

Project	Pemblers Hill Farm, Mortimers Lane, Fair Oak, Hampshire	Date	August 2023
Note	Ecological Walkover Survey	Ref	UE0618
Author	Dan Maude BSc (Hons) MRes qCIEEM	Page	1 of 16
Status	First issue to client		

1 Introduction

- 1.1 Urban Edge Environmental Consulting Ltd (UEEC) was commissioned to undertake an Ecological Walkover Survey (EWS) at Pemblers Hill Farm, Mortimers Lane, Fair Oak, Hampshire (Grid Reference: 450531, 119202).
- 1.2 The purpose of the survey was to update the recommendations provided in the Ecological Mitigation and Management Strategy¹ with regard to the repositioning of an existing farm access gate. This Technical Note assesses the extent, character and condition of habitats present at the northern end of the constructed Pemblers Hill Farm housing development and considers the potential for the impacted area to support protected species.
- 1.3 The survey was carried out on 2 August 2022³ by Dan Maude BSc (Hons) MRes qCIEEM, a Consultant Ecologist with three years' professional consultancy experience. Weather conditions were warm (18°C), with a moderate breeze (Beaufort scale 4), 80% cloud cover and spells of light rain.

Site Description

- 1.4 The survey area lies at the northern end of the newly constructed Pemblers Hill Farm housing development within the Eastleigh Borough of Hampshire. The survey area comprises c.0.3ha of undeveloped land, consisting of a grassland verge, agricultural field, hedgerow and scattered trees.
- 1.5 The survey area is bounded to the north by pasture, to the east and west by a continuation of the grassland verge and hedgerow, and to the south by Pemblers Farm Avenue and the new housing development.

¹ Hampshire Ecological Services Ltd (2019): Ecological Management and Mitigation Strategy Report

- 1.6 The wider area is characterised by extensive open countryside and agricultural land to the north, east and west with interconnecting mature hedgerow and woodland blocks. The residential area of Fair Oak is located to the south and south-west. The extent of the survey area is outlined in red on Figure 1.

Project Background

- 1.7 Recommendations for avoiding and mitigating ecological impacts, together with recommendations for ecological enhancement for the Pembers Hill Farm housing development (Application Ref. RM/18/83278) were made in the Ecological Mitigation and Management Strategy²
- 1.8 It has since become necessary relocate an existing farm gate on Pembers Farm Avenue to improve access into the field to the north. As part of the proposals an EWS is required to update the recommendations made in the Ecological Management & Mitigation Strategy Report with regard to the relocation of the access gate.

Proposed Activities

- 1.9 Planning consent is being sought to amend the approved drawings at Pembers Hill Farm to accommodate the relocation of an existing gate along the northern boundary to improve access into the land to the north. This will result in an extension to the highway at this point. The new access will be 4.2m wide and comprise a structure suitable for 14 tonne vehicles. Proposals include the replacement of the existing gate location with landscaping to ensure there is no net loss of hedgerow. Figure 2 illustrates the proposed new agricultural access.

2 Methodology

- 2.1 During the 2023 walkover survey, habitats and ecological features within the survey area were noted in accordance with the methodology for Phase 1 habitat survey³. This basic methodology was extended to provide more detail in relation to habitats with potential to support rare or protected fauna, as described by the Chartered Institute of Ecology and Environmental Management's *Guidelines for Preliminary Ecological Appraisal*⁴. The assessment of habitat suitability for protected, rare or priority species is based on current good practice guidance such as that presented in the *Herpetofauna Workers' Manual*⁵ and *Bat Surveys for Professional Ecologists: Good Practice Guidelines*⁶.

² Hampshire Ecological Services Ltd (2019): Ecological Management and Mitigation Strategy Report

³ Joint Nature Conservation Committee (2010): Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit, Joint Nature Conservation Committee, Peterborough.

⁴ CIEEM (2017): Guidelines for Preliminary Ecological Appraisal. 2nd Edition, CIEEM, Winchester.

⁵ Gent, A.H. and Gibson, S.D., eds. (2003): Herpetofauna Workers' Manual. Joint Nature Conservation Committee, Peterborough.

⁶ Collins, J. (3rd ed.) (2016): Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd Edition, Bat Conservation Trust, London.

 Survey area

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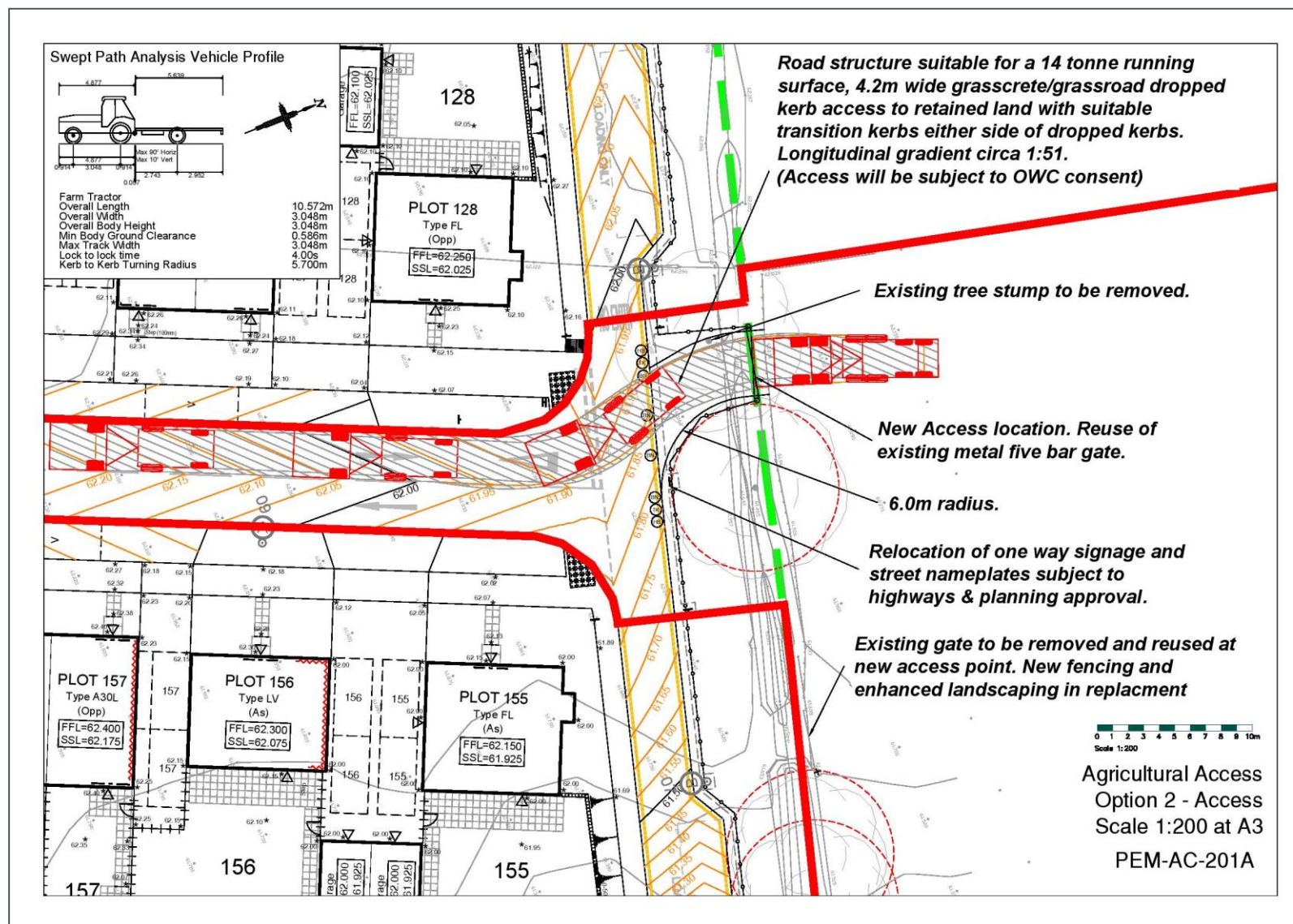


Figure 2: Proposed agricultural access

- 2.2 The ecological walkover survey included a Preliminary Roost Assessment (PRA) which was carried out in accordance with the latest *Good Practice Guidelines* from the Bat Conservation Trust⁵ as well as Natural England Standing Advice on bats. Trees within the survey area were subject to an external, ground-level inspection. All features observable from ground level which were potentially suitable for bats were noted and the overall suitability of the tree for roosting bats was classified with reference to Table 1.

Table 1: Potential suitability of structures/trees for roosting bats (after Collins, 2016)

Suitability	Roosting habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats
Low	A structure with one or more PRFs that could be used by individual bats opportunistically, but do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats A tree of sufficient size and age to contain PRFs but with none seen from the ground / using ladders or features seen with only very limited roosting potential
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (for roost type only)
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat
Confirmed roost	Bats or unequivocal evidence of bats found, i.e. bat droppings

Limitations

- 2.3 There were no difficulties in gaining access to habitats within the survey area and assess protected species suitability.

3 Results

Habitats

- 3.1 The following Phase 1 habitats were identified within or adjacent to the survey area and are shown on the Phase 1 habitats map at Appendix I:
- ▶ Semi-improved neutral grassland;
 - ▶ Improved grassland;
 - ▶ Hardstanding;
 - ▶ Species poor native hedge and trees; and
 - ▶ Broadleaved scattered trees.

Semi-improved neutral grassland

- 3.2 Semi-improved neutral grassland formed a roadside verge that bordered the northern edge of Pembers Farm Avenue and was separated from the pasture to the north by mature hedgerow. The grassland had a tall, tussocky structure and was relatively species rich. Plants included frequent cock's foot *Dactylis glomerata* and Yorkshire fog *Holcus lanatus*, with occasional dandelion *Taraxacum spp*, bedstraws *Galium spp*, ribwort plantain *Plantago lanceolata*, creeping thistle *Cirsium arvense*, teasel *Dipsacus fullonum*, bristly oxtongue *Helminthotheca echioides*, creeping buttercup *Ranunculus repens*, red fescue *Festuca rubra*, oxeye daisy *Leucanthemum vulgare*, perennial rye-grass *Lolium perenne*, common bent *Agrostis capillaris*, common knapweed *Centaurea nigra*, and docks *Rumex spp*. There was a pile of brash located within the grassland at TN1 and a timber fence separated the grassland from the adjacent road.

Improved grassland

- 3.3 Improved grassland was present within the field at the north of the survey area that was split from the semi-improved neutral grassland by mature hedgerow. The field structure was moderately tall (c.15-20cm) but had a homogenous structure. Species composition was low and dominated by perennial rye-grass, with occasional Yorkshire fog, white clover *Trifolium repens* and docks.

Hardstanding

- 3.4 An asphalt road comprised the southern edge of the survey areas and formed Pembers Farm Avenue.

Species rich native hedge and trees

- 3.5 A species rich native hedge and trees ran east to west through the survey area and divided the semi-improved neutral grassland to the south and improved grassland field to the north. The hedgerow was mature, dense and appeared infrequently managed. The height of the hedge understorey varied along its length from c.2m-4m high, but the width was relative consistent at c.2m. The hedgerow consisted of abundant hawthorn *Crataegus monogyna* and blackthorn *Pruus spinosa*, and occasional dogrose *Rosa canina* with several mature ash *Fraxinus excelsior* and pedunculate oak *Quercus robur* trees. The eastern end of the hedgerow ended at the existing access gate, with a timber post and rail fence continued. There was a large, decaying stump within the hedge at TN2.
- 3.6 A new hedgerow had been planted directly in front to the south of the existing hedge to increase hedge structure and species richness. Plants within the new hedge were young and surrounded by protective tubing.

Broadleaved scattered trees

- 3.7 The majority of trees within the survey area lay within the hedgerow but there were an additional three mature ash trees present beyond the eastern extent of the hedge.



Sem-improved neutral grassland and fence line



Brash at TN1



Improved grassland



Hardstanding



Hedgerow with stump (TN2)



Tree stump (TN2)



Existing farm access gate at eastern end of hedgerow



Scattered broadleaved trees

Preliminary Roost Assessment

- 3.8 One tree (T1) within the survey area was considered to provide suitability for roosting bats. T1 was a mature ash at the eastern end of the survey area and the final tree in the line of broadleaved scattered trees. T1 had two main stems both of which were rotten at the centre with large vertical cracks running up the extent of the southern aspect. The location of tree T1 is shown on the Phase 1 Habitat Plan at Appendix I.



Tree T1 with vertical splits

Protected / Notable Species

Breeding birds

- 3.9 The species rich native hedgerow and trees which divides the survey and broadleaved scattered trees are suitable for nesting birds such as wren *Troglodytes troglodytes*, dunnoek (an Amber-listed bird of conservation concern (BoCC5)⁷), robin *Erithacus rubecula* and chaffinch *Fringilla coelebs*. At least 4.2m

⁷ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021): *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. *British Birds* 114: 723-747. ["BoCC5"] Available online at: <https://britishbirds.co.uk/content/status-our-bird-populations>

of the existing hedgerow will be removed as part of the access gate relocation. Precautionary measures for nesting birds are recommended at section 5.

- 3.10 The Ecological Mitigation and Management Strategy proposed the location of bird boxes on the retained boundary trees. It is anticipated that the new access road may require the felling of an existing ash tree which lies within the route footprint. The Ecological Mitigation and Management Strategy suggests that a 1SP Schwegler Bird Box is to be installed on this tree. If felling of this tree is required, the box should be relocated to an alternative suitable tree within the wider site.

Invertebrates

- 3.11 The semi-improved neutral grassland, hedgerow and broadleaved scattered trees are likely to provide moderate value for a common and widespread range of invertebrates. The large decaying tree stump at TN2 provides potential habitat for saproxylic species such as stag beetle *Lucanus cervus*. This stump lies directly in the location of the proposed new field access and will require removal. Recommendations to retain the decaying stump within the wider site are provided at section 5. Given the small amount of other suitable habitat affected by the proposals, and the abundance of similar quality habitat in the surrounding landscape, no further surveys for this group are required.

Bats

- 3.12 The Preliminary Roost Assessment concluded that the mature ash tree T1 was of high suitability for roosting bats due to the large vertical cracks along both stems, and its proximity to good foraging and commuting habitat. It is anticipated that T1 will not be impacted by the relocation of the field access gate. However, if felling or arboricultural works to T1 are required to facilitate the proposals, it could result in destruction of a bat roost or present a risk of killing, injury or disturbance if bats are present during the works. Further surveys for bats roosting in trees are recommended at section 5 if removal of T1 is required.

Hazel dormouse

- 3.13 The hedgerow that divides the survey area is relatively dense and largely intact, providing potential habitat for dormouse. Food plants are present (including hawthorn, oak, blackthorn and bramble), but hazel is absent. However, the hedgerow is fairly isolated in the landscape as it is severed at the eastern and western extent and therefore not well connected to mature hedgerows or blocks of woodland beyond the survey area. In addition, no evidence of hazel dormouse was identified within the wider Pembers Hill Farm⁸.
- 3.14 A length c.4.2m of the existing hedgerow would be removed and replaced with an extension of the highway to create a new access into the adjacent farm field to the north. Clearance works to the hedge should be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing / injury to hazel dormouse, as recommended at section 5.

⁸ Hampshire Ecological Services Ltd (2019): Ecological Management and Mitigation Strategy Report

Reptiles

- 3.15 The survey area contains suitable habitat for reptiles, comprised of semi-improved neutral grassland, improved grassland and hedgerow. These habitats provide suitable shelter, dispersal and foraging opportunities for reptiles. The brash pile (TN1) and decaying tree stump (TN2) provide additional shelter and hibernation habitat. At least 4.2m of hedgerow, along with the same width of grassland to the north and south of the hedge, would be removed to make way for a new access route into the northern field. Both grass snake *Natrix helvetica* and slow worm *Anguis fragilis* were recorded within the wider Pembers Hill site, but no species of reptile was previously recorded in location of the proposed new access. Nevertheless, as there is a known reptile presence in the local landscape, works to create the proposed new access present a risk of killing or injury for reptiles if present within the survey area.
- 3.16 The proposed new access should be undertaken in accordance with a Precautionary Working Method Statement to reduce the risk of killing / injury to reptiles, as recommended at section 5.

4 Evaluation

- 4.1 Table 2 presents a summary of ecological constraints and opportunities identified within the survey area, which are generally consistent with those identified in 2020.

Table 2: Summary of ecological constraints and opportunities

Feature	Detail
<u>Constraints:</u>	
Designated sites	None of the statutory or non-statutory wildlife sites highlighted within the Ecological Mitigation and Management Strategy ⁹ are likely to be affected by the Proposed Development, considering the size and scale of the proposal and its distance from the designated site.
Priority habitats	The hedgerow within the survey area is classified as priority habitat and is of high ecological value. A 4.2m section of the hedgerow will be removed as part of the proposed new access. The loss of hedgerow will be offset by the creation of new hedgerow to replace the existing access gate location. Consequently, there will be no net loss of hedgerow as a result of the works.
Other habitats	Permanent losses of semi-improved neutral grassland and improved grassland, depending on the extent and layout of proposals. These areas are of relatively low ecological value but provide habitats suitable for a number of protected species (e.g., invertebrates, reptiles).
Birds (nesting)	Possible permanent loss of nesting habitats (hedgerows, broadleaved scattered trees, nest box).
Invertebrates	Permanent loss of suitable invertebrate habitat including grassland and hedgerow. The decaying tree stump (TN2) will be removed and repositioned elsewhere within the wider site.

⁹ Hampshire Ecological Services Ltd (2019): Ecological Management and Mitigation Strategy Report

Feature	Detail
Bats	The tree T1 is suitable for roosting bats but is expected to be retained
Reptiles	Possible permanent losses of sup-optimal habitats (amenity grassland, dense scrub and hedgerows).

5 Recommendations

- 5.1 Recommendations are made for the protection of important ecological features, and / or to avoid or mitigate ecological impacts, and to enhance the ecology of the site post-construction. It is intended that these recommendations are considered during future changes to the design of development proposals so that protection of important ecological features is secured and opportunities for ecological enhancement are realised.
- 5.2 The following further surveys (Table 3) will be required prior to refining development designs and formulating a suitable avoidance and mitigation strategy.

Table 3: Recommendations for further ecological survey

#	Recommendations for further ecological survey
R1	Presence / likely absence surveys for roosting bats within the tree T1 if felling or arboricultural works are required, undertaken between May and August.

- 5.3 It is anticipated the tree T1 will not be affected by the proposed new farm access. However, if works felling or arboricultural works are required they could result in destruction of a bat roost or killing, injury or disturbance to roosting bats, and further surveys are recommended to determine their presence or likely absence with these features. The surveys should follow current guidelines (Collins, 2016), comprising dusk emergence and/or dawn re-entry surveys, and can be carried out between May and September (May to August is the optimal period). Surveys should begin at least 15 minutes before dusk and continue for up to 2 hours after sunset, or begin 1.5 to 2 hours before dawn and continue until at least 15 minutes after sunrise. The level of survey effort required is dependent on the suitability of the building or tree to support roosting bats as follows:
- ▶ Confirmed roost / High suitability: At least three surveys visits in total, including at least one dusk emergence and at least one separate dawn re-entry survey;
 - ▶ Moderate suitability: At least one dusk emergence and a separate dawn re-entry survey;
 - ▶ Low suitability: At least one dusk emergence or dawn re-entry survey.
- 5.4 The following species / groups (Table 4) require specific precautionary measures to be adhered to prior to and during construction to ensure that an offence under the relevant legislation is avoided.

Table 4: Recommended precautionary measures

#	Recommendations for precautionary measures
R2	Removal of nesting bird habitats (hedgerows and broadleaved scattered trees) will be undertaken outside of the bird nesting season, which runs from 1 March to 31 August. It will therefore be carried out between September and February. This includes relocation of bird boxes, if necessary. Any construction works undertaken within the bird breeding season where suitable bird breeding habitat exists will require a site check for nesting birds by a suitably qualified ecologist. This will take place no more than two days prior to works commencing. This is to ensure that no disturbance to active bird nests occurs. If a nest is found it must be cordoned off and works adjacent to the nest must be delayed until such time that the chicks have fledged from the nest. This will be supervised by a suitably qualified ecologist.
R3	Works to remove a section of the hedgerow will be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing / injury to hazel dormouse. The Method Statement will specify reasonable avoidance measures including progressive reduction of vegetation height by hand (initial cut to 15cm max during November to March, stump removal from May) to enable any dormice present to disperse into suitable surrounding areas of retained habitat, and will be carried out under the supervision of a suitably qualified ecologist.
R4	Vegetation clearance works will be undertaken in accordance with a Precautionary Working Method Statement to reduce the risk of killing / injury to reptiles. The Method Statement will specify reasonable avoidance measures including timing restrictions (works to be carried out during the reptile active season, broadly March / April to September / October), progressive reduction of vegetation height to displace any reptiles present, and will be carried out under the supervision of a suitably qualified ecologist. Once vegetation removal is complete, the survey area will be maintained in unsuitable condition to prevent recolonisation.

5.5 The following protection measures (Table 5) should be carried out as part of the proposed scheme.

Table 5: Ecological protection measures

#	Recommended ecological protection measures
R5	British Standard BS 5837:2012 and/or National Joint Utilities Group Guidelines (NJUG, 1995) will be followed at all times during construction when working in close proximity to trees or shrubs which are to be retained. According to NJUG Guidelines the root protection zone or precautionary area is 4x the circumference of the trunk (circumference is measured around the trunk at a height of 1.5m above ground level). The distance is measured from the centre of the trunk to the nearest part of any excavation or other work. If a separate tree survey is carried out for the proposed development, works will be undertaken in accordance with the recommendations therein. Tree protection measures will also include the retention of the decaying tree stump (TN2) which provides suitable deadwood habitat for saproxylic invertebrates. If necessary, the tree stump can be moved to a different location within the wider site to fit the proposals.
R6	Avoid the use of external lighting or keep its use to the minimum required for its intended purpose, during both construction and operation. This will be of benefit to nocturnal species e.g. bats. Where external lighting is to be provided, it should be low-level, directional lighting with minimal spill and glare, and consideration should be given to reduced hours of operation and/or a movement responsive system of control. Use narrow-spectrum bulbs and light sources that emit

#	Recommended ecological protection measures
	minimal UV light, avoiding white and blue wavelengths of the spectrum. Use glass lantern covers instead of plastic to filter UV light. Lighting will not be directed towards the hedgerow or broadleaved scattered trees.
R7	All excavations left overnight will either be covered over, or provided with a ramp to enable easy escape of badgers, hedgehogs, small mammals, amphibians and other fauna, and inspected each morning prior to recommencement. Open pipework greater than 150mm outside diameter will be blanked off at the end of each working day.

- 5.6 The following ecological enhancements (Table 6) should be considered for the site to improve the site for wildlife following construction.

Table 6: Recommendations for ecological enhancement

#	Preliminary recommendations for ecological enhancement
R8	Hedgerow creation as part of the landscaping plan for the site should use a wide range of native shrub species of local provenance. Fruit, seed, nut and nectar-bearing species should be used preferentially when selecting a palette of species for landscape planting, so that food sources are available throughout most of the year (e.g. hazel <i>Corylus avellana</i> , hawthorn, blackthorn, rowan <i>Sorbus aucuparia</i> and honeysuckle <i>Lonicera periclymenum</i>). If an evergreen hedge is required for landscape screening, suitable native species include holly <i>Ilex aquifolium</i> , ivy <i>Hedera helix</i> and privet <i>Ligustrum vulgare</i> .

6 Conclusion

- 6.1 In conclusion, the majority of land impacted by the relocation of the farm access is of relatively low ecological value. Significant constraints to development were identified including priority habitat and the potential presence of nesting birds, bats, invertebrates, hazel dormouse and reptiles. However, proportionate and effective mitigation is available to protect against the risk of impacts. No further surveys are required prior to submitting a planning application.

Appendix I: Phase 1 Habitat Map

Please see insert.

Pemblers Hill Farm, Fair Oak, Eastleigh Hampshire

- Survey area
- SI Neutral grassland - semi-improved
- I Improved grassland
- Hardstanding
- V V V V V Species-rich native hedgerow and trees
- ||||| Existing access gate
- Target note
- Broadleaved scattered tree



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Ordnance Survey 0100031673

Scale (at A4): 1:500 Created by: MT

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UE0618ECO-PemblersHillFarm_HabitatMap_230829

