SYNTEGRA CONSULTING

Former Mepal Outdoor Centre
A142 Ireton's Way
Ely
Cambridgeshire

Breeding Birds Survey Report

October 2020

Ref: 19-6364

QUALITY STANDARDS CONTROL

The signatories below verify that this document has been prepared in accordance with our quality control requirements. These procedures do not affect the content and views expressed by the originator.

This document must only be treated as a draft unless it is has been signed by the originators and approved by a director.

Revision	-
Date	20/10/2020
Prepared by	A. Ash (on behalf of Syntegra Consulting Ltd)
Checked by	S. Prior
Authorised by	T. Holden

Note

The advice which we have prepared and provided within this report is in accordance with the CIEEM Code of Professional Conduct. We confirm that the opinions expressed are our true and professional opinions. Opinions and information provided in the report are based on Syntegra Group Ltd using reasonable skill, care and diligence in the preparation of the same in compliance with the CIEEM Code of Professional Conduct.

Validity of Data

The findings of this study are valid for a period of 24 months from the survey date. If the approved works have not commenced within the 24 months, it may be necessary to have an updated survey carried out to allow for any changes in the status of bats on site to be assessed and to inform any mitigation or recommendations.

LIMITATIONS

Syntegra Consulting Ltd ("SC") has prepared this report for the sole use of the **client, The CDS Group,** in accordance with the agreement under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by SC.

The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by SC has not been independently verified by SC, unless otherwise stated in the report.

The methodology adopted and the sources of information used by SC in providing its services are outlined in this report. The work described in this report was undertaken in **2020** and is based on the conditions encountered and the information available during the said period of time. The scope of this report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

SC disclaim any undertaking or obligation to advise any person of any change in any matter affecting the report, which may come or be brought to SC's attention after the date of the report.

Certain statements made in the report that are not historical facts may constitute estimates, projections or other forward-looking statements and even though they are based on reasonable assumptions as of the date of the report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. SC specifically does not guarantee or warrant any estimate or projections contained in this report.

Where applicable, costs may vary outside the ranges quoted. Whilst cost estimates are provided for individual issues in this report these are based upon information at the time which can be incomplete. Cost estimates for such issues may therefore vary from those provided. Where costs are supplied, these estimates should be considered in aggregate only. No reliance should be made in relation to any division of aggregate costs, including in relation to any issue, site or other subdivision.

No allowance has been made for changes in prices or exchange rates or changes in any other conditions which may result in price fluctuations in the future. Where assessments of works or costs necessary to achieve compliance have been made, these are based upon measures which, in SC's experience, could normally be negotiated with the relevant authorities under present legislation and enforcement practice, assuming a pro-active and reasonable approach by site management.

Forecast cost estimates do not include such costs associated with any negotiations, appeals or other non-technical actions associated with the agreement on measures to meet the requirements of the authorities, nor are potential business loss and interruption costs considered that may be incurred as part of any technical measures.

INDEX TO CLAUSES

1. Introduction

1.1. Syntegra Group was commissioned by The CDS Group on behalf of the client, to undertake multiple breeding bird surveys at Land at the Former Mepal Outdoor Centre, A142 Ireton's Way, Ely, CB6 2AY (Grid Ref: TL 42274 82982).

1.2. The preliminary ecological appraisal was carried out in November 2019 by Syntegra Group. The survey noted a large lake that consists of a flooded gravel pit, where a narrow-intermittent fringe of marginal vegetation is present along the majority of the shore. As the site's habitats and features were identified as potential habitat for nesting and breeding birds, further surveys were required to determine if nesting birds are present on site. The surveys were required to support the planning application.

1.3. This report details the breeding bird survey results along with the mitigation and compensation proposals for the land at the Former Mepal Outdoor Centre.

1.4. The following report plans to detail:

- The approach to the survey work and methods used;
- The results and an evaluation of them to determine the likely importance of the site for breeding birds;
- The legislative and planning policy protection for breeding birds;
- And recommendations to avoid or reduce ecological impacts on breeding birds.

2. Constraints

2.1. This report only applies to plans drawn up at the time of survey. Any alterations to plans may render the report void and/or require further surveys and should be communicated to the ecologist at the earliest opportunity.

2.2. *Proposals for this project have not yet been finalised and so the impacts and mitigation measures may need to be altered and updated once the final scheme has been designed. Because of this, additional surveys may need to be carried out to further inform the potential impacts of these proposals.*

2.3. *High human activity in the form of fishing around the lake and vandalism of structures within site, this may have had an affect on breeding behaviour observed during surveys.*

2.4. The client is responsible for reading and understanding the advice given in this report. The client must ensure that, where recommended, precautionary measures and or mitigation is followed through.

3. Methodology

Desk Study

3.1. Syntegra Consulting undertook a basic internet-based search of statutory designated sites within 2km of the site using the Natural England/DEFRA web-based MAGIC database (www.MAGIC.gov.uk). The applicant has also commissioned a local biological records search carried out by Cambridgeshire and Peterborough Environmental Records Centre, CPERC, due to sensitivity of records, the exact locations of protected species are not disclosed in this report.

3.2. The Fenland Local Plan (2014) was consulted for details on policies relevant to designated sites, protected species and general ecology protection.

3.3. The following data were obtained from records to determine:

- The known presence of any protected or notable species (including birds) or habitats on or within 2km of the site.
- The presence of designated conservation sites such as Statutory Sites of Special Scientific Interests (SSSIs) on or within 5km of the site or non-statutory Local Wildlife Sites (LWSs) on or within 2km of the site.

Field Survey

3.4. Surveys were conducted in optimal weather conditions (dry, with little/moderate wind) and during the peak bird breeding season (April to July). The duration of each survey was approximately 4 and a half hours.

3.5. Surveys were undertaken on the 22nd April, the 18th May, and the 27th of June within three hours of dawn, when territorial behaviour is usually at its peak.

Table 1. Weather Conditions

Visit	Date	Weather conditions
1	22/04/2020	Wind speed: F2 Air Temperature: 12°C CC: 80%
2	18/05/2020	Wind speed: F2 Air Temperature: 14°C CC: 60%
3	27/06/2020	Wind speed: F1 Air Temperature: 15°C CC: 40%

3.6. The survey was based on a registration mapping methodology adapted from the BTO Breeding Bird Survey: during each visit, all birds seen or heard were recorded on a plan along with any significant behaviour, particularly regarding breeding activity e.g. territorial singing, display, carrying food or nesting material, active nests etc.

4. Results

Desk Study

4.1. Data search performed by Cambridgeshire and Peterborough Environmental Records Centre, CPERC returned a large volume of bird records in the local area. Of the records returned, Table 2 (below) details the Species of Principal Importance and Bird species of Conservation Concern for which the flooded gravel pit on site and surrounding marginal vegetation could provide potentially suitable foraging or nesting opportunities.

Table 2. Bird species records within the desk study area.

Species	Scientific Name	BoCC status	Species of Principal Importance (SPI)
Arctic Tern	*Sterna paradisaea*	Amber	
Avocet	*Recurvirostra avosetta*	Amber	
Barn Owl	*Tyto alba*	Green	
Barnacle Goose	*Branta leucopsis*	Amber	
Bar-tailed Godwit	*Limosa lapponica*	Amber	
Bewick's Swan	*Cygnus columbianus subsp. bewickii*	Amber	
Bittern	*Botaurus stellaris*	Amber	
Black Tern	*Chlidonias niger*	Green	
Black-necked Grebe	*Podiceps nigricollis*	Amber	
Black-tailed Godwit	*Limosa limosa*	Red	✓
Brambling	*Fringilla montifringilla*	Green	
Brent Goose	*Branta bernicla*	Amber	
Bullfinch	*Pyrrhula pyrrhula*	Green	
Cetti's Warbler	*Cettia cetti*	Green	
Circus hudsonius	*Circus hudsonius*	Green	
Common Crossbill	*Loxia curvirostra*	Green	
Common Scoter	*Melanitta nigra*	Red	✓
Common Tern	*Sterna hirundo*	Amber	
Corn Bunting	*Emberiza calandra*	Red	✓

Corncrake	Corncrake	Red	✓
Crane	*Grus grus*	Amber	
Cuckoo	*Cuculus canorus*	Red	
Curlew	*Numenius arquata*	Red	✓
Dark-bellied Brent Goose	*Branta bernicla subsp. bernicla*	Green	✓
Dunnock	*Prunella modularis*	Amber	
Fieldfare	*Turdus pilaris*	Red	
Garganey	*Anas querquedula*	Amber	
Glossy Ibis	*Plegadis falcinellus*	Green	
Golden Plover	*Pluvialis apricaria*	Green	
Goldeneye	*Bucephala clangula*	Amber	
Grasshopper Warbler	*Locustella naevia*	Red	✓
Great Northern Diver	*Gavia immer*	Amber	
Green Sandpiper	*Tringa ochropus*	Amber	
Greenshank	*Tringa nebularia*	Amber	
Grey Partridge	*Perdix perdix*	Red	✓
Greylag Goose	*Anser anser*	Amber	
Hen Harrier	*Circus cyaneus*	Red	
Hobby	*Falco subbuteo*	Green	
House Sparrow	*Passer domesticus*	Red	✓
Kingfisher	*Alcedo atthis*	Green	
Lapwing	*Vanellus vanellus*	Red	✓
Lesser Redpoll	*Acanthis cabaret*	Red	✓
Limosa limosa subsp. Islandica	*Limosa limosa subsp. islandica*	Green	
Limosa limosa subsp. limosa	*Limosa limosa subsp. limosa*	Green	
Linnet	*Linaria cannabina*	Red	✓
Little Egret	*Egretta garzetta*	Green	
Little Gull	*Hydrocoloeus minutus*	Green	
Little Ringed Plover	*Charadrius dubius*	Green	
Little Tern	*Sternula albifrons*	Amber	

Marsh Harrier	*Circus aeruginosus*	Amber	
Mediterranean Gull	*Larus melanocephalus*	Amber	
Merlin	*Falco columbarius*	Red	
Montagu's Harrier	*Circus pygargus*	Amber	
Northern Golden Plover	*Pluvialis apricaria subsp. Albifrons*	Green	
Osprey	*Pandion haliaetus*	Amber	
Peregrine	*Falco peregrinus*	Green	
Pintail	*Anas acuta*	Amber	
Purple Heron	*Ardea purpurea*	Green	
Quail	*Coturnix coturnix*	Amber	
Red Kite	*Milvus milvus*	Green	
Red-breasted Goose	*Branta ruficollis*	Green	
Redwing	*Turdus iliacus*	Red	
Reed Bunting	*Emberiza schoeniclus*	Amber	✓
Ring Ouzel	*Turdus torquatus*	Red	
Ruddy Shelduck	*Tadorna ferruginea*	Green	
Ruff	*Calidris pugnax*	Red	
Sandwich Tern	*Sterna sandvicensis*	Amber	
Scaup	*Aythya marila*	Red	
Short-eared Owl	*Asio flammeus*	Green	
Skylark	*Alauda arvensis*	Red	✓
Slavonian Grebe	*Podiceps auratus*	Red	
Smew	*Mergellus albellus*	Amber	
Snow Bunting	*Plectrophenax nivalis*	Amber	
Song Thrush	*Turdus philomelos*	Red	✓
Spoonbill	*Platalea leucorodia*	Amber	
Spotted Crake	*Porzana porzana*	Amber	
Spotted Flycatcher	*Muscicapa striata*	Green	✓
Starling	*Sturnus vulgaris*	Red	✓
Swift	*Apus apus*	Amber	
Temminck's Stint	*Calidris temminckii*	Green	

Tree Pipit	*Anthus trivialis*	Red	✓
Tree Sparrow	*Passer montanus*	Red	✓
Turtle Dove	*Streptopelia turtur*	Red	✓
Whimbrel	*Numenius phaeopus*	Red	
White Stork	*Ciconia ciconia*	Green	
White-fronted Goose	*Anser albifrons*	Red	✓
Whooper Swan	*Cygnus Cygnus*	Amber	
Willow Tit	*Poecile montana*	Red	✓
Wood Sandpiper	*Tringa glareola*	Amber	
Yellow Wagtail	*Motacilla flava*	Red	✓
Yellowhammer	*Emberiza citrinella*	Red	✓

Field Survey

4.2. 31 bird species were recorded on or close to site, of which all used habitats within the site boundary (see Appendix III for map confirming bird nests on site). All birds heard or seen using the site were noted on the plans. These are illustrated in Table 3 below.

Bird Species		SPI	BoCC status	Breeding on site	Habitat Association	Est. number of territories
Common Name	Scientific Name					
Arctic Tern	*Sterna paradisaea*		Amber	N	Flying over-foraging on site	0
Black bird	*Turdus merula*		Green	Y	Bramble area	4
Eurasian blackcap	*Sylvia atricapilla*		Green	Y		3
Black-headed gull	*Chroicocephalus ridibundus*		Amber	N	Flying over-foraging on site	0
Eurasian blue tit	*Cyanistes caeruleus*		Green	Y		4
Canada goose	*Branta canadensis*		Green	N	Flying over-foraging on site	0
Carrion crow	*Corvus corone*		Green	Y	Willow tree to the North of site	1

Common whitethroat	*Sylvia communis*		Green	N	Flying over-foraging on site	3
Coot	*Fulica atra*		Green	Y	Reedbeds to the West of site	2
Dunnock	*Prunella modularis*	✓	Amber	Y	Bramble area	2
Goldfinch	*Carduelis carduelis*		Green	N	Foraging on site	2
Great-crested grebe	*Podiceps cristatus*		Green	N	Flying over-foraging on site	0
Great tit	*Parus major*		Green	Y	Woodpeck holes in willow to the south/east of site	3
Herring Gull	*Larus argentatus*	✓	Red	N	Flying over-foraging on site	0
Jackdaw	*Corvus monedula*		Green	Y	Activity building -B6, tent apex	2
Kestrel	*Falco tinnunculus*		Amber	N	Flying over-foraging on site	0
Long-tailed tit	*Aegithalos caudatus*		Green	Y	Seen within Willow trees to the centre of site near shooting range	3
Magpie	*Pica pica*		Green	Y	Willow to the West pf site	1
Mallard	*Anas platyrhynchos*		Amber	N	Flying over-foraging on site	1
Moorhen	*Gallinula chloropus*		Green	N	Flying over-foraging on site	1

Mute swan	*Cygnus olor*		Amber	N	Flying over-foraging on site	1
Pied wagtail	*Motacilla alba*		Green	N		1
Robin	*Erithacus rubecula*		Green	Y	Under fibreglass sheet centre of site east of Island	3
Rook	*Corvus frugilegus*		Green	Y	North-east, large rookery	12
Swallow	*Hirundo rustica*		Green	Y	Nesting within indoor climbing house – B7	4
Swift	*Apus apus*		Amber	N	Flying over-foraging on site	0
Tufted duck	*Aythya fuligula*		Green	N	Flying over-foraging on site	0
Water rail	*Rallus aquaticus*		Green	N	Flying over-foraging on site	0
Wren	*Troglodytes troglodytes*		Green	Y	In woodpecker hole East of site	2
Woodpigeon	*Columba palumbus*		Green	Y	Silver birch trees near centre of site and the east and within the residential building- B5	4
Song Thrush	*Turdus philomelos*	✓	Red	N	Flying over-foraging on site	0

4.3. A large proportion of activity recorded was singing. Other breeding activity, such as active nests and carrying food and material, was noted, suggesting that a number of species use the proposed development site for breeding. This is illustrated in Table 4 below.

5. Legislation

5.1. All wild birds are protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended by Schedule 12 of the Countryside and Rights of Way Act 2000). The law covers all species of wild birds including common and pest or opportunistic species. Some bird species are further protected, while breeding, under Schedule 1 of the Wildlife and Countryside Act.

5.2. Species of principle importance in England (SPIs), listed under Section 41 of the NERC Act (2006), are a material consideration for planning decisions.

5.3. Birds of Conservation Concern (BoCC) assigns species to red, amber or green lists under the following criteria:

Red List species

These are species of high national conservation concern. Species are included on this list if they meet one or more of the following criteria:

- Globally threatened;
- Historical population decline in UK during 1800-1995;
- Rapid (> 50%) decline in UK breeding or non-breeding population over last 25 years;
- Rapid (> 50%) contraction of UK breeding range over last 25 years.

Amber List species

These are species of medium national conservation concern. Species are included on this list if they meet one or more of the following criteria:

- Historical population decline during 1800-1995, but now recovering with population size having more than doubled over the last 25 years;
- Moderate (25-49%) decline in UK breeding or non-breeding population or breeding range over the last 25 years;
- Species of European Conservation Concern;
- Between only one and 300 breeding pairs, or one and 900 individuals, in the UK;
- >50% of the UK breeding or non-breeding population in ten or fewer sites;
- >20% of the European breeding population in the UK;
- >20% of the North-West European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in the UK.

Green List Species

All regularly occurring native species that do not qualify under any of the red or amber criteria are green listed. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

6. Discussion

Species of Principle Importance (SPIs)

6.1. Three priority species were recorded using the site:

- **Dunnocks** (*Prunella modularis)* were recorded during 3 survey visits, singing and foraging within trees, shrub, and hedgerows throughout the site. The dunnock is an SPI and BoCC amber listed species because UK populations declined significantly during the 1970s and 1980s, although populations are now considered to be more stable. The species remains widespread throughout Britain and Cambridgeshire, and was the 13th most recorded species in the RSPB 'Big Garden Birdwatch' in 2017, being found in approximately 45% of participating gardens. Good quality breeding habitat, such as hedgerows are present throughout the site boundaries. It is recommended that boundary vegetation is retained and enhanced. Hedgerow gaps should be plugged to maintain breeding and foraging habitat for dunnocks and compensate for the loss of any habitat during development. If these measures are undertaken it is considered unlikely that the local population status of the dunnock would be significantly impacted by the proposals.
- **Herring Gulls (***Larus argentatus)* were recorded flying over the site and are a BoCC red listed species, as well as a SPI in England, due to long term declines in the number of breeding pairs in Britain. The reasons for their decline are currently under research. Herring Gulls remain widespread within Britain and Cambridgeshire. The site itself provided unsuitable habitat for nesting opportunities and foraging opportunities were currently limited. Given the proximity of the area to the Norfolk coast, Herring Gulls will likely continue to use the site as a commuting route. All rubbish/waste materials, particularly plastics must be carefully disposed of during and after construction to prevent ingestion of harmful materials. If these recommendations are adhered to, the likelihood of development inhibiting/damaging the local population of Herring Gulls will be negligible.
- **Song thrush** was observed using the site, foraging behaviour was recorded but no nesting or breeding behaviour was observed during the site visits. Numbers have declined dramatically over the years and it is advised that a bramble areas remain in places, for a food source. It is advised that native fruiting trees such as the crab apple (*Malus sylvestris*), providing fruits in the autumn. As well as the Holly (*Ilex aquifolium*) providing shelter and a food source in the winter in the form of its berries.

BoCC Red listed species

6.2. Two red listed species were recorded during the survey visits. The Herring Gull and the Song Thrush, which used habitats within the site boundary. For this species, potential impacts and mitigation recommendations have been discussed above as they are SPIs as well.

BoCC Amber listed species

6.3. Seven amber listed species were recorded using habitats within the site boundary: kestrel, swift, arctic tern, black-headed gull, mallard, mute swan and dunnock. Six of these species are not SPIs and are detailed below. Details for dunnock (SPI) can be found above.

- **Artic tern** (*Sterna paradisaea*) were recorded flying/foraging over the site on multiple site visits. A largely coastal bird, can be seen inland during migration as they are summer visitors to the UK and spend their winters in the Arctic. Arctic terns are amber-listed as their populations greatly depend on fish stocks; they have been reducing in numbers due to the lack of food. It is recommended that development around the lake and fishing activities are reduced, decreasing disturbance to foraging animals.
- **Black-headed gull** (*Chroicocephalus ridibundus*) were recorded flying/foraging over the site. They are commonest inland gull, and typically feed on worms, insects, fish and carrion, black-headed gulls were using the site to forage no nesting or breeding behaviour was observed.
- **Kestrels** (*Falco tinnunculus*) are most recognisable as the hovering hawk shape silhouette against an evening sky. As a result, they are the most familiar bird of prey in the British Countryside. They have undergone a period of decline across Europe and the UK. Over the last 40 years the population in the UK alone has dropped by 25%. Previous to this, kestrels and other raptors across Europe suffered heavy loss of number, through organochlorine poisoning of the food chain, creating a continent wide nest failure epidemic. As a result of the decline in the UK (particularly marked in Scotland) the kestrel has been amber listed with regard to conservation. The diet of the kestrel is similar to that of tawny owl. As such, a similar mitigation strategy (planting of seed rich plant species within a managed species rich grassland area on POS land) should be used to mitigate for loss of foraging habitat. The use of artificial kestrel nest boxes should also promote breeding in the area.
- **Mallards** (*Anas platyrhynchos*) were seen foraging in and around the waterbody. They feed on seeds, acorns and berries, plants, insects and shellfish. The site

currently provides plentiful foraging habitat. It is recommended that the boundary vegetation should be retained in order to promote foraging opportunity as well as marginal vegetation surrounding the waterbody.

- **Mute swan** (*Cygnus olor*) were seen foraging in and around the waterbody. Their populations have increased recently due to increased protection for this species. They were amber-listed due to lead poisoning from lowland rivers and has largely been solved by a ban on the sale of lead fishing weights. Some birds may stay in their territories year-round, so it is important to provide them with adequate foraging and breeding habitat. They feed on water plants, insects, and snails so ideally a quite area around within the lake should be given, the island located on site would be an ideal area.
- **Swifts** (*Apus apus*) were recorded flying/foraging over the site. Swifts are a BoCC amber listed species in Britain due to long term declines in breeding numbers in Britain. Swifts are some of the most charismatic summer migrant visitors to Britain. Their screams and aerial displays were a once common part of a British Summer. By resting one half of the brain at a time swifts maintain a truly aerial lifestyle, only landing to breed and rear young. Long term declines in the British population, due to lack of suitable nesting areas, have resulted in swifts been listed with an amber conservation status. The site currently provides plentiful foraging habitat with some nesting opportunity within the buildings on site. It is recommended that the proposed development should include nest boxes to promote nesting opportunity. Additionally, boundary vegetation should be retained in order to promote foraging opportunity. Furthermore, any gaps within boundary vegetation should be planted with native species in order to enhance foraging opportunities for swifts.

6.4. Recommendations detailed in Section 7 are designed to mitigate the loss of breeding and foraging habitat for these species, where necessary, and provide additional breeding opportunities post development for species such as arctic tern, black-headed gull, kestrel, mallard, mute swan, and swift.

Schedule 1 species

6.5. No Schedule 1 species were recorded to be using the site.

7. Mitigation Measures and Recommendations

7.1. A precautionary check for nesting owls should be undertaken by a suitably licensed ecologist immediately prior to removal of suitable trees within the site. If nesting owls are found during works then all potentially disturbing activities within a radius determined by the licensed ecologist must cease until all young birds are independent.

7.2. Mature trees, scrub and hedgerows should be retained within the development where practical, to maintain breeding, foraging and commuting habitat for birds.

7.3. Hedgerow planting, within gaps, would provide additional nesting and foraging opportunities for birds and should include native fruit and nut bearing species such as hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), wild cherry plum (*Prunus cerasifera*), guelder rose (*Viburnum opulus*), blackthorn (*Prunus spinosa*) and field maple (*Acer campestre*). This will also compensate for the any loss of hedgerow and scrub in other areas of the site.

7.4. Retained hedgerows and areas of dense shrub should have a buffer of at least 5m to the proposed construction zone, to retain existing arable and grassland margins for foraging birds. These should be suitably managed for foraging birds in the long term.

7.5. Suitable areas within public open space (POS) should be managed as amenity grassland and species rich wildflower areas as appropriate. This will maintain foraging opportunities for priority species, such as starling, house sparrow and dunnock. It is recommended that wildflower areas are managed appropriately for breeding birds, particularly foraging house sparrow, yellowhammer, skylark and dunnock in the long term. This should include the seeding of specific seed producing and invertebrate encouraging wildflowers, and a suitable management regime to be detailed within the LEMP.

7.6. Current and proposed watercourses and waterbodies should be planted with marginal and aquatic species such as marsh marigold (*Caltha palustris*), bog bean (*Menyanthes trifoliata*), water forget-me-not (*Myositis scorpiodes*), common reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*) and pendulous sedge (*Carex pendulus*). This will create a valuable wetland area to attract invertebrate to site to provide enhanced foraging habitat for swifts and hirundines (such as swallows) post- development.

7.7. A Landscape and Ecological Management Plan (LEMP) should be produced for the site, and should include sensitive hedge-cutting cycles (to produce dense, tall hedgerows with a diversity of species and ground flora), management of hedgerow buffers, appropriate establishment techniques of the grassland and wildflower areas, sensitive grass cutting regimes (which should also consider reptiles present at the site), and suitable management regimes for all waterbodies and watercourses post development.

7.8. Any scrub or tree clearance or management should be undertaken outside the breeding bird season (which is March to September). Should vegetation removal be required during the nesting season, a nesting bird check for active nests need to be undertaken by a suitably qualified ecologist immediately prior to works commencing. If an active bird nest is found, a radius of 5m of vegetation should be retained around the nest, and no work should continue until the young have fledged.

7.9. Any trees, hedgerows or scrub (including buffers) to be retained should be suitably protected from harm throughout the duration of the works to preserve this nesting and foraging habitat for birds.

7.10. To mitigate for lost bird nesting opportunities on the site, and enhance the site for nesting birds, a variety of bird boxes should be installed on trees and new buildings within the development. A variety of standard bird boxes with different sized and shaped entrance holes should also be installed on retained mature trees along the boundaries to attract a greater diversity of birds to nest (see Appendix I). Bird box installation should be conducted facing in a north-east to north- west direction and placed at least 4-5m high away from dense vegetation. Once a proposed layout has been produced an ecologist should be consulted to ensure the most appropriate locations and fixings. The LEMP should detail all necessary maintenance works for the nest boxes installed.

7.11. It is recommended that any proposed soft landscape scheme uses native and/or wildlife-attracting plants and trees such as those suggested above and incorporates wildflower areas wherever possible. These areas would provide foraging resources for seed-eating and insectivorous birds recorded at the site, such as house sparrow, starling, linnet and dunnock. Planting within the development will be designed to maintain connectivity through the site for birds. This could include hedgerow planting at the boundaries or along access roads and grouped tree or shrub planting to provide ‘islands’ of habitat within the development.

8. Conclusion

8.1. The birds identified during the survey were predominantly common species, both at a national and local level. SPIs included dunnock, and herring gull of which dunnocks were likely to be breeding on site. These species are all locally common in Cambridgeshire.

8.2. Areas of higher quality foraging and nesting habitat (boundary vegetation, arable/fallow land and grass margins) are recommended for retention and suitable management. Additionally, the loss of scrub, shrubs and grassland at the site should be mitigated for through hedgerow planting and incorporation of amenity grassland and wildflower areas into POS. No significant numbers of any species were recorded using the site, therefore it is considered that through enhancement of retained areas, buffers to retained hedgerows, compensatory hedgerow and scrub planting and provision of additional nesting opportunities, the likely loss of some areas of nesting and foraging habitat will be adequately mitigated, and the value of the site for birds could be enhanced. Exclusion areas within the lake boundaries should be added reducing disturbance to wetland birds, foraging, nesting and breeding activities please refer to Appendix II: Exclusion Zones.

References

Eaton, M. A., Aebischer, N. J., Brown, A. F., Hearn, R., Lock, L., Musgrove, A. J., Noble, D. G., Stroud, D. A., & Gregory, R. D. (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. British Birds 108: 708-746.

HMSO (1981) Wildlife and Countryside Act. HMSO, London.

HMSO (2006) Natural Environment and Rural Communities Act. HMSO, London.

Appendix I: Recommended bird boxes

The 1B Schwegler Nest boxes are an example of a nest box that would provide nesting sites for several local bird species. These are to be placed within suitable boundary trees for nesting birds on the site.

2GR Schwegler Nest Box provides additional protection against predator species. These are best placed within tree line boundaries avoiding westerly directions.

The triple cedar sparrow box would provide suitability for use by tree sparrows, hung 3-5 metres avoiding westerly directions.

Appendix II: Exclusion Zones

Appendix III: Map of confirmed nests on site