

Great Dixter Estate

Breeding Bird Survey 2018

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Summary

A breeding bird territory mapping survey was conducted throughout the Great Dixter Estate, including the gardens & meadows, Four Acre Shaw and Weights Wood during the months of March-June 2018. A total of fourteen visits were made over this period recording 68 species of bird, including 31 breeding species and another 18 species of possible breeding status.

Thirteen species with a red list UK conservation status and six amber list status species were recorded as either possible, probable or confirmed breeding status within the Estate. The great majority of breeding species were associated with deciduous woodland, woodland edge and scrub as would be expected for a large garden situated within a High Weald landscape of pasture and woodland. A small number of breeding species recorded were also associated with managed hedgerow, cultivated land, small areas of standing freshwater and man-made structures.

A small number of species of wintering status were also recorded at the beginning of the survey and other species recorded as either migrants or fly overs throughout the survey.

An excellent assemblage and population of tree cavity nesting species was recorded as well as a number of much declined species associated with successional scrub under high canopy. Species associated with woodland edge adjacent to meadow and grassland were well represented and good populations of synanthropic species nesting within the man-made structures and buildings present throughout the gardens.

1. Introduction

Great Dixter House & Gardens is a world renowned public garden known for its horticultural excellence, especially for its creative and colourful naturalistic mixed planting. The Great Dixter Estate lies within East Sussex, UK, near the Kent border. The Estate includes the famous formal gardens, the fifteenth century Great Dixter house & associated buildings, an orchard, areas of semi-natural flower-rich neutral meadows, sheep pasture and deciduous coppiced ancient woodland. Three ponds are present within the gardens as well as some temporary standing freshwater in Weights Wood.

The Estate sits within the High Weald Area of Outstanding Natural Beauty and as such is influenced by the complex underlying geology of mainly Early Cretaceous sands and clays that make up the Wealden Group. This produces a mix of some quite dry sandy soils and wetter areas of heavy clay soils.

Within the context of breeding bird populations there are three main blocks of woodland and woodland edge habitat surrounding the gardens. The predominantly deciduous block of woodland around the Prairie, garden entrance and adjacent land. Lower Moat and the Orchard also make up a distinct block of deciduous woodland adjacent to scattered fruit trees. The small block of woodland adjacent to Plant Fair Field, Four Acre Shaw and woodland surrounding the Bottom Field also make up a continuous block of

deciduous woodland habitat. In addition to these is a small tree line of pines adjacent to the car park, a tightly managed hedge around the Bottom Field and sheep paddock and managed hedges within the main gardens.

Weights Wood, which is within the Estate but currently separate to the gardens, is an area of ancient deciduous coppiced woodland. There is a small body of standing freshwater and acidic freshwater gill streams running through the wood.

This survey report outlines the results of the survey to study and analyse breeding bird diversity and breeding territory numbers over the main breeding bird season March-June 2018 within the gardens, woodland and woodland edge throughout Great Dixter Estate. Management recommendations are also outlined based on the results of the survey.

2. Methodology

The breeding bird survey was conducted using the territory mapping common bird census methodology established by the British Trust for Ornithology (Marchant, 1983).

Fourteen survey visits were made throughout the Great Dixter Estate. The survey had to be divided into two routes, Great Dixter Gardens/Four Acre Shaw and Weights Wood. Due to practical considerations regarding the length of the route and for mapping purposes the Great Dixter Gardens/Four Acre Shaw route had to leave out the Farm and the lower end of Four Acre Shaw. All other parts of the gardens were included within the route including the Nursery and adjacent car parks. Eight visits were made around the Great Dixter Gardens/Four Acre Shaw route, and six to Weights Wood between 9 March and 10 June. The Great Dixter Gardens/Four Acre Shaw route was much longer than the Weights Wood route taking 3-4 hours to complete, the Weights Wood route 1-2 hours to complete.

The survey visits were only undertaken during fine weather when there was no precipitation and wind speed was below 12mph. Ideally the visits should be carried out at least ten days apart but as much of March and early April was unsuitable for carrying out survey visits due to cold and windy weather some visits had to be clustered in late April and early May at less than ten days apart.

Registrations of evidence of breeding such as song, territorial behaviour, nest material and food carrying as well the presence of active nests, fledged young and family groups together were recorded on field maps. Each breeding registration was also assigned to a habitat type, or multiple habitat types if, for example, a bird carrying food flew from a foraging habitat to its nest located in a different habitat. This information was then transferred to species maps for analysis of territories.

Resident species that occurred throughout the entire survey period were recorded as a territory if three or more registrations were clustered, with some exceptions where family parties including newly fledged young were recorded or for species such as tawny owl (*Strix aluco*) where breeding registrations were

recorded during special visits to the site and not during the breeding bird survey visits. For summer migrants that do not occur during the entire survey period only two or more clustered registrations were used to identify a territory.

Territory divisions are marked on the species maps between breeding registrations where territorial behaviour involving competing males, pairs or family groups was evident. This allows the maximum influence of each territory to be mapped based on habitat, territory divisions and other field observations.

Table 1. Survey visits & breeding registrations per visit.

| Date | Route | Registrations |
|-------------------|-------------------------------------|----------------------|
| 09/03/2018 | Great Dixter Gardens/Four Acre Shaw | 92 |
| 21/03/2018 | Weights Wood | 34 |
| 06/04/2018 | Great Dixter Gardens/Four Acre Shaw | 106 |
| 16/04/2018 | Weights Wood | 31 |
| 18/04/2018 | Great Dixter Gardens/Four Acre Shaw | 157 |
| 22/04/2018 | Great Dixter Gardens/Four Acre Shaw | 129 |
| 03/05/2018 | Great Dixter Gardens/Four Acre Shaw | 142 |
| 05/05/2018 | Weights Wood | 81 |
| 09/05/2018 | Great Dixter Gardens/Four Acre Shaw | 87 |
| 17/05/2018 | Weights Wood | 83 |
| 22/05/2018 | Great Dixter Gardens/Four Acre Shaw | 95 |
| 28/05/2018 | Weights Wood | 82 |
| 08/06/2018 | Great Dixter Gardens/Four Acre Shaw | 86 |
| 10/06/2018 | Weights Wood | 45 |

3. Results

In total 68 species were recorded during the survey with another two species reported by other observers during the survey period. Of these species 31 were confirmed breeding with another 22 of possible breeding status. Thirteen of these breeding species have a red list UK conservation status and 6 species with an amber list UK conservation status (see box below on red list and amber list criteria).

Birds of Conservation Concern (BoCC)

Red List

- *Species is globally threatened.*
- *Historical population decline in UK during 1800–1995.*
- *Severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period (the entire period used for assessments since the first BoCC review, starting in 1969).*
- *Severe (at least 50%) contraction of UK breeding range over last 25 years, or the longer-term period.*

Amber List

- *Species with unfavourable conservation status in Europe (SPEC = Species of European Conservation Concern).*
- *Historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years.*
- *Moderate (25-50%) decline in UK breeding population over last 25 years, or the longer-term period.*
- *Moderate (25-50%) contraction of UK breeding range over last 25 years, or the longer-term period.*
- *Moderate (25-50%) decline in UK non-breeding population over last 25 years, or the longer-term period.*
- *Rare breeder; 1–300 breeding pairs in UK.*
- *Rare non-breeders; less than 900 individuals.*
- *Localised; at least 50% of UK breeding or non-breeding population in 10 or fewer sites, but not applied to rare breeders or non-breeders.*
- *Internationally important; at least 20% of European breeding or non-breeding population in UK (NW European and East Atlantic Flyway populations used for non-breeding wildfowl and waders respectively).*

Green List

Regularly occurring species that do not qualify under the above criteria.

Eaton et. al. (2015)

Throughout the entire Estate 1242 breeding registrations and 256 breeding territories were recorded involving 49 species. Table 2 shows a summary of all breeding registrations as well as probable and confirmed territories split between the two routes. Other species recorded of possible breeding status and more detail regarding probable and confirmed breeding species are outlined in detail in the species accounts.

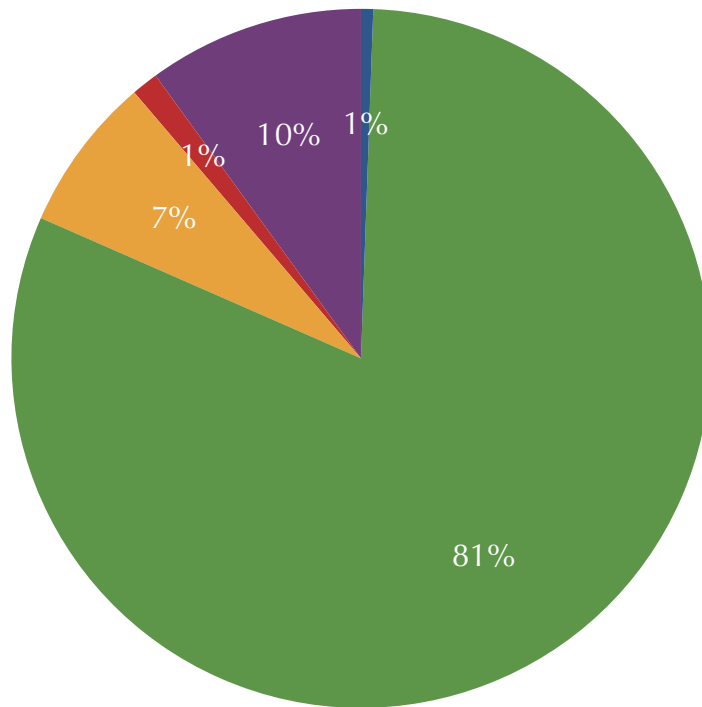
Table 2. Breeding registrations and estimated number of territories for each route. (GD=Great Dixter/Four Acre Shaw, WW=Weights Wood)

| | UK Conservation Status | GD- Registrations | GD-Territories | WW- Registrations | WW-Territories |
|---------------------------|------------------------|-------------------|----------------|-------------------|----------------|
| Mallard | Amber | 1 | 0 | 1 | 0 |
| Sparrowhawk | Green | 0 | 0 | 1 | 0 |
| Moorhen | Green | 7 | 1 | 1 | 0 |
| Stock dove | Amber | 8 | 2 | 12 | 3 |
| Wood pigeon | Green | 96 | 17 | 46 | 11 |
| Collared dove | Green | 4 | 1 | 2 | 1 |
| Turtle dove | Red | 0 | 0 | 1 | 0 |
| Cuckoo | Red | 0 | 0 | 5 | 2 |
| Tawny owl | Amber | 5 | 2 | 1 | 1 |
| Swift | Amber | 4 | 2 | 0 | 0 |
| Green woodpecker | Green | 4 | 1 | 2 | 0 |
| Great spotted woodpecker | Green | 10 | 2 | 13 | 3 |
| Lesser spotted woodpecker | Red | 0 | 0 | 1 | 0 |
| Swallow | Green | 24 | 6 | 0 | 0 |
| Pied wagtail | Green | 3 | 1 | 1 | 0 |
| Wren | Green | 84 | 16 | 46 | 10 |
| Dunnock | Amber | 37 | 6 | 2 | 0 |
| Robin | Green | 104 | 17 | 27 | 7 |
| Nightingale | Red | 0 | 0 | 2 | 1 |
| Song thrush | Red | 21 | 5 | 17 | 6 |
| Mistle thrush | Red | 2 | 0 | 0 | 0 |
| Blackbird | Green | 55 | 8 | 23 | 6 |

| | UK Conservation Status | GD-Registrations | GD-Territories | WW-Registrations | WW-Territories |
|--------------------|------------------------|------------------|----------------|------------------|----------------|
| Blackcap | Green | 12 | 3 | 13 | 5 |
| Lesser whitethroat | Green | 1 | 0 | 0 | 0 |
| Whitethroat | Green | 1 | 0 | 3 | 1 |
| Willow warbler | Amber | 1 | 0 | 0 | 0 |
| Chiffchaff | Green | 32 | 9 | 23 | 7 |
| Goldcrest | Green | 16 | 3 | 5 | 1 |
| Firecrest | Green | 0 | 0 | 1 | 0 |
| Spotted flycatcher | Red | 0 | 0 | 1 | 0 |
| Great tit | Green | 48 | 8 | 8 | 2 |
| Blue tit | Green | 71 | 14 | 28 | 8 |
| Coal tit | Green | 19 | 4 | 0 | 0 |
| Marsh tit | Red | 2 | 1 | 7 | 2 |
| Long-tailed tit | Green | 4 | 1 | 1 | 0 |
| Nuthatch | Green | 18 | 3 | 13 | 3 |
| Treecreeper | Green | 8 | 3 | 3 | 1 |
| Magpie | Green | 4 | 1 | 0 | 0 |
| Jay | Green | 0 | 0 | 2 | 1 |
| Jackdaw | Green | 25 | 5 | 3 | 1 |
| Carrion crow | Green | 9 | 1 | 2 | 0 |
| Starling | Red | 17 | 4 | 0 | 0 |
| House sparrow | Red | 14 | 3 | 0 | 0 |
| Chaffinch | Green | 45 | 6 | 10 | 2 |
| Linnet | Red | 7 | 2 | 0 | 0 |
| Goldfinch | Green | 55 | 8 | 1 | 0 |
| Greenfinch | Green | 30 | 3 | 0 | 0 |
| Bullfinch | Amber | 0 | 0 | 7 | 2 |
| Yellowhammer | Red | 1 | 0 | 0 | 0 |
| | | | | | |
| | | 908 | 169 | 334 | 87 |

Figure 1. Breeding registration habitat association within Great Dixter Gardens/Four Acre Shaw.

- Pond/Wetland
- Woodland/Scrub
- Urban/Buildings
- Grassland/Meadow
- Hedge/Cultivated



4. Species Accounts

Below is a list of all species recorded during 2018, in taxonomic order, with UK conservation status, status within the Great Dixter Estate and species information recorded during the survey.

Phalacrocorax carbo - **Cormorant**

UK Conservation Status - Green

Great Dixter Estate Status - Migrant/Fly Over

One record of a single bird flying over Weights Wood on 21 March.

Ardea cinerea - **Grey heron**

UK Conservation Status - Green

Great Dixter Estate Status - Migrant/Fly Over

One bird seen flying over the Bottom Field on 6 April, and another bird seen landing at the Horse Pond on 22 April for a short while before flying off.

Anas platyrhynchos - **Mallard**

UK Conservation Status - Amber

Great Dixter Estate Status - Possible Breeding

Only two possible breeding registrations of a pair present during the breeding season on suitable habitat. One pair was present on Horse Pond on 22 May and one pair present around a woodland pond within Weights Wood on 5 May. The pond within Weights Wood is temporary and almost completely dried out during 2018 so only Horse Pond or nearby bodies of permanent standing freshwater could support a breeding pair.

Milvus milvus - **Red kite**

UK Conservation Status - Green

Great Dixter Estate Status - Migrant/Fly Over

One bird was reported flying over the gardens on 21 April. A large number of red kites were recorded migrating over South East England during mid-late April 2018 and this individual was most likely part of this movement.

Buteo buteo - **Common buzzard**

UK Conservation Status - Green

Great Dixter Estate Status - Possible Breeding

One-two common buzzards can be seen almost daily flying over the Estate. During the survey most records were clustered around the Four Acre Shaw/New Meadow area, although they can be present over any part of the Estate. It is highly likely this is a breeding pair with a nest site in adjacent land. A nest

survey was carried out throughout Four Acre Shaw early in the year before the canopy closed up but no sign of common buzzard nests, new or old, could be located although there may be suitable habitat at the far end of Four Acre Shaw for a nesting pair.

Accipiter nisus - **Sparrowhawk**

UK Conservation Status - Green

Great Dixter Estate Status - Probable Breeding

Only three records during the survey: one flying over Four Acre Shaw/Bottom Field on 18 April, one flying over Weights Wood on 21 March and one carrying food (a fledged great tit) within Weights Wood on 17 May. The last record is the most important as it indicates probable breeding within Weights Wood.

Accipiter gentilis - **Goshawk**

UK Conservation Status - Green

Great Dixter Estate Status - Fly Over/Possible Breeding

A male goshawk was seen on two dates flying over Weights Wood, on 16 April and 28 May. This indicates a pair may be breeding nearby. In the UK this species usually nests in mature conifers within conifer plantations but some pairs will nest in mature deciduous woodland. A breeding pair nearby may be attracted to the populations of pheasants, wood pigeons and squirrels in and around Weights Wood and records of common buzzards hunting within Weights Wood may relate to records of female goshawk, as they are common buzzard size and can be mistaken for this species.

Falco tinnunculus - **Kestrel**

UK Conservation Status - Green

Great Dixter Estate Status - Migrant/Fly Over

Only one record during the survey of a bird flying over Weights Wood on 17 May.

Phasianus colchicus - **Pheasant**

UK Conservation Status - Introduced

Great Dixter Estate Status - Probable Breeding

A number of records of individual birds or pairs within Weights Wood and the Bottom Field/Four Acre Shaw area.

Gallinula chloropus - **Moorhen**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 0

The only confirmed breeding within the Estate was at Horse Pond where at least one pair bred. There were also records of individual birds during the breeding season at Lower Moat and within Weights Wood.

Chroicocephalus ridibundus - **Black-headed gull**

UK Conservation Status - Amber

Great Dixter Estate Status - Migrant/Fly Over

A small number of records of small flocks flying over the gardens presumably attracted to recently ploughed adjacent arable land.

Larus canus - **Common gull**

UK Conservation Status - Amber

Great Dixter Estate Status - Migrant/Fly Over

A small number of records of small flocks flying over the gardens presumably attracted to recently ploughed adjacent arable land.

Larus argentatus - **Herring gull**

UK Conservation Status - Amber

Great Dixter Estate Status - Migrant/Fly Over

A small number of records of small flocks flying over the gardens presumably attracted to recently ploughed adjacent arable land.

Columba oenas - **Stock dove**

UK Conservation Status - Amber

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 5

Great Dixter Gardens/Four Acre Shaw: 2

Weights Wood: 3

This woodland edge tree cavity nester seems to be doing well within the Estate. A good number of natural nest sites are present especially within Weights Wood with adjacent agricultural land providing feeding habitat. The population could be increased with nest boxes but is not necessary as long as a continuity of natural nest sites is maintained.

Columba palumbus - **Wood pigeon**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 28

Great Dixter Gardens/Four Acre Shaw: 17

Weights Wood: 11

A very successful species within the Estate with a total of 28 territories recorded. This species is increasing in population and is becoming increasingly common in gardens as well as semi-natural habitats. One territory within the gardens was centred around the Great Dixter House with the nest site possibly in the Cat Garden. The mosaic of scattered trees, woodland, and adjacent agricultural land throughout the Estate clearly ideal for this species supporting a dense population.

Streptopelia decaocto - **Collared dove**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 2

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 1

Only 2 territories identified with one probable territory within the gardens and one confirmed within Weights Wood. This species has been declining within urban and suburban areas over the last few years at the same time wood pigeons are increasing within urban areas highlighting possible competition between the two species.

Streptopelia turtur - **Turtle dove**

UK Conservation Status - Red

Great Dixter Estate Status - Possible Breeding

Only one record of a singing male was reported by Brian Banks within Weights Wood outside of the survey period. This is one of the fastest declining breeding bird species in the UK and is also rapidly declining throughout Europe. The species usually nests in dense mature scrub around open water and close to seed rich habitat such as arable land. Dense stands of willow scrub seem to be important for the species within the remaining populations in the Rother area. The willow and aspen scrub within the scrubbiest parts of Weights Wood should therefore be considered of importance for this species. The species should be monitored to ascertain its breeding status within the Great Dixter Estate.

Cuculus canorus - **Cuckoo**

UK Conservation Status - Red

Great Dixter Estate Status - Probable Breeding

Total Territories: 2

Great Dixter Gardens/Four Acre Shaw: 0

Weights Wood: 2

A difficult species to map territories and confirm breeding due to the mobile singing males and the cleptoparasitic nature of the species breeding strategy. Territories are not maintained by breeding pairs as

with other bird species. At least two males were recorded singing within woodland edge on either side of Weights Wood on a number of occasions so two probable breeding territories were identified.

Strix aluco - **Tawny owl**

UK Conservation Status - Amber

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 3

Great Dixter Gardens/Four Acre Shaw: 2

Weights Wood: 1

Due to the nocturnal activity of this species records were obtained outside of the bird survey visits and were made during moth trapping sessions and an extra late evening visit to Weights Wood. It was clear that there were two pairs within the Great Dixter Gardens area one within the tree line bordering the entrance into the gardens and one within the Lower Moat/Four Acre Shaw area. At least one other pair was present within Weights Wood.

Athene noctua - **Little owl**

UK Conservation Status - Introduced

Great Dixter Estate Status - Possible Breeding

Only one record of a bird within the Orchard recorded during a moth trapping session on the edge of the Orchard and Long Border on 12 July. It is interesting to note that a large number of dung beetles were on the wing and came to light during that night, which can be a major food source for this species. This is a cavity nesting species, usually in open grown mature trees, and is most likely nesting on adjacent land. The species will nest in specially made little owl boxes, or sometimes in barn owl boxes. To prevent competition with barn owls it is useful to install little owl boxes where both species breed.

Apus apus - **Swift**

UK Conservation Status - Amber

Great Dixter Estate Status - Migrant/Confirmed Breeding

Total Territories: 2

Great Dixter Gardens/Four Acre Shaw: 2

Weights Wood: 0

Two pairs were recorded nesting within roof/wall cavities on the East side of Great Dixter House. Again most records were made from late evening visits while moth recording on 15 June and 12 July. The highest number of migrants recorded was of a feeding group of 80+ birds over Weights Wood on 21 June.

Picus viridis - **Green woodpecker**

UK Conservation Status - Green

Great Dixter Estate Status - Probable Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 0

One territory identified in the Four Acre Shaw area. There was activity on the edge of Weights Wood early in the season but that pair appeared to move to woodland on adjacent land possibly due to interspecific competition with great spotted woodpeckers over nest site selection, which was observed early in the season.

***Dendrocopos major* - Great spotted woodpecker**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 5

Great Dixter Gardens/Four Acre Shaw: 2

Weights Wood: 3

A very successful species within the Estate with five territories identified. Especially successful within Weights Wood with two nests found and one other territory identified. The amount of standing dead wood available providing a lot of tree cavity nesting space and feeding habitat despite competition with other large cavity nesting species such as green woodpecker, jackdaw and stock dove. Many tree cavity nesting species benefit from the presence of old and abandoned great spotted woodpecker nest sites.

***Dendrocopos minor* - Lesser spotted woodpecker**

UK Conservation Status - Red

Great Dixter Estate Status - Possible Breeding

No confirmed breeding this year and only one breeding registration, adjacent to the Estate, early in the year. The presence of the species within the Weights Wood/Prairie area over the last couple of years highlights possible breeding within the area with Weights Wood providing ideal habitat.

***Alauda arvensis* - Skylark**

UK Conservation Status - Red

Great Dixter Estate Status - Migrant/Fly Over

Only one record of a single bird flying over Weights Wood. The species probably bred on adjacent land to Weights Wood during 2018. Breeding habitat for this species could be created within Bottom Field and within land between Weights Wood and the main gardens.

***Hirundo rustica* - Swallow**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories/Pairs: 6

Great Dixter Gardens/Four Acre Shaw: 6

Weights Wood: 0

At least six nests found within the Great Barn and adjacent buildings with some pairs successfully rearing two broods. A maximum of 48 birds, including adults and fledged young, were seen together in front of the Great Barn on 12 July.

Delichon urbicum - **House martin**

UK Conservation Status - Amber

Great Dixter Estate Status - Migrant/Fly Over

Only one record of a single bird flying over on 6 April.

Motacilla alba - **Pied wagtail**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 0

One territory identified around the Great Barn/Sunk Garden area with a nest most likely within one of the buildings in that area.

Motacilla flava - **Yellow wagtail**

UK Conservation Status - Red

Great Dixter Estate Status - Migrant/Fly Over

One recorded overflying the gardens on 18 April.

Motacilla cinerea - **Grey wagtail**

UK Conservation Status - Red

Great Dixter Estate Status - Wintering/Migrant

Two birds were recorded flying over the Wall Garden/Sunk Garden on 16 March. Another bird was recorded in the same area on 6 April. These records could relate to migrants or birds wintering within the gardens. This species does nest within urban park & garden locations, such as Alexandra Park in Hastings, East Sussex and even on the Queens Hotel in Hastings so it is possible the species could nest at Great Dixter although the species usually requires man-made structures close to running water for nest site location and feeding habitat.

Troglodytes troglodytes - **Wren**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 26

Great Dixter Gardens/Four Acre Shaw: 16

Weights Wood: 10

Good number of territories throughout the Estate with dense populations within woodland edge and scrub habitat throughout and around coppice compartments within Weights Wood.

***Prunella modularis* - Dunnock**

UK Conservation Status - Amber

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 6

Great Dixter Gardens/Four Acre Shaw: 6

Weights Wood: 0

A good number of territories throughout the gardens but a surprising lack of records from Weights Wood.

***Erithacus rubecula* - Robin**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 24

Great Dixter Gardens/Four Acre Shaw: 17

Weights Wood: 7

Another breeding species doing well within the Estate with only wren and wood pigeon having larger populations. The early survey visits also recorded a good number of wintering birds with a dense population of males holding territory especially in and around the Prairie area.

***Luscinia megarhynchos* - Nightingale**

UK Conservation Status - Red

Great Dixter Estate Status - Probable Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 0

Weights Wood: 1

One probable territory identified within a scrubby area of Weights Wood. This is a species that benefits from successional scrub development under high canopy within deciduous woodland so requires a continuity of breeding habitat which is of transient nature so coppicing, management of woodland edge and rides and the natural loss of mature standards is required to maintain the long term breeding population of this species.

Turdus philomelos - **Song thrush**

UK Conservation Status - Red

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 11

Great Dixter Gardens/Four Acre Shaw: 5

Weights Wood: 6

Exceptionally good numbers throughout the Estate of this much declined species. This species does well in an open mosaic of scrub, scattered trees and woodland edge adjacent to grassland, meadow and gardens. The open coppiced areas within Weights Wood had a particularly good amount of activity and supported a dense population of the species. One of the most interesting observations was of a pair feeding two fledged young around the Great Barn log pile indicating that this pair may have nested in one of the brash piles created in this area.

Turdus iliacus - **Redwing**

UK Conservation Status - Red

Great Dixter Estate Status - Wintering/Migrant/Fly Over

Only one record of a small flock on 16 March over the gardens.

Turdus viscivorus - **Mistle thrush**

UK Conservation Status - Red

Great Dixter Estate Status - Possible Breeding

Only two breeding registrations around the Orchard area during the breeding season. Possibly breeding on adjacent land and occasionally visiting the Orchard area.

Turdus merula - **Blackbird**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 14

Great Dixter Gardens/Four Acre Shaw: 8

Weights Wood: 6

A decent number of territories throughout the Estate of this woodland edge/scrub species with a good number of records within the cultivated mixed borders and managed hedges within the main gardens.

Sylvia atricapilla - **Blackcap**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 8

Great Dixter Gardens/Four Acre Shaw: 3

Weights Wood: 5

A disappointing number of registrations and territories with only one confirmed territory the rest being probable territories. This species may have been effected by the cold early spring as this is one of the earliest summer migrants to return.

Sylvia curruca - **Lesser whitethroat**

UK Conservation Status - Green

Great Dixter Estate Status - Possible Breeding

Very disappointing number of records for this species with no confirmed territories.

Sylvia communis - **Whitethroat**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 0

Weights Wood: 1

A disappointing year for all the *Sylvia* warblers, whitethroat included, with only one confirmed territory on the edge of Weights Wood.

Phylloscopus trochilus - **Willow warbler**

UK Conservation Status - Amber

Great Dixter Estate Status - Possible Breeding

This is a species that has greatly declined throughout the UK although scrubby habitat, especially within Weights Wood would be ideal to support a population of willow warbler.

Phylloscopus collybita - **Chiffchaff**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 16

Great Dixter Gardens/Four Acre Shaw: 9

Weights Wood: 7

Relatively decent number of territories but would have expected a much greater number of registrations and territories within ideal chiffchaff habitat throughout the Estate. This early spring migrant may have also been effected by the cold early spring suppressing numbers of breeding pairs. Chiffchaff territories are usually roughly equal to wren, wood pigeon and robin in similar habitat.

Regulus regulus - **Goldcrest**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 4

Great Dixter Gardens/Four Acre Shaw: 3

Weights Wood: 1

The majority of territories were associated with conifers within the gardens although there was some activity in Weights Wood.

Regulus ignicapillus - **Firecrest**

UK Conservation Status - Green

Great Dixter Estate Status - Migrant/Possible Breeding

One breeding registration recorded in suitable habitat within Weights Wood. It is possible for the species to be breeding within Weights Wood but this single record could just relate to a migrant.

Muscicapa striata - **Spotted flycatcher**

UK Conservation Status - Red

Great Dixter Estate Status - Migrant/Possible Breeding

Another species that has declined greatly in the UK. Only a single breeding registration during the breeding season in suitable habitat on the edge of Weights Wood. This record and previous records within the Estate indicate spotted flycatcher is a possible breeding species at the site but no territory was confirmed during the survey.

Parus major - **Great tit**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 10

Great Dixter Gardens/Four Acre Shaw: 8

Weights Wood: 2

A relatively low number of territories identified, especially within Weights Wood, which is surprising as most other cavity nesting species are doing very well within woodland throughout the Estate. The reasons for this are unclear and further breeding bird monitoring would be needed to ascertain possible reasons for the low numbers of great tit during the survey.

Cyanistes caeruleus - **Blue tit**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 24

Great Dixter Gardens/Four Acre Shaw: 14

Weights Wood: 8

Very good number of territories with only robin, wren and wood pigeon having equal or greater number of territories. A dense and complex population in some areas especially within the Orchard where some large territories identified may involve more than one pair, and multiple broods, so the recorded number of territories is a conservative estimate. The good number of territories, competing pairs and fledged young observed indicates a very good number of available tree cavity nest sites, which included old woodpecker nest sites within Weights Wood. The new log and brash pile in the Orchard also providing extra nest site space during the 2018 season.

Periparus ater - Coal tit

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 4

Great Dixter Gardens/Four Acre Shaw: 4

Weights Wood: 0

Most territories were associated with conifers within the gardens except for one territory on the edge of Four Acre Shaw.

Poecile palustris - Marsh tit

UK Conservation Status - Red

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 3

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 2

Two territories identified within Weights Wood and one in Four Acre Shaw of this declining woodland species. This species benefits from management that increases the structural and botanical diversity of woodland and requires cavity nest sites in living trees usually lower to the ground than blue tits and great tits. Ride management, the creation of open glades and continued coppicing should benefit this species. A good species to monitor in relation to improved woodland management. (See section 5 for more management advice detail.)

Aegithalos caudatus - Long-tailed tit

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 0

Only one territory identified from a small number of breeding registrations.

Sitta europaea - **Nuthatch**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 6

Great Dixter Gardens/Four Acre Shaw: 3

Weights Wood: 3

There was plenty of activity throughout the Estate with six territories identified. This species requires cavity nest sites in mature trees, the entrance of which the species reduces in size with mud. Nuthatch habitat is in plentiful supply throughout the Estate especially within Weights Wood, Lower Moat and the top of Four Acre Shaw.

Certhia familiaris - **Treecreeper**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 4

Great Dixter Gardens/Four Acre Shaw: 3

Weights Wood: 1

Four territories identified with most activity around Lower Moat and Four Acre Shaw. Treecreepers nest behind loose bark on mature trees and require an abundance of Lepidoptera larva during the breeding season.

Pica pica - **Magpie**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 0

Only one confirmed territory on the edge of the gardens. This family group probably nested on adjacent land but regularly visited the gardens to scavenge.

Garrulus glandarius - **Jay**

UK Conservation Status - Green

Great Dixter Estate Status - Probable Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 0

Weights Wood: 1

One probable territory identified within Weights Wood.

Corvus monedula - **Jackdaw**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 6

Great Dixter Gardens/Four Acre Shaw: 5

Weights Wood: 1

Five confirmed territories with nests in both roof cavities and tree cavities. There was one tree cavity nesting pair within Lower Moat and another on the edge of Weights Wood. The population within the gardens and surrounding land roost overnight on adjacent woodland edge. A high count of 400+ birds for this roost was recorded on 8 October. This roost also occasionally includes a small number of rook and carrion crow.

Corvus frugilegus - **Rook**

UK Conservation Status - Green

Great Dixter Estate Status - Fly Over/Possible Breeding

A small number of records flying over the gardens and Weights Wood. Possibly breeding nearby on adjacent land.

Corvus corone - **Carrion crow**

UK Conservation Status - Green

Great Dixter Estate Status - Probable Breeding

Total Territories: 1

Great Dixter Gardens/Four Acre Shaw: 1

Weights Wood: 0

One territory identified involving a pair probably breeding on the edge of the gardens. No nest or fledged young were seen during the survey.

Corvus corax - **Raven**

UK Conservation Status - Green

Great Dixter Estate Status - Fly Over/Migrant

Recorded on a small number of occasions flying over the gardens and Weights Wood. Once very scarce in Sussex this species now breeds on the cliffs between Hastings and Pett Level and are now seen regularly in the Rother area.

Sturnus vulgaris - **Starling**

UK Conservation Status - Red

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 4

Great Dixter Gardens/Four Acre Shaw: 4

Weights Wood: 0

This declining species is doing very well nesting in tree cavities around the gardens mainly around the Great Barn & White Barn buildings and around Plant Fair Field. Permanent pasture is an important feeding habitat during the breeding season but cut and grazed meadow in autumn and winter also support migrant and wintering birds, which bolster the breeding population within the gardens.

Passer domesticus - **House sparrow**

UK Conservation Status - Red

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 3 (6-7 pairs)

Great Dixter Gardens/Four Acre Shaw: 3

Weights Wood: 0

Another declining synanthropic species doing well within the gardens. This is a social species nesting in colonies. Three nesting territories were identified, the largest being around the porch and northern side of Great Dixter House where at least three pairs were nesting. Two other nesting areas included the Exotic Garden and around the Nursery buildings where another estimated three pairs nested. The Loggia and the car park picnic tables are favoured feeding areas for the species scavenging on left over food.

Fringilla coelebs - **Chaffinch**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 8

Great Dixter Gardens/Four Acre Shaw: 6

Weights Wood: 2

Eight territories were identified throughout the Estate. This is a very common finch that nests in a wide range of habitats although has seen a decline in recent years due to multiple outbreaks of finch trichomonosis, a disease caused by a protozoan parasite in greenfinches and chaffinches. Further monitoring will be needed to ascertain whether chaffinches are in decline at the site.

Fringilla montifringilla - **Brambling**

UK Conservation Status - Green

Great Dixter Estate Status - Wintering

Only one record of a wintering bird on 9 March near Horse Pond.

Carduelis cannabina - **Linnet**

UK Conservation Status - Red

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 2

Great Dixter Gardens/Four Acre Shaw: 2

Weights Wood: 0

One pair nested in the hedge adjacent to the Vegetable Garden and were seen foraging around the adjacent habitat pile and vegetable plots presumably for seeds on which both adults and young feed. Very encouraging to see this much declined farmland bird nesting within the gardens, with another probable territory on the edge of the Bottom Field.

Carduelis flammea - **Redpoll**

UK Conservation Status - Amber

Great Dixter Estate Status - Wintering

One record of a wintering bird on 9 March flying over the Sunk Garden.

Carduelis carduelis - **Goldfinch**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 8

Great Dixter Gardens/Four Acre Shaw: 8

Weights Wood: 0

The most common finch recorded within the gardens with a dense and conspicuous population of at least eight territories centred around the Orchard. This is quite a social species that can gather in flocks of thousands during winter and on migration. Even during the breeding season flocks involving multiple pairs and fledged young can form creating a difficulty in identifying territories.

This species benefits from meadow that has a good diversity of plants flowering and seeding throughout the year, especially dandelions, thistles, hawkweeds and teasel. Within Great Dixter goldfinches could be seen regularly feeding from seeds within the meadows: the Orchard, Topiary Lawn and Front Meadow being particularly favoured foraging areas.

Carduelis chloris - **Greenfinch**

UK Conservation Status - Green

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 3

Great Dixter Gardens/Four Acre Shaw: 3

Weights Wood: 0

At least three territories were identified throughout the gardens. This is another common finch effected by outbreaks of finch trichomonosis which has probably suppressed the population of this species within the gardens although further monitoring will be required to ascertain whether this species is in decline at the site.

Carduelis spinus - **Siskin**

UK Conservation Status - Green

Great Dixter Estate Status - Wintering/Migrant

A wintering or migrant flock of 5+ birds was recorded around the Horse Pond on 6 April.

Pyrrhula pyrrhula - **Bullfinch**

UK Conservation Status - Amber

Great Dixter Estate Status - Confirmed Breeding

Total Territories: 2

Great Dixter Gardens/Four Acre Shaw: 0

Weights Wood: 2

The species is doing well within Weights Wood with at least two confirmed territories, one near the entrance to the wood and one around the pond and coppice compartment in the western corner of the wood.

Emberiza citrinella - **Yellowhammer**

UK Conservation Status - Red

Great Dixter Estate Status - Possible Breeding

Only one breeding registration on the edge of the Bottom Field indicating possible breeding on the edge of the Estate. This species, as well as linnet, would benefit greatly from some spring sown arable on adjacent land or even some wild bird seed strips sown around the Bottom Field.

5. Conclusions & Management Advice

5.1. Tree Cavity Nesting Assemblage

The most significant outcome of the survey is the success of many tree cavity nesting species throughout the Estate. The abundance of standing dead wood on mature trees throughout the gardens, Weights Wood and some parts of Four Acre Shaw providing an excellent resource for many species. Large cavity nesters such as jackdaw, stock dove and great spotted woodpecker are doing well. Of the small cavity nesting passerines blue tit was particularly abundant and is one of the most successful breeding species within the Estate. Specialist cavity nesters were also present such as treecreeper, which nest behind loose bark. Of greatest importance though was marsh tit. This much declined species nests in cavities low down on mature living trees (especially hornbeam and lime) and unlike other cavity nesting species does not use old and abandoned woodpecker nests. This is probably an adaptation to avoid interspecific competition with blue tits and great tits, which commonly use old woodpecker nests, and predator avoidance.

The natural diversity and abundance of standing dead wood within the gardens and woodland therefore supports an excellent assemblage of cavity nesters considering the lack of nest box provision. This also intersects with the importance of dead wood for the assemblage of saproxylic, saprobic and dead wood nesting invertebrates, which provide an important food resource for many of the insectivorous cavity nesting bird species such as great spotted woodpecker, treecreeper, nuthatch and marsh tit.

Woodland management and tree surgery work within the gardens should be sensitive to the great importance of standing dead wood and tree stumps. Standing dead wood and rotting tree stumps should only be removed where dead, dying and/or diseased trees or branches are a danger to visitors and staff or where a particular pathogen poses an infection risk to the long term survival of trees or woodland.

Due to the availability of natural nest sites a programme of nest box provision is not really needed, except only for targeted species such as barn owl, little owl and maybe marsh tit. The barn owl box at the Farm needs to be repositioned to provide a clear flight path into the nest box. Ideally two barn owl boxes should be placed close to each other, one for the nest and the other for the adults to roost when not on the nest. They should be mounted on poles overlooking pasture or meadow to provide clear unobstructed flight paths into the box. The South facing corner of the Bottom Field would make an ideal location for the installation of barn owl boxes overlooking a wide landscape of pasture and meadow, if this is field is converted to a scrub/meadow mosaic in the future, and would highly likely attract a pair of barn owls to nest. As little owls are present one or two little owl boxes should also be installed to prevent competition with barn owls over the barn owl boxes. These should be mounted on large tree branches on mature trees possibly within the Lower Moat woodland or on the Orchard trees.

Marsh tit nest boxes could be installed within both Weights Wood and Four Acre Shaw although uptake of nest boxes by marsh tits is very low so maintaining a continuity of natural nest cavities for marsh tits would be the best option for increasing the marsh tit population in combination with woodland management designed to improve botanical and structural diversity (see section 5.2. below).

5.2. Woodland Structural Diversity & Successional Scrub

Another important result from the survey was the presence of a number of species requiring a structurally diverse open mosaic of successional scrub under high canopy such as song thrush, marsh tit, turtle dove and nightingale. These are all species that have declined in woodland partly due to the lack of woodland management resulting in tall, dark and leggy unstructured woodland with little ground layer, botanical diversity and successional scrub. Song thrush were found to be doing very well around the older coppice compartments in Weights Wood and marsh tit activity was mostly recorded around the edge of recently cut coppice compartments in Weights Wood. There were only two records of nightingale and one of turtle dove, despite this their presence does highlight the importance of the scrub within Weights Wood, especially willow scrub, not just for birds but also for the invertebrate assemblage associated with willow scrub. Broken up patches of scrub of varied age is superior though to a large dense stand of even age scrub.

Work to improve the structural and botanical diversity of ride edges, continued coppice management on a shorter rotation and the creation of small permanent glades should be undertaken. Log piles should be placed in both open sunny locations and in shaded areas to provide a diversity of invertebrate rich habitat resources. Reduction of willow and aspen scrub should be designed to break up scrub stands on rotation and allow successional scrub to develop into a structurally diverse habitat.

5.3. Seed-eaters, Woodland Edge & Meadow.

Also successful throughout the site were woodland edge and hedgerow nesting passerines that require adjacent grassland and meadow feeding habitat. Goldfinch was particularly notable for its dense and conspicuous population throughout the gardens and Orchard where at least eight pairs bred and could be regularly seen feeding on Asteraceae seeds within the meadows. This indicates that there is a good diversity of plants producing seeds throughout the year within both the meadows and main gardens. It was also encouraging to see another seed-eating species, linnet, breeding within the gardens. This finch has drastically declined within the UK due to changes in agriculture reducing availability of arable seed in winter and the loss of weed rich arable during spring and summer. This hedge or scrub nesting species feeds its young on seeds, unlike some other seed-eaters that feed their young on invertebrates. An abundance of seeds is therefore required during spring. During the breeding season a breeding pair of linnet were regularly observed foraging for seeds around habitat hay piles and within the kitchen garden.

Effort should be made to increase the flowering period of meadows throughout the site by cutting and/or grazing on rotation, creating taller strips of meadow adjacent to woodland edge that are cut only once every two years and leaving small areas of meadow uncut over winter and early spring. It is important to create a rotation for such management with different areas left uncut overwinter each year to maintain a continuity of overwintering seed-heads without the risk of scrub invasion and litter and nutrient build-up within the meadow sward.

Linnets, house sparrows and yellowhammers (and other seed-eating finches and buntings) would also greatly benefit from the sowing of wild bird seed strips around the edge of the Bottom Field especially

adjacent to the sheltered woodland edge at the bottom of the field and/or around the hedgerow bordering the field. A permanent feeding station could also be installed adjacent to the Loggia for the benefit of birds and visitors to the gardens.

5.4. Synanthropic Breeding Birds

A number of synanthropic (associated with humans) species were also doing well within the gardens particularly starling, house sparrow, swift and barn swallow. Starlings require permanent pasture or other short grassland to feed on root feeding insect larvae and either tree or roof cavities to nest. Cavities in ash trunks seemed to be favoured nest locations for the Great Dixter starlings and were seen feeding within the sheep paddock and adjacent land.

House sparrow, another declining synanthropic species, were using roof cavity nest sites in buildings around the Estate and were commonly seen scavenging around picnic tables for left over food dropped by visitors to the gardens. The house sparrow population would benefit from installing house sparrow colony nest boxes in some of the gardens outbuildings.

The most successful synanthropic species at Great Dixter though is the barn swallow making their mud nests in the roof spaces in a number of the buildings around the gardens, with the great majority of current nesting activity within the Great Barn. An abundance of invertebrate prey and nesting space clearly benefiting the species at Great Dixter with a sizeable flock of breeding pairs and fledged young from multiple broods building up in front of the Great Barn over the breeding season. The amount of suitable nesting space for swallows could be increased by keeping roof spaces clear of obstructions as barn swallows need a clear approach to their nests.

6. References

Bibby C.J., Burgess N.D. and Hill D. A. (2000). *Bird Census Techniques*. BTO/RSPB

Marchant J.H. (1983) *BTO Common Bird Census Instructions*. BTO

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