepens to form a swamp with open water. The MG10 rush pasture grades into this wet area, where the soils become much more organic.

The vegetation noted at quadrat **Q4** is dominated by Soft Rush *Juncus effusus*, with a smaller proportion of Sharp-flowered Rush *J. acutiflorus* and very occasional Jointed Rush *J. articulatus*. Lesser Spearwort *Ranunculus flammula* is prominent at the swamp margins in the tall vegetation, which includes much Greater Birds-foot Trefoil *Lotus pedunculatus* (*L.uliginosus*) and Square-stemmed St John's-wort *Hypericum tetrapterum*.

The open water central pools and hummocks support stands of Water-Plantain *Alisma plantago-aquatica*, Water Forget-me-not *Myosotis scorpioides*, Water Speedwell *Veronica anagallis-aquatica*, occasional Fools Watercress *Apium nodiflorum*, and Duckweed *Lemna minor*. There are large stands of Common Spike-rush *Eleocharis palustris*, with occasional Silverweed *Potentilla anserina* and Hairy Sedge *Carex hirta* present at the margins. Here, the edges of the swamp area are somewhat cattle-poached, but much of the central channel is undisturbed.

This swamp vegetation has affinities to NVC **S19** <u>Eleocharis palustris swamp</u>, although this is generally a more northern community in Britain, and to <u>NVC **S23**</u>, which is part of a pattern of stream margins, especially where accessible to stock, and is transitional to damp mesotrophic pastures such as the MG10 Rush-pasture.

# 3. Dry Grassland

The parcel's west and east flanks beyond the rush pasture comprise dry grassland on sandy clay. Prominent species include Rye Grass *Lolium*, White Clover *Trifolium repens* and Creeping Buttercup *Ranunculus repens*. Other species obvious in the sward include the grasses Yorkshire Fog *Holcus lanatus*, Sweet Vernal-Grass *Anthoxanthum odoratum*, Meadow Foxtail *Alopecurus pratensis* and Crested Dogs-tail *Cynosurus cristatus*, together with Hairy Sedge *Carex hirta*; and herbs: Creeping Thistle *Cirsium arvense*, Greater Plantain *Plantago major*.

These parts of the site show some evidence of past improvement and is probably a form of NVC **MG6** <u>Lolio-Cynosuretum</u>, transitional between the *Anthoxanthum* sub-community and the typical sub-community. This is the typical grassland community associated with intensive dairy farming.

# 4. Disturbed Dry Grassland

The extreme north of the parcel supports vegetation related to the other sandy clay grasslands at the east and west sides of the field, but there the community is more disturbed, the field has been obviously driven over, with some tipping of agricultural waste and small piles of spoil.

Here, an informal quadrat **Q1** recorded that *Lolium* and White Clover *Trifolium repens* were still dominants, but with *Plantago major* prominent in bare patches, and *Polygonum persicaria*, Creeping Buttercup and Creeping Thistle also frequent. Pineapple Weed, Ragwort and Nettle were also occasional, and other grasses recorded included Annual meadow grass *Poa annua* and Sweet vernal grass *Anthoxanthum odoratum*. This community is related to MG7e, in the Lolio-Plantigion.

# **Conservation Status**

# Integrity

This field appears to be the only undisturbed grassland in French's Farm. This conclusion is supported by aerial photographs, by the Land Utilisation Survey of 1936, and by topographical observation. The fields to the west of Watery Lane, in development Phases 1 and 2, and in the proposed SANG to the east, are quite different. They are at a higher level, and the 1940s aerial photograph clearly shows them as arable.

The boundaries include 12 aged oaks and many other mature and semi-mature trees, many of which were sufficiently well established in 1886 to have been mapped individually. The

field is an ancient small grassland – possibly a meadow originally - that, despite some agricultural improvement, retains vegetation communities that are still recognisably natural in origin, on diverse and undisturbed soils.

# Conservation Value

In terms of habitat status, *Parkland and Wayside Trees*, and both MG10 *Rush-pasture* and S19 *Eleocharis swamp* are Priority Habitats listed in the Dorset SNCI criteria as meriting consideration for designation as Sites of Nature Conservation Interest (SNCI). (Anomalously, MG10 Rush-pasture, of which this is a good, if not exceptional example, is not listed under 'Rush-pastures', but under Neutral grasslands).

These areas of the vegetation therefore stand to be assessed using the DERC criteria for selection of a Habitat as a Dorset SNCI (Ref).

# SNCI Criteria: Assessment Criteria

Para 2.1 of the Criteria states that;

"there will be a presumption to include semi-natural habitats where they have retained an appropriate structure and flora. Within these habitats the presence of Dorset Notable (DN) species, indicative of the relevant habitat, is to be expected, but there is not always a particular number of DN species used to justify the selection."

Para 2.2 further states that SNCI selection is to be on the basis of species present and their conservation value.

This is a complex site to assess. The ancient boundaries with their aged trees, the **MG10** rush pasture and **S19/S23** swamp have clearly retained an 'appropriate structure and flora'. However, on the basis of the present (incomplete) survey, the field appears not to support sufficient Dorset Notable species to meet SNCI criteria. Further work might well reveal more specialist invertebrate and plant species.

Contextually, we do not know how abundant this type of vegetation is around Lytchett Bay and the northern shores of Poole Harbour. However, as such sites are easily lost to mechanical drainage works, it is likely to be an unusual survival. The historic integrity of the field boundaries and the grassland they surround is also a consideration. Our preliminary evaluation is therefore that this field is of at least **District Value**.

# <u>Hydrology</u>

The sources of the water that has created and still feeds the central runnel are not known, but may be deduced. Initial inspection of the topography and composition of the soils and vegetation suggests it is from a combination of: local surface run-off; and lateral flow of water percolating through the lighter soils on the surrounding higher ground across the impermeable clay layer. It is possible that the location of French's Farm may reflect springs here.

An assessment of the current hydrological state of the runnel and swamp should be carried out to determine the extent of the catchment, which will inform an assessment of the likely effects of development, and any potential for mitigation. It is very likely that the rush pasture and swamp will decline in biodiversity value if the water supply is reduced.

We have not investigated the downstream conditions into which the swamp discharges, or the watercourse south of Slough Lane. However, it is clear from maps that the watercourse flows through the RSPB reserve into Poole Harbour SPA and Ramsar Site.

Any changes in the quality of water flowing out of the site should therefore be carefully assessed. It is likely that, during intensive dairy production, run-off from French's Farm was high in nutrients. There is an opportunity to reduce nutrient levels and restore both the rush pasture and swamp in the field and contribute to improvements in Poole Harbour.

**Maps and Copyright** Attached are extracts for your review, of various old maps. Some of these are Copyright, and copyright will have to be sought for use in a published report

#### **Vascular Plant Species List**

Quercus robur Ulmus procera Ilex aquifolium Prunus spinosa Fraxinus excelsior Corylus avellana Rubus Spp Pedunculate Oak English Elm Holly Blackthorn Ash Hazel Brambles

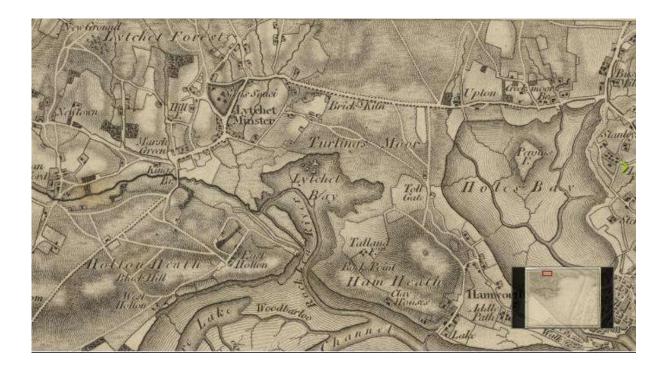
Polygonum persicaria Stellaria sp (not identified) Plantago major Matricaria discoidea Lotus uliginosus Galium palustre Alisma anagallis-aquatica Hypericum tetrapterum Carex hirta Trifolium repens Ranunculus flammula Ranunculus repens Myosotis aquatic Apium nodiflorum Senecio jacobaea Cirsium palustre Cirsium arvense Urtica dioica Sagina ? nodosa Epilobium Filago vulgaris (DN) Lemna minor Juncus effuses Juncus acutiflorus Juncus articulates

Alopecurus pratensis Anthoxanthum odoratum Cynosurus cristatus Holcus lanatus Lolium perenne Poa annua Redleas Chickweed Plantain Pineapple Weed Greater Birds-foot Trefoil Marsh Bedstraw Water-Plantain Square-stemmed St Johns-wort Hairy sedge White Clover Lesser Spearwort Buttercup Water Forget-me-not **Fools Watercress** Ragwort Marsh Thistle Creeping Thistle Nettle Pealwrort Willowherb Cudweed Least Duckweed Soft Rush Sharp-flowered Jointed Rush

Meadow Foxtail Sweet Vernal-grass Crested Dogs-tail Yorkshire Fog Rye grass Annual Meadow-grass

SNEW Ground P Lychet Porest. Clay Hill Bł Sytehed Beacon ox. Postines 6 0 m 0 Sum Threet Organ Ford Hurch Green Lytchet Menster A King rick Kiln 1. 4)? chel 02 Bay an Will Notten Tell Gale Hellen Talland Rock Point B ay

**Map A** Watery Lane on the OSD Sheet 66 (Surveyor Charles Budgen, 1805) The lane is part of an ancient interconnected system around Lytchett Minster.





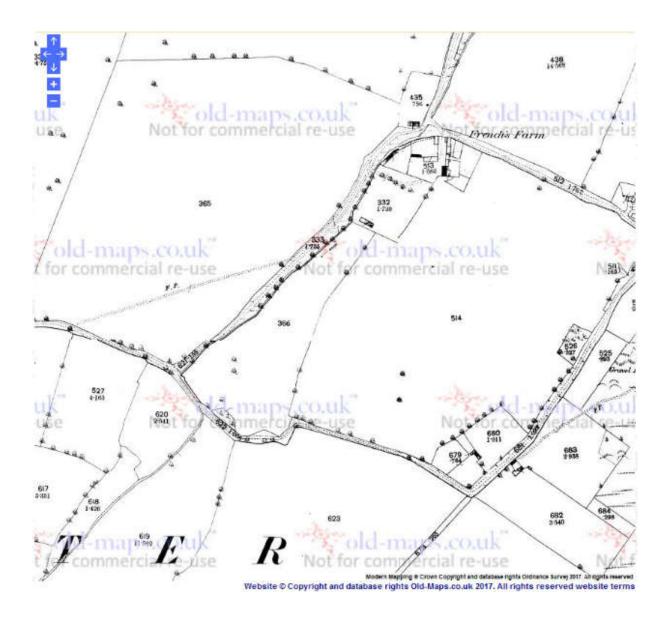
Map B Ordnance Survey Drawing Part Sheet 16 10 April 1811 published by Colonel Mudge.

#### Map C

Geology

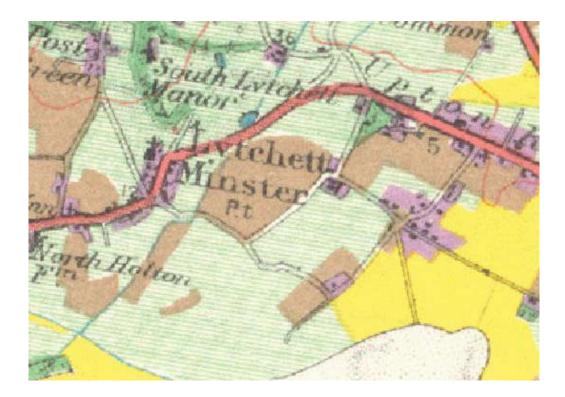
The field straddles the bedrock geology of London Clay Formation to the NW and the Poole Formation to the SE. Watery Lane itself seems to follow the geological boundary line, overlying River Terrace No 2.

The field is on the River Terrace 2 superficial, with the ditch/swamp and its surrounds on alluvium in a shallow valley (pale green)



**Map D** First edition 25 inch to one mile OS from c.1886 (N.B copyright)

Note the old lane with the watercourse along its south-eastern side. Numerous old trees on the southeastern side of the lane by the watercourse. Watery Lane is an ancient landscape feature - possibly a drove road linking to the marshes. The north-western boundary may be a later one (than the south east) resulting from enclosing land to the west, although fairly well-vegetated now.



Map E Land Utilisation Survey Sheet 141 ca 1936.

The field to the south east of Watery Lane is mapped as meadowland and permanent grass, shown pale green hatched. Both the eastern parcel and the potential SANG to the east are in this category.



Map F 1940's Air photo,

This shows the eastern parcel retained in its unploughed state, surrounded by ploughed land, including the SANG area

# **Appendix 4** Western and Eastern Parcels, Policeman's Lane: Bat Note



#### Eastern and Western Parcels, Policeman's Lane, Upton – Note of Bat Surveys 2017

This note provides a summary of the bat surveys completed at Policeman's Lane during June/July 2017. An initial ecological appraisal identified potential for the eastern parcel of the proposed development to support roosting, foraging and/or commuting bats. Further, the desk study found records of a number bat roosts in the vicinity.

This further bat work was therefore undertaken to characterise the populations and/or assemblage using this site and inform the Preliminary Ecological Assessment of the proposal.

#### Overview of Bat Surveys

#### Desktop Study

The Dorset Environmental Records Centre (DERC) provided records of several Pipistrelle and Longeared roosts within 2km of the site. One of the Pipistrelle roosts was particularly close to the site, located approximately 250 metres north on French's Farm Road. There were also non-roost records of a range of bats species within 2km, including Common Pipistrelle, Soprano Pipistrelle, Noctule, Brown Long-eared Bat and Serotine. It is therefore likely that some or all of these species are using the site for foraging and/or commuting.

#### Static Anabat Survey

Two automated data loggers ("Anabat" devices) were placed at the site on the 29<sup>th</sup> June 2017 for 5 nights. One was placed in the line of trees on the western boundary of the eastern parcel and the other in a tree on the eastern boundary. The survey period was at the optimal time of year and nightly weather conditions throughout were optimal. The Anabat on the western boundary recorded high levels of bat activity, particularly of Common Pipistrelle. Soprano Pipistrelle, Noctule, a Myotis species and Serotine were also recorded. The Anabat on the eastern boundary recorded les activity than the western Anabat, but still recorded significant numbers of Common Pipistrelle, Serotine and Noctule.

#### Dusk Activity Survey

A dusk activity survey was undertaken by Matt Falconer and Russell Hoyle on the 4<sup>th</sup> June 2017. For the first part of the survey the surveyors stood at a fixed point located by two dead trees proposed to be removed on the western boundary. They then walked a transect along the boundaries of the entire site. Heterodyne/frequency division Batbox Duet detectors were used, and in line with the Bat Conservation Trust's *"Good Practice Guidelines"* (BCT, 2016) the survey started 20 minutes before sunset and continued until 2 hours after sunset. The survey was carried out at the optimal time of year and in optimal weather conditions.

Four species of bat were encountered including Common Pipistrelle, Soprano Pipistrelle, a *Myotis* species and Serotine. Overall, moderate levels of bat activity were recorded, with highest activity

along the mature hedgerows and tree lines of the large eastern field. Activity in the eastern parcel was concentrated around the mature trees at the northern tip, although low levels of Common Pipistrelle activity were also recorded along the tree lines on the western and southern boundary. There was also moderate activity along the northern boundary of the northern field.

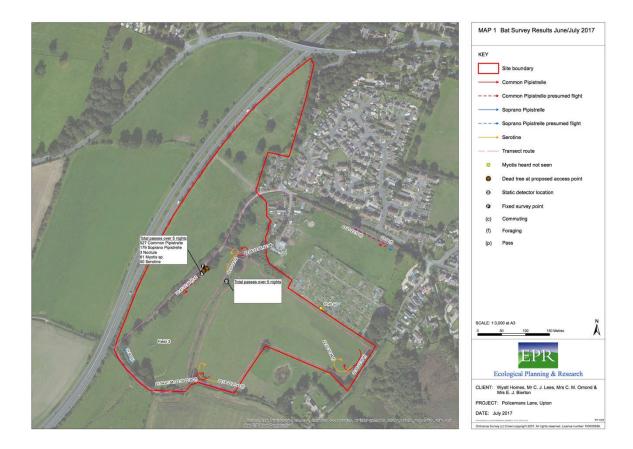
The two dead trees were both assessed as having moderate potential for supporting bat roosts, but no emergences were recorded.

#### Summary

A summary of the survey results is displayed in **Map 1**. In total, five common and widespread bat species were recorded during the surveys (Common Pipistrelle, Soprano Pipistrelle, Noctule, a *Myotis* species and Serotine). Highest levels of activity were recorded in the proposed SANG, but there was also significant activity in Phase3. This was concentrated on the northern tip of the field, with the automated Anabat survey also recording high activity along the tree line on the western boundary. Although the two dead trees on the western boundary of Phase 3 had no bat emergences recorded, their assessed moderate potential for roosts means further inspection will be required.

Count of MANUAL ID	Column Labels			ANABAT 1					
Row Labels	EPTSER	M_ sp	Noise	NYCNOC	PIPPIP	PIPPYG	PIPPYGSO	Undet	Grand Total
Jun	27	41	11	2	458	42		1	582
29-Jun	16	14	4	2	39	38		1	114
30-Jun	11	27	7		419	4			468
Jul	23	20	11	1	69	137	3		264
01-Jul	7	7	3		33	52			102
02-Jul	16	7	8	1	14	53	3		102
03-Jul		6			22	32			60
Grand									
Total	50	61	22	3	527	179	3	1	846

	ANABAT 2										
Row	EPTS	M_					PIPPY	PIPPI			Total
Labels	ER	sp	Noise	NYCNOC	PIPPIP	PIPPYG	GSO	PSO	Bigbat	Pl_Aur	Calls
Jun											
29-Jun	21	1	14	8	148	3	1	3	3	0	
30-Jun	10	1	7	5	81	0	0	0	0	0	
Jul											
01-Jul	5	1	9	4	41	2	0	0	0	7	
02-Jul	33	0	3	4	17	3	0	0	0	1	
03-Jul	11	0	24	1	37	1	0	0	1	1	
Grand											
Total	80	3	57	22	324	9	1	3	4	9	512





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#### Western and Eastern Parcels, Policeman's Lane, Upton: Appendix 5 Great Crested Newt – Survey Update note 2017

#### INTRODUCTION

The site is situated directly adjacent to the A35, west of Upton, Dorset. In order to inform the ecological impact assessment provided for the development proposals, surveys for Great Crested Newts (GCN) were carried out in the form of e-DNA sampling on the relevant ponds to confirm whether GCN were present.

This note will set out the results of the desktop study and the surveys undertaken this year.

Desktop study

An initial data request for protected species within 5km of the site was requested in 2012. This returned a total of 3 GCN results within the search radius. All of these records were noted north of the A35 and so immediately presents limitations to dispersal of the species.

The search was updated in 2014 and records remained unchanged.

Ponds within 250m

There is only one pond which is within the 250m buffer zone stipulated by Natural England guidelines and therefore considered to be within the Zone of Influence. This pond is situated in a horse field adjacent to the south-east corner of the site.

#### Habitat Suitability Index Assessment (HSI)

In order to determine whether the pond was suitable for newts a habitat assessment was carried out on 22<sup>nd</sup> June 2017.

This assessment involved scoring a number of habitat features in terms of their condition. These were then calculated using a formula adapted from Oldham et al., 2001.

#### RESULTS

Habitat Suitability Index Assessment (HSI)

The calculations from the HSI revealed the pond to be of poor suitability with a score of 0.38. See **table 1.1** below for further details.

<u>Table 1.1 – HSI results</u>						
Index	Description	Score				
SI1	Location	A				
SI <sub>2</sub>	Pond area	1050 m³				
SI₃	Pond drying	never				
SI4	Water Quality	poor				
SI₅	Shade	0				
SI <sub>6</sub>	Waterfowl	minor				
SI <sub>7</sub>	Fish	major				
SI8	Ponds	0				
SI9	Terrestrial habitat	poor				
SI <sub>10</sub>	Macrophyte cover	60				
HSI Scor	e	0.38				
Pond Su	itability	Poor				

#### e-DNA

Due to timing constraints it was considered that the most appropriate survey technique was to sample the pond for Great Crested Newt DNA using the appropriate e-DNA protocol.

Methods involved a licensed ecologist to collect 20 samples from various locations around the edge of the pond. The samples were taken from places where Great Crested Newts were most likely to have been present which were amongst vegetation and close to the bottom of the pond.

The turbidity of the samples was kept to a minimum to avoid contamination of the data and gloves were worn throughout the process.

The sampling was carried out by Rebecca Oswin, a licensed surveyor (CL08 ref. 2017-28616-CLS-CLS) on the 22<sup>nd</sup> June 2017.

The results returned from the laboratory were **negative** for GCN.

#### CONCLUSION

The pond is not considered to be suitable for GCN due to the following;

- The terrestrial habitat surrounding the pond consists of an intensively grazed equestrian field with little to no connectivity to more optimal habitat and therefore classed as poor.
- The pond is actively being used by the horses as a drinking facility. Evidence of trampling around the edges of the pond was observed. This would damage vegetation growing around the edges of the pond and decrease diversity making it less suitable as newt habitat.
- The pond is currently inhabited by a number of large koi carp which create too much sediment disturbance and would also prey upon newt larvae. This eliminates the possibility of newts using the pond for breeding purposes.

These factors combined with the negative e-DNA result conclude that the pond is not suitable for GCN and therefore no further survey work is required.

# Appendix 6: Nitrogen Off-setting Calculation for Policeman's Lane

Based on approach recommended in 'Nitrogen Reduction in Poole Harbour' SPD Adopted by Purbeck District Council on 01.04.17. See Appendix 1.

Phase 1						
51 new houses	x 2.42 people/unit	123.42 new residents				
19 new flats	x 1.65 people/unit	31.35				
Total new residents	123.42 + 31.35	154.77				
154.77 new residents	x 0.000875 N tonnes /person/year	<b>0.1354</b> tonnes/year total increase in N load				
2.9 ha changing from agriculture to urban (housing, roads and footpaths)	x 0.0214 N tonnes/ha/year	0.0621 tonnes/year decrease in N load				
4.8 ha* changing from agriculture to low input uses (SANG)	x 0.0298 N tonnes/ha/year	0.1430 tonnes/year decrease in N load				
Total decrease in N load from land- use change	0.0621 + 0.1430	0.2051 tonnes/year decrease in N load				
Total change in N load for Phase 1	0.1354 - 0.2051	0.0697 tonnes/year decrease in N load				

\*This figure does not take account of the green space within the developed area of Phase 1. The calculated decrease in N load is therefore an under-estimate.

Western and Eastern Parcels							
105 new dwellings	x 2.42 people/unit	254.10**new residents					
254.10 new residents	x 0.000875 tonnes	0.2223 tonnes/year total					
	N /person/year	increase in N load					
3.48 ha changing from agriculture to	x 0.0214 N	0.0744 tonnes/year					
urban (housing, roads and footpaths)	tonnes/ha/year	decrease in N load					
4.31 ha changing from agriculture to low		0.1284 tonnes/year					
input uses (green space, SANG, bund	tonnes/ha/year	decrease in N load					
and fence)							
Total decrease in N load from land- use	0.0744 + 0.1284	0.2028 tonnes/year					
change		decrease in N load					
Total change in N load for Phases 2	0.2223 - 0.2028	0.0195 N tonnes/year					
and 3		increase in N load					

\*\*This figure is based on the assumption that all units will be houses. As there is likely to be a proportion of flats, the calculated increase in N load is therefore an over-estimate.

All Phases						
Overall change in N load	0.0697 – 0.0195		tonnes/ se in N load	year d		

# References

<sup>i</sup> The Conservation of Habitats and Species Regulations 2010. Available from: <u>http://www.legislation.gov.uk/uksi/2010/490/contents/made</u>

<sup>ii</sup> The Conservation of Habitats and Species (Amendment) Regulations 2012. Available from: <u>http://www.legislation.gov.uk/uksi/2012/1927/contents/made</u>

<sup>iii</sup> The Wildlife and Countryside Act 1981. Available from: <u>http://www.legislation.gov.uk/ukpga/1981/69/contents</u>

<sup>iv</sup> The Countryside and Rights of Way (CRoW) Act 2000. Available from: <u>http://www.legislation.gov.uk/ukpga/2000/37/contents</u>

<sup>v</sup> The Natural Environment and Rural Communities Act 2006. Available from: <u>www.legislation.gov.uk/ukpga/2006/16/contents</u>

<sup>vi</sup> The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003. Available from: <u>http://www.legislation.gov.uk/uksi/2003/3242/contents/made</u>

<sup>vii</sup> Office of the Deputy Prime Minister (2000). Tree Preservation Orders: A Guide to the Law and Good Practice. Available from:

http://www.communities.gov.uk/publications/planningandbuilding/tposguide

<sup>viii</sup> Natural England and the Forestry Commission (2014). Standing Advice for Ancient Woodland and Veteran Trees. Available from: <u>https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences</u>

<sup>ix</sup> Environment Agency (2014). Pollution Prevention Guidance. Available from: <u>https://www.gov.uk/government/collections/pollution-prevention-guidance-ppg</u>

<sup>×</sup> Water Resources Act 1991. Available from: <u>http://www.legislation.gov.uk/ukpga/1991/57/contents</u>

<sup>xi</sup> Natural England and DEFRA (2016). Protected species: how to review planning applications. Available from: <u>https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications</u>

<sup>xii</sup> Natural England and DEFRA (2015). Badgers: Surveys and mitigation for development projects. Available from: <u>https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects</u>

1 xiii NATURAL ENGLAND (2015). EUROPEAN PROTECTED SPECIES: APPLY FOR A MITIGATION LICENCE. AVAILABLE FROM: <u>HTTPS://WWW.GOV.UK/GOVERNMENT/PUBLICATIONS/EUROPEAN-PROTECTED-SPECIES-APPLY-FOR-A-MITIGATION-LICENCE</u>

xiv Natural England (2015). Badgers: licence to interfere with setts for development purposes. Available from: <u>https://www.gov.uk/government/publications/badgers-licence-to-interfere-with-setts-for-development-purposes</u>

<sup>xv</sup> DCLG (2012). *National Planning Policy Framework*. Available from: <u>https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/6077/21169</u> <u>50.pdf</u> <sup>xvi</sup> ODPM (2005). Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System. Available from: <u>http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity</u>

<sup>xvii</sup> DCLG (2014). Planning Practice Guidance. Available from: <u>http://planningguidance.planningportal.gov.uk/</u>

<sup>xviii</sup> The British Standards Institution (2013). BS42020:2013 Biodiversity – Code of practice for planning and development. Available from: http://shop.bsigroup.com/ProductDetail/?pid=00000000030258704

<sup>xix</sup> JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). *The UK Post-*2010 Biodiversity Framework. Available from: <u>http://jncc.defra.gov.uk/pdf/UK Post2010 Bio-</u> <u>Fwork.pdf</u>

<sup>xx</sup> DEFRA (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. Available from: <u>https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services</u>

Dorset Biodiversity Partnership (2003) Dorset Biodiversity Strategy. Available from: https://www.dorsetforyou.gov.uk/media/185863/AD.ENV1-Dorset-Biodiversity-Strategy/pdf/AD.ENV1 Dorset Biodiversity Strategy.pdf