

PRELIMINARY ECOLOGICAL APPRAISAL

Multi-use public path between St
Dogmaels and Poppit Sands,
Pembrokeshire

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Poppit Path Group

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EXECUTIVE SUMMARY

Grwp Llwybr Poppit Path Group (PPG) is a community group is seeking permission to create a multi-use path (approximately 2 km in length and 3m wide) between St Dogmaels and Poppit Sands, Pembrokeshire. The current path, which is a section of the Pembrokeshire Coast Path, is a narrow (single lane) highway with motorised traffic. It is not pedestrianised, and therefore has health and safety implications for both users of the highway and of the Pembrokeshire Coast Path.

A Preliminary Ecological Appraisal (PEA) was undertaken on the potential routes of the new multi-purpose public path. The appraisal/survey assessed the likely ecological impacts of construction and subsequent presence of the path. Results showed that if the path follows the proposed route, then the ecological impact to local habitats and species would be low, and favourable conservation status would not be detrimentally affected.

In summary:

- The path route is not within a designated site of nature conservation-e.g. Special Area of Conservation, Site of Special Scientific Interest, Special Protection Area and Local Nature Reserves.
- The desk top study revealed that the majority of recorded Priority species are associated with the River Teifi.
- The path route does not encounter any highly-sensitive ecological habitats.
- There was no evidence of Priority Species during the walkover survey.
- The potential impact of the path route to Priority Species is limited to bats, nesting birds and reptiles.
- The potential impact on Priority species is low and can be easily compensated and mitigated.
- The walkover survey did not discover any invasive non-native species along the proposed path route.
- No sites of archaeological importance will be impacted as a result of the path.

In conclusion, if the recommendations stated in this report are adhered to, it will help ensure that the proposed path, both during and post-, construction will not detrimentally impact local habitats and species.

1. INTRODUCTION

Grwp Llwybr Poppit Path Group (PPG) is a community group established in 2016 to achieve the following key objective:

- To provide or enhance access to the coast and countryside within the St. Dogmaels and Poppit area for all people without discrimination, with the object of improving the conditions of life for local people and visitors alike, and to improve the environment and people's understanding of the environment.

At present, PPG is seeking permission to create a multi-use public path (approximately 2 km in length and 3m wide) between St Dogmaels and Poppit Sands, Pembrokeshire. The current path, which is a section of the Pembrokeshire Coast Path, is actually a narrow (single lane) highway with motorised traffic. It is not pedestrianised and is therefore not suitable for wheelchairs and push-chairs/buggies. This has health and safety implications for both users of the highway and of the Pembrokeshire Coast Path. It also results in local users, who wish to visit nearby Poppit Sands, having to either drive the short distance or face the risks of using the existing road, which becomes very busy and congested during summer months.

Community consultation has been carried out by PPG since 2015, and it has confirmed a high-level of support for the proposed path. Increased beach access and human safety have been identified as key issues. A feasibility study has therefore been commissioned by PPG to investigate the potential development of a multi-use public path between St Dogmaels and Poppit Sands. A path of this type would contribute to all seven Well-Being Goals under the Well-Being of Future Generations (Wales) Act 2015.

A Preliminary Ecological Appraisal of the proposed multi-use path route is a component of the overall feasibility study.

2. AIMS & OBJECTIVES

A Preliminary Ecological Appraisal (PEA) was undertaken on the proposed route of the multi-purpose path. The appraisal/survey assessed the likely ecological impacts of construction and subsequent presence of the path. Within the appraisal, an evaluation was made of the ecological features present, as well as scoping for protected and priority species/habitats, identification of potential constraints to the proposed path and recommendations for compensation and mitigation.

The results of this PEA will help to inform the overall feasibility of the proposed path, and also support further ecological site assessments (if the proposal were to progress to the planning/development stage by statutory authorities). The information obtained from the PEA may also contribute to the process of selecting preferred ecological options and in the overall strategic environmental assessment of the development plan for the proposed multi-use path.

Both a desk-top study and a walkover survey were conducted as part of the PEA; and habitats, fauna and flora (of conservation importance) were mapped and discussed in context of the potential ecological impact of the proposed multi-use path.

3. SITE DESCRIPTION

The proposed route for the multi-purpose path (Fig. 1) follows the single lane highway (B4546) northwards from the outskirts of St. Dogmaels to the public car park at Poppit Sands. The section of the route surveyed in this report was the from the proposed start point at the current boat storage area on the outskirts to of St Dogmaels, northwards up to the sharp right hand turn (of the B4546) to the Webley Hotel (Fig. 1). The proposed path (approx. 3m wide) is to follow the road, but to be slightly offset into the adjacent habitat. This will segregate users on foot, horse and/or pedal bike from motorised vehicles, and thus significantly improve safety of all those concerned. The proposed route begins on the estuary-side of the road (Eastern side) and then crosses over to the landward side (Western side) at the point where the track from Ysgbor-Wen intersects the B4546 (Fig. 1). The proposed route then continues to run adjacent to the B4546.

The proposed route then follows an existing bridleway past the farm, Manian Fawr and onto an existing footpath through Cardigan Bay Holiday Park and onto a newly surfaced path through an area owned by Pembrokeshire Coast National Park. The proposed route is provided in more detail in the accompanying feasibility study to this document.

4. METHODOLOGY

DESK-TOP STUDY

A desktop study was undertaken in order to obtain any relevant ecological records that may be present within a 1km radius of the survey site. Of particular relevance were those of protected/priority species, and sites with nature conservation designations. The primary source of information was West Wales Biodiversity Information Centre. The halfway point of the proposed path route was used as the reference point for the 1km data search radius.

The Multi-Agency Geographic Information for the Countryside (MAGIC) website was also consulted to confirm any designated sites (both statutory and non-statutory) within 1km of the survey site. Designated sites include Local Nature Reserves (LNRs), Ramsar Sites, Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Sites of Special Scientific Interest (SSSIs).

To identify any archaeological features that may be impacted by the proposed work, a search for such features was carried out on the CADW website (Welsh Government's historic environment service - <http://cadw.gov.wales/>), the Historic Wales website (a map enabled portal for historic environment information in Wales - <http://historicwales.gov.uk/>) and the Coflein website (online catalogue of archaeology, buildings, industrial and maritime heritage in Wales- <http://coflein.gov.uk/>).

SITE APPRAISAL - WALKOVER SURVEY

- **Habitat:**

An ecological appraisal of habitats was carried out at the site on 14th January 2018 by Dr Emma Wootton. It constituted a full walkover survey of the proposed path route, based on guidelines and methodologies of Phase 1 habitat survey techniques (Joint Nature Conservation Committee, 2010). The walkover survey began at St Dogmaels and progressed northwards towards Poppit sands. (Fig. 1). In brief, the survey identified baseline ecological conditions, as well as any protected or notable habitats. All habitats within the proposed development site were classified and mapped as accurately as possible, using target notes to identify features of particular ecological interest. In the context of this report, protected or notable habitats were considered to be those of a sustainable size and which met any of the following criteria:

- *Habitats which have a high intrinsic ecological value, i.e. they support a diverse range of plant and/or faunal species*
- *Mature or semi-natural habitats*
- *UK Biodiversity Action Plan priority habitats*
- *Local Biodiversity Action Plan habitats considered having a significant extent and/or ecological interest.*
- *Potentially Invasive Non-Native Species (INNS).*

- **Protected ('Priority') Species:**

The site was also assessed on its potential to support any protected or priority faunal species. The survey involved searching for field signs and evidence for the presence of particular species, and also documenting/mapping any habitat with the potential to support such species. The search area included a 15m radius each side of the proposed path route. In the context of this report, protected or notable species were considered to be those that met any of the following criteria:

- *Species protected by British or international law*
- *UK BAP priority species or local BAP species*
- *Nationally rare or scarce species*
- *Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber lists).*

Species of particular interest included badgers, bats, reptiles, amphibians, dormice, otters and nesting birds. For the purpose of this report, such species will be referred to as 'Priority Species'.

5. SURVEY LIMITATIONS

The conditions reported and assessed in this PEA represent those identified at the time of the walkover survey on the 14th January 2018. Although a reasonable assessment of the habitats can be made during a single walkover survey, seasonal variations are not observed. Species observations were based on the current site visit. The survey was conducted during January, which is in the sub-optimal season for undertaking PEAs; hence many plant species encountered were not in flower/leaf

and thus constrained identification. However, habitat types could still be comprehensively classified, and therefore this limitation was not considered likely to alter the conclusions and recommendations made within this report. During the walkover, the potential for protected species could also be accurately assessed. All areas of the site were accessible on the day of the survey.

The desk study used available records and historical data from the local area. However, the data does not always provide a reliable indication of species present, since records depend entirely on survey effort, which is highly variable. The data are useful as a general guide to supplement the site visit and walkover survey, but absence of records does not reflect absence of species.

6. RESULTS

DESKTOP STUDY

- **Designated sites**

The proposed path route is not within a statutory designated site of nature conservation; however it is within 1km of the lower reaches of the River Teifi. The River Teifi is a designated SAC (Special Area of Conservation) and SSSI (Site of Special Scientific Interest). Please refer to Figure 2 for the boundaries of these designated sites in relation to the proposed path route.

There are no non-statutory designations within the 1km radius of the proposed path; however, under the Water Framework Directive there is salt marsh habitat in close vicinity (i.e. the lower reaches of the River Teifi which are adjacent to the proposed path route) which has been classified as high sensitivity.

- **Species.**

The data searches revealed a wide variety of species records for the 1km radius search area. The full species list is presented in Table 1. The species in bold are classified as Priority Species. *i.e. species with European and/or UK legal protection; NERC Act (2006) species and UK BAP priority species.*

Birds constitute a high proportion of the records, followed by butterflies & moths, and then plants.

For the purpose of this study, the results of the desktop study will focus on the Priority Species (i.e. species with European and/or UK legal protection).

The locations of priority species (Target notes; TN 1-12) within the 1 km radius search area are illustrated in Figure 3, and the associated TN's of priority species lists are presented in Table 2. The majority of recorded priority species are birds; however there are records of protected butterflies, moths, bats and otters. The birds, butterflies and moths are species associated with the estuarine environment of the lower reaches of the River Teifi; including areas of mud flats, sand/shingle beds, salt marsh and reed beds. There have been 2 records of otters on Poppit Dunes (TN1, Table 2 & Fig. 3), and all the bat records are associated with the buildings at Manian Fawr on the south-western boundary of the 1km search radius (TN5, Table 2 & Fig. 3).

The only European Protected Species (EPS) recorded in the search area were **otters** and **bats** (several different species; Table 2). Both otters and bat species require derogation licences if works are going to impact them and/or their habitat.

There were no records of INNS within the search area.

- **Archaeological features & historic monuments**

No archaeological features or historic monuments are encountered along the proposed path route; therefore the path will not inflict any detrimental archaeological impact on its surroundings. The geographically-closest features of historic value to the proposed path are:

- St. Dogmaels Battery- Dyfed Archaeological Trust (military structure)
- Glanteify- Country house garden (tennis court and terrace)
- Plasbach- Dyfed archaeological Trust (findspot)
- Manian Fawr Castle

Please refer to Figure 4. None of these features are at risk as a result of the path's construction. Table 3 lists all archaeological features within 1 km radius of the survey site.

SITE APPRAISAL – WALKOVER SURVEY

• Habitats

The proposed route encounters, and impacts upon, a variety of habitats. The habitats are very distinct and have therefore been separated into single entities, hence 'Areas', in order to aid classification, description and discussion of findings. The designated habitat 'Areas' are illustrated in Figure 5. There are 6 such 'Areas' encompassing:

1. Wasteland & hard standing
2. Scrubland & bracken
3. Scrubland & trees
4. Woodland
5. Pasture
6. Hedgerows

Each area will be described and classified individually. Where appropriate, habitats are classified according to Phase 1 habitat definitions (PH1: XX). The areas are listed in order of their presence along the route (from start to finish).

1. Wasteland & hard standing (Area 1).

This area is currently used for boat (and caravan) storage. It encompasses scrub habitat (PH1: J2) dominated by (1-2 m high) of gorse (*Ulex europaeus*) and bramble (*Rubus fruticosus*). Small stands of willow (*Salix* spp.), dog wood (*Cornus* sp.) and *Buddleja davidii* are also present. There are areas of hard standing (concrete and rubble) which have been neglected, and therefore have been colonised by ruderal species, including perennial herbs (e.g. *Plantago* spp., *Ranunculus* spp., *Potentilla* spp., *Dipsacus* sp; PH1: J1.3). The area is enclosed by a wooden fence along the roadside and by a line of young broad-leaved native trees (approx 20 m high) along the estuary side. There is also a 1-2 m wide grass verge running along the fence line by the side of the road. This verge is neutral grassland which is mown regularly.

Please refer to Figure 6 for photographs.

2. Scrubland and bracken (Area 2)

This area is scrubland of continuity with the Area 1 habitat (PH1: J2). Stands (1-2 m high) of gorse (*Ulex europaeus*), bramble (*Rubus fruticosus*) and willow (*Salix* spp.) are still present (PH1:J2).

However, there is no hard standing, and instead, swathes of bracken (*Pteridium aquilinum*) (PH1:C1) and semi-improved neutral grassland (PH1:B2) become a dominant feature. Ruderal herb species are also present – including nettle (*Urtica dioica*), red campion (*Silene dioica*), Buttercup (*Ranunculus* spp.), Herb Robert (*Geranium robertianum*) and Willowherb (*Epilobium* sp.). As with Area 1, this area is also lined by a wooden fence and a line of broad-leaved native trees. Abandoned kayaks and boat trailers were overgrown with vegetation and a pile of aged wooden fence posts was also observed. A mown grass verge (1-2m wide) runs along the edge of the road.

Please refer to Figure 7 for photographs.

3. Scrubland & trees (Area 3)

Area 3 consists of mature broad-leaved trees lining the road side, which gently slopes downwards (away from the road) into young semi-natural woodland (PH1:A1) and scrub (PH1:J2). The mature trees lining the road are 20-30m tall, and are predominantly Sycamore (*Acer pseudoplatanus*) and Elm (*Ulmus* spp.). The young semi-natural woodland (adjacent to the line of mature trees) has a canopy of a height 10-20 m; the trees are typically multi-trunked and elongated. Species include Willow (*Salix* sp.), Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Hazel (*Corylus avellana*). The understorey comprises of typical scrubland species, including bramble (*Rubus fruticosus*), bracken (*Pteridium aquilinum*), nettles (*Urtica dioica*) and young elder (*Sambucus nigra*). Ivy (*Hedera* spp.) is dominant both in the scrubland and on the trees. In the more densely planted (and shaded) areas, ferns become a common ground cover species. There is no obvious grass verge along the road side; however, there is a well-worn path (created by pedestrians) running next to the mature trees. In order to accommodate a 3 m-wide multipurpose path running adjacent to the road, several mature broad-leaved trees (up to 7 trees, with trunks >50 cm in diameter) would have to be felled (Fig. 8).

Please refer to Figure 9 for photographs.

4. Woodland (Area 4)

Area 4 is semi-natural woodland (PH1: A1). It is composed of broad-leaved species including, Sycamore (*Acer pseudoplatanus*), Ash (*Fraxinus excelsior*), Hazel (*Corylus avellana*) and Oak (*Quercus robur*). The canopy is 20-30m high, and many of the trees have been coppiced, and are therefore multi-stemmed. The first section of the woodland is densely planted, and as such, the understorey and ground cover is dominated by ferns, Sphagnum moss and ivy (*Hedera* spp.). The second section of woodland is less densely planted and as such the ground cover is dominated by ivy (*Hedera* spp.), with stands of low growing bramble (*Rubus fruticosus*) and bracken (*Pteridium aquilinum*). Perennial herbs such as Herb Robert (*Geranium robertianum*) are also a component species.

The woodland is raised above the level of the road by 2-3 m; therefore a steep bank edges the side of the road. A small drainage ditch is also present along some sections.

In order for the path to run through the woodland, trees must be felled. The majority of these trees are coppiced, multi-stemmed individuals; however several mature trees (of trunks >25 cm in diameter) may also have to be removed (approx. 10 trees).

Please refer to Figure 10 for photographs.

5. Pasture (Area 5)

Area 5 is classified as improved grassland (PH1:B4). It is currently used as grazing pasture. The habitat is lush, low-growing and dominated by grasses- particularly Crested Dog's Tail (*Cynosurus cristatus*) and Perennial rye grass (*Lolium perenne*). Overall species diversity is low; however, there is scattered Dock (*Rumex* spp.), daisy (*Bellis perennis*), nettle (*Urtica dioica*), buttercup (*Ranunculus* spp.) and thistles (*Cirsium* spp.). These species indicate local enrichment of soil (via grazing animals).

The proposed path would run along the inside edge of the grazing pasture (field) adjacent to the hedgerow.

At the northern end of the pasture there is a permanent structure (a concrete base) containing a very old abandoned piece of agricultural machinery. It is currently overgrown with bramble. (Fig. 11). This structure may have to be removed as part of the path's construction.

Please refer to Figure 12 for photographs.

6. Hedgerow (Area 6)

A mature native hedgerow forms the boundary between the grazing pasture (Area 5) and the road (B4546). The hedgerow also runs adjacent to the B4546. The hedgerow sits atop a steep grass bank, as the grazing pasture is raised above the level of the road. The hedgerow can be classified as a species-rich hedge (PH1: J2.4), and is intact along the entirety of the grazing pasture. The hedgerow is approx 1m deep and 1-2 m high. It is composed of a variety of native species; dominant species include hawthorn (*Crataegus monogyna*), bramble (*Rubus fruticosus*), elder (*Sambucus nigra*), honeysuckle (*Lonicera periclymenum*), ivy (*Hedera* spp.), hazel (*Corylus avellana*), Dog rose (*Rosa canina*) and blackthorn (*Prunus spinosa*).

The first 50 m of hedgerow is separated from the road by a 5m wide raised bank. The top of the bank (5m wide) is scrubland (PH1:J2), dominated by bramble (*Rubus fruticosus*) and bracken (*Pteridium aquilinum*). It is interspersed with ruderal species such as perennial herbs, nettle (*Urtica dioica*) and grasses. The bank also contains several trees approximately 15-20m in height. The majority of the trees are Sycamore (*Acer pseudoplatanus*). Two of these trees would need to be felled if the proposed path was to run along the top of this bank prior to entering Area 5 (pasture). This section of hedgerow is significantly higher in height due to the maturity of the shrubs and trees.

It is proposed that the hedgerow will not be removed as part of the path's construction – instead it will form the boundary between the proposed path and the road (B4546).

Please refer to Figure 13 for photographs.

7. Woodland, Wetland and Bracken (Area 7)

On the upper part of this section from the Holiday Park to Manian Fawr, dark shaded habitat was dominant, with some animal runs found, but not utilised with vegetation cover present. The only trees of note were Ash, Sycamore and Hawthorn. The whole habitat was dominated by bracken. On the lower part of this section, of note was a small section of herringbone dry stone wall leading to a traditional dry wall within the bracken scrub.

The lower area of the proposed path has an existing path in place that requires improvement. The area can be identified at figure 14. This area was surveyed in January 2018 with an additional walk over survey in June 2018. The area adjacent to Poppit Sands Car Park displayed general scrub and meadow species. Grass paths were subject to strimming in the June survey, but further path development and disturbance will require a reptile survey due to being classic reptile basking habitat.

There was nothing of concern during the survey of the remainder of the area. There was evidence of digging at one tree along the path between Poppit Sands Car Park and the Holiday Park that was believed to be a dog, with no evidence of scat or other matter.

- **Protected species.**

The walkover survey did not detect evidence of any protected (or priority) faunal species. However, several of the habitats encountered along the proposed path route do have the potential to support such species. Table 4 below summarises the potential of each habitat. The habitats are designated as the 'Areas' described above (Areas 1-7) and as illustrated in Figure 5. Details on the potential of each Area to support such species are detailed below Table 4.

Table 4. Summary of the potential for each habitat (Area) to support protected and priority species.

Area	Potential for protected/priority species						
	Bats	Badgers	Reptiles	Dormouse	Amphibians	Otters	Nesting birds
1	✗	✗	✓	✗	✗	✗	✗
2	✗	✓	✓	✗	✗	✗	✗
3	✓	✓	✗	✗	✗	✗	✓
4	✓	✓	✗	✗/✓	✗	✗	✓
5	✗	✗	✗	✗	✗	✗	✗
6	✗	✗	✓	✗/✓	✗	✗	✓
7	✓	✗	✓	✗/✓	✓	✗	✓

(Potential habitat, ✓; not potential habitat, ✗)

1. Wasteland & hard standing (Area 1)

Area 1 is potential reptile habitat. It contains scrubland, waste ground and hard standing, all of which are good reptile habitat. The area is composed of mosaic of different habitats and flora, with plentiful

interfaces and boundaries. It is these interfaces which reptiles prefer. Therefore, there are numerous opportunities for reptile basking and refugia. It is also an open and sunny location.

2. Scrubland and bracken (Area 2)

For the same reasons as stated in Area 1, Area 2 is potential reptile habitat. The interface between bracken and grassland (as observed in this area) may be considered to be of high reptile potential, and a pile of wooden fence posts may act as refugia as well as hibernacula. Although no signs of badgers were observed in this area, the habitats within the area may be considered of secondary foraging quality; therefore the area represents badger potential (albeit low, due to it only being of secondary quality).

3. Scrubland & trees (Area 3)

This area contains a diversity of habitats, including mature trees, young woodland and scrubland, and as such it is potentially suitable habitat for nesting birds, bats (in the mature trees lining the road) and badgers (both foraging and residency potential).

4. Woodland (Area 4)

This area of woodland has the potential to support bats, badgers and nesting birds. However, the majority of this woodland area is not considered suitable for dormice, due to it being too damp and shady, with no continuous scrub layer. The dominance of tall spindly trees (due to high tree density) and lack of suitable food sources also prevent this area from being considered ideal dormouse habitat. However, the northern end of this woodland is less dense, and hence more open, and consists of coppiced trees, including hazel. It is also connected to a native hedgerow. It therefore meets some of the dormouse habitat criteria.

One animal track was observed running through the woodland, perpendicular to the road. The track was observed exiting the woodland onto the road. However, the size and shape of the track strongly suggests that it was not created by badgers (Fig. 10).

5. Pasture (Area 5)

This intensively grazed area of pasture (with low species diversity) does not represent potential habitat for any of the species listed in Table 1.

6. Hedgerow (Area 6)

This native hedgerow is potential habitat for reptiles and nesting birds. The hedgerow is on a raised bank, and it is the interface between the bank and hedgerow which represents suitable reptile habitat. Furthermore, due to it being a native hedgerow, with high species diversity, it also meets some of the dormouse habitat criteria. However, the hedgerow is sparse in some sections, and is subject to high

disturbance due to it being adjacent to a busy road. This may therefore reduce its potential to support the dormouse.

Two animal tracks were observed exiting the hedgerow onto the road. The tracks were only visible from the road (not from the pasture). The size and shape of the tracks suggests that they were not created by badgers (Fig. 13).

Note: there was no evidence of invasive non-native species (INNS) in any of the Areas surveyed.

7. Woodland, Wetland and Bracken (Area 7)

As stated in the previous section relating to habitat, note should be made of the requirement for additional survey relating to reptiles and other species that have been noted in table 4.

The presence of an existing path along almost the entire route with potentially remedial works to develop further into the wider project will result in less disturbance as opposed to other areas of the proposed route.

7. POTENTIAL IMPACT OF PROPOSED PATH

The proposed path is to be approximately 3 m wide in order for it to serve its multi-user purpose. Its impact on the surrounding habitat during construction may be up to an additional 3m each side of the path. Therefore, the total impact zone for path construction may be up to 9m in diameter. However, if the path follows the proposed route, then the ecological impact to local habitats and species would be low, and the favourable conservation status of surrounding habitats would not be detrimentally affected. The reasons for this are as follows:

- The path route is not within a designated site of nature conservation-e.g. SAC, SSSI, SPA, LNR.
- The path route will not impact on the adjacent River Teifi, which is a designated SAC and SSI.
- The 1 km radius desk top study revealed that the majority of recorded Priority Species (i.e. birds, butterflies and moths) are associated with the estuarine environment of the River Teifi.
- The path route does not encounter any highly-sensitive ecological habitats.
- There was no evidence of Priority Species during the walkover survey.
- The potential impact of the path route to Priority Species is limited to bats, nesting birds and reptiles.
- The potential impact on bats, nesting birds and reptiles is low and can be easily compensated and mitigated for, if the recommendations of this report (and subsequent surveys) are adhered to.
- The walkover survey did not discover any INNS along the proposed path route.
- No sites of archaeological importance will be impacted as a result of the path.

8. RECOMMENDATIONS – MITIGATION, COMPENSATION & FURTHER SURVEYS.

The following recommendations will help ensure that the proposed path, both during and post-, construction will not detrimentally impact the favourable conservation status of local species or habitats.

Bats: Several mature trees may have to be felled along the proposed path route, in particular in Areas 3 & 4; therefore bat surveys of such trees will be required in order to ascertain their bat roost potential. If bats (and or their roosts) are discovered, then derogations (European Protected Species licences) will be required in order for the trees to be legally-felled. The bat surveys must be carried out by licenced bat ecologists.

Nesting birds: Several of the habitats encountered by the proposed path route support suitable habitat for nesting birds (in particular Areas 3, 4 & 6), therefore works (e.g. vegetation clearance) carried out on these habitats during the nesting season (March –August) should be given careful consideration. Detrimental affects to nesting birds can be mitigated for by allowing no works to be carried out to suitable nesting habitats (e.g. trees, mature scrub and hedgerows) within the nesting season. If this is not feasible, then a nesting bird check should be undertaken (by suitably qualified personnel) on the habitat to be impacted, immediately prior to any work commencing.

Reptiles: Areas 1, 2 and 6 possess habitats suitable for supporting reptiles; therefore, a reptile survey (carried out by a suitably qualified ecologist) is recommended in order to fully ascertain whether reptiles inhabit the site; and if so, identify which species are present, and provide recommendations on how best to minimise the impact of the path's construction on such species. Simple reptile exclusion methods are likely to be effective.

Other Species: Although some of the habitats ('Areas') along the proposed path route have the potential to support badgers, the lack of any physical evidence (such as setts, latrines and snuffle holes) of this species during the walkover survey strongly suggests that badgers are not present, and therefore further surveys are not recommended. However, personnel should remain diligent, and report any signs of badger activity. Similarly, the potential for dormice to inhabit the habitats affected by the path are very low, therefore further surveys for this species are not currently recommended.

Hedgerows: It is recommended that all hedgerows are retained, and enhanced where possible, as wildlife corridors.

Ditches: Ditches should be protected from runoff and pollution in accordance with the Pollution Prevention Guidelines.

Vegetation: Removal of vegetation should be as limited as feasibly possible, and be undertaken with care. Mitigation and compensation may be via appropriate re-planting of vegetation post-construction of the path. The vegetation should incorporate native shrub and tree species, and be suitable for the local environment.

Note: If any protected species, or evidence of protected species, is discovered at any time during site clearance or path construction, then work must temporarily cease and a suitably qualified ecologist be contacted for advice.

9. REFERENCES

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10. SURVEYORS BIOGRAPHY

Dr Emma Wootton holds a BSc (Hons), MSc (distinction) and PhD in Biological Sciences. She worked as a Research fellow at Swansea University for 15 years prior to becoming a self-employed consultant biologist in May 2013. Dr Wootton is also a keen wildlife ecologist and has been involved with numerous ecological projects over the years – both professionally and leisurely. She has a keen interest in British flora and is also licenced bat ecologist. Dr Wootton has attended several training courses including 'Reptile and

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11. LEGAL DISCLAIMER

This document has been prepared by Dr Emma Wootton for Grwp Llwybr Poppit Path Group (PPG), solely as a Preliminary Ecological Appraisal. Dr Emma Wootton accepts no responsibility or liability for any use that is made of this document other than by the client (stated above) for the purposes for which it was commissioned.

Reasonable care and skill was exercised during the whole process.

12. ADDENDICES

• TABLES

Table 1. Species records from Local Records Centre biodiversity data search. Based on 1 km radius search area. Priority Species are listed in bold.

Species Group	Scientific Name	Common Name	Earliest Year	Latest Year	Total Records
Bees, Wasps, Ants and Sawflies	<i>Bombus (Bombus) terrestris</i>	Buff-Tailed Bumblebee	2015	2015	1
Birds	<i>Acanthis cabaret</i>	Lesser Redpoll	2008	2008	1
	<i>Accipiter nisus</i>	Sparrowhawk	2007	2015	19
	<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	1988	2015	8
	<i>Acrocephalus scirpaceus</i>	Reed Warbler	1988	1988	1
	<i>Actitis hypoleucos</i>	Common Sandpiper	2003	2015	242
	<i>Aegithalos caudatus</i>	Long-tailed Tit	2008	2015	21
	<i>Alauda arvensis</i>	Skylark	1988	2015	10
	<i>Alca torda</i>	Razorbill	2009	2009	1
	<i>Alcedo atthis</i>	Kingfisher	2002	2015	66
	<i>Anas acuta</i>	Pintail	1997	2010	31
	<i>Anas clypeata</i>	Shoveler	1999	2010	22
	<i>Anas crecca</i>	Teal	2003	2015	318
	<i>Anas penelope</i>	Wigeon	2002	2015	382
	<i>Anas platyrhynchos</i>	Mallard	2003	2015	331
	<i>Anas strepera</i>	Gadwall	1995	2010	14
	<i>Anser albifrons</i>	White-fronted Goose	2005	2005	1
	<i>Anser anser</i>	Greylag Goose	1998	2015	14
	<i>Anser brachyrhynchus</i>	Pink-footed Goose	1999	1999	6
	<i>Anthus petrosus</i>	Rock Pipit	2008	2015	44
	<i>Anthus pratensis</i>	Meadow Pipit	1988	2015	14
	<i>Anthus spinoletta</i>	Water Pipit	2007	2007	3
	<i>Apus apus</i>	Swift	1988	2015	12
	<i>Ardea cinerea</i>	Grey Heron	2002	2015	188
	<i>Arenaria interpres</i>	Turnstone	2002	2010	98
	<i>Athene noctua</i>	Little Owl	1988	1988	1
	<i>Aythya ferina</i>	Pochard	1995	2009	18
	<i>Aythya fuligula</i>	Tufted Duck	2000	2010	13
	<i>Aythya marila</i>	Scaup	1997	1997	5
	<i>Botaurus stellaris</i>	Bittern	2010	2010	5
	<i>Branta bernicla</i>	Brent Goose	2002	2009	29
	<i>Branta leucopsis</i>	Barnacle Goose	2007	2015	57
	<i>Bucephala clangula</i>	Goldeneye	2003	2010	81
	<i>Burhinus oediconemus</i>	Stone-curlew	1997	1997	1
	<i>Buteo buteo</i>	Buzzard	2008	2015	47
	<i>Calcarius lapponicus</i>	Lapland Bunting	2010	2010	1
	<i>Calidris alba</i>	Sanderling	2003	2015	167

	<i>Calidris alpina</i>	Dunlin	2003	2015	524
	<i>Calidris canutus</i>	Knot	2003	2015	94
	<i>Calidris ferruginea</i>	Curlew Sandpiper	2002	2010	34
	<i>Calidris minuta</i>	Little Stint	1998	2010	27
	<i>Calidris pugnax</i>	Ruff	1998	2010	17
	<i>Carduelis carduelis</i>	Goldfinch	2008	2015	39
	<i>Certhia familiaris</i>	Treecreeper	2007	2011	7
	<i>Cettia cetti</i>	Cetti's Warbler	2008	2010	7
	<i>Charadrius alexandrinus</i>	Kentish Plover	2007	2007	5
Birds	<i>Charadrius dubius</i>	Little Ringed Plover	2000	2008	2
	<i>Charadrius hiaticula</i>	Ringed Plover	2003	2015	403
	<i>Chloris chloris</i>	Greenfinch	2008	2011	16
	<i>Chroicocephalus ridibundus</i>	Black-headed Gull	2000	2015	152
	<i>Columba oenas</i>	Stock Dove	2010	2015	2
	<i>Corvus corax</i>	Raven	2008	2015	22
	<i>Cuculus canorus</i>	Cuckoo	1988	1999	3
	<i>Cyanistes caeruleus</i>	Blue Tit	2010	2015	59
	<i>Cygnus columbianus</i>	Bewick's Swan	1998	1998	1
	<i>Cygnus columbianus subsp. bewickii</i>	Bewick's Swan	1989	1989	1
	<i>Cygnus cygnus</i>	Whooper Swan	2003	2008	4
	<i>Cygnus olor</i>	Mute Swan	2003	2015	347
	<i>Delichon urbicum</i>	House Martin	1988	2015	26
	<i>Dendrocopos major</i>	Great Spotted Woodpecker	1988	2015	8
	<i>Egretta garzetta</i>	Little Egret	2002	2015	281
	<i>Emberiza citrinella</i>	Yellowhammer	1988	2003	4
	<i>Emberiza schoeniclus</i>	Reed Bunting	2003	2015	3
	<i>Falco columbarius</i>	Merlin	1997	2008	3
	<i>Falco peregrinus</i>	Peregrine	2008	2008	2
	<i>Falco tinnunculus</i>	Kestrel	1988	2008	8
	<i>Fulica atra</i>	Coot	1996	2010	35
	<i>Fulmarus glacialis</i>	Fulmar	1988	1988	1
	<i>Gallinago gallinago</i>	Snipe	2008	2015	106
	<i>Gavia arctica</i>	Black-throated Diver	1995	1995	1
	<i>Gavia immer</i>	Great Northern Diver	2003	2003	4
	<i>Gavia stellata</i>	Red-throated Diver	2001	2001	2
	<i>Haematopus ostralegus</i>	Oystercatcher	1996	2015	448
	<i>Hirundo rustica</i>	Swallow	1995	2015	31
	<i>Hydrocoloeus minutus</i>	Little Gull	2003	2003	1
	<i>Larus argentatus</i>	Herring Gull	2001	2015	133
	<i>Larus canus</i>	Common Gull	2000	2015	38
	<i>Larus fuscus</i>	Lesser Black-backed Gull	2000	2015	81
	<i>Larus glaucooides</i>	Iceland Gull	2000	2012	22
	<i>Larus hyperboreus</i>	Glaucous Gull	2002	2012	5
	<i>Larus marinus</i>	Great Black-backed Gull	2002	2015	91
	<i>Larus melanocephalus</i>	Mediterranean Gull	1999	2010	63

	<i>Limosa lapponica</i>	Bar-tailed Godwit	2003	2015	215
	<i>Limosa limosa</i>	Black-tailed Godwit	2002	2015	59
	<i>Linaria cannabina</i>	Linnet	2008	2015	21
	<i>Linaria flavirostris</i>	Twite	2008	2008	1
	<i>Locustella naevia</i>	Grasshopper Warbler	2010	2010	4
	<i>Lymnocyptes minimus</i>	Jack Snipe	1985	1985	1
	<i>Melanitta nigra</i>	Common Scoter	1996	2010	3
	<i>Mergus merganser</i>	Goosander	1997	2015	17
	<i>Mergus serrator</i>	Red-breasted Merganser	2003	2010	167
	<i>Milvus milvus</i>	Red Kite	1996	2015	9
	<i>Morus bassanus</i>	Gannet	2007	2015	4
Birds	<i>Motacilla alba</i>	Pied Wagtail	1999	2015	35
	<i>Motacilla alba subsp. alba</i>	White Wagtail	2008	2010	2
	<i>Motacilla alba subsp. yarrellii</i>	Pied Wagtail	1988	2015	13
	<i>Motacilla cinerea</i>	Grey Wagtail	2008	2015	18
	<i>Motacilla flava</i>	Yellow Wagtail	2007	2007	1
	<i>Muscicapa striata</i>	Spotted Flycatcher	1988	2008	3
	<i>Numenius arquata</i>	Curlew	2003	2015	486
	<i>Numenius phaeopus</i>	Whimbrel	2001	2015	152
	<i>Oenanthe oenanthe</i>	Wheatear	1988	2015	20
	<i>Pandion haliaetus</i>	Osprey	2000	2008	4
	<i>Parus major</i>	Great Tit	2008	2015	37
	<i>Passer domesticus</i>	House Sparrow	2010	2015	48
	<i>Periparus ater</i>	Coal Tit	2008	2015	8
	<i>Phalacrocorax aristotelis</i>	Shag	2003	2015	68
	<i>Phalacrocorax carbo</i>	Cormorant	2003	2015	278
	<i>Phoenicurus ochruros</i>	Black Redstart	2008	2008	2
	<i>Phylloscopus collybita</i>	Chiffchaff	2003	2015	30
	<i>Phylloscopus trochilus</i>	Willow Warbler	2007	2011	14
	<i>Platalea leucorodia</i>	Spoonbill	2000	2008	22
	<i>Pluvialis apricaria</i>	Golden Plover	2003	2015	16
	<i>Pluvialis squatarola</i>	Grey Plover	2002	2008	54
	<i>Podiceps auritus</i>	Slavonian Grebe	1994	2003	3
	<i>Podiceps cristatus</i>	Great Crested Grebe	2003	2010	55
	<i>Poecile palustris</i>	Marsh Tit	1988	2007	3
	<i>Porzana porzana</i>	Spotted Crake	2009	2009	1
	<i>Prunella modularis</i>	Dunnock	2008	2015	45
	<i>Puffinus puffinus</i>	Manx Shearwater	2007	2007	2
	<i>Pyrrhonorax pyrrhonorax</i>	Chough	2009	2015	5
	<i>Pyrrhula pyrrhula</i>	Bullfinch	2007	2015	18
	<i>Rallus aquaticus</i>	Water Rail	2008	2010	96
	<i>Regulus ignicapilla</i>	Firecrest	2007	2007	1
	<i>Regulus regulus</i>	Goldcrest	2008	2015	17
	<i>Riparia riparia</i>	Sand Martin	2008	2008	4
	<i>Rissa tridactyla</i>	Kittiwake	2007	2007	1
	<i>Saxicola rubetra</i>	Whinchat	1988	1988	1

	<i>Saxicola rubicola</i>	Stonechat	2003	2008	7
	<i>Scolopax rusticola</i>	Woodcock	2010	2010	2
	<i>Sitta europaea</i>	Nuthatch	2007	2015	4
	<i>Spinus spinus</i>	Siskin	2007	2011	4
	<i>Sterna hirundo</i>	Common Tern	1999	2015	6
	<i>Sterna paradisaea</i>	Arctic Tern	2007	2010	8
	<i>Sterna sandvicensis</i>	Sandwich Tern	2002	2010	64
	<i>Sternula albifrons</i>	Little Tern	2002	2002	1
	<i>Strix aluco</i>	Tawny Owl	2003	2011	12
	<i>Sturnus vulgaris</i>	Starling	2008	2015	32
	<i>Sylvia atricapilla</i>	Blackcap	1996	2015	17
	<i>Sylvia borin</i>	Garden Warbler	1988	2008	9
	<i>Sylvia communis</i>	Whitethroat	1999	2015	18
Birds	<i>Sylvia curruca</i>	Lesser Whitethroat	2010	2015	12
	<i>Tachybaptus ruficollis</i>	Little Grebe	2003	2015	194
	<i>Tadorna tadorna</i>	Shelduck	2003	2015	348
	<i>Tringa erythropus</i>	Spotted Redshank	2008	2008	2
	<i>Tringa glareola</i>	Wood Sandpiper	2001	2001	1
	<i>Tringa nebularia</i>	Greenshank	2003	2015	66
	<i>Tringa ochropus</i>	Green Sandpiper	2001	2004	10
	<i>Tringa totanus</i>	Redshank	2003	2015	419
	<i>Turdus iliacus</i>	Redwing	2000	2015	14
	<i>Turdus merula</i>	Blackbird	2007	2015	61
	<i>Turdus philomelos</i>	Song Thrush	2007	2012	29
	<i>Turdus pilaris</i>	Fieldfare	2007	2010	9
	<i>Turdus viscivorus</i>	Mistle Thrush	2008	2011	14
	<i>Uria aalge</i>	Guillemot	2007	2009	3
	<i>Vanellus vanellus</i>	Lapwing	2003	2015	145
Butterflies and Moths	<i>Abrostola tripartita</i>	Spectacle	1961	1961	1
	<i>Acasis viretata</i>	Yellow-barred Brindle	2008	2008	1
	<i>Agrotis trux</i> subsp. <i>lunigera</i>	Crescent Dart	2008	2008	2
	<i>Apamea remissa</i>	Dusky Brocade	1971	1971	1
	<i>Arctia caja</i>	Garden Tiger	1971	2008	3
	<i>Argynnis aglaja</i>	Dark Green Fritillary	1987	1987	1
	<i>Callimorpha dominula</i>	Scarlet Tiger	1977	1977	2
	<i>Caradrina morpheus</i>	Mottled Rustic	1961	1961	1
	<i>Celastrina argiolus</i>	Holly Blue	1999	1999	1
	<i>Ceramica pisi</i>	Broom Moth	1961	1961	1
	<i>Chesias legatella</i>	Streak	1986	1986	1
	<i>Chiasmia clathrata</i>	Latticed Heath	1961	1961	1
	<i>Cleorodes lichenaria</i>	Brussels Lace	2008	2008	1
	<i>Coenonympha pamphilus</i>	Small Heath	1982	1982	1
	<i>Deileptenia ribeata</i>	Satin Beauty	1961	1961	1
	<i>Diarsia rubi</i>	Small Square-spot	1971	1971	1
	<i>Ecliptopera silaceata</i>	Small Phoenix	2008	2008	2
	<i>Epirrhoe galiata</i>	Galium Carpet	1971	1971	2

	<i>Euphyia biangulata</i>	Cloaked Carpet	2008	2008	1
	<i>Euphyia unangulata</i>	Sharp-angled Carpet	2008	2008	1
	<i>Euxoa nigricans</i>	Garden Dart	1971	1971	1
	<i>Euxoa tritici</i>	White-line Dart	1971	1971	2
	<i>Hadena confusa</i>	Marbled Coronet	1961	1961	1
	<i>Hepialus humuli</i>	Ghost Moth	1971	1971	2
	<i>Idaea fuscovenosa</i>	Dwarf Cream Wave	1971	1971	2
	<i>Idaea subsericeata</i>	Satin Wave	1971	1971	1
	<i>Lasiommata megera</i>	Wall	2015	2015	4
	<i>Litoligia literosa</i>	Rosy Minor	1961	1961	1
	<i>Macaria wauaria</i>	V-Moth	1962	1962	1
	<i>Malacosoma neustria</i>	Lackey	2008	2008	3
	<i>Panemeria tenebrata</i>	Small Yellow Underwing	1971	1971	1
	<i>Polygonia c-album</i>	Comma	1999	1999	1
	<i>Polyommatus icarus</i>	Common Blue	1991	2007	4
Butterflies and Moths	<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	1971	1971	2
	<i>Timandra comae</i>	Blood-Vein	1971	1971	1
	<i>Triphosa dubitata</i>	Tissue	1971	1971	1
	<i>Tyria jacobaeae</i>	Cinnabar	1961	2007	2
	<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet	2015	2015	1
Mammals	<i>Lutra lutra</i>	Otter	2010	2010	2
	<i>Meles meles</i>	Badger	1995	1995	1
	<i>Mustela nivalis</i>	Weasel	1912	1912	1
	<i>Myotis daubentonii</i>	Daubenton's Bat	2015	2015	1
	<i>Myotis mystacinus</i>	Whiskered Bat	2015	2015	1
	<i>Myotis nattereri</i>	Natterer's Bat	2015	2015	1
	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	2015	2015	1
	<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	2015	2015	1
	<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	2011	2011	1
Other Invertebrates	<i>Aepus marinus</i>		1989	1989	3
	<i>Agonum (Agonum) nigrum</i>		1989	1989	1
	<i>Calopteryx virgo</i>	Beautiful Demoiselle	1982	1982	1
	<i>Carpelimus halophilus</i>		1989	1989	2
	<i>Cassida nobilis</i>		1990	1991	2
	<i>Ceutorhynchus hirtulus</i>		1991	1991	1
	<i>Chrysolina brunsvicensis</i>		1996	1996	1
	<i>Chrysolina sanguinolenta</i>	Toadflax Leaf Beetle	1996	1996	1
	<i>Cyanapion (Bothryorrhynchapion) gyllenhalii</i>		1991	1991	2
	<i>Cypha pulicaria</i>		1989	1989	1
	<i>Diglotta mersa</i>		1989	1989	2
	<i>Geomyza breviseta</i>		1996	1996	2
	<i>Geomyza majuscula</i>		1996	1996	2
	<i>Glocianus punctiger</i>		1991	1991	1

	<i>Leiostyla (Leiostyla) anglica</i>	English Chrysalis Snail	1986	1986	1
	<i>Leptophyes punctatissima</i>	Speckled Bush-cricket	1991	1991	2
	<i>Mecinus circulatus</i>		1991	1991	2
	<i>Oxycera pygmaea</i>	Pygmy Soldier	1987	1996	3
	<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	1982	1982	1
	<i>Sirocalodes mixtus</i>		1990	1991	2
	<i>Sirocalodes quercicola</i>		1991	1991	1
	<i>Tetrix subulata</i>	Slender Ground-hopper	1996	1996	1
	<i>Trioxscelis marginella</i>		1996	1996	2
Plants	<i>Anchusa arvensis</i>	Bugloss	1978	2008	2
	<i>Bryum argenteum</i>	Silver-moss	2007	2008	3
	<i>Bryum gemmiferum</i>	Small-bud Bryum	1973	1973	1
	<i>Calystegia soldanella</i>	Sea Bindweed	2000	2000	1
	<i>Carex riparia</i>	Greater Pond-sedge	1997	1998	2
	<i>Catapodium rigidum</i>	Fern-grass	1978	1978	1
	<i>Cerastium diffusum</i>	Sea Mouse-ear	1978	1978	1
	<i>Clinopodium vulgare</i>	Wild Basil	1994	1994	1
Plants	<i>Crataegus laevigata</i>	Midland Hawthorn	1996	1996	1
	<i>Erophila glabrescens</i>	Glabrous Whitlowgrass	1999	1999	1
	<i>Euonymus europaeus</i>	Spindle	1985	1985	1
	<i>Euphorbia paralias</i>	Sea Spurge	1996	1996	1
	<i>Eurhynchium praelongum</i>	Common Feather-moss	2007	2008	5
	<i>Eurhynchium pumilum</i>	Dwarf Feather-moss	2007	2007	2
	<i>Filago minima</i>	Small Cudweed	1999	1999	1
	<i>Glaux maritima</i>	Sea-milkwort	2013	2013	1
	<i>Hookeria lucens</i>	Shining Hookeria	2007	2008	3
	<i>Juncus gerardii</i>	Saltmarsh Rush	1983	1983	2
	<i>Juncus maritimus</i>	Sea Rush	1983	1983	1
	<i>Lejeunea lamacerina</i>	Western Pouncewort	2008	2008	1
	<i>Leymus arenarius</i>	Lyme-grass	2000	2000	1
	<i>Lithospermum officinale</i>	Common Gromwell	1996	1996	1
	<i>Ononis repens</i>	Common Restharrow	1991	1991	1
	<i>Orthotrichum pulchellum</i>	Elegant Bristle-moss	2007	2007	2
	<i>Parapholis strigosa</i>	Hard-grass	1975	2008	2
	<i>Ranunculus parviflorus</i>	Small-flowered Buttercup	1996	1996	1
	<i>Sagina apetala</i> subsp. <i>apetala</i>	Annual Pearlwort	1978	1978	1
	<i>Salicornia dolichostachya</i>	Long-spiked Glasswort	1976	2008	2
	<i>Salicornia fragilis</i>	Yellow Glasswort	1976	2008	3
	<i>Salicornia pusilla</i>	One-flowered Glasswort	1976	1976	1
	<i>Thamnobryum alopecurum</i>	Fox-tail Feather-moss	2007	2007	2
	<i>Trifolium arvense</i>	Hare's-foot Clover	2008	2008	1
	<i>Tripleurospermum maritimum</i> agg.	Scentless Mayweed agg.	1991	1991	1
	<i>Viola canina</i>	Heath Dog-violet	1995	1995	1
	<i>Weissia controversa</i> var. <i>controversa</i>		2008	2008	1

Table 2. List of Priority Species. Target notes denote species' locations (please refer to Fig. 3). Species in bold are EU-protected species (requiring derogation licences).

Target Note	Priority Species
1	Dark-barred Twin-spot Carpet moth, Chough, House sparrow, Cinnabar moth, Ringed Plover, Badger, Lesser Redpoll, Curlew, Small Heath butterfly, Merlin, Black-headed Gull, Herring Gull, Wall butterfly, Otter
2	Kingfisher
3	Spotted Flycatcher, Firecrest, Yellow wagtail, Skylark, Chough, Reed Bunting, Pintail, Mottled Rustic moth, Garden Tiger moth, Dusky Brocade moth, Latticed Heath moth, Small Square Spot moth, Garden Dart moth, Broom moth, Rosy Minor moth, Cinnabar moth, Blood Vein moth, Osprey, Little-Ringed Plover, Kingfisher, Ruff, Kentish Plover, Ringed Plover, Black-Headed Gull, Galium Carpet moth, White Line Dart moth, Kestrel, Ghost moth, Herring Gull, Mediterranean Gull, Bar-tailed Godwit, Black-tailed Godwit, Linnet, Red Kite, Curlew, Whimbrel, House Sparrow, Spoonbill, Golden Plover, Dunnock, Bullfinch, Shaded Broad-bar moth, Starling, Greenshank, Redwing, Song Thrush, Fieldfare, Lapwing
4	Streak moth
5	Natterer's bat, Daubenton's bat, Whiskered bat, Common pipistrelle bat, Soprano pipistrelle bat
6	Garden Tiger moth, Small Phoenix moth, Lackey moth
7	Garden Tiger moth
8	Spoonbill, Curlew, Whimbrel, Greenshank, Bar-tailed Godwit, Linnet
9	Spotted Crake, Slovenian Grebe, Great Northern Diver, White-fronted Goose, Berwick's Swan, Common Scoter, Pintail, Kingfisher, Scaup, Bittern, Golden Eye, Ruff, Herring Gull, Mediterranean Gull, Black-headed Gull, Bar-tailed Godwit, Black-tailed Godwit, Curlew, Whimbrel, Greenshank, Golden Plover, Green sandpiper Lapwing
10	Golden plover, Song Thrush, Dunnock, Kingfisher, Black-headed Gull, Herring Gull, Curlew, starling, Lapwing
11	Bar-tailed Godwit, Spoonbill
12	Mediterranean Gull, Ruff

Table 3. Results from Archaeological data search (1 km radius)

Dataset	Name	Classification	Dataset UID	Local Authority	Community
Dyfed Archaeological Trust	Welsley Arms	Unknown,Cropmark	Dat31961	Ceredigion	Cardigan
Dyfed Archaeological Trust	Plas-Bach	Field Boundary	Dat31962	Ceredigion	Cardigan
Dyfed Archaeological Trust	St Dogmael's Battery	Battery	Dat31963	Ceredigion	Cardigan
Dyfed Archaeological Trust	St Dogmael's Battery	Military Structure	Dat31964	Ceredigion	Cardigan
Dyfed Archaeological Trust	Welsley Hotel	Quay	Dat31982	Ceredigion	Cardigan
Dyfed Archaeological Trust	Plasbach Foreshore	Findspot	Dat39183	Pembrokeshire	Cardigan

<u>Coflein</u>	Glanteify, Garden, Cardigan	Country House Garden	<u>265036</u>	Ceredigion	Cardigan
<u>Coflein</u>	Quarry, 300 M South Of Manian Fields	Quarry	<u>414811</u>	Ceredigion	Cardigan
<u>Coflein</u>	Anchorage, Pwll Castell, St Dogmaels	Anchorage	<u>525503</u>	Pembrokeshire	St Dogmaels
<u>Coflein</u>	Landing Place, St Dogmaels	Landing Point	<u>525504</u>	Ceredigion	Cardigan
<u>Coflein</u>	Pwllgam Reach (Webley Arms)	Anchorage	<u>525506</u>	Pembrokeshire	Cardigan

• FIGURES

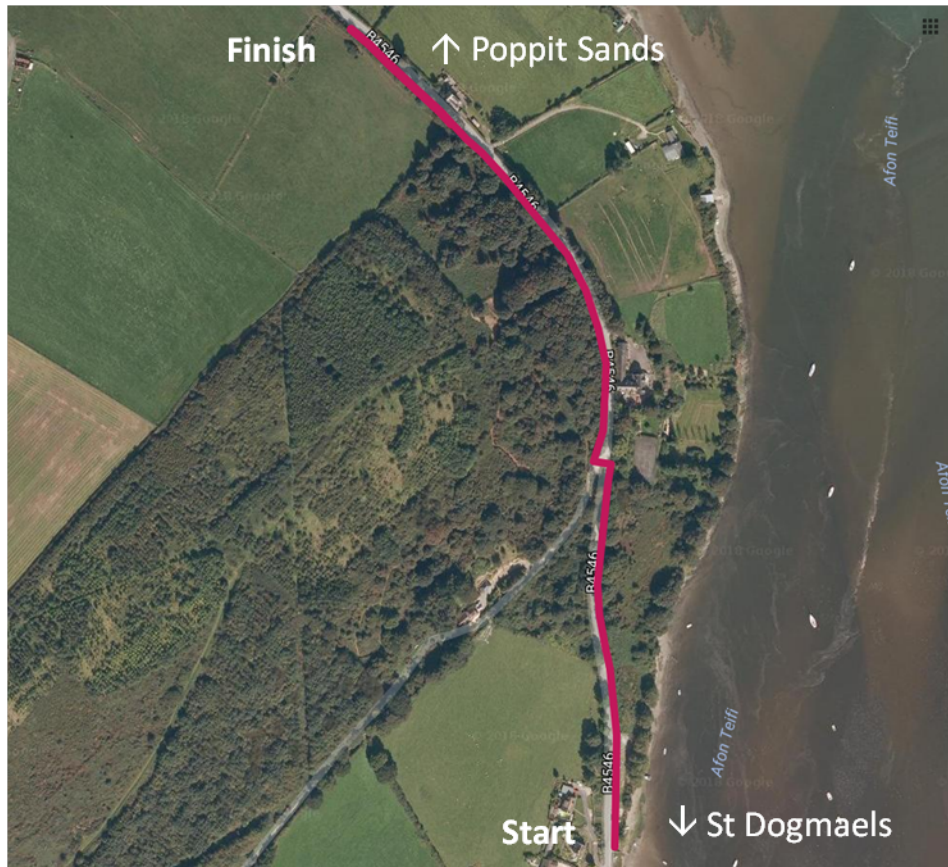


Figure 1. Proposed route of multi-purpose path (red). The walkover survey began at St Dogmaels (Start) and went northwards toward Poppit Sands (Finish).

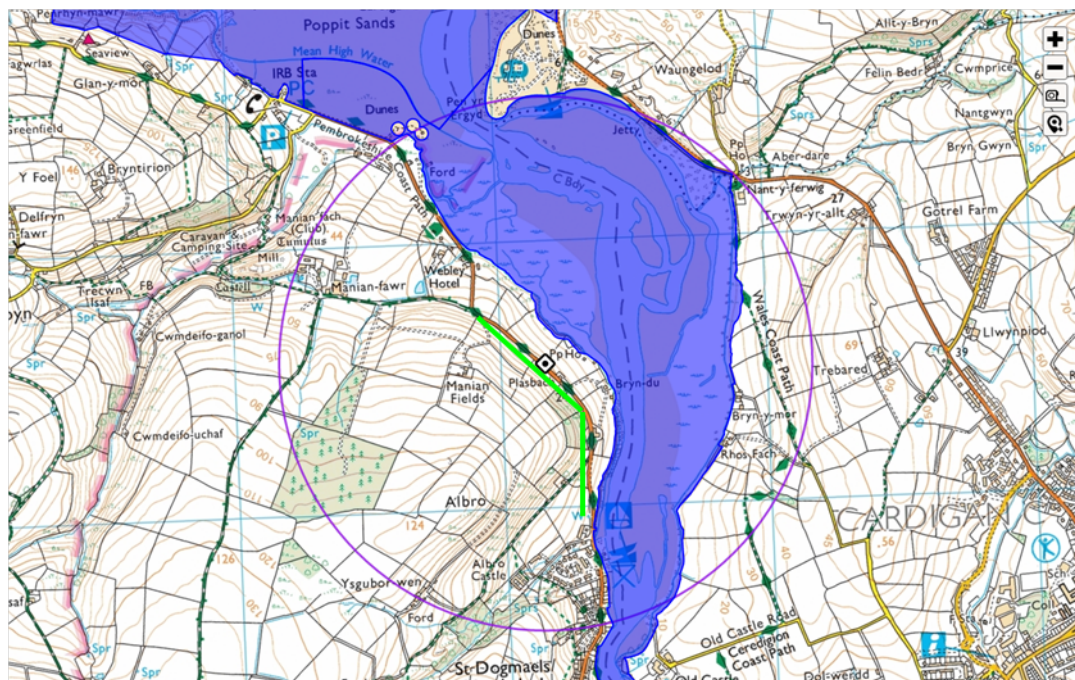


Figure 2. Statutory designated sites of nature conservation. Blue shaded area denotes the boundary of the River Teifi SSSI and SAC. Purple circle denotes 1 km search radius. Proposed path route is highlighted in green at centre of circle.

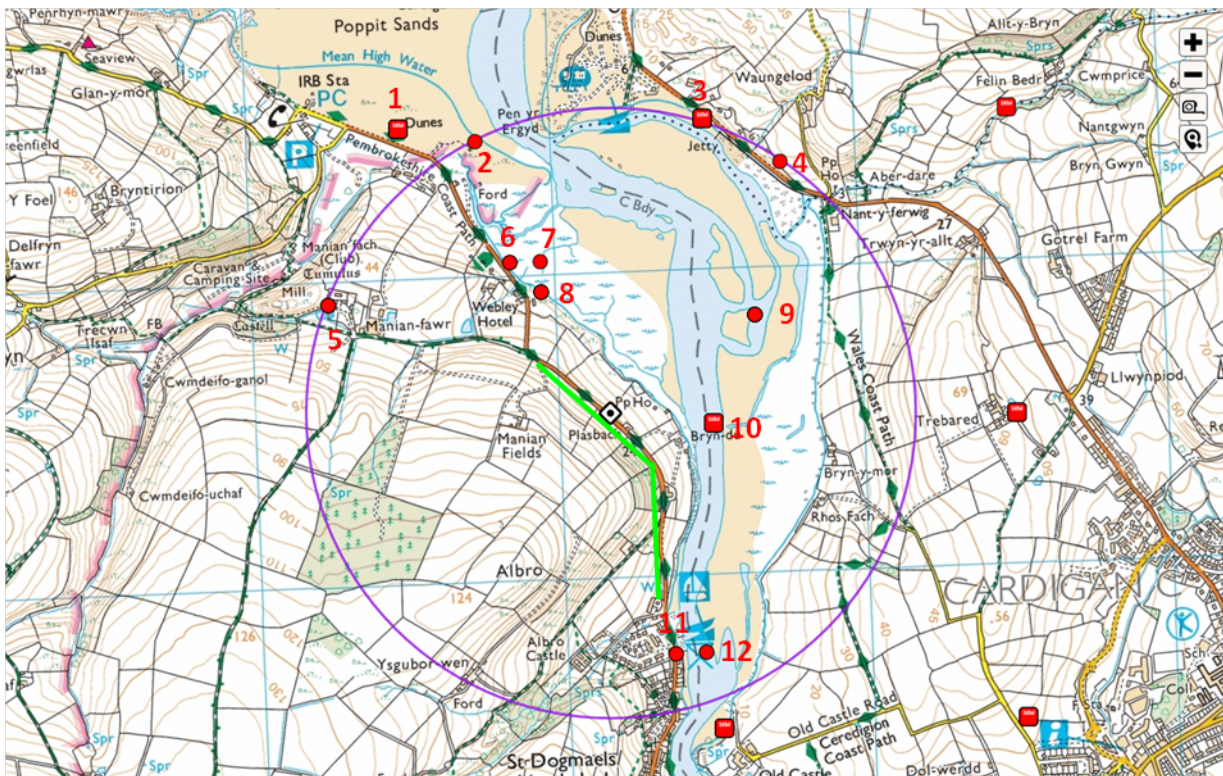


Figure 3. Locations of Priority Species. (Target notes 1-12, Table 2). Purple circle denotes 1 km search radius. Proposed path route is highlighted in green at centre of circle.

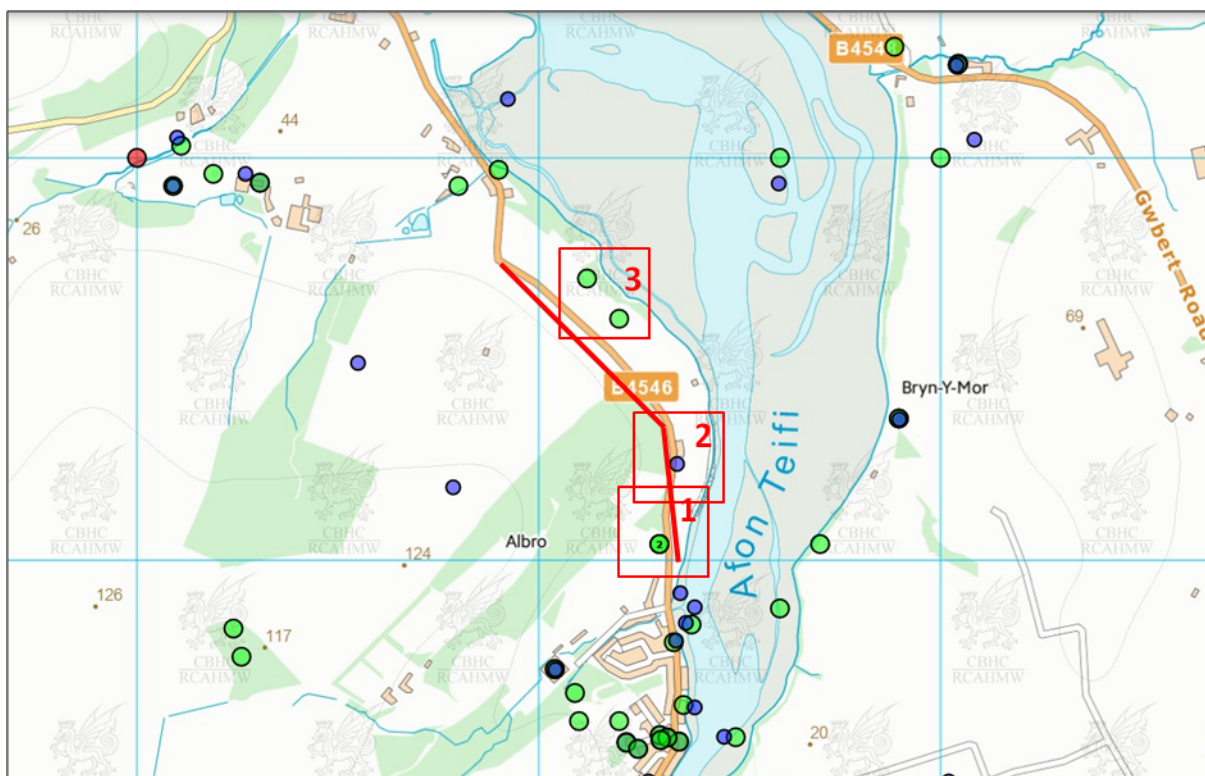


Figure 4. Locations of archaeological features. 1 = St. Dogmaels Battery- Dyfed Archaeological Trust (military structures); 2 = Glanteify- Country house garden (tennis court and terrace); 3 - Plasbach-Dyfed archaeological Trust (find spots). Proposed path route is highlighted in red.



Figure 5 above. Map showing designated Areas 1-6 along proposed path route. These Areas are used to divide the proposed path route into discernible habitat types. **Figure 6 below** – Area 7





Figure 6. Area 1- Wasteland and hard standing.



Figure 7. Area 2- Scrubland and bracken.



Figure 8. Green stars represent locations of mature trees (>30cm trunk diameter) in Area 2 which may have to be felled due to path construction.



Figure 9. Area 3 –
Scrubland and trees.



Figure 10. Area 4 – Woodland.



Figure 10 cont'd. Area 4 – Woodland and animal track.



Figure 11. Yellow circle represents location of piece of agricultural machinery in Area 5 which may have to be removed due to path construction.



Figure 12. Area 5- Pasture. Showing piece of agricultural machinery overgrown with bramble.



Figure 13. Area 6 – Hedgerow and animal tracks.



Figure 13 cont'd. Area 6
– Hedgerow and animal
tracks.



Figure 14 – Area 7



• RELEVANT LEGISLATION

Species	Relevant legislation	Level of protection
Badgers	<ul style="list-style-type: none"> • Protection of Badgers Act 1992 • Wild Mammals (Protection) Act 1996 • Schedule 6 of the Wildlife & Countryside Act (WACA) 1981 	<p>Offence to wilfully:</p> <ul style="list-style-type: none"> • Kill, injure or take, or attempt to kill a badger. • Cruelly ill-treat a badger. • Damage a badger sett or any part of it. • Destroy a badger sett. • Obstruct access to, or any entrance of, a badger sett. • Disturb a badger whilst it is occupying a badger sett. • Sell or offer for sale a live badger. • Possess or control a live badger. • Mark a badger or attach any ring, tag, or other marking device to a badger. • Possess a dead badger or derivative
Bats	<ul style="list-style-type: none"> • Schedule 5&6 of WACA (1981) - as amended by the Countryside and Rights of Way (CRoW) Act 2000 • Conservation of Habitats and Species Regulations 2010 • Wild Mammals (Protection) Act 1996 • Environmental Damage (Prevention & Remediation) Regulations 2009 • Appendix III of the Bern Convention • Appendix II of the Bonn Convention • Natural Environment and Rural Communities Act 2006. • The Environment (Wales) Act 2016 	<ul style="list-style-type: none"> • European Protected Species (fully protected). <p>Offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> • Damage or destroy a bat breeding site or resting place. • Deliberately capture, kill, injure or disturb a bat. • Sell, or attempt to sell, any part of the species, alive or dead. • Transport for the purposes of selling any live or dead animals (or part of the animal).
Birds	<ul style="list-style-type: none"> • Schedule 1 of WACA 1981 (as amended by CRoW Act 2000) 	<p>Offence to:</p> <ul style="list-style-type: none"> • Kill, injure or take any wild bird. • Take, damage or destroy the nest of any wild bird while that nest is in use or being built. • Take or destroy an egg of any wild bird. <p>Certain species: Further offence to:</p> <ul style="list-style-type: none"> • <i>Disturb</i> any such bird when it is building its nest or while it is in or near a nest containing dependant young. • <i>Disturb</i> the dependant young of any such bird.
Great Crested Newts (GCN)	<ul style="list-style-type: none"> • Schedule 5 of WACA 1981 (as amended by CRoW Act 2000) • Conservation of Habitats and Species Regulations 2010 	<ul style="list-style-type: none"> • European Protected species (fully protected). <p>Offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> • Damage or destroy a GCN breeding site or resting place. • Deliberately capture, kill, injure or disturb a GCN. • Sell, or attempt to sell, any part of the species, alive or dead.

		<ul style="list-style-type: none"> • Transport for the purposes of selling any live or dead animals (or part of the animal).
Otters	<ul style="list-style-type: none"> • Schedule 5 of WACA 1981 (as amended by the CRoW Act 2000) • Conservation of Habitats and Species Regulations 2010 • Natural Environment and Rural Communities Act 2006. • Annex II Habitats Directive (protection through Special Areas of Conservation) • UK Biodiversity Action Plan - Priority Species & Species of Principal Importance in Wales 	<ul style="list-style-type: none"> • European Protected Species (fully protected) <p>Offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> • Damage or destroy an otter breeding site or resting place. • Deliberately capture, kill, injure or disturb an otter. • Sell, or attempt to sell, any part of the species, alive or dead. • Transport for the purposes of selling any live or dead animals (or part of the animal).
Reptiles	<ul style="list-style-type: none"> • Schedule 5 of the WACA 1981 (as amended by CRoW Act 2000) • Conservation of Habitats and Species Regulations 2010 (sand lizard & smooth snake) • Appendix III of the Bern Convention • UK Biodiversity Action Plan - Priority Species & Species of Principal Importance for Conservation 	<ul style="list-style-type: none"> • Offence to intentionally kill or injure a reptile. • Sell, or attempt to sell, any part of the species, alive or dead. • Transport for the purposes of selling any live or dead animals (or part of the animal). <ul style="list-style-type: none"> • European Protected Species (fully protected) - sand lizard & smooth snake. <p>Offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> • Damage or destroy the breeding site or resting place of these species. • Deliberately capture, kill, injure or disturb these species.
Water Voles	<ul style="list-style-type: none"> • Habitat protected by the Wildlife and Countryside Act (1981) as amended 1998. • Wild Mammals (Protection) Act 1996 	<p>Offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> • Damage, destroy or obstruct access to any place or structure which water voles use for shelter or protection. • Disturb water voles whilst they are using such a place.