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## **Ecological Survey**

**Carpenter's Field, Templeton,  
Pembrokeshire**

**Frontier Solar Limited**

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**Final Report**

**August 2012**

**kite ecology**

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This report, and the information contained in it, is intended to be valid for a maximum of 12 months from the date of the survey, providing no significant baseline changes have occurred.

Project number	Report number	Revision number	Date of issue
1194	001	Final	100812

## **1 Executive Summary**

1.1 An ecological survey of the site known as Carpenter's Field, Templeton, Pembrokeshire was commissioned in relation to a planning application. Under the current proposals, the site is to be developed.

1.2 A walkover survey of the site was carried out on 8<sup>th</sup> August 2012 when the site was surveyed for signs of protected species including badgers, bats, dormice, otters, water voles, amphibians, birds and reptiles. Habitats on site were also recorded. The surveys were undertaken by a suitably licensed and experienced ecologist.

1.3 Findings

1.4 Dormice are likely to be utilising the hedgerows surrounding the site, particularly along the western boundary. A 5m buffer zone should be placed in front of the hedgerows, with this buffer zone becoming a 'wildlife' area. This buffer zone should be clearly defined and remain outside of any future curtilage. It would also be beneficial if bat and bird boxes were incorporated into the scheme. Any landscaping should also utilise locally sourced, native species as these will be of most benefit to the local wildlife.

## **2 Introduction and site description**

2.1 An ecological survey of the site known as Carpenter's Field, Templeton, Pembrokeshire was commissioned in relation to a planning application. Under the current proposals, the site is to be developed. The centre of the site is located at OSGR SN112115.

2.2 The site itself consists of a 3 acre improved grassland field surrounded by species rich hedgerows to the north, south and west and mature trees along the eastern boundary (Figure 1). Immediately beyond the eastern boundary is an A road which runs through the centre of the small village of Templeton in which the site is located. There are existing housing estates to the north east and south west of the site (Figure 2). There is a single storey stone and corrugated metal walled shed which has a corrugated metal roof situated in the north eastern corner of the site. It is completely covered in vegetation and so totally inaccessible. There is a small spring fed stream beyond the boundary, but adjacent to the western hedgerow of the site.



**Figure 1. Overview of the site taken from eastern hedgerow looking west.**

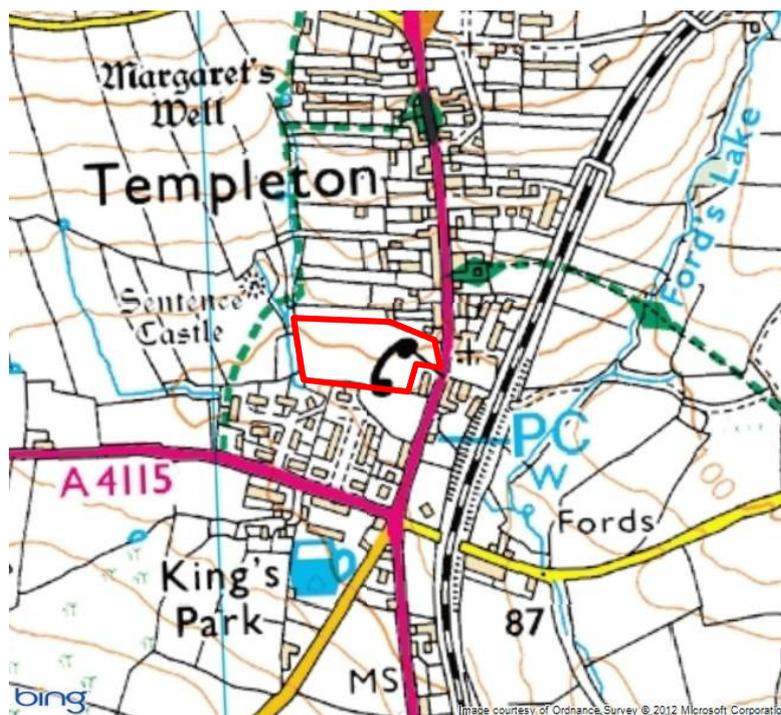


Figure 2. Survey area highlighted in red.

- 2.3 Unless the client indicates otherwise, all species records will be submitted to the relevant biological records centre.

### 3 Desk study and survey methodology

- 3.1 **General** – a walkover survey of the site was carried out on 8<sup>th</sup> August 2012 when the site was surveyed for signs of protected species including badgers, bats, dormice, otters, water voles, amphibians, birds and reptiles. Habitats on site were also recorded. The weather on the day of the survey was cloudy, but mild with an average temperature of 18°C. All surveys were undertaken by a suitably licensed ecologist who is a full member of the Institute of Ecology and Environmental Management and a Chartered Environmentalist.

#### 3.2 Desk study

- 3.2.1 **Aerial photographs** – Google maps was used to identify any important landscape features surrounding the site.
- 3.2.2 **The Countryside Council for Wales** – the Countryside Council for Wales interactive map website was consulted for any relevant designations within a 5km radius of the site.

#### 3.3 On site surveys

- 3.3.1 **Phase 1** – a Phase 1 habitat survey was carried out following the standard field methodology set out in the *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*, Joint Nature Conservation Committee 1990 (2003 edition).

- 3.3.2 **Badgers** – the site, and where possible, a radius of 30 metres from the site boundary was searched for badger setts. Sett entrances are recognised by entrances c.300mm wide and c.200mm high and tend to have large accumulations of earth outside. Other signs searched for included 'snuffle holes' (holes dug by badgers when searching for invertebrates), 'dung pits' (small pits in which badgers deposit their faeces) and 'day nests' (nests of bedding material made by badgers for sleeping above ground).

- 3.3.3 **Bats** – all mature trees on site were assessed for their potential use by roosting bats. This included noting features that may be used by roosting bats including split limbs, cracks,

peeling bark, woodpecker holes and dense coverings of ivy. The building on the south eastern corner was assessed for its potential use by bats.

- 3.3.4 **Dormice** – the hedgerows surrounding the site were assessed for their potential use by dormice. The ground beneath fruiting hazel was surveyed for hazel nuts opened in the characteristic way by dormice.
- 3.3.5 **Otters** – the stream along the western boundary was surveyed for any signs of otter. This included spraints (droppings), footprints and feeding remains. The habitat was also assessed for its potential for holting (resting) sites by otters.
- 3.3.6 **Water voles** – the stream along the western boundary was surveyed for signs of water voles including burrows, latrines and feeding remains.
- 3.3.7 **Amphibians** – the habitat was assessed for its potential use by amphibians with any suitable habitat or features also being recorded.
- 3.3.8 **Birds** – any birds seen or heard on site during the survey were recorded as well as any potential nesting habitat being noted.
- 3.3.9 **Reptiles** - the habitat was assessed for its potential use by reptiles with any suitable habitat or features also being recorded.
- 3.3.10 **Other species** – incidental records of any other species seen or heard on site during the survey were also recorded.

#### 4 Results

4.1 **General** – the site is situated to the south west of the village of Templeton. The village itself is bisected by the A478 and the site is located to the west of this road. The land to the north and south west already has existing properties on it, with a playing field to the south and a church hall in the south eastern corner of the site (but out of the survey area).

#### 4.2 Desk study

4.2.1 **Aerial photographs** – there are agricultural fields to the west of the site which are divided by typical farmland hedgerows. The closest patch of woodland with direct links to the site (via hedgerows) is c.600m to the north west.

4.2.2 **Countryside Council for Wales** – the site is located 2km to the north east of Yerboston Moors Site of Special Scientific Interest (SSSI); 2.5km to the south west of Bryn Bank Quarry SSSI; 2.5km south of the Cleddau River Special Area of Conservation (SAC) and Eastern Cleddau SSSI; and at its closest point is 4km south east from the boundary of the Pembrokeshire Coast National Park.

#### 4.3 On site surveys

4.3.1 **Phase 1** – the site is approximately 3 acres in size and currently consists of an improved field comprising species such as perennial rye grass *Lolium perenne*, Cocksfoot *Dactylis glomerata*, creeping buttercup *Ranunculus repens*, dandelion *Hypochaeris* sp., false oat grass *Arrhenatherum elatius*, ribwort plantain *Plantago lanceolata*, Yorkshire fog *Holcus lanatus* and sweet vernal grass *Anthoxanthum odoratum*. Surrounding the field along the northern, southern and western boundaries (H2, H4 and H3 respectively) are species rich hedgerows which are relatively unmanaged and have an average height of c.3m and width of c.2m. They include species such as hawthorn *Craetagus monogyna*, blackthorn *Prunus spinosa*, hazel *Corylus avellana*, ash *Fraxinus excelsior*, elder *Sambucus nigra*, holly *Ilex aquifolium*, honeysuckle *Lonicera* sp. and sycamore *Acer pseudoplatanus*. There is one mature oak tree *Quercus rubra* in the southern hedgerow/ H4 (Target note 1, Figure 3), with mature ash trees in H3 (Target note 2, Figure 3) and sycamore in H2 (Target note 3, Figure 3). At the base of

the hedgerows are scrubby vegetation including bramble *Rubus fruticosus*, nettle *Urtica dioica*, cleavers *Gallium aparine*, herb Robert *Robertiella robertiana*, red campion *Silene dioica*, bracken *Pteridium aquilinum*, cow parsley *Anthriscus sylvestris*, bindweed *Calystegia sepium* and dog rose *Rosa canina*. There is a small, spring fed stream running in a north to south direction along the western hedgerow (H3). The eastern boundary (H1) includes bramble, bindweed, cleavers and nettle and rather than a typical hedgerow could be described as scrubby vegetation growing over the barbed wire fence. Also along the eastern boundary (and either side of the current access track) are stands of mature ash and sycamore (Target note 4, Figure 3). Also within the stands of these trees, completely covered in vegetation, is a single storey stone and corrugated metal shed which has a corrugated metal roof (Figure 4). It was not possible to survey this building internally due to the density of the vegetation surrounding and covering it.



Key		Target notes	
<span style="color: red;">—</span>	Site boundary	T1	Mature oak
<b>H1</b>	Hedgerows	T2	Mature ash trees
<b>I</b>	Improved grassland	T3	Sycamore trees
		T4	Mature ash and sycamore at entrance
		T5	Badger pathway

Figure 3. Phase 1 habitat map.

4.3.2 **Badgers** – there were several well worn paths around the site, particularly from the south western corner to beneath the oak tree in the southern hedgerow (Target note 5, Figure 2) which may be a commuting route by badgers. There was no evidence to prove this and no setts were found on site.

#### 4.3.3 **Bats**

**Buildings** – the single storey, stone and corrugated metal walled building in the south eastern corner is completely covered in vegetation (Figure 3). This would make access into the building by bats virtually impossible and is considered to have a low bat roosting potential.

**Trees** – there is a mature ash in H3 (Target note 6, Figure 3) which is partially covered in ivy and honeysuckle so may be used by individual roosting bats. All other trees lacked features suitable for use by roosting bats. It is however, very likely that the hedgerows are used by foraging and commuting bats.



Figure 4. Building in south eastern corner completely hidden by vegetation.

- 4.3.4 **Dormice** – several hazel nuts showing signs of being opened by dormice were found beneath a hazel stand in the south western corner of the site (Figure 5). Hedgerows H2 – H4 are species rich and appear suitable for use by dormice. H3 (along the western boundary) also continues off site in a northerly direction so has direct links to further potential dormouse habitat.



Figure 4. Stand of hazel in south western corner where several nuts showing characteristic signs of dormice were found.

- 4.3.5 **Otters** – no signs of otter were found along the stream. The stream is rather isolated and so unlikely to support otters.
- 4.3.6 **Water voles** – no signs of water voles was found along the stream. The section of stream that flows adjacent to the proposed development site is heavily shaded so lacks the dense vegetation required and so appears unsuitable for use by water voles.
- 4.3.7 **Amphibians** – it is possible that the damper areas of the site (particularly along H3 adjacent to the stream) may be used by common species of amphibian, particularly common toad *Bufo bufo*.

4.3.8 **Birds** – house sparrow *Passer domesticus*, blackbird *Turdus merula*, crow *Corvus corone* and house martin *Delichon urbicum* were seen on site during the survey. It is likely that the dense hedgerows surrounding the site would be used by nesting birds at appropriate times of year.

4.3.9 **Reptiles** – it is possible that the rank vegetation surrounding the field may be used by common species of reptiles, particularly slow worm *Anguis fragilis*.

4.3.10 **Other species** – no other species were recorded using the site.

## 5 Limitations to surveys

5.1 The building in the south eastern corner of the site could not be surveyed internally due to the highly vegetative nature of the surrounding habitat. It is considered of low potential for roosting bats and no further surveys have been recommended in this case.

5.2 The results and recommendations of the report are based on findings as they were at the time of the survey. Kite Ecology cannot be held responsible for any base line changes to the site that have occurred since the survey was carried out that may have any effect on the results and recommendations.

## 6 Legislation and planning policy

6.1 **Designated sites** – Special Areas of Conservation and Sites of Special Scientific Interest are strictly protected through both European Directives and UK legislation including the conservation and Habitats and Species Regulations 2010. They are also included in the Joint Unitary Development Plan (JUDP) for Pembrokeshire. Of particular relevance is Policy 64 which states that:

“On sites of importance for nature conservation:

i) development or land use changes will not be permitted if likely to harm, directly or indirectly, the integrity or nature conservation value of a ... Special Area of Conservation...;

ii) *development or land use changes that would be liable to harm a Site of Special Scientific Interest... will only be permitted if it can be subject to conditions that will prevent damaging impacts on wildlife habitats or important physical features...*”

also of relevance is Policy 67 of the JUDP which states that:

“*Development and land use changes will only be permitted where these would not adversely affect the qualities and special character of the Pembrokeshire Coast National Park...*”

6.2 **Badgers** - the Protection of Badgers Act 1992 fully protects badgers and their setts and makes it an offence to either intentionally or recklessly kill, injure or take a badger, to cruelly ill-treat a badger or to interfere with a badger sett. Under section 10(1)(d) of the Protection of Badgers Act 1992, the Countryside Council for Wales the authority to issue licences to interfere with a badger sett for the purpose of development, as defined by Section 55(1) of the Town and Country Planning Act 1990.

6.3 **Bats** - all species of bat and their breeding sites or resting places (roosts) are protected under the Conservation and Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981 (as amended). It is an offence for anyone intentionally to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not. Licences are available from the Welsh Government to allow actions that would otherwise be unlawful.

- 6.4 **Dormice** - the dormouse is strictly protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation and Habitats and Species Regulations 2010. The deliberate and reckless capturing, disturbing, injuring and killing of dormice is prohibited, as is damaging or destroying their breeding site or resting places. Licences are available from the Welsh Government to allow actions that would otherwise be unlawful. Further information on licences is included in Appendix 1.
- 6.5 **Birds** - all birds, their nests and eggs are protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended).
- 6.6 **Natural Environment and Rural Communities Act 2006** – Section 40 of the NERC Act places a 'Biodiversity Duty' on local planning authorities as far as is consistent with the proper exercise of their functions. This replaces Section 74 of the Countryside and Rights of Way Act.
- 6.7 **Technical Advice Notes 5** – TAN 5 gives advice to local authorities on development control issues for Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and Sites of Special Scientific Interest (SSSIs). It also covers the selection and designation of non-statutory nature conservation sites, such as local nature reserves, and the protection of species, commons and greens.
- 7 Discussion and recommendations**
- 7.1 **Designated sites** - while there are a number of designated sites within 5km of the proposed development, the closest designation is over 2km. However, the site is adjacent to existing developments and would use existing utility services. Therefore the development of this site is unlikely to impact on these designated sites.
- 7.2 **Badgers** - while no badger setts were found on site, as there were several well worn pathways across the site, there is the possibility that they may occasionally feed or commute across it. Therefore contractors should be made aware of this and advised that as animals can become trapped in steep sided trenches, these should not be left open overnight. Where it is necessary for trenches to be left open, a ramp should be incorporated to allow animals to escape.
- 7.3 **Bats**
- 7.3.1 **Habitats** - the ash tree in the western hedgerow a dense covering of ivy and honeysuckle and so may on occasion be used by individual roosting bats. This tree should remain unaffected by works and, should any work be required on it, advice on how to proceed be sought from either Kite Ecology or the Countryside Council for Wales. The site is also very likely to be used by foraging or commuting bats and so mitigation should be included in the site which will allow the bats to continue to utilise the site post development. Further information on such mitigation is outlined in Section 8.1 below.
- 7.3.2 **Building** – any works to the small building in the south eastern corner should be carried out using the precautionary principle set out in 7.3.3. Due to the very overgrown nature of the building, it is considered very unlikely to be used by roosting bats (no clear flightpaths), so in this case no further survey work has been recommended.
- 7.3.3 **Precautionary principle** –works affecting the building should be undertaken during the spring or autumn when bats are active but not breeding or in hibernation. They should be carried out by hand with all slates and other roof coverings being removed by hand and checked on their underside prior to stacking/disposal to ensure no bats are clinging to the underside. Particular care should be taken when removing roof coverings along ridges and wall plates as these are areas favoured by roosting bats. All weather boards should also be removed by hand. If a bat is encountered during works, it should be carefully covered and work in that area cease. The area should be left undisturbed for a minimum of 24 hours to allow the bat

to move off of its own accord. Further advice can be sought either from Kite Ecology or the Countryside Council for Wales.

7.4 **Dormice** – evidence to suggest that the hedgerows (particularly the western hedgerow) are being used by dormice. Ordinarily further surveys would be required to establish either their presence or absence. However, in this case, as it will not be necessary to remove any hedgerows to allow the scheme to develop, a more pragmatic approach is recommended. In this case, a buffer zone of 5m between the existing hedgerows and the proposed development should be included in the scheme. This will allow the dormice to continue to utilise the site after development. This buffer zone should be allowed to grow naturally and so will also enhance the amount of suitable habitat on site. Further recommendations are discussed in 8.2.

7.5 **Birds** - any scrub clearance should take place between late August or early March in any year to avoid the bird nesting season. If it is necessary to carry out such work during the bird nesting season then initial works should be conducted carefully, and the presence of birds and their active nests checked for immediately before and throughout vegetation removal. If an active nest is discovered, then work in that area should cease and the nest protected until the young have fledged or the nest is no longer active.

## 8 Proposed mitigation strategy

### 8.1 Bats

8.1.1 *Habitat* – hedgerows and mature trees on site should be retained (discussed further in 8.2.1). These are important foraging and commuting sites for bats and the proposed buffer zone discussed in 8.2.1 will also be of benefit to bats.

8.1.2 *Enhancement* – it would be beneficial if a number of bat boxes could be included in any scheme. These boxes can either be attached to trees, or buildings. Where boxes are included on buildings, it is recommended that they are the 'tube' type which can be incorporated into the wall structure. These 'bat tubes' are self cleaning and also isolate the bats from the rest of the building. They should be positioned as high up as possible and avoid being positioned above windows or doors.

8.1.3 *Lighting* – lighting on site should be kept to a minimum. Where required, it should either be low level, or the hooded type and positioned to shine away from hedgerows and mature trees.

### 8.2 Dormice

8.2.1 *Hedgerows* – a 5m wide buffer zone should be placed between the existing hedgerows and any proposed development. This buffer zone should be allowed to regenerate naturally, and will over time, enhance the biodiversity of the site as it will increase the width of the hedgerow. This will provide further potential habitat for dormice on and around the site. The buffer zone should remain outside the curtilage of any future development and is likely to be subject to a Section 106 Agreement to ensure its longevity.

8.2.2 *Arboreal connectivity* – to allow safe access onto the site from the road, it is likely to be necessary to remove several of the mature ash and sycamore trees within the eastern boundary. It is recommended that tree removal be kept to a minimum and that if possible, several trees be retained to maintain arboreal connectivity around the site. The retention of as much vegetation as possible on the eastern boundary will also screen any proposed development, so retaining the rural nature of the site as is currently the case.

### 8.3 Enhancement

8.3.1 The site offers scope for ecological enhancements in line with TAN5 (further information in 6.8 above). The following recommendations are not required by law, but would ensure that the development does not contravene planning policy.

8.3.2 *Habitats* – any planting should utilise locally sourced, native species in all gardens and landscaping. Wildflower mixes should be used in any grassy areas as these contain a higher density of species. Hedgerows could be used to demarcate property boundaries as these can also act as natural wildlife corridors.

8.3.3 *Birds* – several bird boxes should be incorporated into the scheme to enhance the nesting potential of the site. Nest boxes which can be incorporated into the fabric of buildings themselves are recommended, although these should be sited high up on walls (immediately below the wall plates or soffit boxes) and avoid being positioned above windows or doors.

## 9 **Conclusions**

Dormice are likely to be utilising the hedgerows surrounding the site, particularly along the western boundary. A 5m buffer zone should be placed in front of the hedgerows, with this buffer zone becoming a 'wildlife' area. This buffer zone should be clearly defined and remain outside of any future curtilage.

## 10 **References**

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Welsh Assembly Government (2009) Technical Advice Note 5, Nature Conservation and Planning.

## APPENDIX 1

Further information on European Protected Species licences from the Welsh Government

The Welsh Ministers, in exercise of the powers conferred under regulation 44(2)(e-g) & 44(3)(a-b) of the Conservation (Natural Habitats &c.) Regulations (as amended), has authority to issue licences for the following purposes:

- Preserving 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;
- Preventing the spread of disease;
- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other forms of property or to fisheries; to allow people to carry out activities which would otherwise be illegal;

*Provided that:*

- that there is no satisfactory alternative; *and*
- that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Although the licence is applied for and, if successful, issued in the name of the developer, a suitably experienced and licensed ecologist must assist with the completion of the forms and the design of the accompanying method statement.

It should be noted that National Assembly of Wales licenses are legally binding documents, and the method statement will be attached to any licence issued. It is the responsibility of the licence holder to ensure that the method statement is adhered to.