

SPECTRUM ECOLOGY

Protected Species Surveys

Ecological Survey

Land adjacent to Trane Cemetery | **Gilfach Road** | **Tonyrefail** |
RCT | **CF39 8HL** |

Report Prepared for:
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SPECTRUM ECOLOGY

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NON-TECHNICAL SUMMARY

Spectrum Ecology was commissioned by Mr K Lawrence to undertake a baseline ecological survey of land adjacent to Trane Cemetery in Tonyrefail, Rhondda Cynon Taf, in order to assess the site for potential ecological constraints to the local planning authority granting planning permission.

The site is south facing and comprised of significant scrub cover (bramble, woodland succession alder and willow thickets). A narrow brook runs along the eastern boundary. . The site also has good habitat connections, in the form of a continuous treeline/hedgerow, with a SSSI to the north and a cemetery to the East. However the site is removed from the SSSI by an adjacent plot of land creating a wildlife buffer between the survey site and the SSSI. As a result it is the considered opinion of the surveyors that the development of the survey site, in conjunction with the proposed mitigation, would not significantly impact on the SSSI site to the north.

The combination of these features described above suggests that the site has potential for amphibians and reptiles, however none were observed during the survey periods. However it is recommended that appropriate herpetological surveys be carried out prior to any site clearance or development to better understand the potential impact. However it is considered that due to the relatively small size of the site, then should any amphibians or reptiles be found, these could be accommodated in adjoining habitat and their habitat loss mitigated within the site boundary and the proposed 3 metre buffer between the site and the brook.

The site is bordered by a neglected and overgrown hedgerow network, which has developed into a tree line in certain sections, becoming 'gappy' and poorly integrated in others. The wider surrounding hedgerow network is well connected and integrated.

The dense growth of mixed scrub – including bramble thickets – throughout the site means the site has significant potential for nesting birds. Any subsequent clearance works to the site should fully consider the impact to nesting birds, which are protected by law. Therefore it is considered that any such works would be timed to occur outside of the recognised bird-nesting season under a suitable method statement.

Botanically the site supported grassland species and plant species typical of the succession grassland habitat type, dominated by bramble and bracken. These are of little intrinsic nature conservation value in and of themselves. However, the habitat type is known to be of importance for invertebrates, amphibians, reptiles and small mammals.

Local small mammal populations are almost certainly supported within the scrub constituting the site itself and by the eastern hedgerow, which provides a good quality wildlife corridor into the wider network of hedgerows traversing the landscape.

No signs of badger were found within the site although a specific survey for the species was not carried out.

Two standard oak trees within the fragmented hedgerow to the east of the site contained numerous features with potential to support bat roosts. Numerous other standard trees within the hedgerow boundary also contain some potential for roosting bats. The survey site and hedgerows provides optimum foraging habitat for a number of bats species. It is

suggested that if any works are to occur within close proximity to the standard trees - particularly the mature oaks - prior to any works commencing further bat surveys should be undertaken on the trees. If any bat roosts are found, a European Protected Species Licence (EPSL) will most likely be required to allow development to proceed legally.

Further to the above the brook running along the eastern boundary is not included in the land proposed for development. However, it is recommended that if any such development were to take place, then a minimum 3 metre buffer strip should be maintained along the brook on the western side. This would include retaining the overhanging branches of the mature oak and ash trees, which line the bank. Retaining a minimum 3 metre strip would help to maintain a wildlife corridor linking the habitat to the north (and beyond that to the SSSI) and the graveyard site to the East / South East. This would help ensure a certain level of connectivity, including potential commuting routes for small mammals and foraging opportunities for local bat populations

As the hedgerows and scrub thickets on the site provide important opportunities for nesting birds and commuting bats, any works likely to impact these features should take these species into full consideration. This would include the working practices and timings of works, as well as mitigation and compensation measures.

It is anticipated that potential impacts could be avoided or minimised through sensitive master planning and/or mitigation strategies to control any construction impacts. Such mitigation measures should include the retention and enhancement of the eastern hedgerow with adequate root protection zones, the creation of a reptile and amphibian refuge or relocation area within the 3-metre buffer and bat roosting boxes incorporated into the design of the residential properties. Consideration should also be given to the provision of sparrow terraces on properties located to the centre of the development. Specific surveys for the species should first be carried out to fully inform these measures.

Overall the survey confirms that there are no in-principle ecological constraints to prevent the sensitive development of the site.

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1. Introduction

1.1 Spectrum Ecology was commissioned by Mr K Lawrence to undertake a baseline ecological survey of land adjacent to Trane Cemetery in Tonyrefail, Rhondda Cynon Taf, within the context of applying for outline planning permission to develop residential housing. As part of the standard survey, an assessment was made of the various habitats found at the location, including their species composition. Protected species such as Badger and Bat were also given consideration.

1.2 The wider site is an rural agricultural landscape surrounding the village of Tonyrefail and Thomastown. This landscape supports a typical mosaic of farmland, mountain and upland valley habitats. The survey site itself is a semi marshy grassland habitat, dominated by bracken and bramble with intermittent stands of rush which is bounded by a relatively species-poor hedgerow network. The surrounding landscape of the site comprises a mixture of historic improved grassland for agriculture, divided by hedgerows with occasional woodland blocks. Natural Resources Wales 'Land Map' defines the landscape as 'Grassland & Marsh/Mosaic (Level 3)'. It states that the habitats in the natural area are comprised of 'Agriculturally improved grassland with some dry heath and acid grassland on the slope to Gilfach Goch, with mosaic pattern derived from hedges and some scattered woodland, mainly broadleaf. Urban influence is strong in the southern area, where the area encircles the urban edge, and elements such as pylons are visible detractors'. Therefore they determine the surveyed land has a moderate ecological and landscape value and a high ecological value where unimproved acid and marshy grassland are present. It is therefore considered that the survey site would be classed in overall county terms with a moderate ecological value.

1.3 Aerial photograph showing the extent of the survey area.



1.4 Aerial photograph showing the site in a wider landscape context.



2. Methodology

2.1 Desk Study

The following websites were accessed to search for statutory designated sites and legally protected taxa within 1 km of the proposed development site:

- Multi-Agency Geographic Information for the Countryside - www.magic.gov.uk
- Landmap Natural Resources Wales
<http://landmap-maps.naturalresources.wales>
- National Biodiversity Network Gateway – data.nbn.org.uk.
- Rhondda Cynon Taf – LDP proposal map for SINC sites
- Rhondda Cynon Taf - Local biodiversity action plan

2.1 Field Survey

2.1.1 Flora

2.1.1.1 Habitats

The habitat survey and mapping exercise was carried out by Daniel Lock & Leigh Tuck (Ecologists) on 16th June 2016 and 20th June 2016, using standard Phase 1 Habitat survey methodology as a framework of reference (JNCC, 2003).

2.1.1.2 Species

In addition to general habitat classification, a botanical species list was also compiled. The status of each species was checked against the appropriate local or national floras.

2.1.2 Fauna

2.1.2.1 Habitats

Habitats and features with potential to support protected and/or conservation priority fauna species, together with any field signs of such species, were recorded during the surveys.

2.1.2.2 Species

Amongst others, a search was undertaken for the following key habitats and/or field signs for protected or conservation priority species; Badger, Bat, Great Crested Newt, Dormouse.

2.2 Limitations and Constraints

2.2.1 Desk Study

Desk study data is not likely to be exhaustive and it is therefore possible that protected species not identified during the data search do in fact occur within the vicinity of the proposed development site. Furthermore due to the limited time frame that the report had to be compiled and submitted to the Local Planning Authority then it was not possible to request a SEWBReC report in this instance.

2.2.2 Field Survey

The survey was undertaken on the 16th June 2016, well within the accepted survey season. However, at the time of the survey the overwhelming majority of the site (95%) was covered in dense scrub and had very little provision of access routes, other than routes that were created by the invasive species surveyors. This posed some constraints to developing a comprehensive catalogue of floral species composition. However, it became evident that the paths cut through the site provided a varied transect and the flora assemblage was similar in composition throughout the site. Ultimately, the constraint was not particularly significant and the surveyors were easily able to determine and assess the habitat type from the data gathered.

Although the remit of the survey was for the immediate site of the proposed development only, it is often useful to carry out a rudimentary assessment of the surrounding landscape to provide context. However, only the survey site itself could be accessed due to the surrounding fields being situated on private land. Again, this is not so much of a constraint as the remit of the survey was specifically for the survey site only. Where possible however, these surrounding fields were observed through binoculars in order to obtain a provisional Habitat Suitability Index (HSI) score.

3. RELEVANT LEGISLATION & POLICY

3.1 Legislation

3.1.1 Habitat Regulations

The Conservation (Natural Habitats &c.) Regulations 1994, as amended by the Conservation (Natural Habitats &c.) (Amendment) Regulations 2007 and 2010 respectively, transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English & Welsh law, making it an offence to deliberately capture, kill or disturb any wild animal protected under the Habitat Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

3.1.2 Wildlife & Countryside Act

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CROW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;
- Intentionally damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
- Disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Please note that this legal information is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information. Web addresses providing access to the full text of these documents are given in the References & Bibliography section.

Disturbance is defined by the Habitat Regulations as any action which impairs the ability of an animal to survive, breed, rear its young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

3.1.3 Protection of Badgers Act

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

3.1.4 Natural Environment & Rural Communities Act

The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations

3.2 Policy

3.2.1 Planning Policy Statement

Planning Policy Wales Chapter 5, as well as accompanying documents including TAN9 and TAN 12 set out current government policy on biodiversity and nature conservation which place a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications. Planning Policy Wales also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within a development.

3.2.2 Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfil the ReConvention on Biological Diversity in 1992, to which the UK is a signatory. A list of national priority species and habitats has been produced with all listed species/habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels. The Rhondda Cynon Taf Biodiversity Action Plan has 26 habitat action plans and 57 species action plans.

4. Results

4.1 Habitat Descriptions

4.1.1 Habitats

4.1.1.1 Woodland and Scrub

While no specific areas of woodland or scrub occur within the survey site, it should be noted that many sections of hedgerow – particularly that along the eastern boundary – have not been managed for a significant period of time. Consequently these sections have developed into what could be considered narrow wooded strips. These under managed hedgerows contain numerous standard trees, with significant coverings of Ivy.

4.1.1.2 Hedgerow and Hedgerow Trees

Of the 4 field boundaries, only those to the South and East could be said to be

constituted by hedgerow, as the western boundary comprised a defunct hedge which amounted to little more than a raised bank with essentially a narrow scrub habitat with stands of self seeded trees.

The hedgerow along the southern boundary was far more substantial and consolidated, although this again had been under managed to the point where the majority of the trees had developed into standards. The hedge line was relatively species poor in terms of woody species composition, which comprised of ash and hazel as the dominant species, with occasional oak and hawthorn.

The hedgerows as a whole (but the eastern hedge in particular) provide good quality habitat for nesting birds and potential for roosting bats. The eastern hedge is well connected with the wider hedgerow network and is therefore likely to be important as visual navigational aids for commuting bats, linking the survey site with the wider landscape. The hedgerows will also provide important wildlife corridors for small mammals. Therefore it is recommended that the Eastern Hedgerow be protected from development and conditioned at the outline planning stage that it should remain. Then a suitable mitigation and protection strategy could be devised at the reserved matters stage.

Notwithstanding the above the removal and replanting of the southern hedgerow to accommodate a footway associated with the development would not in itself sever any wider habitat links and would result in only short term impacts. Furthermore as discussed above the undermanagement of the southern hedgerow and if left to succession would provide increasingly less ecological value. Therefore the replanting of a species rich hedgerow coupled with sensitive mitigation measures for its removal would ultimately re-instate the ecological importance of this hedgerow and provide a net enhancement to the site. These works should be conditioned at the outline planning stage to ensure that adequate time is given to prepare the hedgerow for removal before any major site works take place.

Therefore with a robust method statement for the protection of the eastern hedgerow and trees with adequate root protection, coupled with the re-planting of the southern hedgerow, there would be no in-principle ecological constraints with regards to the hedgerow and trees and the impact of development should be short term and minimal.

4.1.1.3 Stream, Ditches and Waterbodies.

The only significant habitat feature of this type is a small brook which runs north–south along the eastern bounday. Mature trees line and overhang the brook on its eastern side. The brook itself may occur just beyond the official eastern boundary and not lie within the actual survey site as well as being outside of the applicants control. Any development of the site has the potential to impact this feature and any associated species, therefore a protection zone should be created along the riparian habitat during the construction phase of any development. This zone could be linked to the tree root protection zone and ultimately the 3 metre ecological buffer that will remain on site after development.

4.2 Designated sites

A SSSI lies within 2km of the site to the North, while Trane Cemetery which borders the site on its eastern side and there is a designated a SINC site to the south of Gilfach Road.

The SSSI known as Rhos Tonyrefail is known for its assemblage of flora which supports the larvae of the Marsh Fratiary Butterfly.

4.3 Protected Species

4.3.1 As part of the survey, the site was assessed for the potential of certain protected species utilising the field. These specifically included Great crested newt, Badger and Bat. It should be noted that this in no way constitutes a formal survey for such species, but rather a brief, rudimentary assessment oh habitat suitability.

4.3.2 Great crested Newt

No evidence of Great crested newt was found during the survey. However, the site does contain features known to be made use of by the species. The dense scrub, marshy in places with associated high numbers of invertebrates, the brook and overgrown hedgerow boundary are all features with a potential for the species, as well as for amphibians in general.

4.3.3 Badger

No evidence of Badger activity was found within the survey site. However, due to the dense scrub growth, access to the entire site was limited. Further, the general habitat type surveyed, as well as that found in the wider area, is of a kind known to support Badger populations. Badgers can have relatively large extended territories and are very mobile animals. Therefore, while no setts, latrines or other features were found within the site, the possibility for Badgers utilising the survey site therefore cannot be discounted.

4.3.4 Bats

The survey site contains features known to be utilised by bat species. This includes potential roosting opportunities in standard hedgerow trees, good quality foraging habitat (scrubland & mature trees / overgrown hedgerow) and a well integrated – if overgrown and unmanaged - hedgerow network to aid navigation from roosts to foraging areas. During a supplementary evening bat activity survey, 3 individuals of myotis bat species were observed using the site for foraging.

5 DISCUSSION & RECOMMENDATIONS

5.1 Habitats

5.1.1. The relatively dense scrub habitat, which constitutes the majority of the site, is increasingly considered to be of moderate to high ecological importance in Wales, due in part to previous historical losses through development. Although containing plant species and assemblages, which are widespread, with relatively little intrinsic conservation value in

and of themselves, the habitat as a whole is known to be important for invertebrates, small mammals, foraging bats and amphibians. It should be noted that the survey found no evidence of the site supporting any Devils Bit Scabious (*Succisa pratensis*), which would liken the site to the SSSI to the north.

5.1.2. The wider hedgerow network which links with the site appears well integrated across the landscape and almost certainly acts as an important 'wildlife corridor' feature, providing safe access to the site from the wider area. The dense scrub itself, which comprises the site, links with similar habitat to the north and ultimately connects with the rhos pasture type habitat of the SSSI. Certain of the standard trees found within the overgrown hedgerows, (in particular certain of the mature oaks and ash trees along the eastern boundary) contain features with good potential for roosting bats. As discussed elsewhere in this document, any hedgerow / tree-line removal as part of the development should therefore be carried out following best practice, taking account of nesting birds and use by bats. Any trees or section of important hedgerow that must be removed should be replaced, in order to achieve 'no net losses' in the longer-term, with appropriate mitigation measures implemented in the interim. Any development works should be preceded by professional bats surveys, particularly where mature trees are likely to be impacted.

5.1.2. The brook running along the eastern boundary is not included in the land proposed for development. However, it is recommended that if any such development were to take place, then a minimum 3 metre buffer strip should be maintained along the brook on the western side. This would include retaining the overhanging branches of the mature oak and ash trees, which line the bank. Retaining a minimum 3 metre strip would help to maintain a viable wildlife corridor linking the habitat to the north (and beyond that to the SSSI) and the graveyard SINC site to the East / South East. This would help ensure a certain level of connectivity, including potential commuting routes and foraging opportunities for local bat populations.

5.1.2. If the land in question were to be developed as proposed, consideration should be given to retaining the surrounding land to the north and east as buffer / connecting habitats. This would help minimise impacts to the SSSI to the north of the site. A minimum 3 metre buffer strip retained along the brook on the eastern boundary would further ensure a certain level of ecological connectivity.

5.1.3. Prior to any development of the site, it is recommended that more in depth surveys be carried out for the presence of amphibians and reptiles and could form part of the conditions of any planning permission. The south facing sloping aspect of the site, proximity to the watercourse and copious bramble / scrub cover suggest a potential for the species. The surveys should be used to assess the likely impact of any development on the species and local populations, with robust mitigation measures and method statements if required. It is considered that any future mitigation can be accommodated within the site boundary.

5.1.4. It is recommended that the tree line along the eastern boundary remain untouched in any future development. The mature oak and ash, which comprise this feature, are seemingly growing on adjacent land but the crowns encroach onto the land proposed for development. This encroachment should form part of the recommended buffer zone. Many of the trees are significantly mature enough so as to have potential features for roosting bats and other wildlife, including gaps, cavities and dense coverings of ivy. Furthermore, during the evening bat activity survey carried out on the 15th July 2016, myotis bats were observed foraging amongst these tree canopies just after sunset. If in the future any works are likely to impact the trees, it is recommended that additional surveys for bats be carried

out. These should be conducted at the appropriate time of year when bats are most active and follow the methodology outlined in BCT guidelines.

5.1.5. The boundary overgrown hedgerow / tree line along the southern boundary is comprised of ash and hazel, with occasional oak and hawthorn. It is proposed to remove this line of trees in order to extend the existing roadside pavement / footpath. If such a development was to happen, it is recommended that a species-rich hedgerow is reinstated along the site boundary in order to preserve ecological connectivity, including important navigational features / commuting routes for local bat species.

5.1.6. The site has very high potential for nesting birds due to the advanced scrub growth and thickets of young, bushy trees. It is therefore considered that no clearance or other works with potential for disturbance should be carried out during the bird-nesting season (March – August inclusive).

5.1.7. The site also has potential for small mammals, as well as amphibians and reptiles as stated previously. Any future site clearance works should therefore take this into consideration. Pending further surveys for amphibians and reptiles, if any such works are to occur then they should proceed under the guidance of a method statement, which sets out a phased approach, clearing the site gradually in sections, over a prolonged period. This will ensure that harm / impacts to any species present will be minimised and give those species adequate opportunity to migrate to the bordering (untouched) buffer zones which link with the wider unaffected habitat.

5.1.8. The site is host to at least 2 invasive plant species and an appropriate working method should be adopted during any clearance or other affecting works. The south-west corner in particular has significant stands of Japanese knotweed, while the south-eastern corner has a number of Himalayan balsam plants. Both areas are near adjoining roadways / tracks and it is likely the infestations resulted from dumped or otherwise transported materials. Given their relatively limited spread at present, the presence of these invasive species should ideally be addressed as soon as possible, before they have opportunity to encroach further into the site, ultimately threatening even more significant habitats beyond.

5.2 Species

5.2.1 Bats

Myotis spp bats were observed foraging over the site during the evening bat activity survey carried out on the 15th June 2016 (see Appendix for full results). The site as a whole is likely to be of importance to foraging bats, as evidenced by those observed during the bat activity survey. The site is highly likely to support the large numbers of invertebrates / flying insects relied upon by foraging bats. Good quality roosting opportunities exist in the immediate vicinity, including the mature, ivy-covered trees highlighted in previous sections. Roosting opportunities also potentially exist nearby within the nearby residential properties and industrial properties and particularly within the cemetery buildings located immediately adjacent to the survey field on the south-east corner. Informal consultation with the county ecologist suggests the presence of known bat roosts in these buildings. While these locations are not within the scope of the surveyed area, they are noted for the potential of existing bat roosts within the immediate vicinity of the field.

It is recommended that a bat survey is carried out prior to any development, in order to gain a better understanding of the likely impacts of such a development to bats. The survey should focus in particular on the mature trees previously mentioned.

All bats and their roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are also included in Schedule 2 of The Conservation (Natural Habitats, &c.) (Amendment) England and Wales) Regulations 2010. Further enforcement has been provided by The Countryside and Rights of Way Act 2000.

5.2.2 Badger

No signs of badger were found during the site visit, but as this species is mobile and depends on a wider territory which may encompass all or part of the site, and considering the constraints on accessing all of the site due to the prohibitively dense scrub growth, it is recommended that a more specific badger survey is carried out before any development in order to confirm that the species are not using the site. An initial first step would be to commission a data search of the wider area to check for locally occurring records of the species. (This would be obtained from SEWBRc – the South East Wales Biological Recording Centre. Please note that due to the short time constraint on producing the current document, there was insufficient time to allow for such a data search to be incorporated here).

Badger is a protected species by virtue of the Protection of Badgers Act 1992 which makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to recklessly interfere with a sett. Further enforcement has been provided by The Countryside and Rights of Way Act 2000.

5.2.3 Birds

Much of the site is bramble scrub, which, along with many of the trees and overgrown hedgerows within the site provides excellent potential nesting habitat for a range of birds.

Nesting birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended). Disturbance to nesting birds can be usually avoided by carrying out works and by excluding birds from suitable nest sites outside the bird-nesting season (the nesting season is generally March to August inclusive). However, birds may nest outside the peak-nesting period, in which case, works that would result in nest disturbance must cease until birds have fledged.

5.2.4 Reptiles

No reptiles were recorded on site and no evidence was found to indicate the site is used by reptiles. However, the south-facing, gently sloping aspect and habitat type does have potential to support common reptiles, namely grass snake *Natrix natrix*, Common lizard *Lacerta vivipara*, and Slow-worm *Anguis fragilis*.

The four widespread species of reptile (common lizard, slow-worm, grass snake and adder) receive partial protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 9(5). It is an offence to intentionally kill, injure, sell, or to advertise for sale, any of these species without an appropriate licence. Further enforcement has been provided by The Countryside and Rights of Way Act 2000.

5.2.5 Amphibians

Although no ponds occur on site, the habitat type and its associated features are known to be important for amphibians and so various species may occur on the site. The four widespread species of amphibian (common toad, common frog, smooth newt and palmate newt) receive partial protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 9(5).

5.3 Summary

The survey site is comprised of habitat types, which are known to be important for invertebrates, as well as other wildlife species – including protected species such as bats, reptiles and amphibians. However, subject to further species surveys and appropriate mitigation measures, there are considered to be no in-principle ecological constraints to the development of the site.

Further surveys would be required for a reserved matters planning application which would set out the necessary mitigation measures required as this process may be some 5 years from the point of granting outline planning permission. However, it is considered that should any protected species be found to be present, appropriate mitigation measures can be incorporated to reduce any significant impacts upon them.

It is anticipated that potential impacts could be avoided or minimised through sensitive mitigation strategies. Such mitigation measures should be informed by further survey, particularly for amphibians and reptiles, bats and badgers. However as a minimum it is considered that at outline planning staged any permission granted should include the retention, enhancement and replacement of hedgerows, retention of the brook incorporating a 3 metre buffer along the western / proposed development side and bat roosting boxes incorporated within the design of the residential properties or placed on the surrounding trees. All trees on the eastern boundary should also encompass root protection as part of any mitigation strategy.

6. Surveyor Experience

6.1 The principle surveyors and authors of this report, were Daniel Lock & Leigh Tuck, both Natural Resources Wales licensed bat workers (Licence Numbers 55038:OTH:CSAB:2014& 54225:OTH:CSAB:2014 respectively), with over eight years experience in carrying out Ecological and protected species surveys. Both have a wide and extensive experience in carrying out ecological surveys, general habitat / countryside management and in protected species and have worked on many projects related to ecology and conservation. They have experience undertaking surveys as part of the National Bat Monitoring Programme, of wider ecological assessments to inform potential development, including construction, demolition and wind farm installations and as well as undertaking numerous building and tree surveys for bats for both private individuals and much larger organisations.

6.2 The Spectrum Ecology principle surveyors team of Dan Lock and Leigh Tuck have now both held a bat license for over 5 years and have become recognised figures in the bat surveying arena, especially with local authorities such as Bridgend County Borough Council and the government body, Natural Resources Wales, previously Countryside Council for

Wales.

This wealth of experience and resultant expertise allows us to produce good quality reports, mitigation documents and habitat management plans to assist clients with any ecology or biodiversity related plans within their projects. As well as producing numerous bat reports annually for private individuals and organisations, we have also been involved in providing training, guidance and advice in such matters to local authorities across Wales.

In 2010 we delivered Protected Species Awareness training over 3 days to Officers and Principle Officers across Bridgend County Borough Council. We were integral in developing BCBC's Tree Safety Policy & advised on the development of the protocol for Bats in bridges (for Highways, when surveying for defects etc.). We have also assisted the Authority on numerous occasions in obtaining derogation licences from CCW / WG (now NRW) by carrying out bat surveys & developing mitigation measures / method statements.

Current and previous clients include Bridgend County Borough Council's regeneration department, Carmarthenshire Colleges, private clients, BBC Television and Fox Television.

Appendix 1 – Species List

Species List

Please note: Due to the dense scrub growth covering the site, access was very limited and confined to a transect footpath which had been cut through previously. The following list is therefore not exhaustive and cannot be considered a definitive list of species composition.

Plants	Invasive non-natives	Grasses	Trees
Tormentil <i>Potentilla erecta</i>	Japanese knotweed <i>Falopia japonica</i>	Cocksfoot <i>Dactylis glomerata</i>	Blackthorn <i>Prunus spinosa</i>
Birdsfoot trefoil <i>Lotus corniculatus</i>	Himalayan balsam <i>Impatiens glanulifera</i>	Timothy <i>Phleum pratense</i>	Hawthorn <i>Crateagus monogyna</i>
Ragwort <i>Jacobaea vulgaris</i>		Yorkshire fog <i>Holcus lanatus</i>	Willow <i>Salix caprea</i>
Rosebay willowherb <i>Chamerionangustifolium</i>			Alder <i>Alnusglutinosa</i>
Selfheal <i>Prunella vulgaris</i>			Common Oak <i>Quercus robur</i>
Meadow buttercup <i>Ranunculusacris</i>			Hazel <i>Corylus avellana</i>
Bramble <i>Rubusspp</i>			Ash <i>Fraxinus excelsior</i>
Foxglove <i>Digitalis</i>			Birch <i>Betulina pendula</i>
Stinging nettle <i>Urticadioica</i>			Sessile Oak <i>Quercus petrea</i>
Bracken <i>Pteridium</i>			Elder <i>Sambucus nigra</i>
Common valerian <i>Valeriania officinalis</i>			
Gossegrass			

<i>Galium aparine</i>			
Hemp agrimony <i>Eupatorium cannabinum</i>			
Creeping thistle <i>Cirsium arvense</i>			
Ribwort plantain <i>Plantago lanceolata</i>			
Pendulous sedge <i>Carex pendula</i>			
Common rush <i>Juncus effusus</i>			
Dock <i>Rumex spp</i>			
Woody nightshade <i>Solanum dulcamara</i>			
Hogweed <i>Heracleum</i>			
Broadleaf willowherb <i>Epilobium montanum</i>			

Appendix 2 - Bat survey

Evening bat activity survey: Land adjacent to Gilfach Road, Tonyrefail, RCT, CF39 8HL

Date: 15th June 2016

Sunset: 21:33 hrs

Temp: 18 °C

Weather conditions: 100% cloud cover, slight westerly breeze, and intermittent showers at start of survey followed by more persistent light rain.

Survey start time: 21:00hrs

Survey end: 23:30hrs

Methodology:

The survey was carried out using Batbox Duet heterodyne / frequency division bat detectors. It was conducted by Licensed bat workers Daniel Lock (Licence Number 55038:OTH:CSAB:2014) & Leigh Tuck (Licence Number 54225:OTH:CSAB:2014). The relatively small size of the parcel of land meant that the 2 surveyors were able to station themselves at the north and south end and adequately cover the scope of the location. The survey was intended to help establish presence of bats and general use of the location by the species. It was not intended to focus specifically on any particular features within or adjoining the land.

This report is intended to be appended to the main document of the wider Ecological assessment of the site. For more comprehensive site details, including description of habitat, please refer to the main document.

Survey Results:

- At 21:46 a myotis species bat was observed foraging over and around the mature trees on the eastern boundary of the site at the northern end

- At 21:50 a second myotis bat was observed foraging over the south-eastern quarter of the site, including around the eastern boundary mature trees.
- At 21:53 a third myotis bat was observed foraging in the same area

A total of 3 individual bats were observed at any one time. The bats went on to forage extensively and generally over the southern section of the site in particular, including immediately over the low growing, succession-growth trees which comprise much of the site.

Discussion:

The weather conditions were sub-optimal for a bat activity survey, given the persistent light rain. However significant numbers of flying insects were present, particularly at the start of the survey. Furthermore, bats were observed utilising the site soon after sunset, suggesting the site is of some importance to nearby roosting species. The mixed scrub habitat with the adjoining brook, which comprises the site, presents high quality foraging habitat, as evidenced by the significant presence of flying insects (midges etc.). The boundary tree lines – the eastern boundary in particular – are likely to function as locally important navigational features / commuting routes for bats, as well as presenting good foraging opportunities.

Many of the mature oak trees along the eastern boundary contain features such as dense coverings of ivy, which have high potential for roosting bats. If any work is proposed to impact these trees it is considered that further bat activity surveys be carried out, focussing on the trees with potential to be affected.

No trees or other features within the main site boundary held any potential for bat roosts. Rather, the site appears to be significant as good quality foraging habitat, with roosts potentially located in adjoining areas (including the cemetery buildings to the immediate East of the location).

Disclaimer: It should be noted that the survey and results detailed above are not of the required effort to constitute a full bat survey of the site or any features within or adjacent to it. Rather this was an evening activity survey intended to help establish presence of – and use by – local bat populations, and to help give an initial indication of the relative importance of the site to bats. Further surveys would be required if any of the high potential features detailed above were to be impacted.