Preliminary Ecological Appraisal

(Update to 2010 assessment)

Port Haverigg Holiday Village, Haverigg

4th August 2022

Report 0822/3

Report commissioned by;

Jason Attwood
Port Haverigg Holiday Village

via Mike Sproston
PWA Planning

Report prepared by;

South Lakes Ecology
Survey and Habitat Management

Tamsin Douglas MSc MCIEEM
13 Rydal Road
Ulverston LA12 9BU
01229 582018

mail@southlakesecology.co.uk

EXECUTIVE SUMMARY

A walkover habitat survey was carried out on the consented extension area for Port Haverigg Holiday Village. The extension was granted planning permission in 2010, but there have been minor changes to the design – triggering the need for a section 73 application, and an update to the 2010 ecology report. A site visit by staff from Natural England and Amphibian & Reptile Conservation also confirmed use of the new landscaped pond by breeding natterjack toads. The discovery of this required all works to stop until an update to the proposed working methods was approved by Natural England.

The purpose of the survey was to re-assess the proposed development for any new impacts on protected or notable species and habitats, and provide any additional avoidance or mitigation measures in order for the construction works to re-commence.

A desktop search for records and information (including information provided in the 2010 report), a walkover survey, and a protected species data search were undertaken to establish species and habitats present on and in the near vicinity of the site.

A total of 5 broad habitat types were recorded in the survey area. Four of these were not of any conservation concern as they are widespread and/ or of low value to wildlife. The only habitat of interest is the pond as it has been used by natterjack toads to breed.

The previous survey report found no significant ecological issues or concerns with the proposals, which is still the conclusion of this report – with the notable exception of the natterjack toad breeding pond. Surrounding habitat is not especially suitable for foraging natterjack toads and there are no potential refugia present on the site.

The main features of ecological interest or concern which could be affected by the proposed works are:-

- **Breeding pond for natterjack toad.**
- **Nearby statutory protected sites (SSSI, SAC and SPA within 100m)**

After analysing records in the context of this project, no further detailed ecological surveys are recommended. The following mitigation and avoidance measures are recommended:

- **Pre-works check for natterjack toadlets by ecologist before dry pond is infilled**
- **All works active between 15th March and 31st October to diligently follow a method statement**. This must include details of natterjack toad identification and describe methods of work which must be followed to minimise risk to any toads on site (such as not creating temporary refugia or leaving open tranches overnight)
- **Regular visits to site by ecologist (March-July) to check on progress of works and also to monitor use of pond(s) by natterjack toads to inform the construction team**
- **Surveys of ponds on site for use by natterjack toad for 3 years after works are complete**
- **Once works are complete, information should be provided for guests and tourists to encourage responsible behaviour in and around the nearby protected coastal sites (especially of dog walkers).** This can be in the form of leaflets in lodges/ caravans or in welcome packs, notices on the board on site etc).

Compensation methods have been detailed in the Landscape Design Plan (part of the consented plans for the site) – which should be followed. These include creation of natterjack toad pools, refuges and habitat on the eastern edge of the site. Ideally, these should be created this winter (2022/23) to encourage the natterjacks to use these areas rather than the large landscaped ponds in the centre of the site.

Contents

1. INTRODUCTION

1.1 The aim of the survey

Planning Permission was obtained in 2010 from Copeland Borough Council, permitting the extension of Port Haverigg Holiday Village, Haverigg. The project is only partially completed, and as there have been minor deviations from the original plans, the project requires a section 73 application – for which the Planning Authority has requested an update to the previous ecology survey.

The aim of this report is to review the habitats on site as recorded in the 2010 Ecology Survey (Baseline EcIA survey and report by Cameron Crook & Associates), and to identify whether there are any additional habitat or protected species issues or potential ecological constraints or concerns that would result from the development (or whether any identified in 2010 are no longer applicable).

The survey was carried out following technical guidelines provided by CIEEM (Chartered Institute of Ecology and Environmental Management) and mapped following UK Habitat Classification guidance (see Appendices for full references).

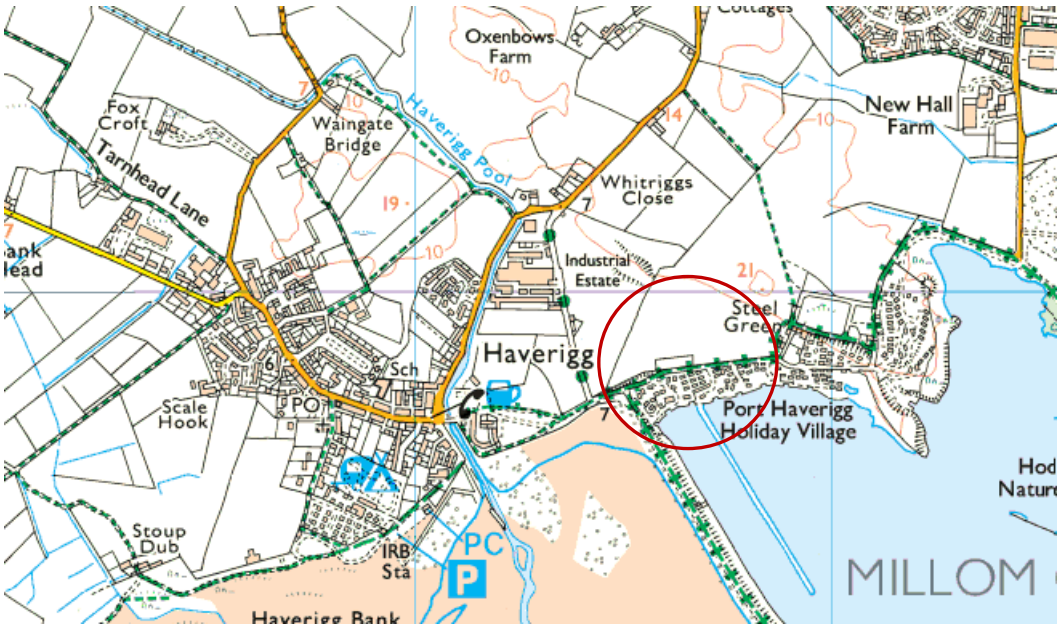
1.2 Consented development

The consented development includes extending the existing holiday site to provide an additional 100 holiday home pitches, and several touring and camping pitches and related facilities. Some of these works have been completed, but most of the new holiday home pitches and other landscaping work is yet to be started. The works are currently on hold, and the developer intends to re-start construction in autumn 2022.

1.3 The survey area/ zone of influence

The habitat survey was carried out on the site extension area (site central grid reference SD166789) and, where possible, on all adjacent open land and field parcels. A zone extending to 250m from the development footprint was surveyed from public rights of way and access land to establish whether any ponds likely to support natterjack toads or great crested newts were present.

Figure 1: Location of extension to Port Haverigg Holiday Village



OS Map copied under licence (No. 100055725)

2. SURVEY METHOD

2.1 Desktop study

Aerial photographs (Google Earth) and Ordnance Survey maps were used to assess the likely habitat types in and around the site, and to search for waterbodies that could host protected species such as natterjack toads. Natural England and JNCC websites were used to obtain boundaries of any statutorily designated sites in the area. The previous EcIA report was studied for additional background to the site ecology.

As the previous survey is 12 years old, Cumbria Biodiversity Data Centre was consulted and a data search requested for protected species within 2 km radius of the centre of the site.

2.2 Habitat survey

The habitat walkover survey was carried out by Tamsin Douglas MCIEEM (South Lakes Ecology) on June 17th 2022.

The area was walked over, and habitats within the study area were described and mapped using standard UK Habitats Classification methodology (UKHab 2020). The Professional edition of the UKHab guidance was followed, and habitats classed to level 5 of the hierarchy were applicable. The minimum mappable unit was 25m², with target notes used to describe smaller features.

2.3 Protected species survey

Evidence of and potential for protected species was assessed on the site on 17th June 2022, and also from details in the 2010 EcIA report. In particular, the potential for the following species/ animal groups was assessed:-

Birds

The site was assessed for its potential to support notable bird species, or important assemblages of wintering or passage birds. In particular the habitats on site were assessed for their potential and likelihood to support breeding birds, and any evidence/ sightings noted.

Reptiles

The site was assessed for its potential to support reptiles such as common lizard, slow-worm and adder, following guidance issued in the 'Herpetofauna Workers Manual'.

Amphibians

A search of the site was made to identify and assess any possible breeding ponds for amphibians, notably natterjack toad *Epidalea calamita* and great crested newt *Triturus cristatus*. Ponds within 250m of the proposed development were assessed for suitability to host great crested newt using methods detailed by Oldham *et al* (2000). An assessment was also made of the quality of the habitat for foraging and potential for hibernation sites. Survey was carried out following guidance published in the 'Herpetofauna Workers Manual'.

Bats

The site was assessed for its suitability for roosting, foraging and commuting bats. Trees, buildings and other structures were appraised for likelihood of hosting roosting and/or hibernating bats, and topographical features of interest to commuting bats were noted. Survey followed methods described in the Bat Workers Manual.

Terrestrial mammals

The potential of the site to support other protected terrestrial mammals, notably badger *Meles meles*, otter *Lutra lutra* hedgehog *Erinaceus europaeus* and water vole *Arvicola amphibius* was assessed. Evidence of activity such as badger setts/ otter holts, paths, latrines, droppings/ spraints and feeding signs were noted and appropriate guidance followed.

Other species

Presence of and potential for other protected and/ or notable species was recorded.

Potential of the site to support important invertebrate assemblages was assessed following the Invertebrate Habitat Potential (IHP) rapid assessment categories and interim guidance outlined by Dobson and Fairclough (2022, awaiting publication of full toolbox). Any invertebrate sightings were recorded.

2.4 Invasive species survey

The presence of any invasive species within the survey area was recorded and mapped.

2.5 Survey constraints

The weather (sunny, mild with light breeze) was suitable for signs or sightings of most diurnal wildlife, including territory holding birds, reptiles and invertebrates. Most adult amphibians have left breeding ponds – but tadpoles would still be present if breeding was successful.

The time of year was suitable for assessing botanical quality of grasslands, though some species are yet to be in flower.

The likely presence of protected species described in 2.3 above was also inferred from the potential of the habitat to support them, any incidental sightings or evidence, biological records from the data search and professional judgement of the ecologist carrying out the survey.

3. BASELINE ECOLOGICAL CONDITIONS

3.1 Desktop survey results

3.1.1 Protected and statutory sites search

The site is 4km south of the boundary of the Lake District National Park.

There is a lot of protected land within 5km, most of which is designated for coastal/ inter-tidal habitats and species. Three sites (two of which are or European significance) are approximately 100m from the site boundary.

The site is within the 200m buffer zone of Duddon Estuary SSSI, which means that Natural England must be consulted about the project.

Table 1: Protected sites within 5km of proposed development

Protected area/ site	Description of interest	Distance from site
Duddon Estuary SSSI	Coastal and inter-tidal habitats and species, including natterjack toad	100m
Morecambe Bay SAC	Coastal and inter-tidal habitats and species	100m
Morecambe Bay and Duddon Estuary SPA	National and international populations of wintering and breeding birds	100m
Millom Ironworks LNR	Post-industrial habitats, and natterjack toad population	1.5km
Sandscale Haws NNR	Coastal habitats, invertebrates, breeding birds, amphibians (incl natterjack toad).	3.6km
Shaw Meadow and Sea Pasture SSSI	Botanical	4.7km

3.1.2 Notable habitats search

There are several mapped notable habitats within 1km of the site (habitats listed under section 41 of the NERC Act 2010 – previously known as BAP habitats). These include sand dunes, maritime cliffs & slopes, coastal & floodplain grazing marsh and deciduous woodland within 500m, and saline lagoon within 100m. There are no identified notable habitats within the development boundary.

3.1.3 Protected and notable species search

Online data searches for records of EPS (European Protected Species) licenses issued within 5km of the site yielded one result – for disturbance to natterjack toads at a site 2.2km to the east of the development.

The data search from Cumbria Biodiversity Data Centre provided detailed records of protected, rare, scarce and alien species within 2km radius of the extension to Port Haverigg Holiday Village. A total of over 7400 records were provided, the vast majority of which were of birds and relating to the nearby Hodbarrow RSPB reserve.

A table of key species which are of notable consideration within the context of this project is shown in Table 2 below. Notable bird species have not been included in the table below,

unless they are of specific interest to this project, or have further legislative protection, as all species of bird are protected whilst nesting. Due to their (generally) limited dispersal, invertebrate records are only included if the habitats on site are suitable, and there are records within 500m of the site.

Table 2: Species of conservation concern which have been recorded within 2km of the proposed site

Species	Priority species listed under s41 of NERC Act 2006?*?	Wildlife and Countryside Act 1981 (as amended) Sch 1,5 or 8.	Proximity to site	Number of records (most recent)
Palmate newt		Yes	1.1km	6 (2014)
Smooth newt		Yes	0.3km	20 (2017)
Great Crested Newt	Yes	Yes	1.2km	2 (1981)
Common toad	Yes	Yes	0.3km	26 (2016)
Common frog		Yes	1.1km	24 (2014)
Natterjack toad	Yes	Yes	0.5km	300 (2018)
Common lizard	Yes	Yes	0.5km	23 (2017)
Otter	Yes	Yes	1.1km	2 (2016)
Badger**			1.7km	1 (1997)
Bats (2 named species)	Yes	Yes	0.5km	12 (2014)
Hedgehog	Yes		0.7km	8 (2017)

**Previously BAP (Biodiversity Action Plan) priority species*

***Protected under Protection of Badgers Act 1992*

There were a lot of records of notable invertebrates (especially butterflies) from the nearby Hodbarrow RSPB reserve – but the habitats of site are not suitable for these species as the diversity of the grassland is low.

There are no records of natterjack toads from the site – the closest being a breeding record at least 500m away in Hodbarrow RSPB reserve (last recorded there in 1993).

3.1.4 Summary of findings from the EcIA report 2010

The following headline results have been lifted directly from the 2010 report.

Significance of Habitats and Flora

3.5 All habitats and vegetation communities recorded on site are relatively common and widespread throughout Cumbria and Britain and are typical of disturbed or cultivated ground.

Significance of Fauna

3.21 With the exception of breeding/overwintering birds and bats, no protected or otherwise important species were recorded on site during any of the surveys and for the reasons outlined above none are reasonably expected to occur on site.

3.22 Whilst no bird species listed under Schedule 1 of the Wildlife & Countryside act were recorded breeding on the development site, a number of important species (UK Priority and BAP) were recorded and all breeding birds (with a small few exceptions) are protected in general terms under the Wildlife & Countryside act. Therefore, site design, mitigation and the programme of site operations, where applicable, must take

this into account. The most important habitat for bird breeding is the mature scrub and other rough vegetation that occurs along the site margins and closely adjacent to the development site boundary as indicated on the Phase 1 Habitat Map.

3.23 With respect to the UK Priority and Cumbria BAP species, development proposals are unlikely to affect any known breeding or overwintering sites as these are located at a sufficient distance away although precautions must still be taken to ensure that there is no impact upon any species which may temporarily use the sites.

3.24 No habitat suitable for bat roosting was found on site and no conclusive signs of roosting activity were found anywhere near to the areas of the site proposed for development. The habitat is used to a limited extent for commuting and foraging but is not considered of particular importance and so proposals will result in very limited impact upon bats.

3.25 Based on current survey results and data obtained during the desktop survey, there is likely to be no direct or indirect impact upon any other protected or otherwise important species.

3.2 Habitat survey results

The habitats were mapped, following UKHab methodology (see methods section and references), as shown in Figure 2 in the appendices. Descriptions of the major habitats are given in section 3.2.2 below, and detailed target notes on habitats or species of interest included as appendices to this report.

Photographs of the area of the development are provided at the end of the report.

3.2.1 Habitats recorded within survey area

- g3c Neutral grassland (species poor)
- g4 Modified grassland
- r1 Pond
- r Dry pond
- u1 Built up areas/ caravan site (completed part of development)
- u1c Artificial unvegetated unsealed land (cleared for development)

3.2.2 Habitat descriptions

g3c – Neutral grassland

This is grassland of neutral pH, and with no dominant species or features present. It includes all of the grassland on the bank in the northern part of the site. It is currently unmanaged and species poor- dominated by species typical of disturbed/ cultivated land such as nettle, docks, bramble and grasses (false oat grass, Yorkshire fog, crested dog's tail and rye grass are frequent. There are few herbs present, and it is of limited value to wildlife.

The upper sections of this bank are not being developed, but may be enhanced for wildlife gains as part of the project.

g4 – Modified grassland

This is grassland that is regularly and intensively managed – such as lowland grazing pasture, silage fields, or amenity grassland. Typically these grasslands are subject to frequent fertiliser and pesticide application, and have been seeded - supporting a limited diversity of widespread agricultural or amenity species. Modified grasslands such as

these are usually of very limited value to wildlife, though surrounding good habitat, including hedgerows, can increase their value.

All of the grassland on the flatter sections of the site, which haven't been developed comprise this type of grassland. There are some herbs present (such as silverweed, white clover and creeping buttercup) – which are all typical of disturbed and cultivated land. The grassland is being cut regularly to enable the development to proceed once renewed permission is obtained.

This short grassland can be of value to foraging natterjack toads and mammals such as hedgehog. The ground below is hard and not suitable for burrowing.

All of this area will be directly affected by the proposals – for installation of services, access roads, base pads and static caravans.

r1 – Standing open water- priority habitat

There is a large new ornamental pond on the site (not present in 2010). It is completely bare around the margins, with no aquatic or emergent vegetation present. There are few invertebrates (a few water boatmen seen) and some algae in the water. Approximately 300-400 natterjack toad tadpoles were recorded here by Pin Dhillon-Downey (Natural England) and Yvette Martin (Amphibian and Reptile Conservation) when they carried out a site visit on 7th June 2022. These were still evident on the site visits on 17th and 23rd June 2022- where two age classes appeared to be present. Some tadpoles had very well-developed rear legs and small front legs and seemed close to emergence, whereas others only had very small budded rear legs (this could be down to different growth rates or both sets of tadpoles from different spawn strings).

On a follow up site visit on 28th July 2022 no tadpoles could be seen. Water levels had dropped significantly since the June visits, but there had been no sightings of tadpoles for the last 2 weeks. It is unclear if they had emerged successfully or been predated.

This pond will remain in place, and not developed any further.

r1 – Dry pond

An old pond (visible on 2018 aerial photo images) is still present to the east of the new pond. On all of the site visits in June and July this pond was completely dry. There is some wetland vegetation (mostly rushes) within the pond and around the periphery – but none of this is especially notable, with no herbs of interest seen.

It may have been used by breeding amphibians earlier in the season, but no successful breeding attempts would have been possible.

This pond is due to be infilled when the other new ornamental pond is excavated. There are small cracks in the clay walls that could be used by toadlets (but are not big enough nor adult toads, and the substrate is too hard for them to dig tunnels/ holes).

u1 – Built up areas & gardens (incl. caravan parks)

The development has been partially completed in the south-west side of the site – with base pads, static caravans, access roads and services installed and amenity grassland around them.

u1c – Artificial unvegetated unsealed surface

This is an area of cleared land, in preparation for the next phase of the development. Works stopped when natterjack toad tadpoles were discovered in the new ornamental pond.

This area has negligible value for wildlife, and will be further developed once permission has been obtained.

A summary table of the habitats described above and their importance in the context of British conservation and the legal framework is shown below (Table 3).

Table 3: Habitats of conservation concern

Habitat	Priority habitat listed under s41 of NERC Act 2006?*	Is habitat a notable consideration?
Neutral grassland		
Modified grassland		
Pond	Yes	Yes
Dry pond		No, unless proven use by amphibians
Built up areas		
Cleared, unvegetated land		

***** *Previously UK Biodiversity Action Plan (BAP) habitat*

3.2.3 Surrounding habitat (adjacent to red line boundary)

Land to the immediate west, east and south of the site boundary comprises existing campsites/ caravan sites. Beyond this to the south is Hodbarrow Lagoon – a saline lagoon, which is part of Duddon Estuary SSSI, Morecambe Bay SAC and Morecambe Bay & Duddon Estuary SPA.

To the north and north-west of the site boundary is agricultural land (sheep and horse grazed pasture). There is some scattered scrub and a hedgerow leads to the north-east.

3.2.4 Ponds within 250m of the proposed development

Previous reports, online aerial images and OS maps were used to identify any potential natterjack toad or great crested newt breeding ponds within the site, or within 250m of the proposals. No other ponds were found.

3.3 Protected and notable species survey results

3.3.1 Birds

There are very few areas of scrub on the site – but patches of bramble could be used by nesting birds, as could areas of undisturbed grassland. The rougher grass is suitable for foraging barn owl and kestrel.

Undisturbed areas of the grassland could be used by roosting waterfowl, gulls and waders during high tide periods in the winter months. The number of surrounding caravans and touring areas makes it highly unlikely that waders would attempt to breed on the site.

A breeding bird and wintering bird survey were carried out as part of the original survey work in 2010, and concluded that some widespread species (such as robin, magpie and blackbird) bred on site. No significant wintering assemblage was noted – though herring gull (one of the SPA key species) was recorded in the surveys. It did not state the timing of the winter bird surveys in the methodology of the 2010 report, but it is presumed that these were carried out over the high tide period.

There are a lot of records of birds from the local area – the vast majority of which are from Hodbarrow RSPB reserve nearby.

Other than small numbers of widespread species of bird nesting in scrub on the site, nesting and wintering birds are not considered to be a concern for this development.

3.3.2 Reptiles

The 2010 surveys found no evidence of reptiles using the site, and no new evidence was found in these 2022 site visits. The land has little variation in topography and vegetation, limiting its value to this group of animals. The closest record in the data search was from 0.5km away in Hodbarrow RSPB reserve.

Reptiles are not considered to be a concern for this development.

3.3.3 Amphibians

No water bodies were present on site or within 250m for the previous surveys in 2010. Habitat on site was considered sub-optimal for natterjack toads, though they were known to be present within 250m (on RSPB Hodbarrow reserve).

A new ornamental pond has been created, and approximately 300-400 natterjack toad tadpoles were recorded here by Pin Dhillon-Downey (Natural England) and Yvette Martin (Amphibian and Reptile Conservation) when they carried out a site visit on 7th June 2022. These were still evident on the site visits on 17th and 23rd June 2022- where two age classes appeared to be present. Some tadpoles had very well developed rear legs and small front legs, and seemed close to emergence, whereas others only had very small budded rear legs (this could be down to different growth rates or both sets of tadpoles from different spawn strings).

On a follow up site visit on 28th July 2022 no tadpoles could be seen. Water levels had dropped significantly since the June visits, but there had been sightings of tadpoles for the last 2 weeks. It is unclear if they had emerged successfully or been predated.

No records or sightings of other amphibian species have been found. The only record of great crested newt within 2km of the site is from 1981, so it is reasonable to presume this species is not present in the area (all ponds locally are regularly surveyed for amphibians focussing on natterjacks). There are records of common toad and smooth newt within 300m of the site, so these species may well establish themselves in the new pond.

Amphibians, specifically natterjack toad, are a concern for this development and impacts on them will need further assessment.

3.3.4 Bats

There are no suitable features on site for roosting bats. They are very likely to forage over the grassland in suitable conditions, but the site is unlikely to be of key importance due to its size and lack of features of interest.

Low levels of bat activity were recorded during the 2010 surveys, and it is reasonable to presume this will still be the situation on site as little has changed. The addition of the pond may provide some extra feeding opportunities.

Bats are unlikely to be a concern for this development.

3.3.5 Terrestrial mammals

No signs of terrestrial mammals were seen in either the 2010 or 2022 surveys, and there are no local records of badger or otter. There are several records of hedgehog in the local area (closest within 700m), so it is possible that these could forage on the site (there are no suitable hibernation or nesting sites in the development area).

Terrestrial mammals (other than foraging hedgehogs) are unlikely to be a concern for this development.

3.3.6 Other species

None of the habitats present on site are likely to be of interest to invertebrates. The bare ground around the ponds is hard baked, and does not provide good opportunities for burrowing insects such as bees and wasps.

3.3.7 Protected and notable species summary

Within 50m of the proposed development :

The following signs or sightings of protected or notable species were seen during the survey within 50m of the site footprint.

- Natterjack toad tadpoles within the new ornamental pond on site.
- Previous records of nesting birds in scrub

The potential for protected and notable species identified during the survey within 50m of the site was:-

- potential for other breeding amphibians in new pond: moderate
- Potential for ground nesting birds: slight

Within the broader survey area:

Duddon Estuary and Morecambe Bay protected sites are within 100m of the site boundary. These contain nationally and internationally important assemblages of birds, other wildlife and notable habitats.

3.4 Invasive species survey results

No invasive species were seen or recorded during the survey.

4. SURVEY CONCLUSIONS

Following the above assessment of the species sightings and records, and the walkover habitat survey, it is concluded that the following features of ecological interest or concern could affect, or be affected by the proposed works:-

- **Breeding pool and surrounding habitat for natterjack toad**

  The record of 300-400 tadpoles in the new landscaped pond means that the site is now considered to be a breeding site for this species. These animals and their resting places are protected under UK and European legislation, and a license will be required to carry out any works on an area where the presence of natterjack toads has been confirmed.

  There are no plans to carry out any further works to the pond. Surrounding habitat is broadly suitable for foraging natterjack toads, but the ground is very hard and unsuitable for burrowing – so any toads foraging near the pond will need to move elsewhere to rest, or use suitable refugia through the day. There are no tussocks of vegetation and no suitable refugia currently on site, so it is likely that any adult toads and emerging toadlets will move off site towards the coastal sand dunes to rest, forage and hibernate. The exception to this is the dry pond – which has small cracks in the clay banks. These could be used by toadlets, but are too small for adult toads (and the substrate is too hard for digging).

  Works are planned to re-commence in the autumn, when natterjack toads are in hibernation. As there are no suitable hibernacula on site, this should not have any impacts on this species (as long as no new refugia are created in the meantime).

  Any works ongoing into the spring months, however, will need to operate under a method statement – ensuring that no hazards are left on site for the toads, and that access to the breeding pond is maintained.

  Mitigation and enhancement measures are needed to encourage the toads to use a less sensitive area of the site, and minimise the risk of any impacts on individual toads or the local natterjack toad population. As part of the original consented design plan for the site, new natterjack scrapes were proposed for the eastern end of the site.

- **Nearby statutory protected sites (Duddon Estuary and Morecambe Bay)**

  Duddon Estuary SSSI, Morecambe Bay SAC and Morecambe Bay & Duddon Estuary SPA are all within 100m of the development. There is already a strong precedent to encourage tourists into this area of Morecambe Bay (with existing caravan and camping sites and associated infrastructure), and impacts on the local habitats and bird populations are likely to be manifest already. The wintering bird surveys undertaken for the 2010 report indicate that the area is avoided by wintering waders, gulls and wildfowl – and this pattern is repeated for the breeding bird survey. It is considered unlikely that there will be any cumulative effects from extending the site in this area – but some mitigation to encourage responsible behaviour by visiting tourists should be put in place.

5. RECOMMENDATIONS

5.1 Recommendations for further survey

No further species surveys are required on this site.

Some monitoring of the natterjack toad population is highly recommended, to assess the success of new compensation features and monitor the use of the new ornamental pond. These should be carried out for 3 years after the new ponds (ornamental pond and the natterjack pools) are dug.

5.2 Recommended avoidance and mitigation measures

5.2.1 Summary of findings from 2010 report

The following below is taken straight from section 4.2 of the report (pages 11-13).

4.2 Likely Impact of the Development and Outline Mitigation

The current ecological impacts resulting from the proposed sites development works, based on the criteria outlined above and mitigation required to negate any impacts are summarized within the following table:

Ecological Issues (receptors)	Details	Likely Impacts	Required Mitigation and Residual Impact
Bats	Bats forage and commute alongside the more sheltered areas of mature scrub at the margins of the site. No trees suitable for use as roost sites were found and no buildings occur on the site proposed for development or will be otherwise affected.	Removal of mature scrub such as hedgerow may result in severance of commuting routes, and/or loss of foraging areas.	Maintain and enhance existing flight-lines such as areas of dense scrub and hedgerow wherever possible to provide clear commuting routes and high quality foraging areas. Improve habitat and wildlife corridors by planting of new hedges and trees, and provide additional foraging potential by creation of new (freshwater) water bodies (see landscape plan)
	Nature Conservation Importance: **European**	Impact Magnitude: **Nil Effect** Overall Impact: (Nil Effect: European) **Non Significant**	Residual Impact Magnitude: **Nil Effect** Impact Magnitude: **Non significant**
Badgers	No badger setts found but badgers may occur in nearby site from time to time with occasional foraging on site	No significant impact likely unless new setts established in the interim.	Check for signs of new setts being established prior to any site works taking place. Retain mature vegetation along periphery of site as commuting routes. If new setts found, situation to be reassessed.

11

	Nature Conservation Importance: **National**	Impact Magnitude: **Nil Effect** Overall Impact: (Nil effect: National) **Non Significant**	Residual Impact: **Nil Effect** Impact Magnitude: **Non significant**
Breeding and overwintering Birds	Potential for breeding and overwintering birds is generally low due to lack of quality habitat, particularly considering habitat of much higher quality occurs nearby (estuary, salt-marsh, lagoon)	Removal of trees, shrubs or other dense vegetation ***during the breeding season*** will result in disturbance of breeding birds. Carrying out works during winter period may disturb overwintering birds 'overspill' from adjacent sites.	Retain as much existing mature vegetation as possible, especially dense, mature scrub. Improve quality of habitat and wildlife corridors by creation of new hedgerows, tree planting and water bodies. No vegetation to be removed during breeding season (February to July inclusive) unless checked for breeding birds by ecologist. Site to be re-checked for use by overwintering birds if works to take place between November-January inclusive.
	Nature Conservation Importance: **National**	Impact Magnitude: **Moderate-High** Overall Impact: (Minor: National) **Severe**	Residual Impact: **Nil effect** Impact Magnitude: **Non Significant**
Great Crested Newts	None recorded in any water body within 250m of site boundaries	No likely impact.	No mitigation required.
	Nature Conservation Importance: **European**	Impact Magnitude: **Nil Effect** Overall Impact: (Nil effect: European) **Non Significant**	Residual Impact: **Nil Effect** Impact Magnitude: **Non Significant**
Natterjack Toads	None recorded in any of the water body or suitable habitat within 250m of site boundaries	No likely impact.	No mitigation required.
	Nature Conservation Importance: **European**	Impact Magnitude: **Nil Effect** Overall Impact: (Nil effect: European) **Non Significant**	Residual Impact: **Nil Effect** Impact Magnitude: **Non Significant**

Reptiles	No suitable habitat recorded. No signs of any reptile species on site.	No likely impact.	No mitigation required
	Nature Conservation Importance: **National**	Impact Magnitude: **Nil Effect** Overall Impact: (Nil effect: National) **Non Significant**	Residual Impact: **Nil Effect** Impact Magnitude: **Non Significant**
Botanical & Habitats	The majority of habitat proposed for development is of low ecological value being predominantly species-poor improved grassland. Other vegetation such as mature scrub (including hedgerows) and rank grassland has moderate ecological importance but is present in relatively low proportions, primarily along the site margins	With the exception of the mature scrub and hedgerows, there will be a direct loss or deterioration of significant areas of the existing vegetation. However, most of the vegetation that will be affected is of low ecological value.	Retain mature vegetation, in particular scrub and associated rank grassland, wherever possible. Protect any retained vegetation during development works. Improve habitat overall by creation of new hedgerows, new tree planting, creation of new water bodies, and wild flower meadows (see landscape plan for detailed proposals)
	Nature Conservation Importance: **Local**	Impact Magnitude: **Beneficial Effect** Overall Impact: (Beneficial Effect: Local) **Non Significant**	Residual Impact: **Beneficial Effect** Impact Magnitude: **Non Significant**

5.2.2 Additional avoidance and mitigation measures following updated survey in 2022

Natterjack toads

This species is now known to breed on site in the new landscaped pond, with known populations also to the east in RSPB's Hodbarrow reserve. The development area (in its current condition) does not have any suitable refugia for resting or hibernating (other than the dry pond with its very limited opportunities – see below), but could be used by foraging toads. Works in the winter on most of the site are very unlikely to have any impacts on natterjack toads, but any once they emerge from hibernation to head to breeding ponds (typically early-mid March depending on weather conditions) they will become a feature of concern for the construction works as they are likely to cross the development site.

To minimise the risk of impacts on this protected species, a method statement should be written and adhered to for all works on site from 15th March to the end of October inclusive.

There should also be regular visits by an ecologist to the site during the key breeding season for natterjack toads (typically April- May, but late breeding attempts in June and July are not uncommon) to check the method statement is being followed, and to inform contractors and interested parties about any new breeding activity. The method statement should include identification information about natterjack toads, as well as avoidance measures such as:

- Safe storage of materials and equipment (not creating new temporary refuge sites that could be used by natterjack toads)
- Infilling of all trenches before dusk each day (natterjack toads are nocturnal), to avoid trapping natterjack toads. If necessary services such as pipework should be installed in small sections. If this is not possible then a daily ecologist check of any groundworks may be necessary.

It is considered that amphibian fencing should not be necessary for this site, as long as the above measures are followed diligently. Amphibian fencing can be problematic to install securely, especially on hard ground such as at Port Haverigg Holiday Village – and the gaps and crevices around the fencing can in turn be used by resting natterjack toads rather than discouraging them from using the area.

The infilling of the dry pond should be carried out after a finger tip search by an ecologist, as there is limited scope for toadlets to use some of the narrow cracks in the clay banks to hibernate (they are not large enough for adult toads, and the substrate is too hard to dig).

Nearby statutory protected sites

The proximity of the development to nationally and internationally important wildlife sites could result in increased disturbance pressure on animals and birds, as well as damage to sensitive habitats (such as sand dunes and inter-tidal habitats). Once the development is completed, there should be a reasonable effort made by the owners to inform and educate tourists and regular visitors to the area about the value of the local wildlife sites, and measures they can take to minimise impacts. This can be in the form of information on noticeboards or in welcome packs/ emails. Simple messages are all that is needed;

- Keep dogs under control (preferably on a lead) on the upper shore of the beach and around sand dunes to protect ground nesting birds and high-tide roosts.
- If a bird is agitated, then it is likely that you are close to its nest. Many ground nesting waders have well camouflaged eggs, so head lower down the beach (below the high tide mark) or follow clear footpaths.
- Keep to paths and open areas to avoid trampling sensitive vegetation
- No fires or BBQs near to sand dunes, grassland or scrub habitats

General

- Ensure areas of importance to nocturnal animals are not disturbed by light – turn off all lighting overnight/ when works are not active.
- Minimise the footprint of the development, clearly marking the area in which machinery and plant is permitted. Ensure that contractors are aware of the wildlife value of the site.
- Ensure all machinery on site is in good condition and regularly maintained, with no leaks of fluids.
- Always have a suitable spill kit on site with any machinery, and refuel away from sensitive areas (best on sealed surfaces such as tracks or car parks).

5.3 Recommended additional compensation measures and enhancements to encourage net biodiversity gains

Three new scrapes for natterjack toads were included in the approved design for the extension to the holiday village (Landscape Design Plan drawing 3833.01 by TBA Ltd). These should be constructed as soon as practicable this winter to encourage its use by natterjack toads instead of the larger landscaped ponds on the western end of the site. These new scrapes are likely to be more suitable for breeding natterjack toad, plus they are on the periphery of the site (closer to the RSPB reserve where they are also known to breed). Where possible the new scrapes should be of variable depths, to mitigate for any dry period during the spring/ summer period.

The landscape design plan also included numerous refugia/ hibernacula around the scrapes. These should be constructed, primarily to provide shelter for adult toads through the day. They should be made of clean rubble/ stones loosely covered by soil, and left to re-vegetate. Other items such as mats or wood are more likely to be disturbed by people, putting the toads in danger. Larger hibernacula (as shown in the landscape design) are best constructed in a quieter corner of the site (such as the north-east corner, near to hedgerows and open habitat) where they are less likely to be disturbed by people.

The landscape design plan also includes wildflower areas and native hedgerow, scrub and tree planting – which should all be followed to enhance to biodiversity status of the site.

6. REFERENCES

Beebee T. (2013) *Amphibians and Reptiles* Pelagic Publishing

BTO (2021) *Birds of Conservation Concern 5* summary report https://www.bto.org/sites/default/files/publications/bocc-5-a5-4pp-single-pages.pdf

Butcher B., Carey P., Edmonds R., Norton L. and Treweek J. (2020) The UK Habitat Classification User Manual version 1.1 www.ukhab.org

Cumbria Biodiversity Data Centre https://www.cbdc.org.uk/data-services/cumbria-biodiversity-evidence-base/cbeb-interactive-map/

DEFRA (2007) *Hedgerow Survey Handbook*

Dobson J & Fairclough J (2022) *Rapid Assessments for the Potential Value of Invertebrate Habitats*. CIEEM In Practice magazine 112 p44-48.

Gent A.H & Gibson S.D. *eds* (2003) *Herpetofauna Workers Manual* JNCC

Harris S. & Yalden D.W. (eds.) (2008) *The Handbook of British Mammals*, third edition Blackwell Scientific Publications, Oxford

Halliday G. (1997) *A Flora of Cumbria* University of Lancaster

Institute of Ecology and Environmental Management, Professional Guidance Series (CIEEM www.cieem.net) [Members only]

Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines* English Nature, Peterborough

Mitchell-Jones, A.J. & McLeish A.P. (2004) *The Bat Workers' Manual* 3rd Edition. JNCC, Peterborough.

NCC (1990) *Handbook for Phase 1 Habitat Survey* JNCC Peterborough

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt* (Triturus cristatus). Herpetological Journal 10 (4), 143-155

Preston C.D., Pearman D.A. & Dines T.D. (2002) *New Atlas of the British and Irish Flora* Oxford University Press

Stace C.(2010) *New Flora of the British Isles* 3rd edition Cambridge University Press

Stott, M. *et al* (2002) *The Breeding Birds of Cumbria: a tetrad atlas 1997-2001*. Cumbria Bird Club

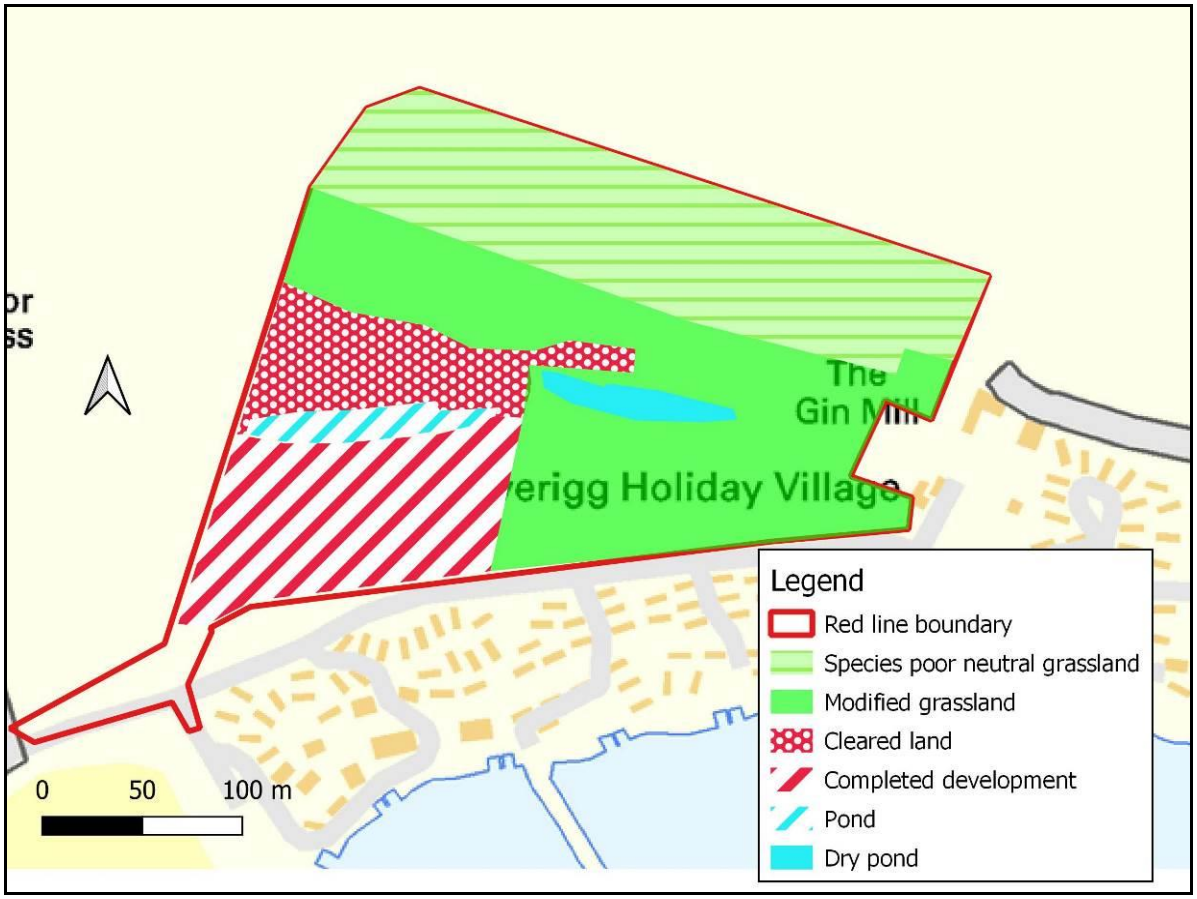
www.magic.gov.uk (Information on priority habitats, species and protected sites)

www.jncc.defra.gov.uk (Information on legal framework, BAP species and habitats)

Natural England Species Information Note SIN006 (2011) *Otter- European Protected Species* www.publications.naturalengland.org.uk

APPENDICES

Figure 2: Habitat map



Contains Ordnance Survey data © Crown copyright and database right [2013]

Description of Wildlife Law and Legislation referred to in this document

National Planning Policy Framework (2018)
Current guidance recommends that planners ensure that all new developments:

- minimise impacts on biodiversity and protected sites
- result in a local net gain in biodiversity
- safeguard wildlife-rich habitat and wider ecological networks
- promote conservation/ restoration and enhancement of priority habitats and ecological networks
- promote protection/ recovery of priority species

Nesting birds
Under Section 1 of the Wildlife and Countryside Act 1981 (as amended), wild birds are protected from being killed, injured or captured. Under this legislation their nests and eggs are also protected from being damaged, destroyed or taken (this includes nests in the process of being built as well as those with eggs and/or chicks in).

Birds which are listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are protected by special penalties at all times. Further enforcement has been provided by The Countryside and Rights of Way Act 2000.

Amphibians
The four widespread species of amphibian (common frog, common toad, 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). It is an offence to sell or possess (dead or alive) these species. Further enforcement has been provided by The Countryside and Rights of Way Act 2000.

Natterjack toads are a European Protected Species, and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981.

It is an offence for anyone intentionally to kill, injure or disturb a natterjack toad, to possess one (whether live or dead), or sell or offer for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by natterjack toad for shelter.

Biodiversity Action Plans – Species and Habitats
The UK Biodiversity Action Plan (UK BAP) was published 1994, in response to the Convention on Biological Diversity (CBD), which the UK signed up to in 1992 in Rio de Janeiro. National and Local action plans were developed for the most threatened species and habitats.

The plans, and species and habitats to which they related are reviewed and updated regularly. The current lists can be found on the JNCC website. These have now been succeeded by NERC Act 2006 (see below) but are still commonly used for guidance.

Natural Environment and Rural Communities (NERC) Act 2006
Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act. This purpose of this list is to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

56 habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. There are 943 species of principal importance included on the S41 list. As above, these are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

Photographs

Photo 1.
Looking east from the boundary bund across the development site.

Note the lack of potential natterjack refugia or hibernacula.

Photo 2.
Looking south along the boundary bund (western edge of the site), across the development site. Note the land near to the pond has already been cleared for the construction works.

Photo 3.
New landscaped pond, looking east.

Land to the south already developed on this half of the site.

Photo 4.
Natterjack tadpoles.

Photo taken on 23rd June 2022.

Photo 5.
Dry pond, looking west to the existing site.

Photo 6.
Dry pond on eastern half of site. This is to be infilled by material from digging the new landscaped pond to the south.

There are small cracks in the banks of the pond bed. These are not large enough for an adult toad, but could be used by toadlets.

Photo 7.
Looking west across the development site, with the dry pond on the right hand edge of the image.

Note the lack of natterjack refugia or hibernacula.

Photo 8.
Proposed locations of the new natterjack scrapes at the eastern edge of the site.