
PHASE II SURVEY REPORT ADDENDUM

1.0 INTRODUCTION

1.1 OVERVIEW

Greengage Environmental Limited (Greengage) was commissioned by Cumberland Council to produce an addendum to update the 2023 Phase II Survey report¹ produced by Greengage relating to Hodbarrow Nature Reserve and a parcel of land immediately north of the nature reserve proposed for development as a Visitor Centre and car park, located on the south-west coast of Cumbria. For the purpose of this report the 'site' refers to the nature reserve and the land proposed for the Visitor Centre and car park, as shown on Appendix A Figure A.1.

This addendum includes a review of additional data and survey information relating to breeding birds, overwintering birds and natterjack toad *Epidalea calamita* which has become available since the production of the 2023 Phase II Survey report. This addendum has been produced to inform an updated Ecological Impact Assessment (EclA)² which subsequently informs an updated planning application for the site which seeks:

"Erection of Visitor Centre with café/shop, group room, staff/volunteer, toilet facilities and vehicle parking; consolidation, repair and installation of interpretive sculpture to Towsey Hole Windmill; refurbishment of existing Tern Island Hide; new bird hides, pathways, gateway features, street furniture, and demarcation of spaces at existing car park; enhancement of wildlife habitats; associated landscaping and drainage infrastructure; and maintenance of byway with restricted vehicular access -The Iron Line Project."

The Hodbarrow Nature Reserve (hereafter referred to as 'the nature reserve') is part of the Duddon Estuary Site of Special Scientific Interest (SSSI) and Morecambe Bay and Duddon Estuary Special Protection Area (SPA), Morecambe Special Area of Conservation (SAC) and Duddon Estuary Ramsar site. The wider Morecambe bay and Duddon Estuary is designated for the presence of internationally important coastal habitats which support internationally and nationally important assemblages of breeding, over-wintering and migratory birds. Other protected and notable species present include great crested newts (GCN) *Triturus cristatus*, natterjack toads, nationally scarce plants including *Epipactis dunensis*, *Limonium humile*, *Centaurium littorale*, *Pyrola rotundifolia*, *Equisetum variegatum*, *Corallorhiza trifida*, *Coincya monensis* ssp. *monensis* and at least two British Red Data Book invertebrates *Colletes cunicularius*, *Psen littoralis*, *Hypocaccus rugiceps*. The land that is proposed for construction of the Visitor Centre and car park lies outside but adjacent the boundary of these statutory designated areas.

An understanding of the ecological baseline of the site and surroundings is required to fully understand the potential impacts of the proposed development upon the site and wider designations. As such, the impacts relating to construction, e.g. development of the Visitor Centre and car park, and potential operational impacts, e.g. associated with the increase in visitor numbers linked to the access improvement works across the nature reserve, previously stated in the Greengage 2023 Phase II Survey report have been revisited and reviewed taking the additional, up to date information into account. Dependant upon the outcome of the review, the below addendum either provides an amended conclusion, or confirms that previous conclusions/statements remain unchanged (as applicable).

1.2 ECOLOGICAL BACKGROUND SUMMARY

2023 Phase II Survey report included a desk study, a desktop review of the breeding and wintering bird assemblages associated with the identified statutory designated sites (see below), in combination with a suite of Phase II habitat and protected species surveys undertaken throughout 2021 and 2022. These included a National Vegetation Classification (NVC) survey, amphibian, reptile and invertebrate surveys.

Key findings from the 2023 Phase II Survey report are set out in Table 1.1 below.

Table 1.1 Summary of 2023 Phase II Survey data

Receptor	Details
Designated sites	The nature reserve was identified to be situated within the statutorily designated boundaries of the Duddon Estuary SSSI, the Morecambe Bay and Duddon Estuary SPA, the Morecambe Bay SAC and the Duddon Estuary Ramsar. The proposed Visitor Centre and car park development footprint was identified to lie outside but adjacent the designated sites boundaries.
Habitats	<p>The NVC was undertaken by Joshua Styles in June 2021 and May 2022. The survey identified that internationally important Annex I habitats are present on site:</p> <ul style="list-style-type: none"> The nature reserve and the proposed Visitor Centre and car park site supported semi-natural dry grasslands and scrubland facies on calcareous substrates (H6210); The nature reserve supported Annex 1 H2130 Fixed coastal dunes with herbaceous vegetation (grey dunes) which is listed as one of the qualifying features for the Morecambe Bay SAC designation. <p>Several nationally, regionally and locally important habitats were identified to be present on site.</p>
Notable plants	A Phase 3 Notable Plant Survey was also undertaken by Josh in May 2022. The habitats present on site were identified to support several internationally, nationally, regionally and locally important plants including Irish dandelion <i>Taraxacum aesculosum</i> and pillwort <i>Pilularia globulifera</i> .
Invasive species	There have been a number of invasive species identified on site, including cotoneaster <i>Cotoneaster</i> spp, variegated yellow archangel <i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i> , montbretia <i>Crocasmia x crocosmiiflora</i> , Japanese knotweed <i>Reynoutria japonica</i> and sea buckthorn <i>Hippophae rhamnoides</i> .
Birds	The nature reserve, specifically purpose built limestone slag islands on Hodbarrow lagoon, was identified to support important breeding bird assemblages such as the breeding colonies of common terns <i>Sterna hirundo</i> , Sandwich terns <i>Thalasseus sandvicensis</i> and little terns <i>Sternula albifrons</i> .

	<p>The nature reserve, specifically Hodbarrow lagoon, was also confirmed to support important over-wintering and migratory bird assemblages including overwintering redshank <i>Tringa totanus</i>, knot <i>Calidris canutus</i> and passage by black tailed godwit <i>Limosa limosa</i>.</p> <p>Both the nature reserve and the proposed Visitor Centre and car park site were identified to support a variety of nesting birds during spring/summer in the scrub, trees and waterbodies.</p>
Amphibians	<p>Tyrer Ecological Consultants Ltd undertook amphibian surveys in 2021 and 2022. Surveys identified likely absence of natterjack toads and GCN on site. However, a confirmed natterjack breeding pond was identified approximately 400 metres (m) north east from the planning application boundary and 570m north-east of the nearest works associated with maintenance of the Byway Open to All Traffic (BOAT)). Male natterjack toads were heard calling off-site c. 20m to the east (95m north-east of the nearest works associated with the maintenance of the BOAT). The waterbodies onsite were confirmed in 2021 and 2022 to support common amphibians, smooth newt <i>Lissotriton vulgaris</i>, common toad <i>Bufo bufo</i> and common frog <i>Rana temporaria</i>.</p>
Reptiles	<p>Lucy Gibson Consulting and Appletons undertook reptile surveys in 2021 and 2022 surveys which recorded a 'Good' population of common lizard <i>Zootoca vivipara</i> in habitats across the site and one slow-worm <i>Anguis fragilis</i> was recorded within the nature reserve.</p> <p>Common lizard and slow-worm are fairly widespread species in Cumbria and thus the value of the site for reptiles was assessed to be at the Local level.</p>
Invertebrates	<p>The invertebrate surveys were undertaken by in May, June, July 2021 and April and May 2022 by Stenecology. The nature reserve was identified to support at least 159 species of terrestrial invertebrates: 26 species (~16%) are regarded as locally common or locally scarce, three (~2%) are currently accorded Nationally Scarce or Section 41 status, pertaining to <i>Attactagenus plumbeus</i>, <i>Saprinus aeneus</i> and <i>Coenonympha nymphula</i>, and one is classed as data deficient, pertaining to <i>Ceruella virgata</i>. All records were identified in Appendix B.3 of the 2023 Phase II survey report. The nature reserve is considered to be of district (low) importance for invertebrates. The proposed Visitor Centre and car park site supports at least 86 terrestrial invertebrate species, three of which are notable, including: beetle <i>Amara curta</i> Dejean, weevil <i>Orthochaetes setiger</i>, and dingy skipper <i>Erynnis tages</i>. The proposed Visitor Centre and car park site is considered to be of district (low) importance for invertebrates.</p>

2.0 METHODOLOGY

This addendum provides a review of additional data and survey information relating to breeding birds, overwintering birds and natterjack toad which has become available since the production of the 2023 Phase II Survey report.

The data has been collected and provided by the RSPB team that manage and monitor Hodbarrow Nature Reserve and includes the following datasets:

- Breeding birds recorded in 2023 and 2024;
- All bird data for 2023 and 2024; and,
- Amphibian survey results for the pools on site collected during April and August 2024.

Greengage are awaiting confirmation on the methodology for the above data received by RSPB.

The breeding and overwintering bird assemblages known to use the nature reserve contribute to the qualifying species of the Morecambe Bay and Duddon Estuary Special SPA and Duddon Estuary Ramsar designated sites. The 2023 Phase II Survey report had received RSPB data up until 2022. Given the time since the previous report, an updated review of the 2023 and 2024 records was deemed necessary to understand if any additional qualifying or notable species of breeding and overwintering birds have been identified using the site.

As there was no surveys undertaken in the proposed Visitor Centre and car park site, as per the 2023 Phase II Survey report, all passerine species recorded on the nature reserve were also considered likely to use the habitats available in the proposed Visitor Centre and car park site.

To assess the wintering bird data, Greenage filtered the data to show the winter months only (September to March inclusive). This resulted in data for January to March 2023 September to December 2023 and January to March 2024).

Additionally, since the previous amphibian survey undertaken in 2021 and 2022, the RSPB were awarded funding from the Species Recovery Trust and have undertaken habitat management at the nature reserve in the winter of 2023. The aim of the habitat management was to improve the suitability of the nature reserve habitats to support natterjack toads. Work included scrub clearance and creation of additional scrapes/pools. Natterjack toads are a qualifying species of the Duddon Estuary Ramsar designation and are also included in the Duddon Estuary SSSI citation. Given the time since the previous amphibian surveys, a review of the results from additional survey effort was deemed necessary to re-confirm presence/likely absence of natterjack toads in the additional scrapes/pools on the site. Monitoring of the additional scrapes/pools on-site was undertaken by the RSPB in April and August 2024. The maps provided by RPSB are included in the Appendix B and Appendix C. No maps for the breeding and overwintering bird data has been provided by RSPB.

It has been discussed and agreed with Cumberland Council that the previous National Vegetation Classification (NVC) survey will also be updated by Greengage. However this will occur later during the 2025 season, to correspond with the optimum period for botanical survey (May through September), and the results will be communicated in a separate document.

2.1 EXCLUSIONS

Given the previous survey effort and understanding of the site, no updates to earlier surveys of GCN, reptiles or terrestrial invertebrates have been carried out, further justification for which has been provided below.

GCN

The results from the Tyrer Ecological Consultants Ltd amphibian surveys were presented in the 2023 Phase II Survey report and identified likely absence of GCN within the surveyed waterbodies on site in 2021. The waterbodies present included three small ponds and three lagoons (measuring 13,100m² and 26,000m²). The lagoons which were not surveyed support a large number of waterfowl which reduce suitability for GCN and additionally, in accordance with Habitat Suitability Index (HSI) for GCN, ponds larger than 2,000m² are omitted because "*there are few data for great crested newt occupancy of ponds of this size and above*". The optimal size for waterbodies for GCN use is considered to be around 50-250m².

In 2022 additional waterbodies situated outside of the planning application boundary were surveyed by Tyrer Ecological Consultants Ltd and presented in the 2023 Phase II Survey report. From review of the Tyrer Ecological Consultants Ltd map and measurement by Greengage using aerial imagery the waterbodies surveyed were situated within 500m of the site. No GCN were identified during these surveys, however presence of natterjack toads, smooth newts, common toads and common frogs was confirmed.

All waterbodies to the north east within 500m of the site fall within coastal floodplain grazing marsh habitat which indicates that these waterbodies may be brackish and as such not suitable for GCN.

The records search acquired in 2021 identified two records of GCN from 1980 and 1981; both are historic. One of the records is from Haverigg which is over 500m away and the other is separated from the site by the Duddon Estuary (which forms part of the Duddon Estuary SSSI, the Morecambe Bay and Duddon Estuary SPA, the Morecambe Bay SAC and the Duddon Estuary Ramsar), therefore limiting opportunity for dispersal of GCN from this record location to the site. A lack of records does not automatically prove absence of a species, however the records did also identify that regular natterjack toad surveys have taken place within 2km of the site since 2013. During these surveys 78 records of smooth and palmate newts have been recorded but no GCN have been recorded on any occasions. The absence of recent GCN records in this instance suggests that the surrounding area does not support GCN.

In 2023, the RSPB received funding from the Species Recovery Trust to create new swales and pools on site, although specifically for natterjack toads and which therefore should be kept absent of emergent vegetation. This reduces suitability for GCN use as vegetation leaves are required for egg laying. These pools have been created and will be retained and protected during the development.

There is suitable terrestrial habitat for GCN situated within the immediate zone (c. 0 - 100m) around on site waterbodies, however likely absence of GCN in relation to these waterbodies has been

previously determined. The suitable terrestrial habitat in the immediate zone of the on site waterbodies will also be retained and protected as part of the proposals. In accordance with the Natural England rapid risk assessment tool in relation to GCN impacts³, while the development will result in a permanent loss of scrub habitat which is situated within the intermediate zone (c. 100 - 250m) around these waterbodies it will be small scale (approximately 0.03ha) and the output concludes that *"an offense is highly unlikely"*. Given that the nearest off-site waterbodies are likely unsuitable (brackish) and no GCN have been recorded in other off-site waterbodies between 250 - 500m from the site, GCN dispersal onto site is considered highly unlikely and the 2022 likely absence status is considered to remain valid.

Reptiles

Data collected to inform the 2023 Phase II Survey report for reptiles recorded a 'Good' population of common lizard and a single slow-worm on the site. Given that these species are common and relatively widespread in the Cumbria area, that high value habitat for these species on site will be retained and protected, and that it is unlikely population numbers would have changed significantly in the interim period, the previous mitigation measures proposed is considered to remain valid and unchanged.

Terrestrial invertebrates

Both the proposed Visitor Centre and car park site and the nature reserve were considered to be of district (low) importance for terrestrial invertebrates in accordance with the Table 4.3 of the Phase 2 report¹. Given that habitats have remained broadly the same since the 2021 and 2022 surveys (as described in the EclA update report²), it is considered unlikely that assemblages have changed significantly in the interim period and the results remain valid.

3.0 RESULTS

For the purposes of this report impacts relating to construction, e.g. development of the proposed Visitor Centre and car park site, and potential operational impacts, e.g. associated with the increase in visitor numbers linked to proposed access improvement works across the nature reserve, have been considered separately for receptors at the nature reserve and the proposed Visitor Centre and car park site location.

3.1 BREEDING BIRDS

Nature Reserve

Error! Reference source not found.1 details the data provided by the RSPB for breeding pairs at the site in 2023 and 2024. **Error! Reference source not found.**2 details the peak number of adults, adults on nests (AONs) and fledglings for tern species *Sternidae* spp. and black-headed gull *Chroicocephalus ridibundus*.

The conservation and/or legislative status has also been provided for each species, detailing:

- Birds of Conservation Concern (BoCC) status (Red, Amber or Green);
- Any extra legislative protection above standard including under Schedule 1 and Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA) (Schedule 1; Schedule 9);
- The inclusion of species under the Annex I of the European Union (EU) Directive on the Conservation of Wild Birds (also known as the Birds Directive), listed in the designation for the Morecambe Bay and Duddon Estuary Special Protection Area (SPA) (Qualifying species for SPA designation); and,
- Those listed Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (S41 NERC).

Table 2.1 Number of breeding pairs for species in 2023 and 2024

Common Name	Scientific Name	Conservation and Legislative Status	Breeding Pairs 2023	Breeding Pairs 2024
Recorded in association with habitats around the nature reserve				
Linnet	<i>Carduelis cannabina</i>	Red; S41 NERC	No data	5
Grasshopper warbler	<i>Locustella naevia</i>	Red; S41 NERC	No data	0
Greenfinch	<i>Chloris chloris</i>	Red	No data	2
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber; S41 NERC	No data	1
Reed bunting	<i>Emberiza schoeniclus</i>	Amber; S41 NERC	No data	1

Dunnock	<i>Prunella modularis</i>	Amber; S41 NERC	No data	4
Song thrush	<i>Turdus philomelos</i>	Amber; S41 NERC	No data	4
Whitethroat	<i>Sylvia communis</i>	Amber	No data	4
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	Amber	No data	0
Willow warbler	<i>Phylloscopus trochilus</i>	Amber	No data	23
Wren	<i>Troglodytes troglodytes</i>	Amber	No data	10
Meadow pipit	<i>Anthus pratensis</i>	Amber	No data	2
Wood pigeon	<i>Columba palumbus</i>	Amber	No data	5
Rock pipit	<i>Anthus petrosus</i>	Green	No data	1
Pied wagtail	<i>Motacilla alba</i>	Green	No data	1
Robin	<i>Erithacus rubecula</i>	Green	No data	11
Stonechat	<i>Saxicola torquatus</i>	Green	No data	1
Blackbird	<i>Turdus merula</i>	Green	No data	3
Blackcap	<i>Sylvia atricapilla</i>	Green	No data	9
Lesser whitethroat	<i>Sylvia curruca</i>	Green	No data	1
Reed warbler	<i>Acrocephalus scirpaceus</i>	Green	No data	2
Chiffchaff	<i>Phylloscopus collybita</i>	Green	No data	16
Great tit	<i>Parus major</i>	Green	No data	3
Blue tit	<i>Cyanistes caeruleus</i>	Green	No data	4
Long-tailed tit	<i>Aegithalos caudatus</i>	Green	No data	0
Magpie	<i>Pica pica</i>	Green	No data	0
Jay	<i>Garrulus glandarius</i>	Green	No data	0
Carrion crow	<i>Corvus frugilegus</i>	Green	No data	1
Chaffinch	<i>Fringilla coelebs</i>	Green	No data	9
Goldfinch	<i>Carduelis carduelis</i>	Green	No data	4
Recorded in associated with the lagoons				
Ringed plover	<i>Charadrius hiaticula</i>	Red; Qualifying species for SPA designation	9	5

Oystercatcher	<i>Haematopus ostralegus</i>	Amber; Qualifying species for SPA designation	5	11
Shelduck	<i>Tadorna tadorna</i>	Amber; Qualifying species for SPA designation	1	1
Lapwing	<i>Vanellus vanellus</i>	Red; S41 NERC	1	5
Common gull	<i>Larus canus</i>	Red	No data	No data
Greylag goose	<i>Anser anser</i>	Amber; Schedule 1	3	2
Spoonbill	<i>Platalea leucorodia</i>	Amber; Schedule 1	4	1
Mallard	<i>Anas platyrhynchos</i>	Amber	1	1
Eider	<i>Somateria mollissima</i>	Amber	71	79
Red-breasted merganser	<i>Mergus serrator</i>	Amber	1	1
Moorhen	<i>Gallinula chloropus</i>	Amber	12	3
Great crested grebe	<i>Podiceps cristatus</i>	Green	1	1
Cormorant	<i>Phalacrocorax carbo</i>	Green	1	43
Grey heron	<i>Ardea cinerea</i>	Green	0	1
Tufted duck	<i>Aythya marila</i>	Green	4	3
Little egret x Cattle egret	<i>Egretta garzetta</i> x <i>Bubulcus ibis</i>	N/A	30	1
Canada goose	<i>Branta canadensis</i>	Not assessed; Schedule 9	5	3

Table 2.2 Peak number of adults, adults on nests (AONs) and fledglings for tern species and black-headed gull in 2023 and 2024

Common Name	Scientific Name	Conservation and Legislative Status	Peak No. of Adults	Peak No. of AONs	Peak No. of Fledglings
2023					
Sandwich tern	<i>Thalasseus sandvicensis</i>	Amber; Qualifying species for SPA designation	927	596	335

Common tern	<i>Sterna hirundo</i>	Amber; Qualifying species for SPA designation	80	53	78
Little tern	<i>Sternula albifrons</i>	Amber; Schedule 1; Qualifying species for SPA designation	81	53	0
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber	1202	590	307
Arctic tern	<i>Sterna paradisaea</i>	Amber	7	3	0
2024					
Sandwich tern	<i>Thalasseus sandvicensis</i>	Amber; Qualifying species for SPA designation	805	332	396
Common tern	<i>Sterna hirundo</i>	Amber; Qualifying species for SPA designation	102	63	39
Little tern	<i>Sternula albifrons</i>	Amber; Schedule 1; Qualifying species for SPA designation	72	32	7
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber	1187	796	735
Arctic tern	<i>Sterna paradisaea</i>	Amber	15	4	0

The data shows the site still supports a number of red and amber list, Schedule 1 and S41 bird species and Hodbarrow lagoon is still supporting qualifying breeding bird species. There has been an increase in cormorants from 4 estimated breeding pairs in 2022.

The 2023 levels of sandwich terns have shown a slight decrease in adults but an increase in adults on nests and decrease in fledglings. Common terns had similar levels to 2022. Little terns and arctic terns have had an increase in adult numbers and adults on nests.

The 2024 levels of sandwich terns have shown a slight decrease in each count since 2022. Common terns and arctic terns shown a slight increase in numbers adults and adults on nests but a slight decrease in fledgling success. Little terns have seen an increase in adult numbers but a decrease in the adults on nest and fledgling counts.

Black headed gulls had higher numbers in all counts in both 2023 and 2024 with exception to fledgling numbers in 2023. Their numbers of fledglings has doubled in 2024.

One new species, not previously identified in relation to the site at all, was returned between 2023 and 2024, pertaining to the little egret x cattle egret hybrid.

Six species that had been previously recorded at the site in general, but not during the breeding bird season (April to August inclusive), were returned between 2023 - 2024. These pertained to; rock pipit, stonechat, grasshopper warbler, long-tailed tit, jay and arctic tern. However, none of these species are listed under Annex I of the Morecambe Bay and Duddon Estuary SPA or within the Duddon Estuary Ramsar citation.

Proposed Visitor Centre and Car Park site

Whilst no bird data specifically relates to the Visitor Centre and car park site, habitats suitable for bird nesting were present, include scrub such as dense bramble *Rubus fruticosus*, hawthorn *Crataegus monogyna* and willows *Salix sp.* .

According to RSPB records there are breeding warblers, including whitethroat *Sylvia communis* and lesser whitethroat *Sylvia curruca* on the nature reserve of which the scrub habitat at the proposed Visitor Centre and car park site could support.

Bird species noted using habitats around the nature reserve, which would likely nest in dense scrub habitat are provided within Table 2.3 below. As there is no breeding bird data available, the geographic value of the species has been estimated using information gathered from Cumbria Biodiversity Data Centre⁴.

Table 2.3 Birds likely to nest within the dense scrub associated with the proposed Visitor Centre and car park site

Common Name	Scientific Name	Conservation and Legislative Status	Geographic Value
Greenfinch	<i>Chloris chloris</i>	Red	Local
Linnet	<i>Linaria cannabina</i>	Red	Local
Dunnock	<i>Prunella modularis</i>	Amber; S41 NERC	Local
Song thrush	<i>Turdus philomelos</i>	Amber; S41 NERC	Local
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber; S41 NERC	Local

Wren	<i>Troglodytes troglodytes</i>	Amber	Local
White throat	<i>Sylvia communis</i>	Amber	Local
Willow warbler	<i>Phylloscopus trochilus</i>	Amber	Local
Magpie	<i>Pica pica</i>	Green	Site
Chaffinch	<i>Fringilla coelebs</i>	Green	Site
Blackbird	<i>Turdus merula</i>	Green	Site
Goldfinch	<i>Carduelis carduelis</i>	Green	Site
Robin	<i>Erithacus rubecula</i>	Green	Site
Wood pigeon	<i>Columba palumbus</i>	Green	Site
Crow	<i>Corvus corone</i>	Green	Site
Great tit	<i>Parus major</i>	Green	Site
Blue tit	<i>Cyanistes caeruleus</i>	Green	Site
Chiffchaff	<i>Phylloscopus collybita</i>	Green	Site
Blackcap	<i>Sylvia atricapilla</i>	Green	Site
Long-tailed tit	<i>Aegithalos caudatus</i>	Green	Site

The 2023 and 2024 data reveal there were no new additional bird species recorded that would likely nest in dense scrub habitat compared to those identified in the 2023 Phase II Survey report¹.

3.2 OVERWINTERING BIRDS

Nature Reserve

The RSPB provided data for species recorded at the site during winter months (September to March inclusive) in 2023-2024, which is detailed in Table 3.1 below.

Table 3.1 Species recorded at the site during winter months 2023-2024

Common Name	Scientific Name	Conservation and Legislation Status
Dunlin	<i>Calidris alpina</i>	Red; Qualifying species for SPA designation
Ringed plover	<i>Charadrius hiaticula</i>	Red; Qualifying species for SPA designation
Curlew	<i>Numenius arquata</i>	Red; S41 NERC; Qualifying species for SPA designation
Herring gull	<i>Larus argentatus</i>	Red; S41 NERC; Qualifying species for SPA designation
Scaup	<i>Aythya marila</i>	Red; Schedule 1; S41 NERC

Black-tailed godwit	<i>Limosa limosa</i>	Red; Schedule 1; S41 NERC
Long-tailed duck	<i>Clangula hyemalis</i>	Red; Schedule 1
Goldeneye	<i>Bucephala clangula</i>	Red; Schedule 1
Lapwing	<i>Vanellus vanellus</i>	Red; S41 NERC
Great black-backed gull	<i>Larus marinus</i>	Red
Whooper swan	<i>Cygnus cygnus</i>	Amber; Schedule 1; Qualifying species for SPA designation
Oystercatcher	<i>Haematopus ostralegus</i>	Amber; Qualifying species for SPA designation
Pink-footed goose	<i>Anser brachyrhynchus</i>	Amber; Qualifying species for SPA designation
Knot	<i>Calidris canutus</i>	Amber; Qualifying species for SPA designation
Turnstone	<i>Arenaria interpres</i>	Amber; Qualifying species for SPA designation
Redshank	<i>Tringa totanus</i>	Amber; Qualifying species for SPA designation
Shelduck	<i>Tadorna tadorna</i>	Amber; Qualifying species for SPA designation
Lesser black-backed gull	<i>Larus fuscus subsp. graellsii</i>	Amber; Qualifying species for SPA designation
Sandwich tern	<i>Sterna sandvicensis</i>	Amber; Qualifying species for SPA designation
Greenshank	<i>Tringa nebularia</i>	Amber; Schedule 1
Greylag goose	<i>Anser anser</i>	Amber; Schedule 1
Wigeon	<i>Anas penelope</i>	Amber
Teal	<i>Anas crecca</i>	Amber
Wheatear	<i>Oenanthe oenanthe</i>	Amber
Red-breasted merganser	<i>Mergus serrator</i>	Amber
Eider	<i>Somateria mollissima</i>	Amber
Snipe	<i>Gallinago gallinago</i>	Amber
Shoveler	<i>Anas clypeata</i>	Amber
Gadwall	<i>Anas/Mareca strepera</i>	Amber
Mallard	<i>Anas platyrhynchos</i>	Amber
Sparrowhawk	<i>Accipiter nisus</i>	Amber
Moorhen	<i>Gallinula chloropus</i>	Amber

Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber
Kestrel	<i>Falco tinnunculus</i>	Amber
Golden plover	<i>Pluvialis apricaria</i>	Green; Qualifying species for SPA designation
Little egret	<i>Egretta garzetta</i>	Green; Qualifying species for SPA designation
Kingfisher	<i>Alcedo atthis</i>	Green; Schedule 1
Mute swan	<i>Cygnus olor</i>	Green
Raven	<i>Corvus corax</i>	Green
Tufted duck	<i>Aythya fuligula</i>	Green
Grey heron	<i>Ardea cinerea</i>	Green
Cormorant	<i>Phalacrocorax carbo</i>	Green
Great crested grebe	<i>Podiceps cristatus</i>	Green
Little grebe	<i>Tachybaptus ruficollis</i>	Green
Coot	<i>Fulica atra</i>	Green
Canada goose	<i>Branta canadensis</i>	Not assessed; Schedule 9

Although previously recorded at the site during breeding bird surveys, wheatear had not been recorded on site during the 2021/2022 overwintering periods assessed to support the 2023 Phase II Report. Wheatear was the only new species recorded in the overwintering period of September 2023 - March 2024. This species is not listed under Annex I of the Morecambe Bay and Duddon Estuary SPA or within the Duddon Estuary Ramsar citation.

Proposed Visitor Centre and Car Park site

The terrestrial habitats associated with the proposed Visitor Centre and car park site are not considered to be of value or suitable for use by qualifying overwintering bird species, as these typically require coastal and estuarine habitats or large expanses of water.

3.3 NATTERJACK TOAD

Data returned from the RSPB natterjack toad monitoring indicated the continued likely absence of natterjack toads on the site during 2024. However, in keeping with the previous amphibian survey results, natterjack toad calls were recorded just off-site to the east in April and August 2024. Details of amphibian monitoring data recorded in 2024 is detailed in Table 3.2 below.

Table 3.2 Amphibian data from 2024 monitoring

Common Name	Scientific Name	Date	Details
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Natterjack toad	<i>Epidalea calamita</i>	April 2024	Up to 8 males recorded calling c. 20m off-site to the east in neighbouring habitat, as shown in Figure B.1.
Natterjack toad	<i>Epidalea calamita</i>	August 2024	Approximately 4 to 5 males recorded calling c. 20m off-site to the east, as shown in Figure C.1.
Common toad (assumed)	<i>Bufo bufo</i>	April 2024	Approximately 5000 tadpoles recorded on site, as shown in Figure B.1, assumed to be common toad.

4.0 CONCLUSIONS

Greengage was commissioned by Cumberland Council to produce an addendum to update the 2023 Phase II Survey report⁵ produced by Greengage for Hodbarrow Nature Reserve and a parcel of land immediately north of the nature reserve which is proposed for development as a Visitor Centre and car park.

This addendum had included a review of additional RSPB data and survey information relating to breeding birds, overwintering birds and natterjack toad which has become available since the production of the 2023 Phase II Survey report.

Seven additional species of breeding bird have been identified to be associated with the site in 2023 and 2024. These comprise little egret x cattle egret hybrid (not associated with the site previously at all), and rock pipit, stonechat, grasshopper warbler, long-tailed tit, jay and arctic tern (previously recorded at the site, but not during the breeding bird season (April to August inclusive). However, none of these species are listed under Annex I of the Morecambe Bay and Duddon Estuary SPA or within the Duddon Estuary Ramsar citation.

Only new one species of overwintering bird (wheatear) was returned between 2023 and 2024. This had been previously recorded at the site, but not during the overwintering period. However, this species is not listed under Annex I of the Morecambe Bay and Duddon Estuary SPA or within the Duddon Estuary Ramsar citation.



Natterjack toads were recorded calling in the same location as previous years, off-site to the east. No natterjack toads were recorded at the Hodbarrow Nature Reserve itself.

These survey findings have been used to inform the updated EclA² for the proposed development. This update should be read in conjunction with this report.

APPENDIX A SITE BOUNDARY

Figure A.1 Site boundary information

IRON LINE

-  Planning application boundary
-  Visitor Centre and car park site.cpg



Title: Figure A1

Drawn by: LT
Date: 09/04/2025

Reviewed by: HB
Date: 09/04/2025




Project number: 553023
Sources: Google Satellite, OpenStreetMap

APPENDIX B AMPHIBIAN DATA APRIL 2024

Figure B.1 Amphibian data from RSPB for April 2024



Legend:

-  RSPB Reserves- Public (UK) (polygons)
-  Unidentified tadpoles
-  Calling males

Acknowledgements & notes:

Created by: RSPB

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Map scale = 1:7,167



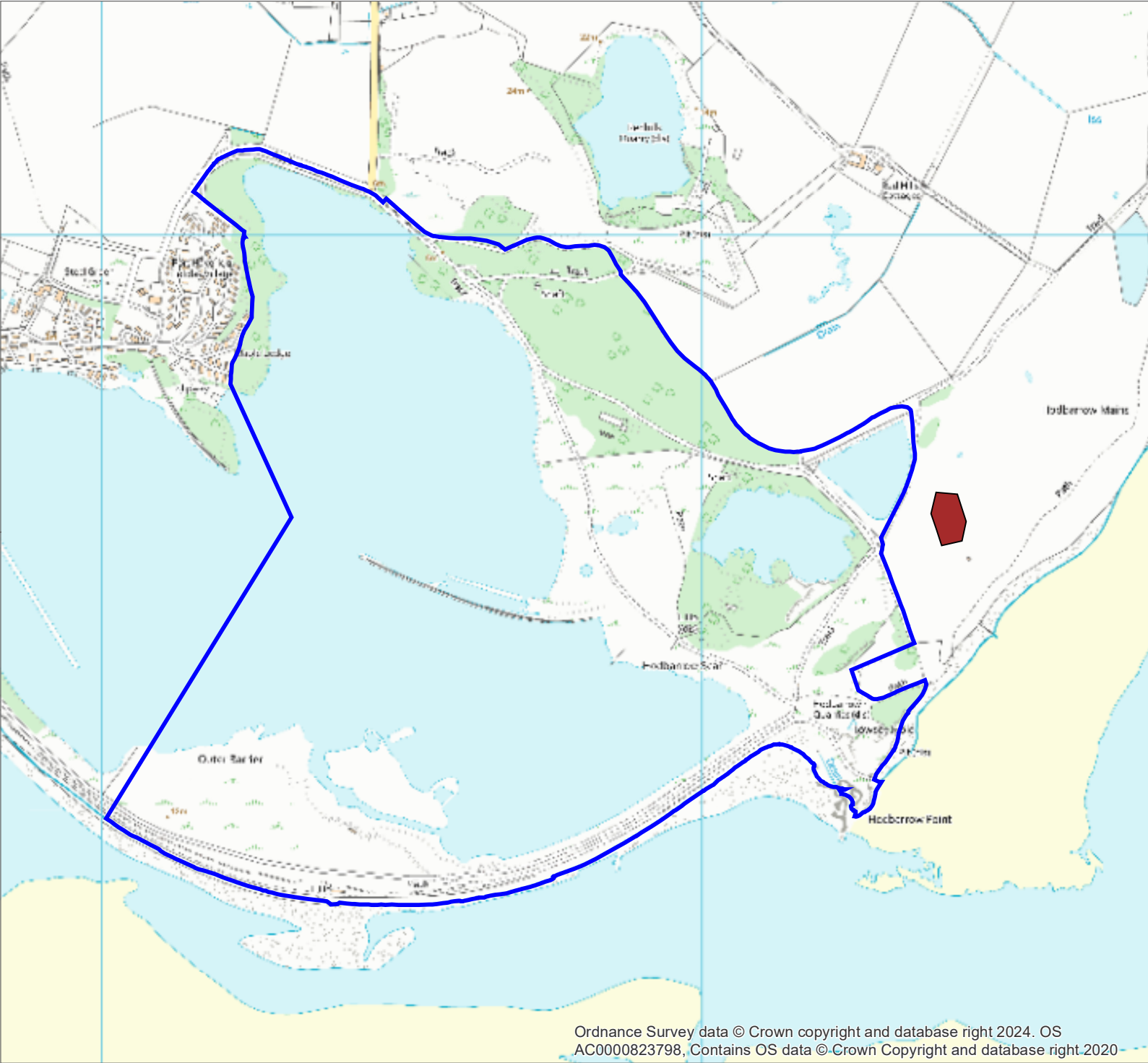
Date printed: 17/04/2024

0 70 140 280 metres



APPENDIX C AMPHIBIAN DATA AUGUST 2024

Figure C.1 Amphibian data from RSPB for August 2024



Legend:

RSPB Reserves- Public (UK) (polygons)

Natterjack calling

Acknowledgements & notes:

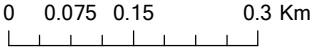
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Ordnance Survey licence number AC0000813580 (2024)

N

Map scale = 1:9,089

Date printed: 27/08/2024



APPENDIX D REFERENCES

¹ Greengage (2023) Phase II Survey Report. Ref. 551959ltJun23FV02_Phase2Surveys, dated May 2023.

² Greengage (2025) Ecological Impact Assessment (EclA). Ref. 553023cp09Apr25FV01_EclA

³ Natural England (2020) Template for Method Statement to support application for licence under Regulation 55(2)(e) of The Conservation of Habitats and Species Regulations 2017 (as amended) in respect of great crested newts *Triturus cristatus*. Form WML-A14-2 (Version April 2020)

⁴ Cumbria Biodiversity Data Centre Occasional Publication (2021) A List Of The Birds Of Cumbria

⁵ Greengage (2023) Phase II Survey Report. Ref. 551959ltJun23FV02_Phase2Surveys, dated May 2023.