Sevenoaks Wildlife Reserve, Bradbourne Vale Road, Sevenoaks, Kent TN13 3DH

Bird Survey Report

KWT Consultancy Services

Head Office: Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent ME14 3BD
Tel: 01622 662012
info@kentwildlife.org.uk | kentwildlifetrust.org.uk

Report Verification

Client	Kent Wildlife Trust
Site/Job	Sevenoaks Wildlife Reserve, Bradbourne Vale Road, Sevenoaks, TN13 3DH
Central Grid Reference	TQ 51941 56691
Report Title	Bird Survey Report
Report reference	ECOSERV003

Quality Assurance

Report Version	Date	Prepared By	Reviewed By	Approved By
Draft	26/02/2021	Marie Dipple MSci, Assistant Ecologist, KWT Consultancy Services		
Final	24/03/2021	Clair Thackray PhD, Ecologist, KWT Consultancy Services	Tony Swandale BA (Hons), Dip Ecology, Ecologist, KWT Consultancy Services; Camilla Blackburn BSc, Ecological Consultancy Officer, KWT Consultancy Services; Anne Waite BSc, CBiol, MRSB Project Manager, KWT Consultancy Services	Vincent Ganley Managing Director, KWT Consultancy Services

This report has been prepared in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

This report has been prepared by KWT Consultancy Services for the sole use of the client.

All opinions expressed are the true and professional bona fide opinions of KWT Consultancy Services. They do not constitute professional advice and the client may wish to seek professional legal interpretation of the relevant wildlife legislation referenced in this report.

Any information provided by third parties and referred to within this report has not been checked or verified by KWT Consultancy Services unless otherwise expressly stated within this document.

Contents

1 SUMMARY

INTRODUCTION

Kent Wildlife Trust is seeking to obtain planning permission for improvements to the existing visitor experience at its Sevenoaks Wildlife Reserve. The land subject to development proposals comprises a c.1.75 ha area located in the south-west of Sevenoaks Wildlife Reserve Site of Special Scientific Interest (SSSI).

The site is dominated by bare ground with areas of semi-natural broadleaved woodland and dense scrub.

A Preliminary Ecological Appraisal undertaken by KWT Consultancy Services identified suitable habitat for breeding birds within the site and Sevenoaks Wildlife Reserve is designated as a SSSI on the basis of its breeding bird populations, and also cited as being important for non-breeding wetland and wintering species. A recommendation was made to evaluate the bird populations known to be present within the SSSI using existing survey data for 2018-2020. This report summarises the findings of the surveys and provides recommendations for mitigation and compensation.

RESULTS AND RECOMMENDATIONS

The table below summarises the findings of the surveys, the potential impacts of the proposals on the bird populations and recommendations for mitigation.

Legal and conservation status of bird species within site and wider reserve	Areas of suitable breeding bird habitat within or adjacent to site	Potential Impact of the proposals	Recommendations	Timing constraints

• WCA 1981 – All nesting birds
• WCA 1981 Schedule 1 breeding birds:
  ○ None within site
  ○ Two species in northern part of reserve
• Two Red List and one Amber List species breeding within or immediately adjacent to site
• Reserve designated as SSSI for breeding bird assemblage
	• Scattered scrub and short grassland mosaic
	• Dense scrub and broadleaved woodland
	• Broadleaved woodland along lake shoreline lying immediately beyond western site boundary
		Permanent loss and temporary reduction of breeding and foraging habitat for birds of conservation concern	• Berry-rich planting
			• Scrub regeneration
			• Tree and woody scrub planting	

		Damage or destruction of nests and/or killing or injury of individual birds during clearance, demolition and construction works	• Cutting-back of scrub to 300mm outside of nesting season • Monitoring surveys post-development • Tool box talk to construction workers	Clearance to 300mm during October – February
		Short-term noise disturbance of breeding and wintering birds during works (non-Schedule 1 species)	• Planned short-term duration of works (6-9 months) • No use of piling • Dawn surveys during construction period to monitor location of nests • Installation of Noise-Control fencing if required	Watching brief for nesting birds required during March-August (works scheduled to start in September and end by the following June)
		Long-term noise disturbance of	**Habitat and Visitor Zonation Plan:**	

		breeding and wintering birds due to increased visitor numbers	Visitor activity to be focussed in south and west of reserve through trails and paths, education opportunities and signage. Majority of reserve to be designated as 'quiet area' with extensive wilding and controlled access for experienced birdwatchers	

2 INTRODUCTION

2.1 Background

Kent Wildlife Trust is seeking to obtain planning permission for improvements to the existing visitor experience at its Sevenoaks Wildlife Reserve. The land subject to development proposals comprises a c.1.75ha area located in the south-west of Sevenoaks Wildlife Reserve and Site of Special Scientific Interest (SSSI) – herein termed as 'the site'.

The current development proposals for the site include the following:

- Demolition of five structures, removal of several containers.
- Permanent loss of limited areas of scattered scrub and trees as part of building works and the enlargement of parking areas and access routes.
- Temporary reduction of scattered scrub habitats bordering the works area.
- Extension and renovation of the existing visitor centre building (B8).
- Recladding and improved thermal performance of the visitor centre, requiring the temporary removal of all roof tiles and timber weatherboarding from all elevations.
- Installation of air sourced heat pumps within the visitor centre and photovoltaic panels on the visitor centre roof.
- Resurfacing of all access routes and parking areas.
- New play area to the east of the visitor centre.
- New areas of tree planting and soft-landscaping in the north, east and west of the site.

2.2 Scope of Work

KWT Consultancy Services was commissioned to undertake a Preliminary Ecological Appraisal (PEA) of the site in November 2019 (KWT CS, 2020). The PEA identified suitable habitat for breeding birds within the site. No wetland habitats occur within the site itself, but wetland habitats of significance to birds are present within the reserve, occurring to the north and west of the site. The PEA accordingly recommended that an evaluation of the breeding, wetland and wintering bird populations should be carried out, utilising existing survey data for 2018-2020. CIEEM suggests that surveys and reports that are between eighteen months and three years old may still be valid, dependent on the results of a walkover survey by an ecologist to determine the current status of the site compared with status of the site at the time of the original surveys[1]. The site surveys undertaken as part of the PEA confirmed that there have been no significant changes to the site between 2018 and 2020 and therefore no additional surveys were proposed.

KWT Consultancy Services were commissioned to undertake a desktop evaluation of the existing survey data. This report summarises the findings and provides recommendations for mitigation and compensation.

2.3 Survey Area

Sevenoaks Wildlife Reserve is situated on the northern periphery of Sevenoaks town (see Figure 1). The village of Dunton Green is located to the west, the A25 to the south,

[1] CIEEM Advice Note (April 2019) on the Lifespan of Ecological Reports and Surveys https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

residential and commercial areas to the west and open agricultural land to the north. It is accessed from Bradbourne Vale Road at OS grid reference TQ5218 5636.

The reserve is owned by Tarmac and leased / managed by Kent Wildlife Trust and covers a 73ha area, approximately 39ha of which comprises five large lakes and numerous smaller waterbodies; the wetlands are surrounded by areas of broadleaved woodland with dense scrub, neutral grassland, wet woodland and reedbed. The river Darent flows through the north of the reserve. The reserve is designated in its entirety as SSSI for its breeding bird assemblage and downy emerald dragonfly. The reserve also sits in an area identified in the Sevenoaks District Plan as: Area of Archaeological Potential, and Metro Greenbelt.

The site subject to development proposals lies within the south-west corner of the reserve; habitats within the site comprise amenity grassland, broadleaved woodland, scattered scrub and trees, and areas of unsurfaced bare ground and hard-standing. The site also includes the existing Jeffrey Harrison visitor centre building and an outdoor education / sensory garden area.

Figure 1 shows the extent of the reserve and the general location of the site. Figure 2 shows the development proposals.

2.4 Objectives

The primary objectives of the bird surveys were as follows:

- Identify the likely importance of the site for breeding birds.
- Assess the significance of the site for breeding, wetland and wintering birds in the context of the wider reserve.
- Provide an assessment of the potential impact of the proposed development upon the breeding and non-breeding bird populations of the reserve.
- Provide an early indication of potential ecological mitigation and compensation requirements that may be required as part of the development proposals.

Figure 1: Site Location Map. Map provided by Kent Wildlife Trust showing extent of Sevenoaks Wildlife Reserve (outlined in green), and the general location of the site (outlined in red)

Figure 2: Development proposals

3 LEGISLATION, PLANNING AND CONSERVATION POLICY

All species of bird are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). Protection was extended by the Countryside and Rights of Way (CRoW) Act 2000.

Under the above legislation it is an offence to intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take or destroy the egg of any wild bird; or
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

For detailed information, it is advisable to consult the primary legislation, which can be found on the UK Legislation website at: http://www.legislation.gov.uk/ukpga/1981/69

3.1 Site of Special Scientific Interest (SSSI) Designation

Sevenoaks Wildlife Reserve is designated as a SSSI under Section 28 of the Wildlife and Countryside Act 1981, as amended - being of recognised national importance for its 'Assemblages of breeding birds - Lowland open waters and their margins' (KWTCS, 2020). The reasons for its notification are the large flooded gravel pits which form several lakes and associated wetland and terrestrial habitats, which together support both breeding and wintering bird populations of conservation importance. The designation makes it a legal requirement that the special features for which a site has been designated are appropriately managed by the landowner.

The SSSI was last assessed by Natural England in 2009 and was deemed to be in favourable condition – based upon bird records supplied by the British Trust for Ornithology (BTO) using Wetland Bird Survey (WeBS) data for 2006 and 2007. The favourable assessment is based on the following species breeding or at least utilising the reserve for key functions during the breeding period: gadwall, great crested grebe, kingfisher, little grebe, little-ringed plover, mute swan, pochard, ringed plover, tufted duck and water rail.

3.2 Species of Principal Importance

Under the Natural Environment and Rural Communities (NERC) Act 2006, the presence of a protected species is a material consideration when a local planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat (ODPM 06/2005, paragraph 98). Under Section 40 of the Act, local authorities are legally obliged to have regard for the purposes of conserving biodiversity, specifically those habitats and species listed as being of Principal Importance under Section 41 (S41). Several species of breeding, wetland and wintering bird recorded within the reserve are listed under S41.

3.3 Birds of Conservation Concern

The UK's leading bird conservation organisations periodically assess the status of birds in the UK, Channel Islands and Isle of Man to create lists of Birds of Conservation Concern

(BOCC) according to their current population status; the most recent is the 4th review which was published in 2015 (Eaton *et al*., 2015). The bird species that breed or overwinter within the UK were assessed against a set of objective criteria to be placed on Green, Amber or Red lists – indicating an increasing level of conservation concern. The review used up-to-date information on the status of birds in the UK and elsewhere in their ranges, drawing on data collated through the UK's bird monitoring schemes.

The criteria assessed the historical decline, trends in population and range, population size, localisation and international importance of each species as well as their global and European threat status. A total of 247 species were considered. There are currently 67 species on the Red list, 96 on the Amber list, and 81 on the Green list.

4 METHODOLOGY

4.1 Desk Study

Sevenoaks Wildlife Reserve has been subject to long-term annual breeding, wetland and wintering bird surveys by Kent Wildlife Trust reserve wardens, and a desktop review of the data collected during 2018-2019 was undertaken to enable an assessment of the likely impacts of the proposed works on the bird populations present. The methods used during the annual surveys are detailed below.

In addition to the data from surveys carried out by Kent Wildlife Trust, records for wetland and wintering birds were obtained for the reserve from the Kent Ornithological Society for the period January to December 2020.

4.2 Common Bird Census Surveys

The surveys were conducted using the standard Common Bird Census (CBC) methodology as devised by the British Trust for Ornithology (Gilbert et al, 1998). This technique was used to monitor populations of breeding birds in the UK between 1962 and 2000, when it was superseded by the less time-consuming Breeding Bird Survey; however, the CBC technique continues to be a widely used method for surveying breeding birds at a local scale. The method uses registration mapping which can allow the number and distribution of breeding territories to be determined for each species. A CBC does not involve searching for nest sites and does not aim to confirm that breeding has taken place.

A total of eight visits were undertaken of the entire reserve during the 16 week period between 27th March and 3rd July 2019 (one visit every two weeks). The surveys were undertaken by Susanna Clerici and Linturn Hopkins, both of Kent Wildlife Trust. The location of all bird species was recorded on a map in the field using standard BTO species codes and symbols.

Weather data for each CBC survey date is shown in Table 1.

Table 1: Date, time and weather information for the CBC survey visits

Visit Ref.	Date	Time	Weather conditions
A	27/3/19	09:00-12:45	Cool, calm, bright conditions
B	10/4/19	08:00-11:30	Cool start, sunny, cold NE wind
C	23/4/19	08:00-11:30	Cool, calm and sunny conditions
WR	25/4/19	08:00-11:30	Cool, calm, bright conditions
D	11/5/19	08:15-11:50	Cool, calm and sunny conditions
E	22/5/19	08:45-13:00	Cool, calm and sunny conditions
F	5/6/19	08:15-12:00	Cool, calm, bright conditions
G	18/6/19	08:00-16:00	Calm, sunny in AM rain showers in PM
H	3/7/19	09:00-11:00	Cool, sunny conditions

4.3 Wetland Bird Survey

The Wetland Bird Survey (WeBS) monitors non-breeding waterbirds in the UK. Following a tradition begun in 1947, wetland sites are counted once per month, providing data for population trends in abundance and distribution. The national network of sites legally protected for their importance to wintering waterbirds depends fundamentally on the WeBS counts. 'Waterbirds' includes wildfowl (ducks, geese and swans), waders, rails, divers, grebes, cormorants and herons. Gulls and terns are also optionally included. In a typical year, over 220 waterbird species, races or populations are counted in WeBS, including non-native, feral and vagrant species.

Non-breeding waterbird numbers peak at different times for different species therefore, wherever possible, counting is carried out through the year, running from July to June, with the core counting season being September to March. As non-breeding waterbirds can be very mobile, survey dates are nationally synchronised, with counters requested to visit during the day on priority Core Count dates if at all possible.

WeBS count data was collected for the reserve from January 2018 to August 2019. The surveys were undertaken by Susanna Clerici and Linturn Hopkins, both of Kent Wildlife Trust.

4.4 Wintering Birds Survey

The WeBS count data also included counts for wintering bird species using the reserve during 2018-2020.

4.5 Limitations

The survey data has been obtained from annual monitoring of breeding birds undertaken by Kent Wildlife Trust staff for the whole of the reserve, which encompasses the site. The habitats within the wider reserve – comprising c.39ha of waterbodies surrounded by broadleaved woodland, scrub and unmanaged grassland – are considered to be of greater suitability for breeding, non-breeding wetland and wintering birds than those habitats present within the site. It is therefore considered that the survey data represent the maximum number of species and individuals which are likely to occur within the site.

Whilst every effort has been made to ensure the accuracy of this report, it should be noted that bird populations are capable of migration and as such are likely to change over time. Certain species may be difficult to detect at those times of the year when they are less visible and / or less vocal. The Common Bird Census survey represents a 'snapshot' of the breeding bird community recorded at the time the survey was conducted. The accuracy of the results of a Common Bird Census survey is therefore dependent on the number and timing of the survey visits. The surveys encompassed the period April to early June – which is usually the optimal time for surveying breeding birds. Whilst it is possible that birds breeding earlier or later in the season were not recorded, the optimum timing of the survey is considered to enable a reliable assessment of the breeding species present.

5 RESULTS

5.1 Common Bird Census Surveys

Within the reserve, a total of 35 breeding bird species were recorded during 2019, at least 23 of which were recorded as pairs and / or confirmed nesting (Table 2).

Table 2: Summary of Common Bird Census survey results for the Wildlife Reserve during 2019

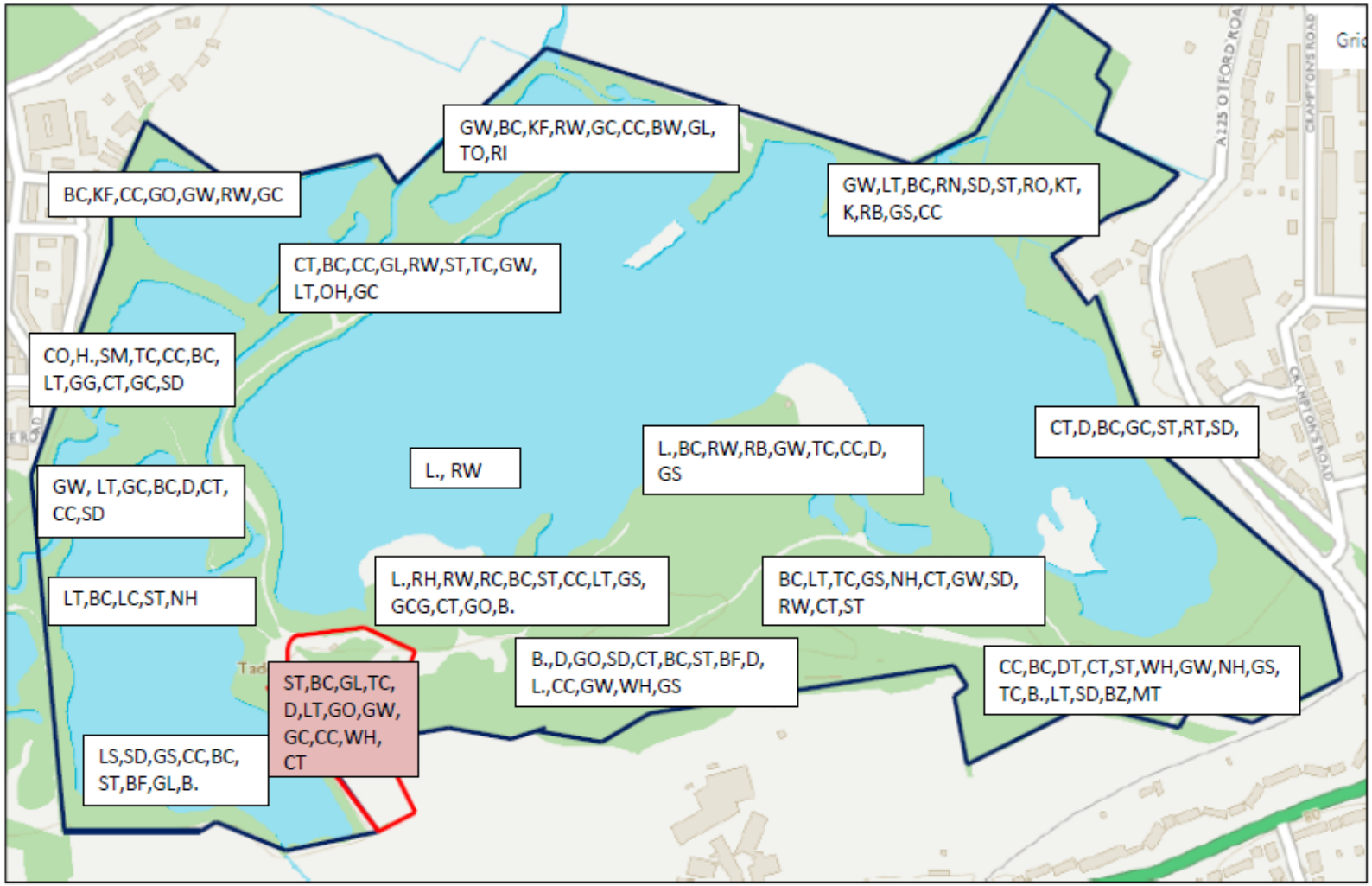
Common Name	BTO species code	No. times recorded	Comments
Common buzzard	BZ	5	Single birds observed, one visit recorded two observations on 15th June
Kestrel	K.	1	Single bird recorded flying outside northern boundary
Stock dove	SD	34	2-3 pairs observed around southern and western parts of the reserve
Green woodpecker	G.	12	Single birds, possibly 1 pair in south
Greater spotted woodpecker	GS	21	1-2 calling in south
Dunnock	D.	35	4 pairs in central west
Robin	R.	1	Nest confirmed in south east
Song thrush	ST	45	2-3 pairs in south
Mistle thrush	M.	5	0-1 pairs
Whitethroat	WH	5	0-1 pairs in south
Garden warbler	GW	34	2-3 pairs
Blackcap	BC	153	10-12 pairs
Chiffchaff	CC	66	7-8 pairs
Long-tailed tit	LT	32	5-6 pairs
Coal tit	CT	7	1-2 pairs
Treecreeper	TC	25	Single birds calling possibly 3 pairs
Goldfinch	GO	8	1-2 Pairs
Bullfinch	BF	6	1 pair
Reed warbler	RW	30	2-3 pairs
Reed bunting	RB	3	Single birds singing
Goldcrest	GC	41	2-3 pairs
Kingfisher	KF	5	1-2 pairs
Lesser spotted woodpecker	LS	1	Single bird singing
Red kite	KT	2	Heard calling outside northern boundary
Rook	RO	15	4-5 pairs, 8 nests recorded in north east
Ring-necked parakeets	RI	5	1-2 pairs
Sparrowhawk	SH	8	Single birds observed flying over
Heron	H.	3	2 pairs, 2 nests found
Eurasian coot	CO	2	1 pair, 1 nest found in central west
Great crested grebe	GG	2	1-2 pairs, nests found
Lapwing	L.	31	4-5 pairs
Willow warbler	WW	1	0-1 pair
Marsh tit	MT	1	Single bird singing
Nuthatch	NH	1	Single bird singing
Grey wagtail	GL	1	Single bird singing

Of the total number of species recorded within the reserve, 12 species were recorded exhibiting breeding behaviour within the site such as carrying nesting material, singing, or making territorial alarm calls. The data is presented in Table 3. Figure 3 shows the location/s at which each species was recorded on at least one occasion.

Table 3: Species and territorial breeding behaviour recorded within the site during the Common Bird Census survey

Species	Territorial Breeding Behaviour
Treecreeper	Singing
Chiffchaff	Singing
Blackcap	Territorial alarm calls and parent / juveniles recorded
Dunnock	Carrying nest material
Long-tailed tit	Territorial alarm calls and parent / juveniles recorded
Grey wagtail	Singing
Song thrush	Singing
Goldcrest	Singing
Garden warbler	Singing
Whitethroat	Singing
Goldfinch	Singing
Coal tit	Singing

Figure 3: Common Bird Census survey results showing bird species distribution within the reserve during 2019. The site subject to development proposals is outlined in red and the shaded text box lists species recorded within the site. Refer to Table 2 for BTO species codes



5.2 Wetland Non-Breeding Bird Surveys and KOS Records

Total annual counts for non-breeding wetland birds (WeBS) recorded within the reserve during January 2018 – August 2019 and the records for 2020 obtained from KOS are provided in Table 4.

Table 4: Non-breeding wetland bird species recorded within the Wildlife Reserve 2018-19

Common Name	Number of records (2019)	Number of records (2018)	Number of records (2020)
Mute Swan	29	18	
Greylag goose	864	2692	30
Canada goose	1017	1426	6
Egyptian goose	88	82	40
Grey heron	47	28	6
Cormorant	90	150	32
Great white egret	1	1	1
Little egret	8	21	16
Great crested grebe	140	175	3
Lapwing	460	440	307
Moorhen	105	210	
Coot	615	954	
Mallard	321	509	
Teal	129	296	
Gadwall	76	105	
Mandarin	4	22	
Little ringed plover	26	10	19
Tufted duck	492	541	62
Green sandpiper	7	5	8
Lesser black backed gull	9	21	
Herring gull	254	595	85
Black-headed gull	353	154	100
Kingfisher	9	7	3
Mediterranean gull	4		
Oystercatcher	6		12
Common gull	91	153	
Shelduck	15	6	9
Common tern	2		18
Common sandpiper	8	3	5
Snipe	51	115	6
Shoveler	70	59	60
Wigeon	2	53	27
Little grebe	11	37	31
Black-necked grebe		6	
Pochard	184	122	91
Great black-backed gull	13	20	
Bean goose			2
Water rail	2	0	5
White-fronted goose			6
Scaup			4
Goldeneye			2
Goosander	2		17
Black-throated diver	2		
Black-tailed godwit	2		1
Redshank	2		1

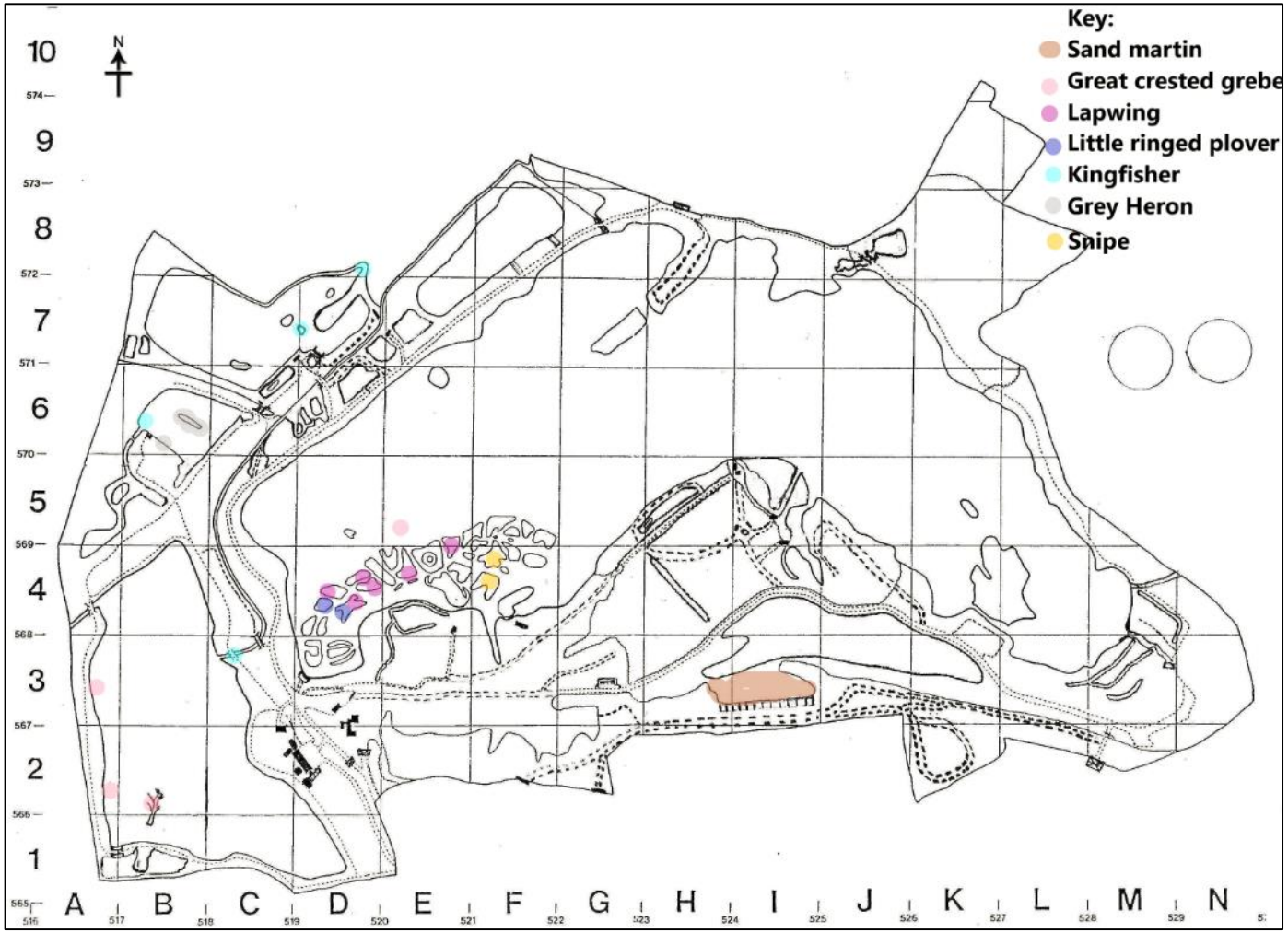
Common Name	Number of records (2019)	Number of records (2018)	Number of records (2020)
Turnstone			1
Yellow-legged gull			1
Caspian gull	4		1

Figure 4 shows nesting locations for six of the wetland bird species (sand martin, great crested grebe, lapwing, little ringed plover, kingfisher, grey heron, snipe) which were recorded breeding within the reserve during 2018.

5.3 Wintering Bird Surveys

All species listed in Table 4 were recorded during the winter months apart from little ringed plover and common tern.

Figure 4: Showing locations of nesting wetland bird species recorded within the reserve during 2018. Map provided by Reserve Warden



6 EVALUATION

6.1 Assessment of the Bird Community

6.1.1 Species of Conservation Importance – Breeding Birds

A species of conservation importance is defined as one included in one or more of the following: Annex 1 of the EU Birds Directive, Schedule 1 of the Wildlife and Countryside Act, the most recently revised Birds of Conservation Concern 4 Red List (Eaton *et al*., 2015), or the S41 Priority Species List.

Within the reserve, two Schedule 1 / Annex 1 species – kingfisher and red kite - were recorded; a kingfisher breeding territory was also recorded during 2018 (Figure 4). In 2019 red kite was observed flying and calling to the north of the reserve, outside of the boundary.

Six Red List species were recorded within the reserve; of these, three species - lapwing, song thrush and mistle thrush - were confirmed breeding during 2019.

Six Amber list species were recorded within the reserve: dunnock, bullfinch, kingfisher, kestrel, willow warbler and reed bunting - evidence of breeding was found for all species except kestrel and reed bunting.

A total of six S41 priority species were recorded within the reserve. Of these, two – dunnock and song thrush – were recorded within the proposed development site.

Details of the species of conservation importance recorded during the Common Bird Census survey within the reserve are shown in Table 5.

Table 6 provides details of the species of conservation importance recorded within the proposed development site during the Common Bird Census in 2019.

Table 5: Bird Species of Conservation Importance recorded within the Wildlife Reserve during the breeding bird survey in 2019 and the number of confirmed territories / pairs

Species	No. of confirmed territories/pairs	1	A	R	S41
Dunnock	4		■		■
Song thrush	2-3			■	■
Lapwing	4-5			■	■
Mistle thrush	0-1			■	
Bullfinch	1		■		■
Red kite	0	■			
Lesser spotted woodpecker	0			■	
Marsh tit	0-1			■	■
Grey wagtail	0-1			■	
Kingfisher	1-2	■	■		
Kestrel	0-1		■		
Willow warbler	0-1		■		
Reed bunting	0-1		■		■

Table 6: Bird Species of Conservation Importance recorded within the proposed development site during the breeding bird survey in 2019

Species	1	A	R	S41
Dunnock				
Song thrush				
Grey wagtail				

Key to abbreviations

1 = Schedule 1 of the Wildlife and Countryside Act 1981 (and later amendments) and Annex 1 of the EU Birds Directive[2]

A = Birds of Conservation Concern 4: the Amber List for Birds (2015)

R = Birds of Conservation Concern 4: the Red List for Birds (2015)[3]

S41 = Priority Species listed in UK Biodiversity Action Plan[4]

6.1.2 Species of Conservation Importance - Wetland Non-Breeding and Wintering Birds

Details of the species of conservation importance recorded during the WeBS and wintering bird surveys of the reserve are shown in Table 7. A total of six Red List species and 26 Amber List species were recorded.

Table 7: Bird species of conservation importance recorded within the site during the WeBS and wintering bird surveys

Species	A	R	S41
Mute swan			
Greylag goose			
Canada goose			
Egyptian goose			
Grey heron			
Cormorant			
Great white egret			
Little egret			
Great crested grebe			
Lapwing			
Moorhen			
Coot			
Mallard			
Teal			
Gadwall			
Mandarin			
Little ringed plover			
Tufted duck			
Green sandpiper			

[2] More information: http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm

[3] More information: https://www.bto.org/sites/default/files/shared_documents/publications/birds-conservation-concern/birds-of-conservation-concern-4-leaflet.pdf

[4] S41 priority species are those identified as being the most threatened and in need of conservation action.

Species	A	R	S41
Lesser black-backed gull	■		
Herring gull		■	■
Black-headed gull			
Kingfisher	■		
Mediterranean gull	■		
Oystercatcher	■		
Common gull	■		
Shelduck	■		
Common tern	■		
Common sandpiper	■		
Snipe	■		
Shoveler	■		
Wigeon	■		
Little grebe			
Black-necked grebe	■		
Pochard		■	
Great black-backed gull	■		
Bean goose	■		
Water rail			
White-fronted goose		■	
Scaup		■	■
Goldeneye	■		
Goosander			
Black-throated diver	■		
Black-tailed godwit		■	■
Redshank	■		
Turnstone	■		
Yellow-legged gull	■		
Caspian gull	■		

6.2 Species and Habitat Distribution Within the Reserve and the Site

The reserve supports a varied community of birds and is of national significance for its breeding bird assemblage. Across the whole of the reserve, a total of thirty-five species were recorded during the Common Bird Census surveys of 2019, at least 23 of which were considered to be breeding. The surveys of wetland and non-breeding birds in 2018-2020 recorded a total of 48 species.

Territorial breeding behaviour by 12 species was recorded within the site during 2019, three of which are Species of Conservation Concern; all are songbirds associated with scrub, parkland and woodland habitats. The site comprises a mosaic of scattered tree and scrub cover with open grassland areas. The dense areas of taller scrub cover are likely to be the primary areas for nesting, while grey wagtail prefers wetland margins.

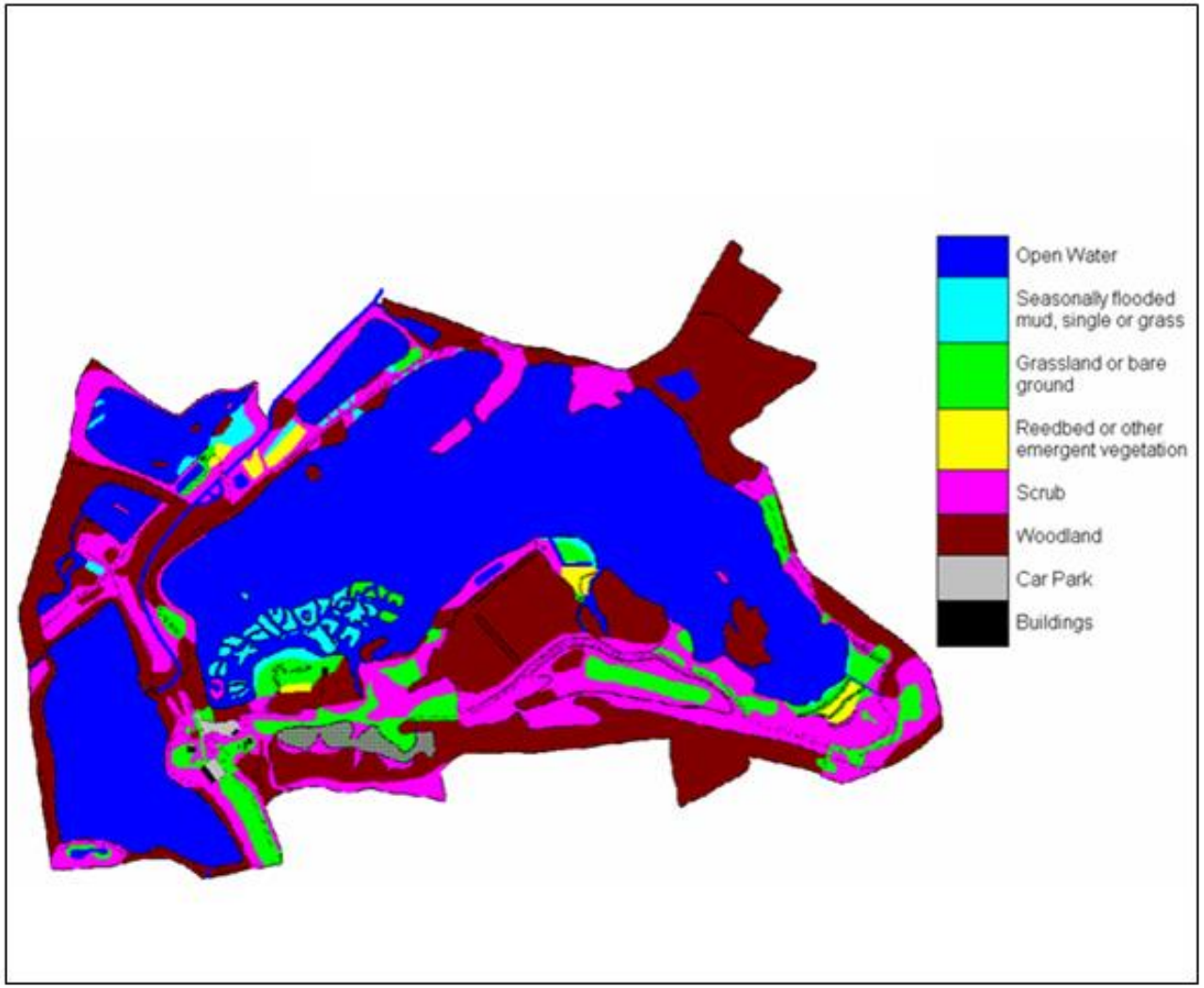
Breeding territories of wetland species were only recorded within the wider reserve, primarily on East Lake to the north of the site.

There are no significant wetland habitats within the site; the nearest large waterbody is West Lake, located c.20m west of the site boundary. Territories of one wetland species - great crested grebe - were recorded on the western shoreline of West Lake in 2018; this lake is steep-sided and there are no islands or areas of shallow water, resulting in a lack of emergent vegetation and no seasonally exposed mud. The lake supports large fish populations and fishing bays occur around much of the shoreline.

In comparison, East Lake is considerably larger and there are 33 islands within it, including a chain of low-lying islands which are artificially flooded in the winter. In spring these islands provide ‘safe’ breeding areas for waders and wildfowl (Figure 4). East Lake also contains the majority of the reserve’s bank-side vegetation including reedbeds, creeks, and areas of shallowly sloping grassland; as a result of this habitat diversity, the majority of the wetland and wintering species using the reserve are found within and around East Lake.

Figure 5 shows the distribution of broad habitat types within the reserve as reported in the Kent Wildlife Trust management plan produced in 2015.

Figure 5: Map, extracted from the Sevenoaks Wildlife Reserve Management Plan, showing the broad habitat types within the reserve



7 IMPACT ASSESSMENT

The development proposals involve the demolition of five buildings and the removal of localised areas of scrub and trees in the north, south and east of the site, to enlarge parking facilities and access routes into the reserve. Renovations will also be undertaken to the existing visitor centre building which will require localised scrub and tree clearance. The construction footprint is relatively small and much of it is outside the main habitats used by the breeding, wetland and wintering birds of the reserve.

The proposals and potential impacts are described below, with the location and extent of Areas 1, 2 and 3 shown on Figure 6:

- Reduction in foraging habitat through the permanent loss of approximately 105m^2 of scattered scrub (height 1-2m) and temporary loss of 480m^2 of scattered scrub (height 1-2m) along the boundary of the southern construction area (Figure 6, Area 1).
- Reduction in nesting and foraging habitat through the permanent loss of approximately 180m^2 of dense scrub (height 2m+) within the visitor centre building construction area (Figure 6, Area 2).
- Reduction in nesting and foraging habitat through the permanent loss of approximately 380m^2 of dense scrub (1-4m height) as a result of the creation of paths, roads and parking areas (Figure 6, Area 3).
- Removal of a low number of scattered trees (Figure 6).
- Damage or destruction of nests and killing or injury of birds if clearance and demolition works take place during the bird breeding season (March to September inclusive).
- Noise disturbance during the visitor centre renovation works (no piling). Duration of works 6-9 months.
- Noise and vibration disturbance during building demolition and the removal of the existing road surface and construction of new road and parking areas. Duration of works c. 9 months.
- Noise and physical disturbance throughout the reserve due to an expected long-term increase in visitor pressure.

7.1 Breeding Birds – Scrub and Tree Removal

Without mitigation, the above proposals would result in the permanent loss of small areas of scrub breeding and foraging habitat, potential destruction of active bird nests, and killing or injury of breeding birds within the dense scrub, trees and buildings to be removed.

While the habitats and associated species within the site are known to be widespread across the reserve, 13 species have been recorded as breeding within the site, including two Red List species (song thrush and grey wagtail) and one Amber List species (dunnock) – of these, dunnock and song thrush are likely to breed within scrub habitats. Grey wagtails are known to hold a territory outside of the site, on the southern shoreline of West Lake (Paul Glanfield, pers com.). The Zone of Influence of these works extends only to the site itself. The potential impacts on breeding birds equate to a Low-Negative impact at site level on species of Low to High conservation significance.

7.2 Breeding, Wetland and Wintering Birds – Short and Long-term Disturbance

Without mitigation, the noise and vibration occurring during the visitor centre renovations, building demolition and road construction would result in the short-term disturbance of species breeding within retained habitat areas of the site and adjacent off-site habitats. The Zone of Influence includes the site and the immediately adjacent habitats of broadleaved woodland and West Lake. No wetland species have been recorded breeding along the eastern shoreline of the lake which lies 20m west of the site boundary. This equates to a Low-Negative impact at Local level on species of Low to High conservation significance.

In the long term, the proposals are expected to increase visitor numbers and without mitigation this would result in increased disturbance of breeding, wetland and wintering birds throughout the reserve. The Zone of Influence includes the site and all publicly accessible habitats which are suitable for birds. Due to the SSSI status of the reserve, this equates to a High-Negative impact at a County level on a breeding bird assemblage that is considered to be of National significance, and includes species of Low, Moderate and High conservation significance.

8 RECOMMENDATIONS

8.1 Outline Mitigation Strategy – Scrub, Tree and Building Removal

Under the Wildlife and Countryside Act (1981) as amended, all breeding birds, including eggs and chicks, are protected against injury or killing and their nests are protected against damage or destruction up until the eggs have hatched and the chicks have fledged. An outline Mitigation Strategy has been prepared to address the potential impacts described in the Chapter 7. The mitigation proposals for the site are described below and mitigation areas are shown in Figure 6.

Demolition and Renovation Works

Suitable features for nesting birds were noted within several buildings to be removed or renovated. Where works on buildings will be undertaken during March-August, a check for nests will be carried out by the site ecologist within 48 hours of works; species such as feral pigeon are known to nest within buildings throughout the year. If an active nest is found, then works will be delayed until all chicks have fledged and the nests are no longer in use.

Vegetation Clearance and Supervision

Areas of scrub to be lost temporarily or permanently will be cut to 300mm during October - February. The height will be further reduced following mitigation for reptiles and Roman snails and maintained at a low height thereafter for the duration of works.

Within Area 3, the majority of suitable nesting habitat (scrub and trees) will be retained. Works are scheduled to start in September, at the end of the bird nesting season, and estimated to continue for nine months. The last 4-5 months of construction works will therefore occur during the breeding bird season and there will be areas of suitable nesting habitat retained within the works area. While no Schedule 1 species have been recorded within or adjacent to the site, and it is likely that the ongoing works may deter nesting birds, nevertheless a Watching Brief will be put in place where works continue during the nesting season (March-August) to identify the location of any nesting birds during the works period to ensure that the construction team are kept informed of areas where nests are present to avoid accidental damage. The Watching Brief will involve a fortnightly walkover of the site for the duration of the works period, starting at sunrise.

All construction workers should be given a tool box talk stressing the importance of avoiding accidental damage to retained potential nesting habitat.

Timing

The works are currently proposed for the period September – June to avoid the busiest time of year in terms of visitor numbers. Cutting back of scrub that is to be temporarily or permanently lost within Areas 1-3 will be undertaken during the preceding February and maintained at a short sward height thereafter until the onset of works.

Compensation

Natural England's Standing Advice for mitigation with regard to development and wild birds states:

'*Where birds are displaced by development, especially Section 41 birds and red and amber listed species, a suitable amount of replacement habitat should be considered*'.

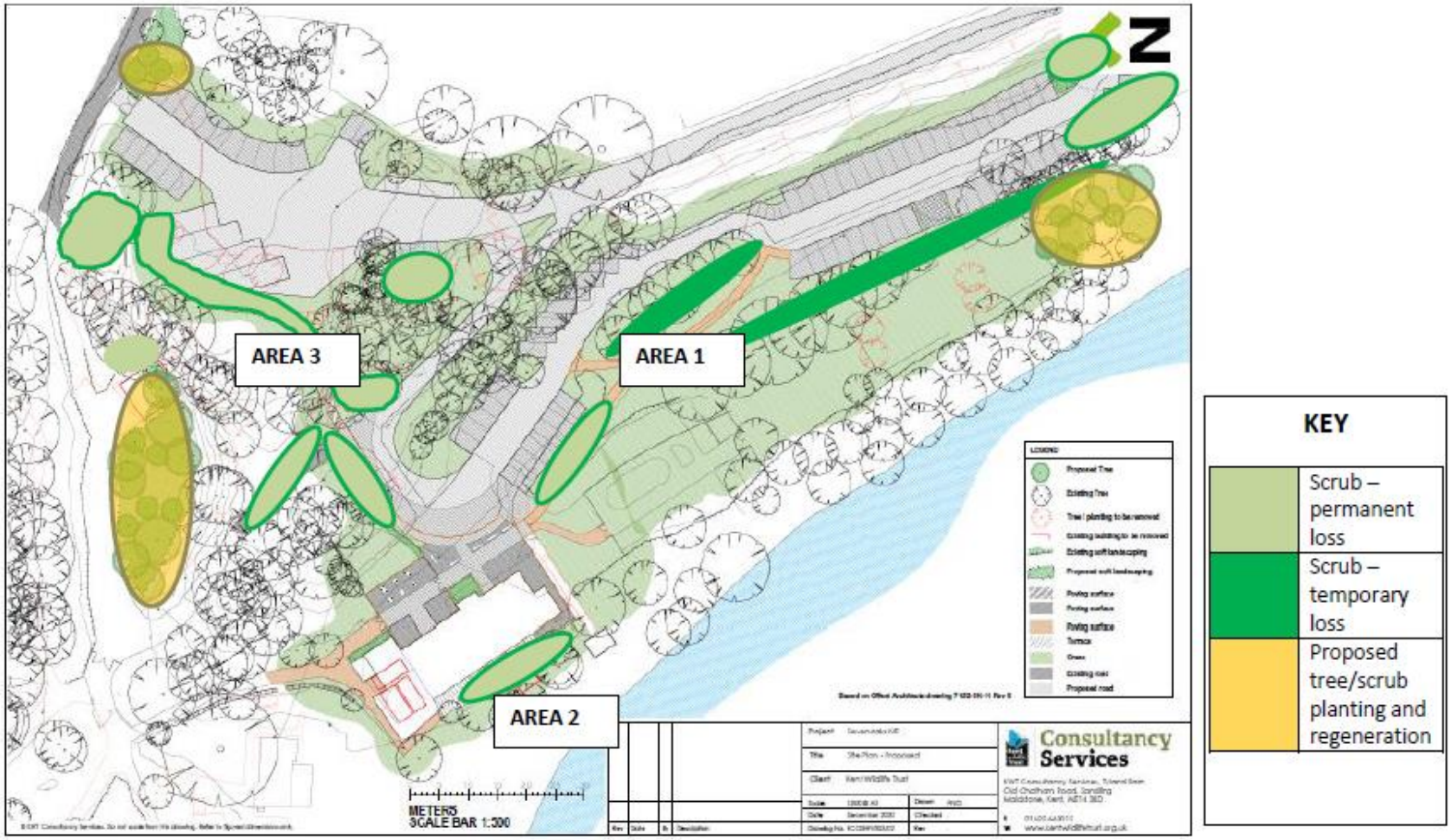
Berry-rich planting will be included within areas of soft landscaping around the renovated visitor centre building and play area. Areas of cut scrub in the south of the site will naturally regenerate and be managed to provide scattered scrub habitat.

Three new areas of native tree and woody scrub planting will be created in the north, east and south of the site, together with natural regeneration (Figure 6). These areas are continuous with existing woodland and scrub habitats and will create a patchwork of scrub and trees in a range of sizes, heights and shapes to provide habitats of varied structure for birds and other wildlife. Planting will only include species of local provenance that are already present within the site - such as hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, elder *Sambucus nigra*, field maple *Acer campestre*, dogwood *Cornus sanguinea*, oak *Quercus* sp., gorse *Ulex europaeus* and beech *Fagus sylvatica*.

Monitoring

Monitoring surveys for breeding, wetland and wintering birds are recommended for years 1, 3 and 5 post-development. Information gained will be used to inform the Sevenoaks Wildlife Reserve Management Plan.

Figure 6: Proposed works and recommendations for breeding birds



8.2 Outline Mitigation Strategy – Short- and Long-term Disturbance of Breeding, Non-breeding Wetland and Wintering Birds

8.2.1 Short-Term Disturbance

Construction operations have the potential to disturb birds using the site for roosting, foraging, and breeding. Operations likely to disturb breeding birds include noise from vegetation clearance, initial ground works and some construction activities, such as drilling to remove the existing road surface. There is no obvious consensus on the levels of sound which may cause disturbance to a range of bird species, with cited values ranging from 42dBA to 117dBA. Active, high level, infrequent disturbance causes most birds to be displaced for short periods (Shannon et al., 2015).

The species present within the site are not listed on Schedule 1 of the Wildlife and Countryside Act 1981 and are not legally protected from disturbance whilst breeding. However, as Red and Amber List species are present, any impact on breeding success within the site would be seen as significant. Site clearance and construction activities will result in variable increased noise over approximately nine months. This would change the noise environment within and near bird territories within the site and adjacent habitats, reducing the audibility of territorial song and thereby impacting on the ability of birds to hold territories and breed successfully. Noise disturbance may also lead to nest desertion or the avoidance of the area and temporarily reduce the suitability of retained nesting areas.

The effect of the construction noise would be temporary, for at most one breeding season, and while abandonment of the site could be permanent for some individuals, the effect is likely to be reversible given the habitat retention and enhancements proposed. As such the disruption of breeding by some individuals is unlikely to reduce the conservation status of breeding bird populations within the site. Furthermore, the survey results indicate that the vast majority of breeding and wintering birds are present within the extensive woodland and wetland habitats to the north of the site.

With regard to species breeding or wintering within the site and West Lake, the following measures will be followed during the construction period to minimise the impact of noise disturbance:

- Demolition works are expected to be completed within less than 4 weeks.
- Piling will not be used during the renovation of the visitor centre - works are expected to be completed within 6-9 months.
- Working hours will be 8am-4pm with no weekend working.
- Installation of temporary fencing, such as Heras noise control panels or tree protection fencing, around the edge of the road construction areas will protect retained scrub and trees from dust pollution and avoid incursion by works vehicles, as well as reducing noise impacts on any nesting birds present.

In terms of Schedule 1 and wetland birds recorded within East Lake and the wider reserve, the construction works are considered to be sufficiently well screened by the topography and trees to the north of the site to avoid any impact of construction noise on these species.

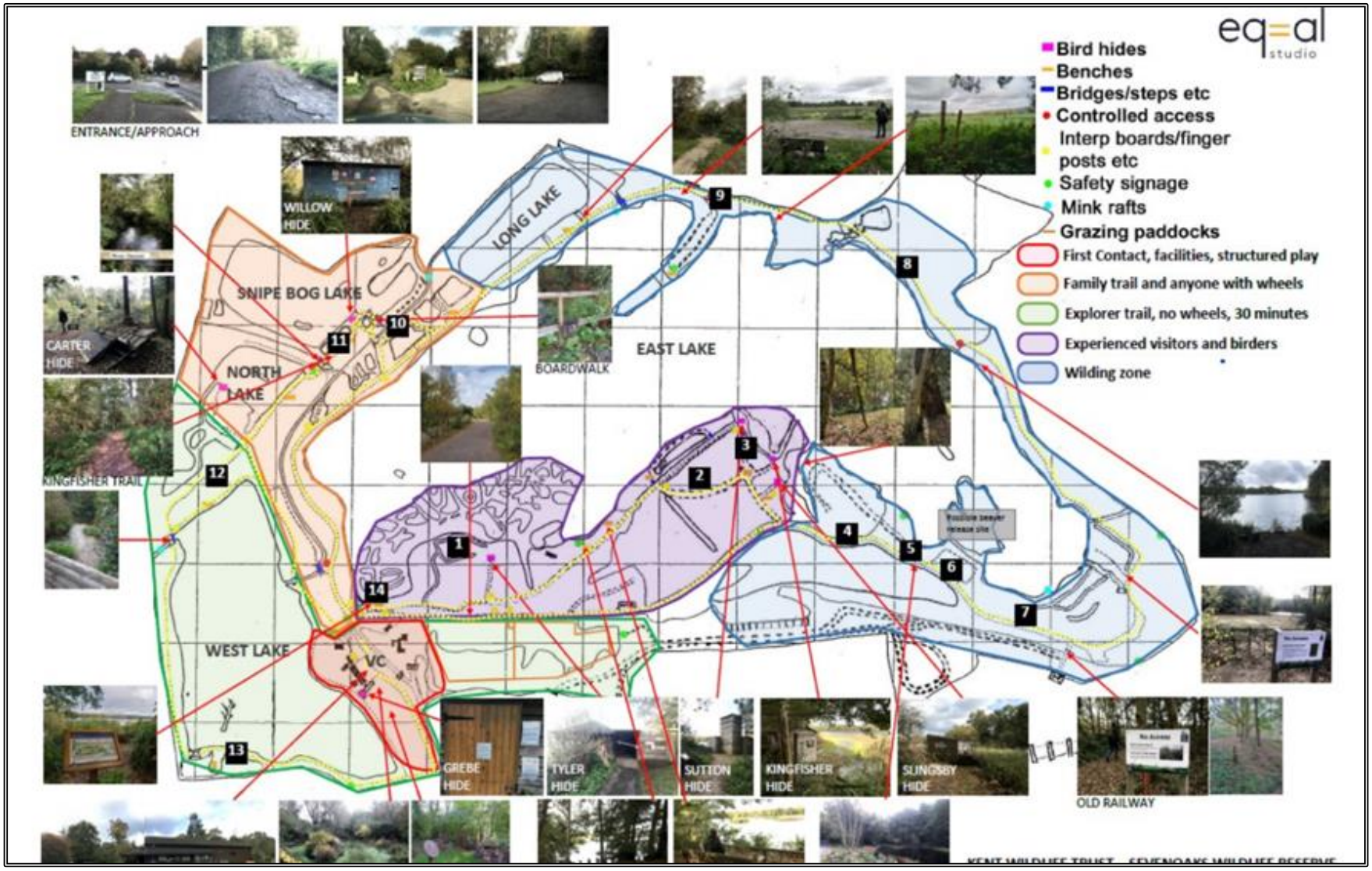
8.2.2 Long-term Disturbance

In order to mitigate potential negative impacts of the predicted increase in visitor numbers on the conservation status of bird populations within the reserve, a Habitat and Visitor Zonation Plan has been devised (Figure 7). This will focus visitor activity within the south and west of the reserve with a network of new paths and explorer trails while the east of the reserve, encompassing the majority of East Lake and surrounding habitats, will be designated as 'quiet areas' for wilding and experienced birdwatching – with signage, hides, controlled access and limited pathways to provide undisturbed areas for breeding and non-breeding birds.

Human access management including the use of habitat barriers to exclude or 'set-back' the public from sensitive areas, zoning to concentrate visitors within specific areas, re-surfacing of well-used / popular paths, signage, interpretation boards and educational activities have all been shown to be successful in reducing the impact of disturbance on wetland birds (Batey, 2013).

The zonation plan will put in place targets of the Sevenoaks Wildlife Reserve Management Plan (2015) and it is considered that the measures will remove any residual negative impact from the increase in visitor presence within the site, and provide a long-term positive impact through the increased availability of undisturbed areas for breeding and non-breeding birds.

Figure 7: Proposed Habitat and Visitor Zonation Plan for SWR



9 ECOLOGICAL ENHANCEMENTS

In addition to the above measures, ecological enhancements should where possible be incorporated into the proposed development to contribute towards the objectives of planning legislation. In July 2018, the UK Government published the revised National Planning Policy Framework (NPPF) which states that "opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity" (Para 175).

Enhancement recommendations for a range of habitats and species were provided within the PEA report. The following enhancements pertain specifically to breeding birds:

- The renovated visitor centre building will incorporate a range of suitable nest boxes for use by hole-nesting species such as blue tit and great tit and open boxes or 'nesting shelves' attractive to species such as robin, pied wagtail and swallow.
- The use of nest-box cameras would serve as a valuable education tool.
- A seasonal program of guided bird walks could be planned as part of the visitor engagement proposals for the site.

10 REFERENCES

Batey, C. 2013. *The effectiveness of management options in reducing human disturbance to wetland and coastal birds.* The Plymouth Student Scientist, 2013, 6, (2), 340-354.

Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD. 2015. *Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man.* British Birds 108, 708–746.

Kent Wildlife Trust. 2015. *Sevenoaks Wildlife Reserve Management Plan, 2015-2020.*

Shannon, G. *et al*. 2015. *A synthesis of two decades of research documenting the effects of noise on wildlife. Biological Reviews 1-24 (2015).* Cambridge Philosophical Society.

Internet sources
www.rspb.org.uk
www.bto.org.uk
www.jncc.defra.gov.uk

Appendix 1 - Sevenoaks Gravel Pit SSSI Schedule

COUNTY: KENT SITE NAME: SEVENOAKS GRAVEL PIT

DISTRICT: SEVENOAKS

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981

Local Planning Authority: SEVENOAKS DISTRICT COUNCIL

National Grid Reference: TQ 522569 Area: 71.0 (ha.) 175.3 (ac.)

Ordnance Survey Sheet 1:50,000: 188 1:10,000: TQ/55 NE

Date Notified (Under 1949 Act): 1968 Date of Last Revision: 1981

Date Notified (Under 1981 Act): 1989

Other Information:
This site is managed as the Sevenoaks Wildfowl Reserve by the Jeffery Harrison Memorial Trust. There are boundary amendments including extensions and deletions.

Reasons for Notification:
The interest of this group of lakes, formed by the flooding of the former gravel workings and fed by the River Darenth, centres on its breeding bird populations. Extensive landscaping to create shallows, spits and islands, and the planting of trees and aquatic plants have provided conditions suitable for both breeding and wintering birds.

The most numerous breeding species are Canada and greylag geese, mallard and tufted duck. Many other water birds breed including great-crested grebe, kingfisher, moorhen and coot. Wintering and passage wildfowl include pochard, shelduck, teal and shoveler, and passage waders are also attracted including greenshank and green sandpiper. The uncommon little ringed plover is a regular breeding species here.

The woodland and reed beds support a typical range of song birds including whitethroat, reed, and sedge warblers. There is also a large rookery, and a sand martin colony in a sand face in the south of the site. Sand martins have undergone a major fluctuation in population levels in recent years and this face supports one of the few significant colonies in West Kent.

The botanical and entomological interest of the site is also known to be developing. Thirteen species of Odonata (dragonflies) are present including the locally-distributed downy-emerald dragonfly *Cordulia aenea*. Plants of note include small cud-weed *Filago minima*, dwarf elder *Sambucus ebulus*, and slender bird's-foot trefoil *Lotus angustissimus*.