

APPENDIX 5

BREEDING BIRD AND VANTAGE POINT SURVEY REPORT

1. Non-technical summary

- 1.1. I, Aurora Gonzalo Tarodo, was instructed by Avondale Ecology, to undertake a series of breeding bird surveys and vantage points at Parc Pelenna, Neath (central grid reference: SS 80376 99542), relating to site development.
- 1.2. Breeding bird surveys and vantage points were conducted in July 2022.
- 1.3. A total of 39 bird species were recorded on site
- 1.4. The composition of breeding birds on site was typical of the habitat present, comprising for the most part common and widespread species.
- 1.5. Habitat preservation, creation and enhancements resulting from the development would be expected to have a beneficial residual impact on most common species.

2. Introduction

- 2.1. This report has been prepared by me, Aurora Gonzalo Tarodo, on behalf of Avondale Ecology. The report provides the result of breeding bird surveys and vantage points undertaken at Parc Pelenna, Neath (central grid reference: SS 80376 99542).

2.2. Aim and objectives

The aim of the breeding bird surveys and vantage points was to provide an overall assessment of the breeding bird species composing the bird communities, make recommendations to minimize the potential impact of development, and consider opportunities for habitat creation when possible. The objectives of the surveys were to:

- Evaluate the importance of breeding bird populations on site for conservation
- Evaluate the anticipated residual impact of the development; and
- To identify areas of ornithological potential interest.

2.3. Relevant Legislation and Policy

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.

Special penalties relate to offences concerning birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to intentionally or recklessly disturb any Schedule 1 bird or their dependent young while nesting. Those who intend to visit the nest of a species listed under Schedule 1 must first obtain a licence from the relevant statutory nature conservation organisation. Certain species are afforded special protection under Schedule 1 only during the close season (1 February – 31 August) but may be killed or taken outside this period. In England and Wales, these are Goldeneye (*Bucephala clangula*) and Pintail (*Anas acuta*).

Environment (Wales) Act 2016

The Environment (Wales) Act supersedes Welsh provisions detailed in sections 40 and 42 of the NERC Act (2006) and makes requirements for more sustainable and proactive planning and management of natural resources within Wales. Part 1 of this legislation relates to the sustainable management of natural resources and, within this, Section 7 requires the identification of species and habitats in Wales which are regarded as of 'principal importance' to maintain and enhance biodiversity.

Well-being of Future Generations Act (2015)

The Well-being of Future Generations Act requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

The European Community Council Directive 79/409/EEC, on the Conservation of Wild Birds (commonly known as the 'Birds Directive'), provides a framework for the conservation and management of wild birds in member states.

Protection of SPAs is implemented under the Conservation of Habitats and Species (Amendment) Regulations 2012 (The Conservation Regulations).

Conservation Status

Some bird species are classified according to their conservation status, such as their inclusion on the Red and Amber lists of Birds of Conservation Concern (BoCC) in the UK (Standbury *et al*, 2021):

- Red list (high conservation concern) species are those that are globally threatened according to IUCN criteria; those whose population has declined

rapidly (50% or more) in recent years; and those that have declined historically and not shown a substantial recent recovery.

- Amber list (medium conservation concern) species are those with unfavourable conservation status in Europe; those whose population or range has declined moderately (between 25% and 49%) in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
- Green list (low conservation concern) or non-listed species fulfil none of the above criteria.

3. Methodology

Breeding bird survey

The site was subject to 4 breeding surveys. These were undertaken during the end of the breeding season (July), to obtain sufficient information with which to determine the value of the site for breeding birds.

3.1. Breeding bird surveys to assess the presence and abundance of passerines and near passerines

The site was walked at a steady pace, so areas within 50 metres were covered and all bird species were identified. Birds were identified by sight (using binoculars) and by sound. (songs/calls). To collect contrasted data, in some randomly selected, transects, I used sound recordings (using Song Meter Micro) to compare with *in situ* species identified.

A species list for the site was compiled and the results were used to assign a breeding status to each of the species encountered:

- Non-breeding: unusual species for the habitat
- Probable breeders: species observed with the potentiality for breeding as encountered in suitable habitat during the breeding season but no signs of breeding
- Probably breeding: breeding behaviour (fly display, courtship, pairs in suitable nesting locations, alarm calls, etc.)

- Confirmed breeder: nest found, recently fledged young, eggshells encountered, adult carrying nesting material or food.

To map bird presence, standardized British Trust for Ornithology (BTO) codes for species were used (Gilbert G *et al* 1998).

The surveys started approximately 1 hour after sunrise and were taken during suitable weather (e.g., good visibility, no rain) to procure the maximum detection of species present (table 1).

Week	Date	Temperature (°C)	Cloud cover (%)	Wind (km/h)	Precipitation	Visibility
1	28/06	13	90	26km/h	0	Good
	29/06	11	100	14km/h	0	Good
2	5/07	12	10	8km/h	0	Good
	6/07	15	30	5km/h	0	Good
3	11/07	18	5	6km/h	0	Good
	12/07	19	30	3km/h	0	Good
4	28/07	13	30	12km/h	0	Good
	29/07	15	30	4km/h	0	Good

Table 1 Days of survey

3.2. Vantage point to assess the presence of breeding Honey Buzzards and other raptors.

Vantage point surveys (VP), are designed to quantify the level of flight activity and its distribution over the site under study. Data can also be used to provide an overview of bird usage of the site.

Bird detection decreases with distance. This is particularly common with smaller species, but even larger species show declines in detection at more than 2km distance.

Habitat, location and terrain might prevent having a clear and open VP. Therefore, when selecting a VP, the aim should be to cover all of the flight activity such that no point is greater than 2km away from the VP. VP's scan an arc of 180° as larger arcs can not be scanned efficiently.

Honey Buzzards, and in general raptors in the breeding season should remain active throughout the day. This means a constant movement of carrying prey for their young. Chicks hatching goes from late June to early July for Honey buzzards. VP's were carried out during the day on the same days as breeding bird surveys, and these lasted no less than 3 hours of constant observation, with exception of the 11th of July when a heatwave reduced significantly the number of birds moving and this particular survey was shortened. An example of flight trajectories appears in the appendix (map 3)

3.3. Nightjar survey

Nightjars are associated with heathlands, moorlands, woodland edges and clearings, in young and recently felled conifer plantations, and coppiced woodland. Suitable habitat needs bare ground patches of greater than two metres squared for nesting. Areas which support rich densities of invertebrate prey. The most suitable areas for Nightjar on site are shown in Appendix map 1.

Surveys consisted of short transects immediately next to the identified suitable breeding areas. These consisted of listening for active males churring an hour after sunset or an hour before sunrise, and were carried at least once every week.

3.4. Barn owl box inspection

A local bird ringer from the BTO monitored the box and ringed the chicks.

4. Limitations

The results of the surveys and assessments undertaken are representative of the time of surveying.

The methodology used is a standard and accepted by statutory conservation bodies, such as Natural Resources Wales (NRS), however, these have been adapted to the scope of the work and time agreed.

5. Results

5.1. Breeding bird surveys

List of species recorded within the study area, along with their breeding status and BoCC status are provided in table 2.

In total 39 species were encountered, corresponding with 29 probable breeder species, 2 probably breeding and 6 confirmed breeders. Only 2 species detected were no breeders. The species community present on site is comprised largely typical of the main

habitats available on sites, such as chiffchaff willow warbler, blackbird or siskins.

Crossbill, Red kite, Goshawk and Barn owl were the only schedule 1 species encountered in these surveys.

Table 2:

BTO code	Common name	BoCC Status	WCA Schedule	Breeding status on site
B	Blackbird	Green	✗	Probable breeder
ST	Song Thrush	Amber	✗	Probable breeder
MP	Meadow pipit	Amber	✗	Confirmed breeder
SK	Siskin	Green	✗	Probable breeder
WW	Willow warbler	Amber	✗	Probable breeder
SL	Swallow	Green	✗	Confirmed breeder
BT	Blue tit	Green	✗	Probable breeder
FR	Redpoll	Red	✗	Probable breeder
WR	Wren	Green	✗	Probable breeder
M	Mistle Thrush	Red	✗	Probable breeder
TP	Tree pipit	Red	✗	Confirmed breeder
CC	Chiffchaff	Green	✗	Probable breeder
R	Robin	Green	✗	Probable breeder
CT	Coal tit	Green	✗	Probable breeder
BC	Blackcap	Green	✗	Probable breeder
RB	Reed bunting	Amber	✗	Probable breeder
PW	Pied wagtail	Green	✗	Confirmed breeder
CR	Crossbill	Green	√	Probable breeder

SC	Stonechat	Green	✗	Probably breeding
GT	Great tit	Green	✗	Probable breeder
GO	Goldfinch	Green	✗	Probable breeder
D	Dunnock	Amber	✗	Probable breeder
KT	Red Kite	Green	✓	Probable breeder
BZ	Buzzard	Green	✗	Probable breeder
J	Jay	Green	✗	Probable breeder
SI	Swift	Red	✗	Non-breeding
C	Carrion Crow	Green	✗	Probable breeder
WH	Whitethroat	Amber	✗	Probably breeding
RN	Raven	Green	✗	Probable breeder
K	Kestrel	Amber	✗	Probable breeder
BO	Barn owl	Green	✓	Confirmed breeder
HM	House Martin	Red	✗	Non-breeding
GS	Great Spotted Woodpecker	Green	✗	Probable breeder
GI	Goshawk	Green	✓	Confirmed breeder
MG	Magpie	Green	✗	Probable breeder
LT	Long-tailed Tit	Green	✗	Probable breeder
TC	Treecreeper	Amber	✗	Probable breeder

CH	Chaffinch	Green	×	Probable breeder
LI	Linnet	Red	×	Probable breeder

5.2. Vantage point

As for the breeding bird surveys, in the VP the majority of species recorded are largely widespread. No presence of Honey buzzards was detected on site; however, confirmed historical records of this species breeding at Parc Pelenna. The results of the current surveys should be used carefully.

5.3. Nightjar surveys

No Nightjars were detected on site. However, the date these surveys were carried out was slightly late to detect the presence of this species. Males normally churr when arriving at the breeding ground, and by the end of July, peak activity of courtship and display are reduced significantly. Nonetheless, suitable habitats for breeding are present on site and were identified, this is shown in appendix map 2.

6. Discussion and evaluation of impacts

6.1. Bird assemblage

The species recorded on site compose largely the typical of the main habitats found on site and are particularly characterised by species of woodland such as Willow warbler, Mistle thrush; Bracken like Tree pipit or Stonechat or semi-improved grassland with Meadow pipit.

Crossbills were detected at the edge of Parc Pelenna coinciding with the coniferous plantation, however, given that this species can breed as early as January, no birds in breeding state were detected. The loss of mixed woodland and coniferous plantation would produce a direct negative impact on Crossbill, as it's a species reliant on pine cone seeds.

Mixed woodland provides habitat to species not detected on these surveys but most likely present like the Wood warbler, also a red-listed species.

Honey buzzard was not detected on these surveys, however, historical records show that these used to breed in Parc Pelenna, other raptors like Goshawk were detected and confirmed as a breeder on site.

The retention of mixed woodland would highly benefit Crossbills or Wood warblers and small raptors like Sparrowhawk; scrub, hedgerows or grassland species like Tree pipit, Linnet, Meadow pipit or Redpoll.

Overall, the bird species recorded were not considered to be a country (within Wales) significant when compared to records in the rest of the country. However, given that

several species encountered are on the red list of The Birds of Conservation Concern, preserving as much habitat as possible is advised.

6.2. Potential impacts

Clearance, construction and operation of compound activities could cause loss of nesting habitat and direct disturbance of nesting birds; decrease of foraging and refuge opportunities and habitat fragmentation for a variety of birds.

Generally, the impact on breeding birds arising from the potential effect of development is based on understanding the habitat and ecological requirements of each species, the extent of development, the number of species recorded, and the conservation criteria on legislation (Schedule 1 of the Wildlife and Countryside Act (1981)), guidance (Red and Amber listed Birds of Conservation Concern 5 (2021) and to some degree professional assessment.

The species recorded on site considered the most vulnerable to any kind of impact are species that appear on one or more of the following:

- Red and Amber listed Birds of Conservation Concern 5 (2021) (BoCC)
- Schedule 1 of the Wildlife and Countryside Act (1981) (WAC Schedule)

The status (BoCC and WAC Schedule) of species recorded on site appears in table 2.

6.3. Habitat loss

The development proposal will likely result in the loss of grassland and scrub habitats. The species supported by this habitat are generally widespread locally and within the country. Given the predominance of these habitats within the wider landscape, the population of birds recorded on site are likely to occupy habitats within the surrounding landscape. Onsite habitats are therefore likely to be part of this population, and the impact on these specific habitats is likely negligible.

The woodlands, mixed, broadleaved and coniferous are recommended for retention as for any standing water or marshy area.

6.4. Disturbance impact

Any kind of construction operation has the potential to disturb birds using the habitat for roosting, foraging or breeding. Noise from vegetation clearance, groundwork or machinery such as piling are low-frequency noises but high amplitude. Both noise and the presence of workers, especially wearing PPE, often produce birds to displace for

extended periods. During the breeding season, disturbance can produce abandonment of nest or/and territory displacement, reducing the possibility to sustain nesting areas.

7. Mitigation

Retention of most of the woodland, standing water and marshy areas and the potential creation of semi-natural habitats like hedges would avoid the vast majority of impacts on breeding birds.

To avoid disturbance of breeding birds, ground clearance and vegetation would be undertaken outside of the breeding season for most birds. If any large tree needs removing, surveys on that tree will be needed previously to log and this will only be advisable for logging before early breeders start such as Crossbill.

These measures will ensure the impact on nesting birds to be negligible.

Buffer planting with native species, retention and improvement where possible of present vegetation, will provide further mitigation for any habitat loss. This will provide connectivity with the wider landscape and support the conservation of local and migratory species.

To compensate for any loss of habitat for cavity specialist species, installation of nest boxes would provide refuge and breeding sites for small and medium species such as Blue tit, Nuthatch, Robin or Jackdaw. For that, the following should be included on-site:

- 5 x Small Wooden boxes – 33 mm entrance hole for species such as Great tit, Pied flycatchers and smaller like Blue tits.
- 5 x Small Wooden boxes – Open fronted boxes for species such as Robin, Redstart or Great tit
- 2 x Large Wooden box – 250 mm entrance for species such as Tawny owl or Jackdaws. These boxes should be placed as low as 3 metres above the ground. The entrance should avoid facing prevailing wind, generally avoiding west or south-west.

8. Conclusion

The bird surveys show that the bird assemblage is composed of the most common and widespread species within Wales. However, the presence of several red-listed species with national importance for conservation, makes the site of high importance and disturbance should be minimised when possible.

The overall recommendation is habitat creation and preservation, management for enhancement such as vegetation planting and corridor creation to keep the connectivity with the wide landscape.

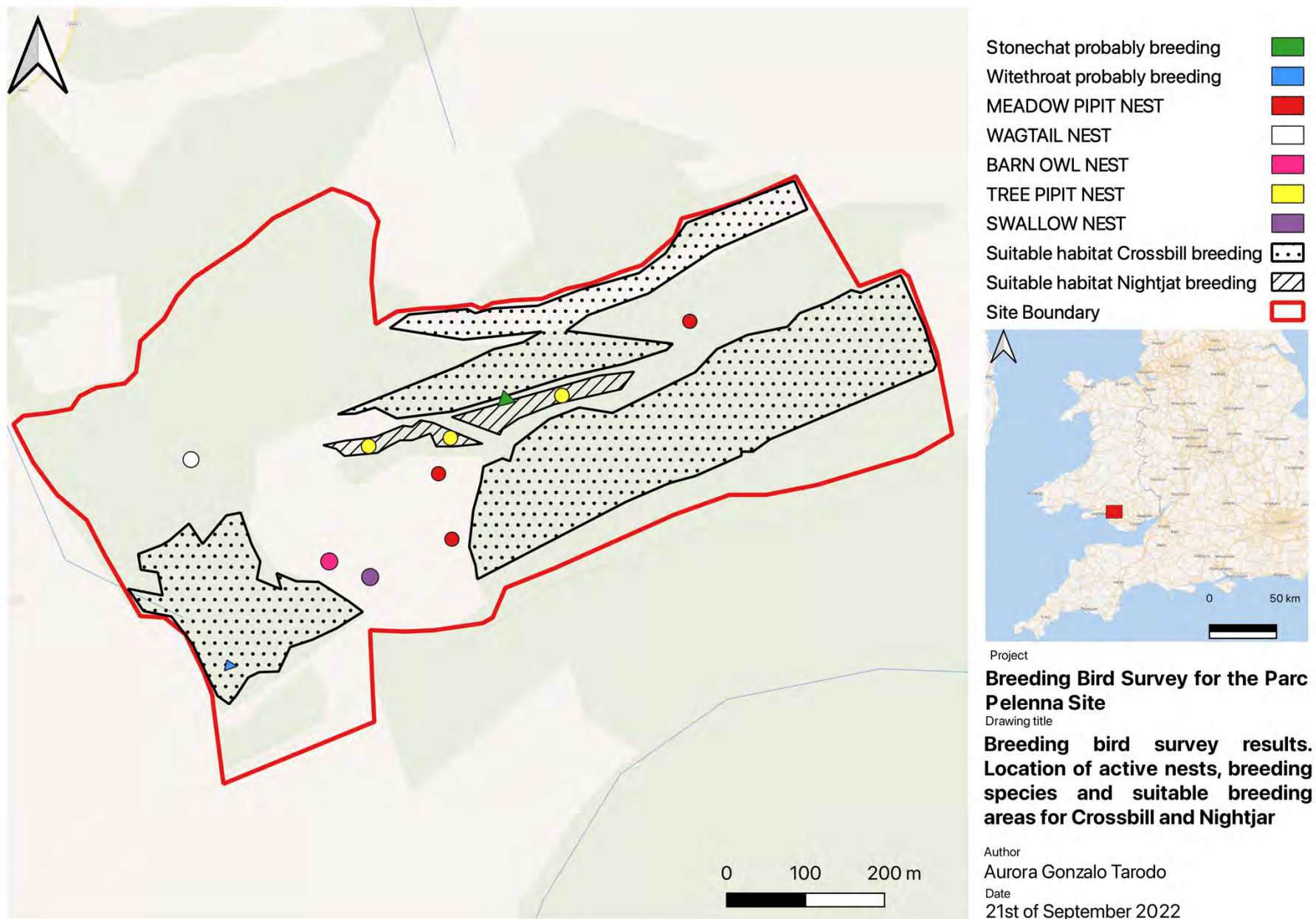
9. References

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2. Gilbert G *et al* 1998. Bird monitoring methods

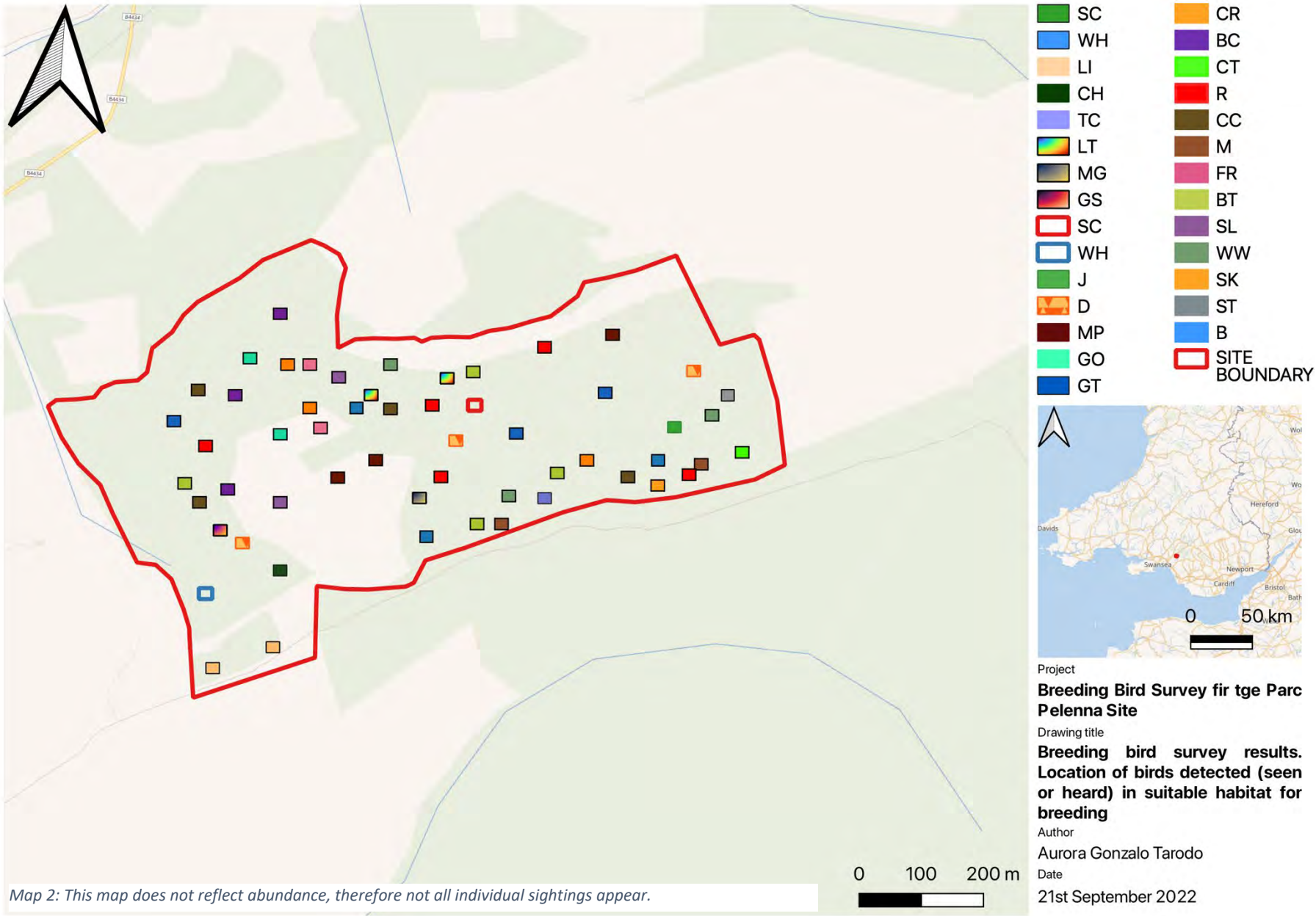
10. Appendix

- 10.1.** Map 1: Breeding bird survey results. Location of active nests, breeding species and suitable breeding areas for Crossbill and Nightjar.
- 10.2.** Map 2: Breeding bird survey results. Location of birds detected (seen or heard) in suitable habitat for breeding
- 10.3.** Map 3: Vantage point with most common species.

9.1. Map 1 Location of active nests, breeding species and suitable breeding areas for Crossbill and Nightjar.



9.2. Map 2 Breeding bird survey results. Location of birds detected (seen or heard) in suitable habitat for breeding.



9.3. Map 3 Vantage point with most common species.

