ASSESSMENT OF PROPOSED NEW AREAS OF BIODIVERSITY IMPORTANCE

FOR THE PLANNING SERVICE, STATES OF GUERNSEY

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GLOSSARY OF TERMS & ABBREVIATIONS

Area of Biodiversity Importance (ABI) - Areas of Biodiversity Importance, or ABIs, are sites identified in the Island Development Plan (2016) due to their botanical, scientific or zoological value. They contain species or habitats which are of local or national importance, but which are not of sufficiently high value to be designated as an SSS.

Habitat - the place in which a plant or animal lives. In the marine (including intertidal) environment, the habitat is defined according to the geographical location, physio-geographic features and the physical and chemical environment (including salinity, wave exposure, strength of tidal streams, substrate and rock pools).

Invasive Non-native Species (INNS) – often referred to as 'alien invasive species', invasive nonnative species (INNS) are plants or animals which are originally from a different area of the world but have been brought here by man and which establish and spread at the expense of native wildlife.

Joint Nature Conservation Committee (JNCC) – the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation.

Site of Special Significance (SSS) – an area which have been identified as having special significance because of its archaeological, historic, botanical, geological, scientific, cultural, zoological or other special interest and which it is desirable to preserve, enhance or manage. The provisions of The Land Planning and Development (Guernsey) Law, 2005 and its ordinances offer them significant protection from development that might harm their special interest.

EXECUTIVE SUMMARY

56 sites which are currently undesignated in the Island Development Plan (2016) have been identified as possible new Areas of Biodiversity Importance (ABIs) by the Planning Service. Each site was surveyed and assessed using modified Radcliffe criteria to determine its ecological value. A combination of Phase 1 habitat, ornithological and botanical surveys was used and the sites were then ranked.

In applying the same scoring assessment criteria and scoring threshold as that of the 2019 assessment of Sites of Nature Conservation Importance (Environment Guernsey 2019), 55 of the sites are recommended as ABIs.

1. INTRODUCTION

1.1 Background

In November 2016, the States of Guernsey approved the Island Development Plan (IDP), which included a two-tier system for the protection of sites of nature conservation importance. The upper tier is a network of Sites of Special Significance (SSS) which is afforded a high level of protection under the planning law and IDP Policy GP2. High-level criteria were set for the designation of these sites.

The second tier covers areas which do not meet the criteria for an SSS, but nevertheless contribute significantly to the island's biodiversity. As such, they receive some protection under IDP Policy GP3. These sites were designated as Areas of Biodiversity Importance (ABIs) with the aim of helping to preserve Guernsey's native wildlife whilst balancing the Island's social and economic needs in terms of land use.

The primary differences between the two tiers is that an SSS is designated only if it is extensive or contains species or habitats of national or international significance, whereas ABIs are generally smaller and may only support species or habitats of local importance to the Channel Islands. There are however, exceptions and in some cases, ABIs can support nationally or internationally important biodiversity.

Around 80 locations are currently designated as ABIs under the IDP, either as 'stand-alone' sites or as important buffer zones or corridors associated with SSSs.

In 2019, the Planning Service commission a report titled "Review of Areas of Biodiversity Importance" (Environment Guernsey, December 2019). One of the recommendations of this report was that a number of undesignated sites had potential to be designated as new ABIs. This recommendation was based on a desk-based assessment using the results of the 2018 Phase 1 Habitat Survey (Hayward and Scopes, 2019) combined with expert opinion and local knowledge.

Environment Guernsey Ltd was commissioned in Spring 2021 to survey the potential new ABIs and determine whether or not they have sufficient biodiversity to be designated as such.

A total of 56 sites were included in this analysis. A map of the ABI sites surveyed is included (Figure 1) and brief descriptions of each site can be found the Appendices.

The list of candidate sites is as follows -

- A. Les Vicheries and Rue Rocheuse
- B. Vale Pond meadows
- C. Belgreve Cottage
- D. Bordeaux landfill site
- E. Jardin de Lorette
- F. La Biloterie
- G. La Marette

- H. Le Catioroc
- I. Le Guet
- J. Les Tracheries
- K. Rue a l'Eau
- L. Rue des Deslisles
- M. Rue Mainguy
- N. Creve Coeur
- O. Rue des Pres
- P. Le Petit Axce
- Q. Rue des Vinaires
- R. Rue de la Cloture
- S. Churchyards 10 in total
- T. Flooded quarries 28 in total

The aim of the report is to compile the results of the site assessments and to make recommendations, based on robust criteria and evidence, in respect of proposed new ABIs.

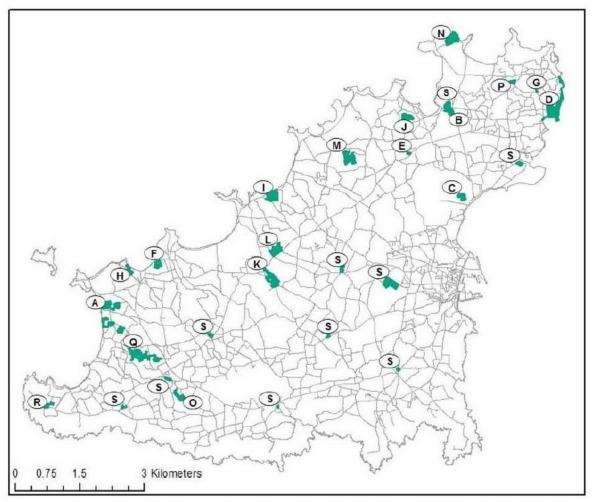


Figure 1 Map of proposed new ABI sites (Flooded quarries are not shown)

2. METHODOLOGY

2.1 ABI criteria & Field Methodology

A successful conservation plan requires the use of robust criteria and evidence to designate suitable ABIs. A set of criteria must be quantifiable in order to be justified and defendable at a public inquiry.

The criteria used for this review are based on the Ratcliffe criteria for estimating the value of an area for nature conservation, which have been adjusted to make them more suitable for Guernsey (Ratcliffe 1977). In their 2003 review of the Revised Rural Area Plan (2003), La Société Guernesiaise identified a number of disadvantages of strictly adhering to the Ratcliffe criteria in a local context and they therefore used a revised set of criteria. In summary these are:

- Size In general, larger sites contain more habitats and species, and larger populations of those species, than smaller sites. This is important because larger populations are less vulnerable to local extinction from either natural or man-made causes or events. In addition, some species require large ranges or territories, and larger sites are therefore more suitable for these species.
- 2. Habitat Diversity Different habitats allow different communities to exist and as such, a greater diversity of habitats typically increases the value of a site. There are however, a number of complications that mean habitat diversity should not automatically be assumed to increase site value. For instance, some habitats/communities are more species-rich than others a site supporting a range of different habitats may not necessarily support a greater number of species.
- **3. Habitat Rarity** Habitats that are either regionally or nationally rare are important to consider as they could reflect habitats that are in decline elsewhere, although not always. Habitats which are common in the UK but rare in Guernsey, or vice versa, may be considered of local importance.
- 4. Species Diversity Sites tend to be of higher conservation value if they support a greater number of species. This criterion is often reflected by habitat diversity. For the purposes of this review, we visually assessed the diversity of plant and bird species for each site. This provided a dataset that is relatively easy to collect and compare between sites.
- 5. Species Rarity The presence of rare species adds to overall conservation value, especially when the populations are of a reasonable size. The rarity of species was assessed using existing records from the Guernsey Biological Records Centre (where present) and those identified during site visits.

Each of the candidate sites was surveyed by an ornithologist between April and July 2021. A botanist surveyed the various sites apart from the flooded quarries between April and October 2021; it was not possible to undertake botanical surveys of the quarry sites due to the steep inaccessible terrain associated with most of them. The purpose of the visits was to record the species present and provide a comparable data set.

2.2 Quantifying the ABI criteria

In order to obtain a more objective measure of site value we have quantified each of the modified Ratcliffe criteria, giving each site a score for each criterion. The methods for quantifying and scoring each criterion are described below.

- 1. Size The calculate geometry geoprocessing tool was used to quantify the area of each site in m^2 . This area data was converted into hectares and transformed logarithmically. Each site was scored between 0-3 for size (0 = ≤ 0.0 , 1= 0.01 1.0, 2 = 1.01 2.0, 3 = ≥ 2.0 .)
- 2. **Habitat Diversity** This was quantified by counting the number of different habitat designations identified during the Phase 1 Habitat Survey undertaken in 2018.
- 3. Habitat Rarity The results of the 2018 Phase 1 Habitat Survey was assessed and each habitat allocated a score between 0-3 for rarity (3 = >1ha, 2= 1-9.9ha, 1 = 10-99ha, 0 = >100ha). Where this habitat was present in a site, this score was assigned. The average of the scores was used to provide a measure of average rarity. Using this calculation, each site was then assigned a score between 0-3 for habitat rarity (0= <1.0, 1= 1.0 1.49, 2 = 1.5 1.9, 3 = ≥ 2.0)
- 4. **Species Diversity** the number of bird and plant species recorded during site visits in April-October 2019. Bird and plant records were assessed individually and then combined to provide an assessment of species diversity. Where the data from the Guernsey Biological Records Centre shows that the site is valuable for a taxon not assessed, the score was increased by 1.
- 5. **Species Rarity** the number of rare species identified during the 2021 site visits or from recent records lodged with the GBRC.
 - a. Floral records rare species are those marked on the Checklist of Guernsey Plants (Rabey and Gilmour 2019) as rare in either Guernsey or the UK.
 - b. Bird records rare species are those noted as rare in the Guernsey Birds book (Bisson 2015) or those red- or amber-listed in the UK.

2.3 Method Limitations

The following limitations to the methodology have been identified and whilst they have not significantly affected the overall results, they should be considered when interpreting the results and discussion.

- 1. Timings of surveys whilst the surveying was undertaken during the optimum survey seasons for plants and breeding birds, some species will inevitably be missed e.g. late or failed breeding birds or late-flowering plants. This was not deemed to significantly impact results and all surveys were undertaken at the same time so data is still comparable. The data cannot however be reasonably compared to similar surveys of other sites undertaken over a more extended survey season.
- 2. Rarity data will be limited to a degree by the amount of previous recording undertaken at the site. This was considered during the interpretation of the results.

- 3. The use of historical records for rarity data may not necessarily reflect the current management/value of the site. This was also borne in mind during interpretation of the results.
- 4. Some sites were inaccessible for detailed floral surveys. In those instances, we relied on bird data and used average floral data so as to not bias the score.
- 5. Directly comparing diversity across sites of different sizes or comprising different habitats is likely to skew the interpretation (see David and Gilmour, 2003 for a full explanation of this). This was borne in mind when interpreting the results.



Figure 2 Field and associated habitats at Rue Des Deslisles, Castel

3. **RESULTS**

Table 1 below contains the score data for each site.

Ref	Name	Area	Habitat Rarity	Habitat Diversity	Species Diversity	Species Rarity	TOTAL	RANK
D	Bordeaux landfill site	2	2	3	3	3	13	1
N	Creve Coeur	1	2	3	3	3	12	2
А	Les Vicheries and Rue Rocheuse	1	1	3	3	3	11	3
F	La Biloterie	1	2	2	3	3	11	3
Q	Rue des Vinaires	1	1	3	3	3	11	3
В	Vale Pond meadows	1	1	2	3	3	10	4
С	Belgreve Cottage	1	1	2	3	3	10	4
J	Les Tracheries	1	1	2	3	3	10	4
К	Rue a l'Eau	1	1	3	3	2	10	4
L	Rue des Deslisles	1	1	2	3	3	10	4
м	Rue Mainguy	1	1	2	3	3	10	4
S3	Le Foulon	1	1	2	3	3	10	4
T26	St Andrews / Brickfields Quarry	1	1	2	3	3	10	4
н	Le Catioroc	1	1	1	3	3	9	5
I	Le Guet	1	1	1	3	3	9	5
0	Rue des Pres valley	1	1	2	3	2	9	5
Р	Le Petit Axce	1	1	2	2	3	9	5
R	Rue de la Cloture	1	3	0	2	3	9	5
S4	St Andrew's Church	0	3	0	3	3	9	5
Т3	Carteret Quarry	1	1	1	3	3	9	5
T4	Guillotin Quarry	1	1	1	3	3	9	5
T5	Hougue Ricart Quarry	1	1	2	3	2	9	5
Т7	Jamblin Quarry	1	1	1	3	3	9	5
T12	Marais Reservoir	1	2	1	2	3	9	5
T13	Noirmont Quarry	1	1	2	2	3	9	5
T14	Old Quarry - Cotes des Amarreurs	1	1	1	3	3	9	5
T22	Paradis Quarry	1	0	2	3	3	9	5
E	Jardin de Lorette	0	2	1	3	2	8	6
Т8	Juas Quarry	1	1	2	2	2	8	6
T11	Hougue Au Moulin Quarry	0	2	0	3	3	8	6

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T15	Old Quarry - Grande Maison Road	1	1	2	2	2	8	6
T19	Old Quarry - Rue Batee	0	1	1	3	3	8	6
T23	Old Quarry - Rue du Chateau	0	2	0	3	3	8	6
S2	Forest Church	0	3	0	3	1	7	7
Т2	Capelles Quarry	0	2	0	2	3	7	7
T16	Old Quarry - La Corvee Road	0	1	1	2	3	7	7
T18	Old Quarry - La Route de la Lande	0	0	2	2	3	7	7
T24	Old Quarry - Rue Mainguy	0	2	1	2	2	7	7
T25	Old Quarry - Torrey Canyon	0	2	1	2	2	7	7
S5	St Martin's Church	0	3	0	3	0	6	8
S7	St Sampson's Church	0	0	0	3	3	6	8
S8	St Saviour's Church	0	3	0	2	1	6	8
T1	Barker's Quarry	0	1	1	2	2	6	8
Т6	Irene & Robine Quarry	0	2	0	2	2	6	8
Т9	L'Epine Quarry	0	0	2	2	2	6	8
T17	Old Quarry - La Maison du Compte	0	2	0	2	2	6	8
S10	Vale Church	1	2	0	2	1	6	8
T21	Old Quarry - Rue des Cottes	0	1	1	2	2	6	8
T27	Tracheries Quarry	0	1	1	2	2	6	8
S1	Castel Church	1	0	0	3	1	5	9
S6	St Peters Church	0	1	0	3	1	5	9
T10	La Houguette Balan Quarry	0	1	1	1	2	5	9
T20	Old Quarry - Rue des Chapelles	0	2	0	1	2	5	9
T28	Ville Baudu Quarry	0	0	2	2	1	5	9
S9	Torteval Church	0	0	0	2	2	4	10
G	La Marette	0	1	0	1	1	3	11

Table 1Summary of results of the review of ABIs including scores for individual criteria, total scores and final ranking.The bold black line marks the scoring threshold for ABI designation as used in the 2019 assessment.

4. DISCUSSION

4.1 Assessment of candidate ABI designations

In the 2019 report, the ABI sites scored between 1 and 13 and those areas with four points or less were considered for removal from the ABI network. In using the same threshold for the candidate sites results, most of the candidate locations qualify for designation.

The highest scoring areas were Bordeaux Landfill Site and Creve Couer. These are relatively large sites and it is to be expected that, in addition to hosting a wide range of plant and bird species, both supported a range of different habitats.

A further three sites (Les Vicheries/Rue Rocheuse, La Biloterie and Rue Des Vinaires) similarly scored highly mostly due to their large extents and mixed habitats. They also achieved maximum scores on species rarity as a result of particular rare plants or birds recorded during the surveys.

31 of the 56 locations attained the highest possible score on species rarity highlighting the value of the candidate sites in hosting particular species of local or national (or international) importance. Eight of these did not score on the size criterion indicating that even relatively small areas can play an important role in supporting local biodiversity.

Two sites, La Marette and Torteval Churchyard, achieved the lowest scores. La Marette is a former greenhouse site which was cleared in the late Nineties and predominantly planted as an informal orchard of crab apple (*Malus sylvestris*) and Wild Pear (*Pyrus pyraster*) in 2005. There is an associated grassland habitat which currently supports a rather limited range of plants. Whilst this site may become more biodiverse in the long term, it does not currently meet the standard for ABI designation. This illustrates that species-rich habitats generally develop over an extended period of time following stable land management, and cannot easily be established within a short timeframe.

All local churchyards support permanent grassland habitats which in many cases have become relatively species-rich over time. The plant diversity of a churchyard is closely linked to the management regime which varies in terms of mowing frequency and the use of chemicals such as herbicides and fertilizers. Despite the different maintenance operations, most churchyards scored highly for plant diversity.

Although seven of the ten churchyard sites achieved low scores overall, Torteval Church was the only one to fall slightly below the threshold for designation. The area achieved low scores on size, habitat rarity and habitat diversity, largely due to its limited extent. Higher scores were achieved on species rarity and species diversity, reflecting the ecological value of the grassland habitat.

With all other parish churchyards meeting the threshold for ABI designation, there is a case for including the Torteval site within the network, particularly bearing in mind it broadly hosts the same type of habitat as other cemeteries. It is therefore recommended that all parish churchyards, including Torteval, be designated as ABIs. (Note – if this recommendation is accepted, the only parish church not included would be Town Church. This church has no associated churchyard and the parish is instead represented by the relatively high-scoring Le Foulon cemetery.)

4.2 Threats

The surveying of the candidate Areas of Biodiversity Importance highlighted the threats which many of these sites face. The most significant of which are considered to be -

- **1.** Inappropriate management
- 2. Development
- **3.** Invasive non-native species
- 4. Disturbance

Inappropriate management is characterised by either too little or too intensive management. Areas of species-rich grassland require suitable mowing or grazing in order to prevent the establishment of invasive scrubby species such as bracken and bramble. If such habitats are neglected or abandoned, they will quickly succeed to scrub and the delicate wildflowers, which require sufficient sunlight, will be lost.

Likewise, too intensive a management regime – whether that be intensive mowing for amenity purposes, or agricultural improvement – will likely allow disturbance-tolerant species to persist at the expense of the more delicate and rare species.

Vegetation clearance, especially in woodland or established scrubland will also likely have a significant negative impact on the animals which live there.

Management plans may be required to encourage appropriate management regimes which would preserve the ecological interest of the site and discourage damaging or inappropriate activities.

Development, whilst it may consider and attempt to mitigate the impacts to biodiversity, will inevitably lead to the loss of the ecological value upon which the designation has been made. An extensively developed area, no matter how environmentally sensitive, will generally not be able to support sufficient species or habitats so as to warrant its continuing designation as an ABI. Even small-scale development within an ABI may render the site unsuitable for a range of species.

Invasive non-native species (INNS) have been noted as the third largest driver of biodiversity loss globally (IUCN, 2019) and many species are already established in Guernsey. Species present in some ABIs include sour fig (*Carpobrotus edulis*), New Zealand wireplant (*Muehlenbeckia complexa*) and German ivy (*Delairea odorata*). All of these alien plants spread rapidly and, without targeted management, will smother and destroy native habitats and wildflowers. Where INNS have been identified within an ABI, consideration should be given to their removal in order to preserve the ecological interest of the site.

Disturbance of a site by humans may have a detrimental effect of the animals which use it, notably birds. Whilst most wildlife can tolerate certain levels of visual or noise disturbance, a range of species may be lost if regular disruption e.g. due to recreation.

There are many more activities or environmental stressors which may impact on the biodiversity of a site, for example, disturbance, climate change, and pollution. In addition, there may be cumulative impacts from multiple threats which would have a more significant impact than each one individually.

5. **RECOMMENDATIONS**

A summary of the recommended new ABIs are provided below -

5.1 Stand-alone sites

- 1. Les Vicheries & Rue Rocheuse
- 2. Vale Pond meadows
- 3. Belgreve Cottage
- 4. Bordeaux landfill site
- 5. Jardin de Lorette
- 6. La Biloterie
- 7. Le Catioroc
- 8. Le Guet
- 9. Les Tracheries

5.2 Churchyards

- 1. Castel Church
- 2. Forest Church
- 3. Foulon Cemetery
- 4. St. Andrews Church
- 5. St. Martins Church

5.3 Flooded Quarries

- 1. Barker Quarry
- 2. Capelles Quarry
- 3. Carteret Quarry
- 4. Guillotin Quarry
- 5. Hougue Ricart Quarry
- 6. Irene & Robine Quarries
- 7. Jamblin Quarry
- 8. Juas Quarry
- 9. La Hougue Balan Quarry
- 10. L'Epine Reservoir
- 11. Hougue Au Moulin Quarry
- 12. Marais Reservoir
- 13. Noirmont Quarry
- 14. Old Quarry Cotes des Amarreurs

- 10. Rue a l'Eau
- 11. Rue des Deslisles
- 12. Rue Mainguy
- 13. Creve Coeur
- 14. Rue des Pres
- 15. Le Petit Axce
- 16. Rue des Vinaires
- 17. Rue de la Clotures
- 6. St. Peters Church
- 7. St. Sampsons Church
- 8. St. Saviours Church
- 9. Torteval Church
- 10. Vale Church
- 15. Old Quarry Grande Maison Road
- 16. Old Quarry La Corvee Road
- 17. Old Quarry La Maison Au Compte
- 18. Old Quarry La Route de la Lande
- 19. Old Quarry Rue Batee
- 20. Old Quarry Rue des Chapelles
- 21. Old Quarry Rue des Cottes
- 22. Old Quarry Rue du Chateau
- 23. Old Quarry Rue Mainguy
- 24. Old Quarry Torrey Canyon
- 25. Paradis Quarry
- 26. St Andrews/Brickfields Quarry
- 27. Tracheries Quarry
- 28. Ville Baudu Quarry

5.4 Sites not recommended for ABI designation

1. La Marette

6. ADDITIONAL CANDIDATE SITES

In undertaking this assessment, a small number of additional sites were identified as having potential for future ABI designation. These were mostly areas similar to those evaluated as part of this project, such as other cemeteries or quarries, or extensions to the existing or recommended ABI designations.

6.2. Cemetaries

Over time, a number of parish cemeteries have become limited in terms of space and as a result new cemeteries have been established elsewhere. Many of these new facilities do not currently host species-rich habitats as such ecosystems only develop after many years of stable land management regimes. As such, these newer cemeteries may become important for biodiversity over time.

In addition, there are some churches such as St. John's Church in Les Amballes, St. Peter Port which could host habitats which are comparable with designated sites elsewhere.

In addition, there are smaller cemeteries which warrant assessment such as -

- 1. Brothers' Cemetery (Candie Road, St. Peter Port),
- 2. Les Camps Collette Nicolle Graveyard (Green Lanes, St. Peter Port)
- 3. Fort George Military Cemetery (Fort George, St. Peter Port)

6.3 Quarries

The Consultants' Briefing Note for this project estimated that around 20 flooded quarries would require assessment. As part of this project, 28 quarries were visited and evaluated. We are aware however, that a small number of flooded quarries have not yet been considered, for example –

- 1. Flooded Quarry (Les Hures, Chouet, Vale)
- 2. Flooded Quarry (La Miellette Lane, Vale)

6.4 Other types of site

Due to recent rapid declines of species-rich grasslands across the island, the relative importance of smaller sites which host such habitats has increased. As such, there are a number of locations which now warrant consideration for ABI designation. These include –

- 1. Glebe land below St. Peters Church, St. Peters
- 2. Semi-improved Marshy Grassland, Rue Des Cambrees, Torteval
- 3. Semi-improved Marshy Grassland, Rue Des Corneilles, Castel.



Figure 3 Area of undesignated Semi-improved Marshy Grassland, Rue Des Corneilles, Castel

6.5 Summary

It is recommended that consideration be given to these additional areas and that a further desk study be undertaken to identify any remaining candidate sites. Following completion of this exercise, a final assessment of sites would be required to determine their suitability for designation.

7. CONCLUSIONS

The potential new ABIs listed in 2019 were identified using a combination of the mapping from the 2018 Phase 1 Habitat Survey, expert opinion and local knowledge. Following the assessment of each site based on five separate criteria, 55 of the 56 sites are recommended for ABI designation. This outcome emphasises the strong correlation between habitats of nature conservation importance and suitability for ABI designation.

It is further recommended that a final 'sweep' of potential sites be made through a desk study and subsequent assessment in order to ensure than any outstanding sites be subject to proper evaluation. Whilst it is not possible to state how many sites might be included, it is anticipated that the number would be relatively low, perhaps 15 in total.



Figure 4 Mixed habitats at Bordeaus Landfill Site, Vale

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APPENDIX 1 HABITAT SURVEY LEGEND

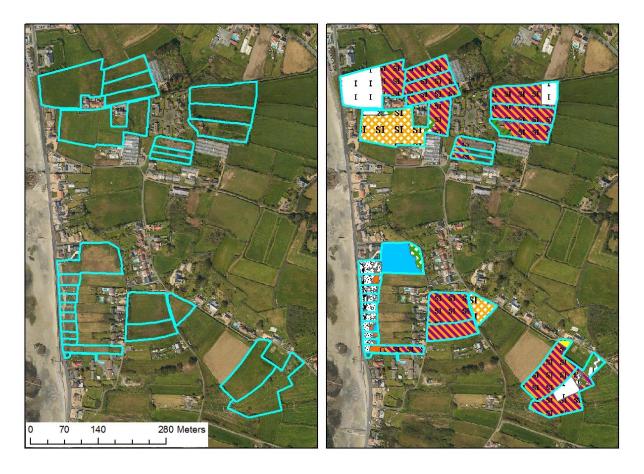
(Reproduced from Habitat Surveys 1999-2018)

Habitats



APPENDIX 2 SITE DESCRIPTIONS OF PROPOSED NEW STAND-ALONE ABI SITES

1. Les Vicheries and Rue Rocheuse, St. Peters



Site description: Several low-lying fields adjoining or in close proximity to an existing SSS. The proposed new ABI would protect additional areas of rare habitat and improve connectivity with the SSS.

Size: 8.66ha.

Owners: La Societe Guernesiaise and private ownership.

Habitats: Semi-improved Grassland, Semi-improved Marshy Grassland with associated earthbanks and scrubby hedgerows. Also Swamp and Dense Scrub.

Notable species – Plants: Galingale (*Cyperus longus*) - <100 sites in the British Isles. Adder's-tongue (*Ophioglossum vulgatum*) – only local site.

Notable species – Birds: Song Thrush (*Turdus philomelos*) Starling (*Sturnus vulgaris*) Linnet (*Linaria cannabina*) and House Sparrow (*Passer domesticus*) are all UK red-listed*. Also Buzzard (*Buteo buteo*), Marsh Harrier (*Circus aeruginosus*), Swallow (*Hirundo rustica*).

Threats: Over-mowing or agricultural improvement, lack of appropriate management.

Recommended Management: The grassland areas should be cut annually and the cuttings taken off. Hedges should be cut every 1-2 years. Some fields are suitable for seasonal extensive grazing by sheep or cows (late summer-autumn). Grazing by horses is generally not appropriate.

*Source: Birds of Conservation Concern (BoCC) Red List (Eaton et al 2015)

2. Vale Pond meadows, Vale



Site description: Low-lying fields supporting adjoining an existing SSS. The proposed new ABI would protect additional areas of rare habitat and would improve connectivity with the SSS.

Size: 1.84ha.

Owners: Private.

Habitats: Semi-improved Marshy Grassland, Planted Broadleaved Woodland, Dense Scrub. Also Improved Grassland.

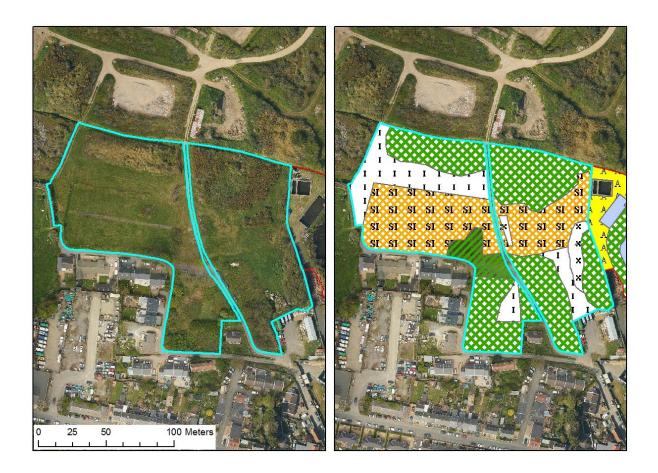
Notable species - Plants: Perforate St. John's-wort (*Hypericum perforatum*) and Bilbao's Fleabane (*Erigeron floribunda*) - rare locally.

Notable species – Birds: Song Thrush (*Turdus philomelos*) and House Sparrow (*Passer domesticus*) are both UK red-listed. Also Little Egret (*Egretta garzetta*).

Threats: Agricultural improvement of grassland habitats. This has already impacted the south field.

Recommended management: The grassland areas should be cut annually and the cuttings taken off, ideally as hay. Hedges should be cut every 1-3 years. The fields are suitable for seasonal extensive grazing by sheep or cows (late summer-autumn) but grazing by horses is generally not appropriate.

3. Belgreve Cottage, St. Sampsons



Site description: A disturbed area of open land which has retained and/or developed species-rich grassland habitats.

Size: 3.97ha.

Owners: States of Guernsey.

Habitats: Semi-improved Grassland, Dense Scrub, Planted Broadleaved Woodland, Tall Ruderal. Also Improved Grassland, and Amenity Grassland.

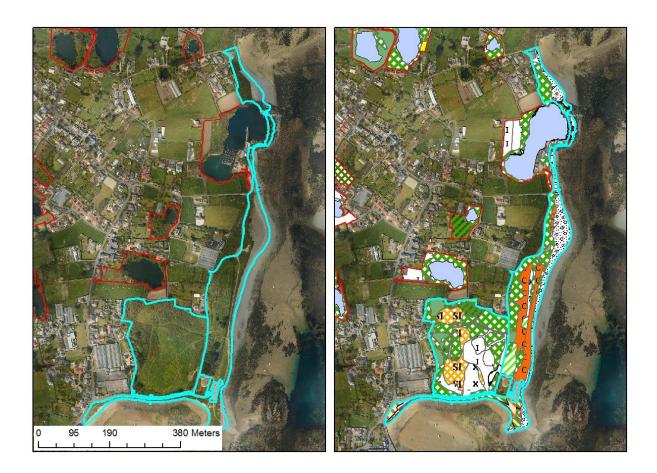
Notable species - Plants: Perforate St. John's-wort (*Hypericum perforatum*) - rare locally.

Notable species: Song Thrush (*Turdus philomelos*) Linnet (*Linaria cannabina*) and House Sparrow (*Passer domesticus*) are all UK red-listed. Also Swallow (*Hirundo rustica*), Cetti's Warbler (*Cettia cetti*), Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*), Long-tailed Tit (*Aegithalos caudatus*) and Bullfinch (*Pyrrhula pyrrhula*).

Threats: Invasive non-native species such as Pampas grass (*Cortaderia selloana*), development, lack of suitable management, scrub encroachment.

Recommended management: Ideally the scrub would be periodically cut back or limited in extent by annual maintenance. Grassland habitats should be cut annual and the cuttings removed. Grazing by sheep or cattle would be beneficial. Invasive species should be removed.

4. Bordeaux landfill site, Vale



Site description: A former landfill site restored as a natural mound (Hougue) and associated coastal strip.

Size: 10.19ha.

Owners: States of Guernsey and private.

Habitats: Semi-improved Grassland, Tall Ruderal, Dense Scrub, Coastal Grassland, Shingle, Dune Grassland, Dune Scrub. Also Planted Broadleaved Woodland, Planted Coniferous Woodland.

Notable species – **Plants:** Loose-flowered Orchid (*Anacamptis laxiflora*) - <25 sites in the British Isles. Hairy Bird's-foot-trefoil (*Lotus subbiflorus*), Small-flowered Catchfly (*Silene gallica*), Yellow Vetch (*Vicia* lutea) and Toothed Medick (*Medicago polymorpha*) - <100 sites in the British Isles. Ivy Broomrape (*Orobanche hederae*) and Subterranean Clover (*Trifolium subterraneum*) - <250 sites in the British Isles.

Notable species – **Birds:** Song Thrush (*Turdus philomelos*), Starling (*Sturnus vulgaris*), Linnet (*Linaria cannabina*) and House Sparrow (*Passer domesticus*) are all UK red-listed. Also Swallow (Hirundo rustica), Whitethroat (Sylvia communis), Chiffchaff (*Phylloscopus collybita*), migrant Spotted Flycatcher (*Muscicapa striata*).

Threats: Scrub encroachment of sensitive grassland habitats, coastal erosion, human disturbance, lack of appropriate management of grasslands, invasive non-native species such as sour fig (*Carpobrotus edulis*).

Recommended management: Grassland habitats should be cut annually and the cuttings removed. Associated scrub areas should be kept in check every 1-2 years.

5. Jardin de Lorette, St. Sampsons



Site description: A former greenhouse site cleared and managed as a nature reserve. Part of the site has been planted as an apple orchard.

Size: 0.33ha.

Owners: La Societe Guernesiaise.

Habitats: Planted Woodland, Semi-improved Marshy Grassland, Semi-improved Grassland. Also Dense Scrub.

Notable species – Plants: Common Spotted-orchid (*Dactylorhiza fuchsia*) and Southern Marsh Orchid (*D. praetermissa*) - scarce locally.

Notable species - Birds: Song Thrush (*Turdus philomelos*) and House Sparrow (*Passer domesticus*) are both UK red-listed. Also Kestrel (*Falco tinnunculus*).

Threats: Invasive non-native species, human disturbance, scrub encroachment.

Recommended management: Grassland habitats are managed with a rotational programme of cutting and raking. Rank vegetation such as bramble and blackthorn should be cut back regularly or removed manually.

6. La Biloterie, St. Saviours



Site description: Several low-lying fields close to the West Coast.

Size: 2.08ha.

Owners: La Societe Guernesiaise and private.

Habitats: Swamp, Semi-improved Marshy Grassland. Also Improved Grassland, Dense Scrub.

Notable species – Plants: Water Dock (*Rumex hydrolapathum*) and Marsh Woundwort (*Stachys palustris*) – rare locally. Slender Spike-rush (*Eleocharis uniglumis*) - very rare record for Guernsey (record awaiting verification).

Notable species - Birds: Song Thrush (*Turdus philomelos*) Starling (*Sturnus vulgaris*) and House Sparrow (*Passer domesticus*) are all UK red-listed. Also Grey Heron (*Ardea cinerea*), Marsh Harrier (*Circus aeruginosus*), Kestrel (*Falco tinnunculus*), Swallow (*Hirundo rustica*), Reed Warbler (*Acrocephalus scirpaceus*), Blackcap (*Sylvia atricapilla*).

Threats: Agricultural improvement, coastal flooding, scrub encroachment.

Recommended management: The fields would benefit from annual hay-cutting followed by autumn grazing. Areas of reedbed (swamp) should be cut periodically to prevent rank growth and willow encroachment.

7. La Marette, Vale (not recommended for ABI designation)



Site description: A former greenhouse site which was cleared and planted as a mixed orchard. The site is managed as a nature reserve.

Size: 0.24ha.

Owners: La Societe Guernesiaise.

Habitats: Planted Woodland (orchard).

Notable species – Plants: Early Meadow-grass (Poa infirma) - <250 sites in the British Isles.

Notable species - Birds: Starling (*Sturnus vulgaris*) and House Sparrow (*Passer domesticus*) are both UK redlisted. Also Blackcap (*Sylvia atricapilla*).

Threats: Scrub encroachment, invasive non-native species, human disturbance.

Recommended management: The grassland understorey should be cut 1-2 times/year and boundary habitats cut every 1-2 years.

8. Le Catioroc, St. Saviours



Site description: A publicly-accessible low ridge supporting mixed habitats.

Size: 1.42ha.

Owners: National Trust of Guernsey and private.

Habitats: Semi-improved Grassland, Planted Coniferous Woodland, Dense Scrub. Also Improved Grassland.

Notable species – Plants: Tree Mallow (*Malva arborea*) and Purple Fumitory (*Fumaria purpurea*) - <250 sites in the British Isles.

Notable species - **Birds:** Cuckoo (*Cuculus canorus*), Song Thrush (*Turdus philomelos*) and Linnet (*Linaria cannabina*) are all UK red-listed. Also Kestrel (*Falco tinnunculus*), Blackcap (*Sylvia atricapilla*), Bullfinch (*Pyrrhula pyrrhula*).

Threats: Scrub encroachment.

Recommended management: The site is already managed sympathetically by the owners. It would be beneficial to monitor the extent of scrub to ensure it does encroach over species-rich grassland habitats.

9. Le Guet, Castel



Site description: A planted woodland used as a popular amenity area.

Size: 5.29ha.

Owners: States of Guernsey.

Habitats: Planted Coniferous Woodland and Dense Scrub. Also limited Planted Semi-natural Woodland.

Notable species – Plants: Lanceolate Spleenwort (*Asplenium obovatum ssp.billotii*) - <250 sites in the British Isles, though common in Guernsey. Four-leaved Allseed (*Polycarpon tetraphyllum*) - <100 sites in the British Isles, though common in Guernsey. Little Robin (*Geranium purpureum*) - <100 sites in the British Isles. Madeiran Geranium (*Geranium maderiensis*) is on the European endangered species list. Guernsey Elm (*Ulmus minor ssp. sarniensis*) - endemic to Guernsey

Notable species- Birds: Song Thrush (*Turdus philomelos*) is UK red-listed. Also Buzzard (*Buteo buteo*), Short-toed Treecreeper (*Certhia brachydactyla*), Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*).

Threats: Human disturbance, storm damage, invasive non-native species such as Montbretia (*Crocosmia* spp.) and Japanese Knotweed (*Fallopia japonica*). The existing Monterey pines are all of the same age and are reaching the end of their natural life.

Recommended management: The States of Guernsey are currently implementing a replanting programme in order to create a more mixed woodland habitat.

10. Les Tracheries, Vale



Site description: Several low-lying fields and associated mixed habitats.

Size: 2.71ha.

Owners: Private.

Habitats: Semi-improved Marshy Grassland, Semi-improved Grassland, Improved Grassland. Also Tall Ruderal, Semi-natural Broadleaved Woodland, Planted Broadleaved Woodland, Dense Scrub.

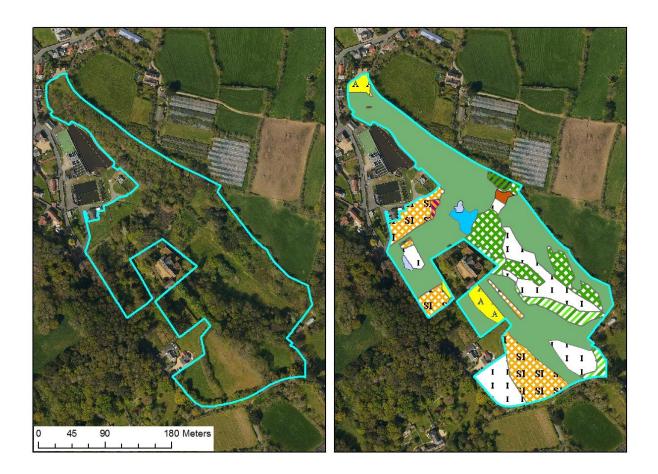
Notable species – Plants: Yellow Bartsia (*Parentucellia viscose*) Galingale (*Cyperus longus*) and Ivy Broomrape (*Orobanche hederae*) - <100 sites in the British Isles. Many-stalked Spike-rush (*Eleocharis multicaulis*) - very rare locally.

Notable species - Birds: Song Thrush (*Turdus philomelos*) and House Sparrow (*Passer domesticus*) are both UK red-listed. Also Buzzard (*Buteo buteo*), Sparrowhawk (*Accipiter nisus*), Moorhen (*Gallinula chloropus*), Blackcap (*Sylvia atricapilla*).

Threats: Agricultural improvement or lack of appropriate management.

Recommended management: Ideally the fields should be grazed by cattle or cut for hay and grazed in autumn. Boundary habitats should be cut every 1-2 years to prevent encroachment.

11. Rue a l'Eau, Castel



Site description: A predominantly wooded hillside supporting various habitats.

Size: 5.94ha.

Owners: States of Guernsey and private.

Habitats: Semi-natural Broadleaved Woodland, Semi-improved Grassland. Also Improved Grassland, Planted Woodland, Planted Broadleaved Woodland, Planted Mixed Woodland, Semi-improved Marshy Grassland, Amenity Grassland.

Notable species – Plants: Water-plantain (*Alisma plantago-aquatica*), Tufted Forget-me-not (*Myosotis laxa*), Wild Strawberry (*Fragaria vesca*) and Branched Bur-reed (*Sparganium erectum*) – rare locally. Galingale (*Cyperus longus*), Slender Bird's-foot-trefoil (*Lotus angustissima*), Little Robin (*Geranium purpureum*) and Four-leaved Allseed (*Polycarpon tetraphyllum*) - <100 sites in the British Isles. Ivy Broomrape (*Orobanche hederae*) - <250 sites in the British Isles.

Notable species – Birds: Song Thrush (*Turdus philomelos*) is UK red-listed. Also Buzzard (*Buteo buteo*), Moorhen (*Gallinula chloropus*), Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*), Short-toed Treecreeper (*Certhia brachydactyla*).

Threats: Agricultural improvement, over-intensive management (frequent mowing).

Recommended management: The woodland habitats do not require specific management. The grasslands should ideally be cut infrequently and the cuttings removed e.g. as hay. Larger areas could be grazed by cattle or sheep.

12. Rue des Deslisles, Castel



Site description: A block of farmed fields with large associated mixed hedgerows.

Size: 4.59ha

Owners: Private

Habitats: Semi-improved Grassland, Improved Grassland, Planted Broadleaved Woodland, Semi-natural Broadleaved Woodland. Also Parkland, Semi-improved Marshy Grassland.

Notable species – **Plants:** Galingale (*Cyperus longus*), Toothed Medick (*Medicago polymorpha*), and Fourleaved Allseed (*Polycarpon tetraphyllum*) - <100 sites in the British Isles. Common Amaranth (*Amaranthus retroflexus*) and Swine-cress (*Lepidium coronopus*) – rare locally. Guernsey Elm (*Ulmus minor ssp. sarniensis*) - endemic to Guernsey.

Notable species- Birds: Swift (*Apus apus*), Song Thrush (*Turdus philomelos*) and Starling (*Sturnus vulgaris*) are all UK red-listed. Also Buzzard (*Buteo buteo*), Kestrel (*Falco tinnunculus*), Raven (*Corvus corax*), Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*)

Threats: Agricultural improvement – several fields have already been impacted by intensive management.

Recommended management: The fields should be cut for hay and/or grazed. They should not be re-seeded or treated with agri-chemicals such as fertilizers or herbicides.

13. Rue Mainguy, Vale



Site description: An area of small fields and associated habitats used as a campsite, adjacent to an existing ABI.

Size: 5.43ha.

Owners: Private.

Habitats: Mainly Improved Grassland, with some Semi-improved Marshy Grassland and Planted Broadleaved Woodland. Also Amenity Grassland, Dense Scrub, Semi-natural Broadleaved Woodland and Open Water.

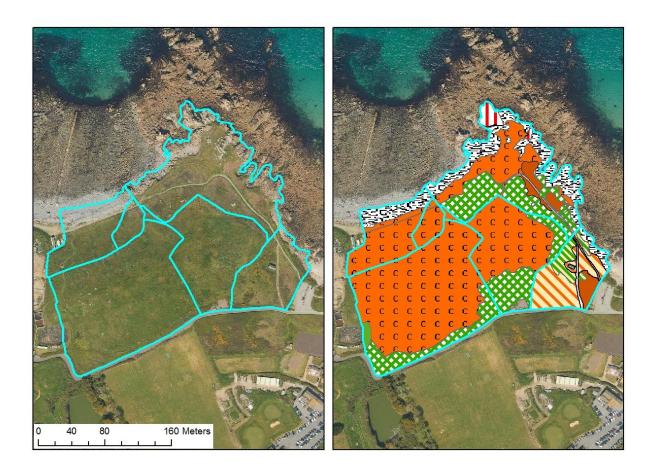
Notable species – Plants: Loose-flowered Orchid (*Anacamptis laxiflora*) - <25 sites in the UK. Galingale (*Cyperus longus*) - <100 sites in the British Isles. Narrow-leaved Bird's-foot-trefoil (*Lotus tenuis*) and Ivy Broomrape (*Orobanche hederae*) - <250 sites in the British Isles.

Notable species – **Birds:** Song Thrush (*Turdus philomelos*), Starling (*Sturnus vulgaris*) and House Sparrow (Passer domesticus) are all UK red-listed. Also Buzzard (*Buteo buteo*), Kestrel (*Falco tinnunculus*), Moorhen (*Gallinula chloropus*), Reed Warbler (*Acrocephalus scirpaceus*), Firecrest (*Regulus ignicapillus*).

Threats: Over-intensive management such as frequent mowing, agricultural improvement.

Recommended management: The fields should not be ploughed and reseeded and should be maintained without the use of fertilizer or herbicides.

14. Creve Coeur, Vale



Site description: A former landfill site which has been restored to coastal grassland and associated habitats.

Size: 5.72ha.

Owners: States of Guernsey.

Habitats: Coastal Grassland, Dense Scrub, Dune Grassland. Also Rock, Continuous Bracken and Dune Scrub.

Notable species – Plants: Wild Leek (*Allium ampeloprasum*) - <250 sites in the British Isles. Teasel (*Dipsacus fullonum*) - rare locally.

Indian Strawberry (*Potentilla indica*) and Brown Knapweed (*Centaurea jacea*) originate from a seed mix sown on the land as part of the restoration.

Notable species - Birds: Song Thrush (*Turdus philomelos*) Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*) and Linnet (*Linaria cannabina*) are all UK red-listed. Also Swallow (*Hirundo rustica*), Stonechat (*Saxicola rusticola*), Whitethroat (*Sylvia communis*) and migrant Honey Buzzard (*Pernis apivorus*).

Threats: Scrub encroachment, invasive non-native species such as Pampas grass, human disturbance.

Recommended management: The grassland habitats should be cut annually and the associated scrub kept in check. Annual grazing by cattle or sheep would be beneficial.

15. Rue des Pres, St. Peters



Site description: A valley comprised mostly of large mature gardens and a number of small fields.

Size: 2.60ha.

Owners: Private

Habitats: Planted Broadleaved Woodland, Semi-improved Grassland, Amenity Grassland. Also Improved Grassland.

Notable species – Plants: Galingale (*Cyperus longus*) and Cornish Moneywort (*Sibthorpia europaea*) - <100 sites in the British Isles. Creeping Jenny (*Lysimachia nummularia*), Hybrid Woundwort (*Stachys x ambigu*) and Royal Fern (*Osmunda regalis*) - rare locally.

Notable species – Birds: Song Thrush (Turdus philomelos) is UK red-listed. Also Blackcap (Sylvia atricapilla).

Threats: Over-management associated with gardens.

Recommended management: The site benefits from variable management regimes from different landowners.

16. Le Petit Axce, Vale



Site description: A low-lying area comprising a remnant of a formerly extensive wetland system.

Size: 1.24ha.

Owners: Private.

Habitats: Swamp, Semi-improved Marshy Grassland, Improved Grassland, Dense Scrub. Also Semi-improved Grassland, Amenity Grassland.

Notable species – Plants: Galingale (Cyperus longus) - <100 sites in the British Isles.

NB - Due to access constraints, this site was surveyed late in the year. A spring/early summer survey would be required in order to be comparable with other sites.

Notable species - Birds: Starling (*Sturnus vulgaris*) and House Sparrow (*Passer domesticus*) are both UK redlisted. Also Moorhen (*Gallinula chloropus*), Chiffchaff (*Phylloscopus collybita*).

Threats: Land drainage, lack of management, agricultural improvement.

Recommended management: The grassland habitats should be cut and/or grazed annually as site conditions allow. Ideally the swamp should be cut periodically to prevent encroachment of rank vegetation or willow scrub.

17. Rue des Vinaires, St. Peters



Site description: A valley comprising small fields and fragmented mixed habitats.

Size: 7.88ha.

Owners: Private.

Habitats: Mixed including Improved Grassland, Dense Scrub, Continuous Bracken and Tall Ruderal. Also Semiimproved Grassland, Planted Broadleaved Woodland and Arable Land.

Notable species – Plants: Butcher's Broom (*Ruscus aculeatus*) - <250 sites in the British Isles. Galingale (*Cyperus longus*), Slender Bird's-foot-trefoil (*Lotus tenuis*) and Four-leaved Allseed (*Polycarpon tetraphyllum*) - <100 sites in the British Isles. Guernsey Elm (*Ulmus minor ssp. sarniensis*) - endemic to Guernsey.

Notable species – **Birds:** Cuckoo (*Cuculus canorus*), Song Thrush (*Turdus philomelos*) and House Sparrow (*Passer domesticus*) are all UK red-listed. Also Buzzard (*Buteo buteo*), Sparrowhawk (*Accipiter nisus*), Moorhen (*Gallinula chloropus*), Blackcap (*Sylvia atricapilla*), Bullfinch (*Pyrrhula pyrrhula*).

Threats: Over-management such as frequent mowing, agricultural improvement.

Recommended management: The site benefits to a degree from variable management regimes from different landowners. However, the grassland habitats should generally be mowed no more than 1-2 times/year and/or grazed with sheep or cattle.

18. Rue de la Cloture, Torteval



Site description: Three small fields with traditional boundary earthbanks, adjoining other ABI-designated land.

Size: 1.25ha.

Owners: Private.

Habitats: Semi-improved Grassland.

Notable species – Plants: Exceptional quantities of Bird's-foot (Ornithopus perpusillus).

NB - This site was surveyed after a hay cut. A spring/early summer survey would be required in order to be comparable with other sites.

Notable species – **Birds:** Cuckoo (*Cuculus canorus*), House Sparrow (*Passer domesticus*) and Linnet (*Linaria cannabina*) are all UK red-listed. Also House Martin (*Delichon urbica*), Swallow (*Hirundo rustica*), Whitethroat (*Sylvia communis*) and migrant Spotted Flycatcher (*Muscicapa striata*).

Threats: Agricultural improvement.

Recommended management: The existing management of an annual hay cut is appropriate. Agri-chemicals should not be applied to the land.

APPENDIX 3 SITE DESCRIPTIONS OF PROPOSED NEW ABIS – CHURCHYARDS (10 IN TOTAL)

19. Castel Church



Site description: A parish cemetery of moderate size.

Size: 1.08ha.

Owners: Church of England/Castel Parish.

Habitats: Amenity Grassland with some Planted Broadleaved Woodland.

Notable species – Plants: Annual Wall-rocket (*Diplotaxis muralis*) - rare locally. Subterranean Clover (*Trifolium subterraneum*) - <250 sites in the British Isles.

Notable species - Birds: House Sparrow (*Passer domesticus*) is UK red-listed. Also Buzzard (*Buteo buteo*), Raven (*Corvus corax*), Long-tailed Tit (*Aegithalos caudatus*).

Threats: Over-intensive management of grassland habitat, use of chemicals.

Recommended management: The grassland should be maintained without the use of fertilizers or herbicides. Ideally cuttings should be removed.

20. Forest Church



Site description: A parish cemetery of small size.

Size: 0.21ha

Owners: Church of England/Forest Parish

Habitats: Semi-improved Grassland

Notable species - Plants: Guernsey Elm (Ulmus minor ssp. sarniensis) - endemic to Guernsey.

Notable species - Birds: Starling (Sturnus vulgaris) is UK red-listed. Also Kestrel (Falco tinnunculus).

Threats: Over-intensive management of grassland habitat, use of chemicals.

Recommended management: The existing maintenance regime is satisfactory. The grassland should be maintained without the use of fertilizers or herbicides. Ideally cuttings should be removed.

21. Foulon Cemetery



Site description: A parish cemetery of large size.

Size: 5.11ha

Owners: States of Guernsey

Habitats: Semi-improved Grassland, Improved Grassland, Amenity Grassland. Also Planted Mixed Woodland, Planted Broadleaved Woodland.

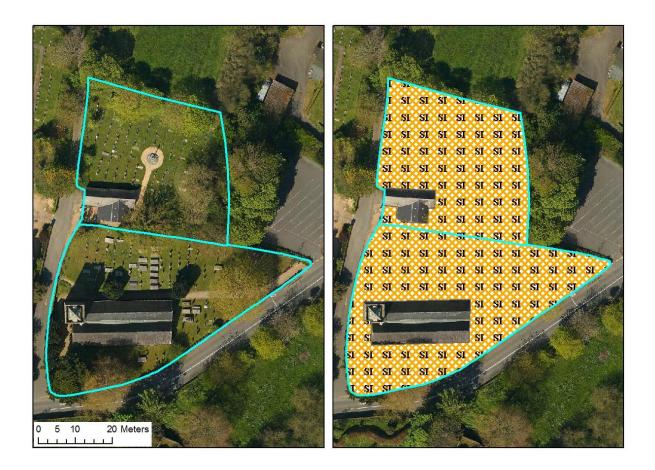
Notable species – **Plants:** Four-leaved Allseed (*Polycarpon tetraphyllum*) and Hairy Bird's-foot-trefoil (*Lotus subbiflorus*) - <100 sites in the British Isles. Narrow-leaved Pepperwort (*Lepidium ruderale*) – rare locally.

Notable species - Birds: Swift (*Apus apus*) and Song Thrush (*Turdus philomelos*) are both UK red-listed. Also Firecrest (Regulus ignicapillis), Short-toed Treecreeper (Certhia brachydactyla).

Threats: Over-intensive management of grassland habitat, use of chemicals.

Recommended management: The maintenance regime of the western half is satisfactory. The eastern half of the area would benefit from less intensive maintenance, with the cuttings removed. The grassland should be maintained without the use of fertilizers or herbicides.

22. St. Andrew's Church



Site description: A parish cemetery of small size.

Size: 0.35ha.

Owners: Church of England/St. Andrew's Parish.

Habitats: Semi-improved Grassland with scattered trees.

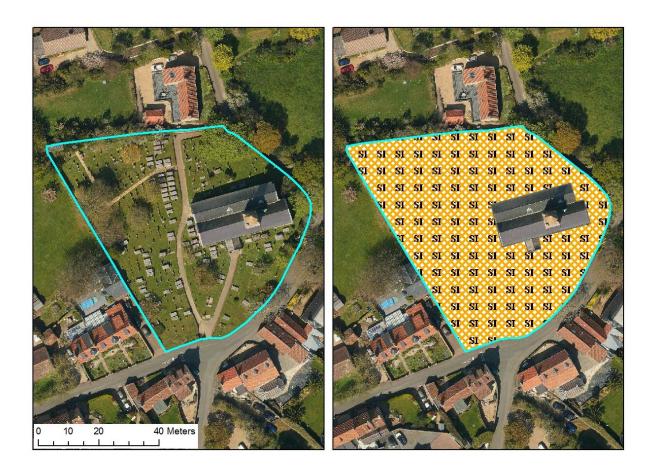
Notable species - Plants: Guernsey Elm (Ulmus minor ssp. sarniensis) - endemic to Guernsey.

Notable species - Birds: Song Thrush (*Turdus philomelos*) and House Sparrow (*Passer domesticus*) are both UK red-listed. Also Bullfinch (*Pyrrhula pyrrhula*).

Threats: Over-intensive maintenance of grassland habitat, use of chemicals.

Recommended management: The existing maintenance regime is satisfactory. Ideally cuttings should be removed and the grassland maintained without the use of fertilizers or herbicides.

23. St. Martin's Church



Site description: A parish cemetery of small size.

Size: 0.41ha

Owners: Church of England/St. Martin's Parish

Habitats: Semi-improved Grassland with scattered trees.

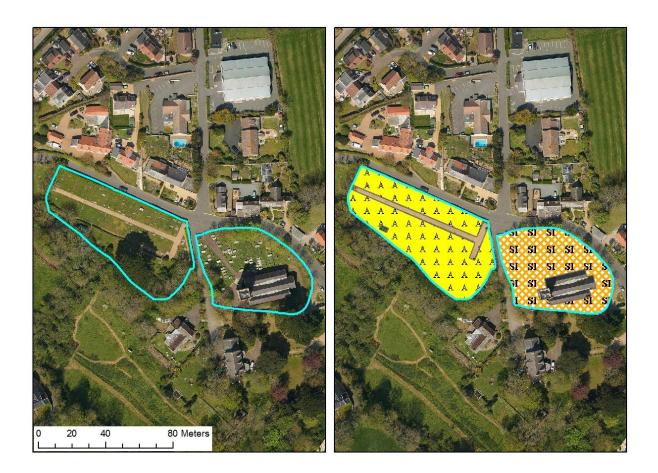
Notable species – Plants: None recorded during survey.

Notable species - Birds: House Sparrow (Passer domesticus) is UK red-listed. Also Blackcap (Sylvia atricapilla).

Threats: Over-intensive maintenance of grassland habitat, use of chemicals.

Recommended management: The existing maintenance regime is satisfactory. Ideally cuttings should be removed and the grassland maintained without the use of fertilizers or herbicides.

24. St. Peter's Church



Site description: A parish cemetery of moderate size.

Size: 0.62ha

Owners: Church of England/St. Peter's Parish

Habitats: Semi-improved Grassland, Amenity grassland and boundary trees.

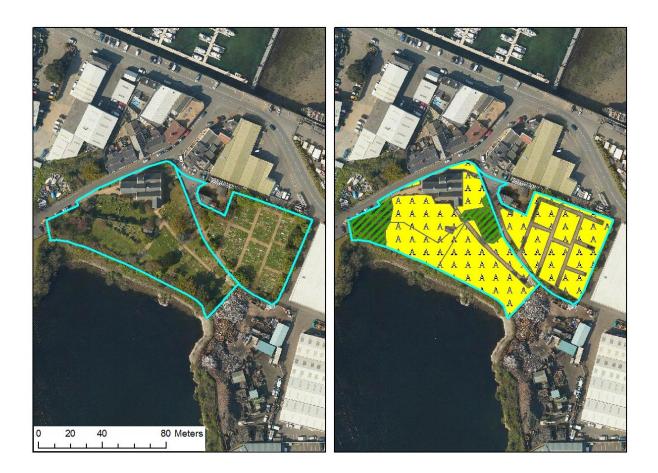
Notable species – Plants: Shaggy Mouse-ear-hawkweed (*Pilosella peleteriana*) - <25 sites in the British Isles. Four-leaved Allseed (*Polycarpon tetraphyllum*) and Hairy Bird's-foot-trefoil (*Lotus subbiflorus*) - <100 sites in the British Isles. Autumn Lady's-tresses (*Spiranthes spiralis*) – scarce locally.

Notable species - Birds: Blackcap (Sylvia atricapilla), Firecrest (Regulus ignicapillis).

Threats: Over-intensive maintenance of grassland habitat, use of chemicals.

Recommended management: The existing maintenance regime of the older eastern half is satisfactory. The newer western half would likely become species-rich over time. Ideally cuttings should be removed from all areas and the grassland maintained without the use of fertilizers or herbicides.

25. St. Sampson's Church



Site description: A parish cemetery of moderate size.

Size: 0.84ha.

Owners: Church of England/St. Sampson's Parish.

Habitats: Amenity Grassland, Planted Broadleaved Woodland.

Notable species – Plants: Galingale (*Cyperus longus*) and Four-leaved Allseed (*Polycarpon tetraphyllum*) - <100 sites in the British Isles.

Notable species - Birds: Swift (*Apus apus*), Starling (*Sturnus vulgaris*), Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) are all UK red-listed.

Threats: Over-intensive maintenance of grassland habitat, use of chemicals.

Recommended management: The grasslands may benefit from less intensive maintenance, with the cuttings removed and without the use of fertilizers or herbicides.

26. St Saviour's Church



Site description: A parish cemetery of moderate size.

Size: 0.67ha

Owners: Church of England/St. Saviour's Parish

Habitats: Semi-improved Grassland and boundary trees

Notable species – Plants: Four-leaved Allseed (*Polycarpon tetraphyllum*is) - <100 sites in the British Isles.

Notable species - Birds: Blackcap (Sylvia atricapilla), Firecrest (Regulus ignicapillis).

Threats: Over-intensive maintenance of grassland habitat, use of chemicals.

Recommended management: The existing maintenance regime appears satisfactory. Ideally cuttings should be removed from all areas and the grassland maintained without the use of fertilizers or herbicides.

27. Torteval Church



Site description: A parish cemetery of small size with an adjoining wooded area. The eastern portion of woodland is managed as a nature reserve.

Size: 0.53ha.

Owners: Church of England/Torteval Parish and La Societe Guernesiaise.

Habitats: Amenity Grassland, Planted Broadleaved Woodland.

Notable species – Plants: None recorded during survey. A range of fungi noted but not surveyed.

NB - This site was surveyed late in the season. A spring/early summer survey would be required in order to be comparable with other sites.

Notable species- Birds: Buzzard (Buteo buteo), Blackcap (Sylvia atricapilla).

Threats: Over-intensive maintenance of grassland habitat, use of chemicals, invasive non-native species in woodland.

Recommended management: The grasslands may benefit from less intensive maintenance, with the cuttings removed and without the use of fertilizers or herbicides. Invasive species should be removed from woodland.

28. Vale Church



Site description: A parish cemetery of large size.

Size: 1.73ha.

Owners: Church of England/Vale Parish

Habitats: Dune Grassland with scattered trees.

Notable species – Plants: Four-leaved Allseed (*Polycarpon tetraphyllum*is) - <100 sites in the British Isles.

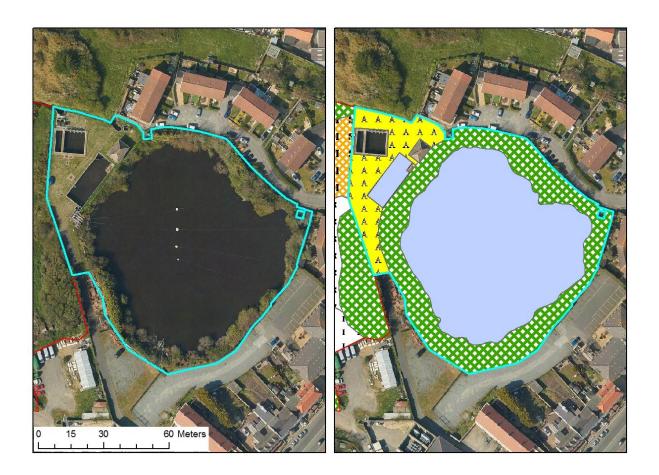
Notable species- Birds: House Sparrow (Passer domesticus) is UK red-listed.

Threats: Over-intensive maintenance of grassland habitat, use of chemicals.

Recommended management: The existing maintenance regime appears satisfactory. Ideally cuttings should be removed from all areas and the grassland maintained without the use of fertilizers or herbicides.

APPENDIX 4 SITE DESCRIPTIONS OF PROPOSED NEW ABIS -FLOODED QUARRIES (28 IN TOTAL)

29. Barker's Quarry, St. Sampsons



Site description: A flooded quarry of moderate sizesurrounded by scrub.

Size: 0.98ha.

Owners: States of Guernsey.

Habitats: Standing Water, Dense Scrub, Amenity Grassland.

Notable species: Starling (*Sturnus vulgaris*), Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – all UK red-listed. Also Coot (*Fulica atra*), Moorhen (*Gallinula chloropus*).

Threats: Disturbance, introduction of invasive non-native species.

30. Capelles Quarry, St. Sampsons



Site description: A small flooded quarry surrounded by scrub and woodland.

Size: 0.75ha.

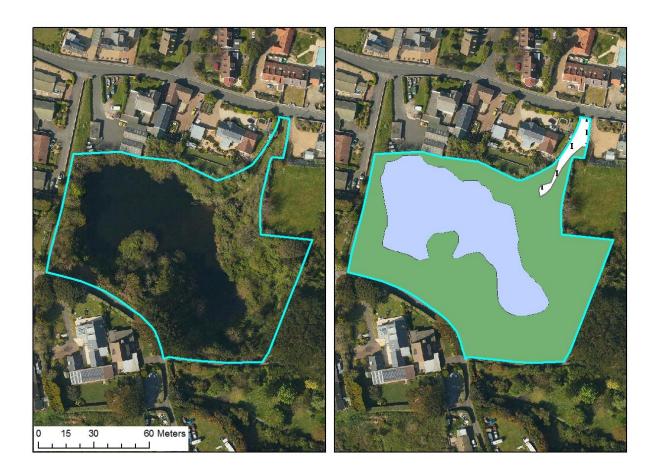
Owners: States of Guernsey

Habitats: Standing Water, Semi-natural Broadleaved Woodland.

Notable species: Starling (*Sturnus vulgaris*), Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – all UK red-listed. Also Buzzard (*Buteo buteo*), Blackcap (*Sylvia atricapilla*).

Threats: Introduction of invasive non-native species,

31. Carteret Quarry, Castel



Site description: A flooded quarry of moderate size with extensive surrounding woodland.

Size: 1.11ha.

Owners: States of Guernsey.

Habitats: Standing Water, Semi-natural Broadleaved Woodland.

Notable species: Starling (*Sturnus vulgaris*), Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – all UK red-listed. Also Buzzard (*Buteo buteo*), Moorhen (*Gallinula chloropus*), Blackcap, Chiffchaff (*Phylloscopus collybita*), Bullfinch (*Pyrrhula pyrrhula*).

Threats: Disturbance, introduction of invasive non-native species.

32. Guillotin Quarry, Vale



Site description: A flooded quarry of moderate size with surrounding scrub.

Size: 1.17ha.

Owners: Private.

Habitats: Standing Water, Dense Scrub. Also Improved Grassland.

Notable species: Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – both UK red-listed. Little Grebe (*Tachybaptus ruficollis*) - rare local breeding species. Also Coot (*Fulica atra*), Moorhen (*Gallinula chloropus*).

Threats: Infilling by landowner, disturbance, introduction of invasive non-native species.

Recommended management: Prevent further infilling.

33. Hougue Ricart Quarry, Vale



Site description: A large flooded quarry with surrounding scrub.

Size: 2.41ha

Owners: States of Guernsey

Habitats: Standing Water, Dense Scrub. Also Amenity Grassland Improved Grassland, Brownfield.

Notable species: Grey Heron (*Ardea cinerea*), Kestrel (*Falco tinnunculus*), Sparrowhawk, (*Accipiter nisus*), Blackcap (*Sylvia atricapilla*), Raven (*Corvus corax*).

Threats: Disturbance, introduction of invasive non-native species.

Recommended management: No active management required. Monitoring of site for non-native species.

34. Irene & Robine Quarry, Castel



Site description: Two small flooded quarries with surrounding scrub.

Size: 0.44ha

Owners: Private.

Habitats: Standing Water, Dense Scrub.

Notable species: Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*) – both UK red-listed. Also Grey Heron (*Ardea cinerea*), Coot (*Fulica atra*).

Threats: Disturbance, introduction of invasive non-native species.

35. Jamblin Quarry, Vale



Site description: A large flooded quarry with surrounding scrub.

Size: 1.49ha.

Owners: States of Guernsey.

Habitats: Standing Water, Dense Scrub. Also Amenity Grassland, Planted Broadleaved Woodland.

Notable species: Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*) – both UK red-listed. Also Kestrel (*Falco tinnuculus*), Moorhen (*Gallinula chloropus*), Blackcap (*Sylvia atricapilla*)

Threats: Introduction of invasive non-native species.

36. Juas Quarry, Vale



Site description: A large flooded quarry with surrounding scrub and woodland.

Size: 4.84ha

Owners: States of Guernsey

Habitats: Standing Water, Semi-natural Broadleaved Woodland, Dense Scrub. Also Semi-natural Grassland, Continuous Bracken, Amenity Grassland.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Also Kestrel (*Falco tinnunculus*), Coot (*Fulica atra*), Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*).

Threats: Disturbance.

37. L'Epine Quarry, Vale



Site description: One of a pair of flooded quarries, both of moderate size.

Size: 0.98ha

Owners: States of Guernsey

Habitats: Standing Water, Semi-natural Broadleaved Woodland, Dense Scrub. Also Amenity Grassland.

Notable species: Song Thrush (Turdus philomelos) – UK red-listed. Also Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*).

Threats: Disturbance, introduction of invasive non-native species.

Recommended management: No active management required. Monitoring of site for non-native species.

38. La Houguette Balan Quarry, Vale



Site description: A small flooded quarry with adjoining scrub and woodland.

Size: 0.49ha

Owners: Private

Habitats: Standing Water, Dense Scrub, Planted Broadleaved Woodland.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Also Moorhen (*Gallinula chloropus*), Chiffchaff (*Phylloscopus collybita*).

Threats: Introduction of invasive non-native species.

39. Hougue Du Moulin Quarry, Vale



Site description: A small flooded quarry surrounded by scrub.

Size: 0.82ha.

Owners: Private.

Habitats: Standing Water, Dense Scrub.

Notable species: Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – both UK red-listed. Also Kestrel (*Falco tinnunculus*), Swallow (*Hirundo rustica*).

Threats: Disturbance, development, over-intensive management of habitats, introduction of invasive non-native species.

40. Marais Quarry, Vale



Site description: A flooded quarry of moderate size with associated scrub.

Size: 1.06ha.

Owners: States of Guernsey.

Habitats: Standing Water, Dense Scrub, Improved Grassland. Also Brownfield.

Notable species: Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*) – both UK red-listed. Also Moorhen (*Gallinula chloropus*), House Martin (*Delichon urbica*).

Threats: Introduction of invasive non-native species.

Recommended management: No active management required. Monitoring of site for non-native species.

41. Noirmont Quarry, Vale



Site description: A large flooded quarry used for farming of marine shellfish.

Size: 2.76ha.

Owners: Private.

Habitats: Standing Water (saline), Dense Scrub, Hard Cliff. Also Improved Grassland.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Breeding Raven (Corvus corax) - rare local breeding species. Also House Martin (*Delichon urbica*), Blackcap (*Sylvia atricapilla*).

Threats: Disturbance, pollution, introduction of invasive non-native (marine) species.

42. Old Quarry – Cotes Des Amarreurs, Vale



Site description: A flooded quarry of moderate size and surrounding scrub.

Size: 1.95ha.

Owners: Private.

Habitats: Standing Water, Dense Scrub. Also Amenity Grassland, Dune Grassland.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Also Kestrel (*Falco tinnuculus*), Moorhen (*Gallinula chloropus*), Swallow (*Hirundo rustica*), Whitethroat (*Sylvia communis*)

Threats: Disturbance, introduction of invasive non-native species.

43. Old Quarry – Grande Maison Road, St. Sampsons



Site description: A flooded quarry of moderate size and associated scrub and woodland.

Size: 1.98ha.

Owners: Private.

Habitats: Standing Water, Dense Scrub, Semi-natural Broadleaved Woodland, Planted Mixed Woodland. Also Amenity Grassland.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Also Grey Heron (*Ardea cinerea*), Coot (*Fulica atra*), Chiffchaff (*Phylloscopus collybita*), Raven (*Corvus corax*).

Threats: Disturbance, introduction of invasive non-native species.

44. Old Quarry – La Corvee Road, Vale



Site description: A small flooded quarry with surrounding woodland and scrub.

Size: 0.88ha.

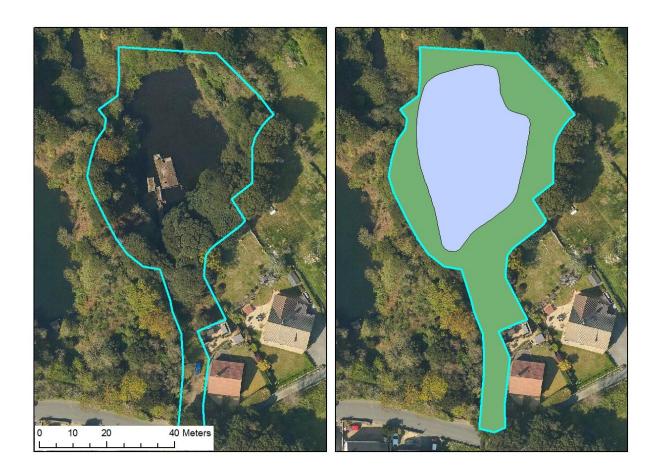
Owners: States of Guernsey.

Habitats: Standing Water, Dense Scrub, Semi-natural Broadleaved Woodland.

Notable species: Starling (Sturnus vulgaris), House Sparrow (Passer domesticus) – both UK red-listed.

Threats: Introduction of invasive non-native species

45. Old Quarry – La Maison Au Compte, Vale



Site description: A small flooded quarry surrounded by woodland.

Size: 0.30ha.

Owners: Private.

Habitats: Standing Water, Semi-natural Broadleaved Woodland.

Notable species: Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – both UK red-listed. Also Buzzard (*Buteo buteo*), Blackcap (*Sylvia atricapilla*), Bullfinch (*Pyrrhula pyrrhula*).

Threats: Disturbance, introduction of invasive non-native species.

46. Old Quarry – La Route De La Lande, Vale



Site description: A small flooded quarry and associated scrub.

Size: 0.64ha

Owners: Private.

Habitats: Standing Water, Dense Scrub. Also Improved Grassland, Arable Land.

Notable species: Starling (*Sturnus vulgaris*), Linnet (*Linaria cannbina*), House Sparrow (*Passer domesticus*) – all UK red-listed. Also Kestrel (*Falco tinnuculus*), Moorhen (*Gallinula chloropus*).

Threats: Disturbance, introduction of invasive non-native species, intensive management of surrounding area.

47. Old Quarry – Rue Batee, Vale



Site description: A small flooded quarry and associated scrub.

Size: 0.73ha.

Owners: Private.

Habitats: Standing Water, Dense Scrub. Also Amenity Grassland, Continuous Bracken.

Notable species: Starling (*Sturnus vulgaris*), Linnet (*Linaria cannbina*), House Sparrow (*Passer domesticus*) – all UK red-listed. Also Moorhen (*Gallinula chloropus*), Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*).

Threats: Disturbance, introduction of invasive non-native species, intensive management of surrounding area.

48. Old Quarry – Rue Des Chapelles, Vale



Site description: A small flooded quarry surrounded by scrub.

Size: 0.28ha.

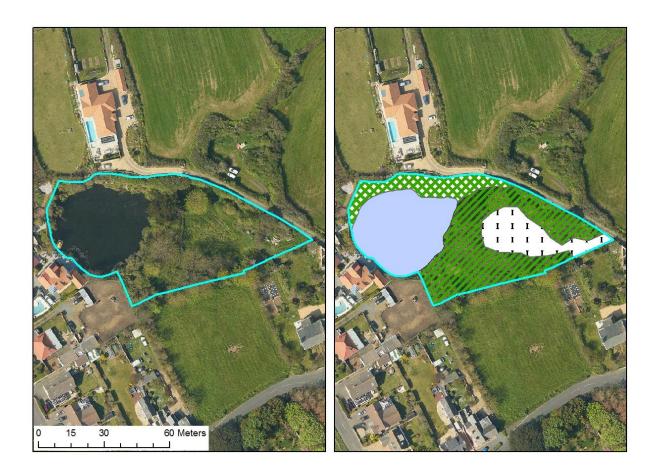
Owners: Private.

Habitats: Standing Water, Dense Scrub.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed.

Threats: Disturbance, introduction of invasive non-native species.

49. Old Quarry – Rue Des Cottes, Vale



Site description: A small flooded quarry and associated scrub and woodland.

Size: 0.46ha.

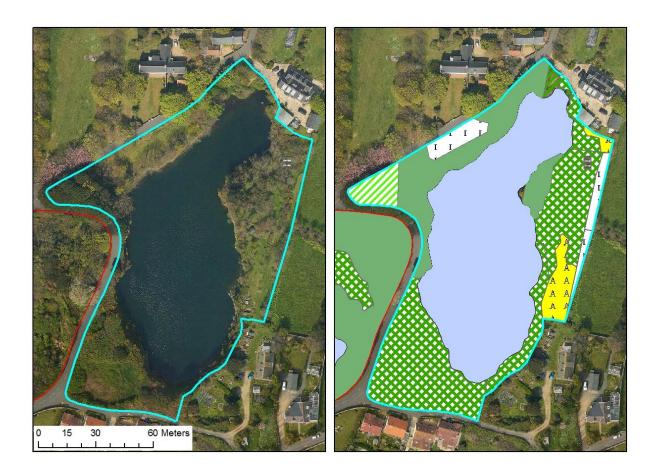
Owners: Private.

Habitats: Standing Water, Dense Scrub, Planted Broadleaved Woodland. Also Improved Grassland.

Notable species: House Sparrow (Passer domesticus) – UK red-listed. Also Swallow (Hirundo rustica).

Threats: Disturbance, introduction of invasive non-native species.

50. Paradis Quarry, Vale



Site description: A flooded quarry of moderate size and associated scrub and woodland.

Size: 1.46ha.

Owners: Private.

Habitats: Standing Water, Dense Scrub, Semi-natural Broadleaved Woodland. Also Improved Grassland, Amenity Grassland.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Also Kestrel (*Falco tinnuculus*), Sparrowhawk (*Accipiter nisus*), Moorhen (*Gallinula chloropus*), Swallow (*Hirundo rustica*), Chiffchaff (*Phylloscopus collybita*)

Threats: Disturbance, residential development at north end.

51. Quarry – Rue Du Chateau, Vale



Site description: A small flooded quarry surrounded by scrub.

Size: 0.63ha.

Owners: Private.

Habitats: Standing Water, Dense Scrub.

Notable species: Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – both UK red-listed. Also Kestrel (Falco tinnunculus), Swallow (Hirundo rustica), Blackcap (Sylvia atricapilla).

Threats: Disturbance, introduction of invasive non-native species.

52. Quarry – Rue Mainguy, Vale



Site description: A small flooded quarry surrounded by woodland.

Size: 0.54ha.

Owners: States of Guernsey.

Habitats: Standing Water, Planted Broadleaved Woodland, Semi-natural Woodland. Also Contiuous Bracken.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Also House Martin (*Delichon urbica*), Blackcap (*Sylvia atricapilla*).

Threats: Introduction of invasive non-native species.

53. Quarry – Torrey Canyon, Vale



Site description: A small flooded quarry contaminated with oil from 1959 Torrey Canyon oil spill. Despite contamination, the quarry surrounds support some wildlife.

Size: 0.34ha.

Owners: States of Guernsey.

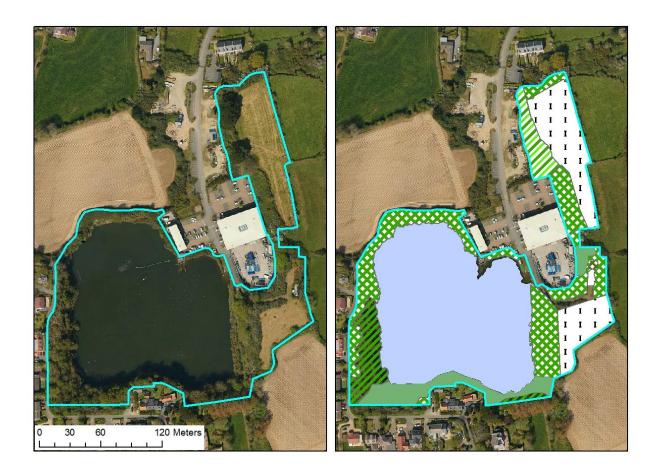
Habitats: Brackish Pool/Standing Water – contaminated, Hard Cliff, Dense Scrub.

Notable species: House Sparrow (*Passer domesticus*) – UK red-listed. Also Kestrel (*Falco tinnunculus*), Willow Warbler (*Phylloscopus trochilus*).

Threats: Existing oil contamination, quarrying development.

Recommended management: Treatment or disposal of contaminated water and clean-up of site.

54. St. Andrew's/Brickfield Quarry, St. Andrews



Site description: A large flooded quarry with mixed associated habitats.

Size: 4.27ha,

Owners: States of Guernsey,

Habitats: Standing Water, Dense Scrub, Planted Broadleaved Woodland, Semi-natural Broadleaved Woodland, Planted Mixed Woodland. Also Improved Grassland.

Notable species: Swift (*Apus apus*), Song Thrush (*Turdus philomelos*), Linnet (*Linaria cannabina*) – all UK red-listed. Also Buzzard (*Buteo buteo*), Peregrine Falcon (*Falco peregrinus*), Coot (*Fulica atra*), Moorhen (*Gallinula chloropus*), Barn Owl (*Tyto alba*), Swallow (*Hirundo rustica*), Blackcap (*Sylvia atricapilla*), Chiffchaff (*Phylloscopus collybita*), Long-tailed Tit (*Aegithalos caudatus*).

Threats: Disturbance, recreation, introduction of invasive non-native species, over-intensive management of grasslands.

Recommended management: The grassland habitats should be cut for hay and/or grazed. They should not be re-seeded or treated with agri-chemicals such as fertilizers or herbicides. Recreational use of the quarry should ideally be monitored and limited if necessary.

55. Tracheries Quarry, St. Sampsons



Site description: A very small quarry and associated woodland and scrub.

Size: 0.08ha.

Owners: Private.

Habitats: Standing Water, Planted Broadleaved Woodland, Dense Scrub.

Notable species: Starling (*Sturnus vulgaris*), Song Thrush (*Turdus philomelos*), House Sparrow (*Passer domesticus*) – all UK red-listed.

Threats: Disturbance, introduction of invasive non-native species.

56. Ville Baudu Quarry, Vale



Site description: A small flooded quarry surrounded by woodland and scrub.

Size: 0.57ha.

Owners: States of Guernsey.

Habitats: Standing Water, Semi-natural Broadleaved Woodland, Dense Scrub. Also Amenity Grassland, Improved Grassland.

Notable species: Song Thrush (*Turdus philomelos*) – UK red-listed. Also Kestrel (*Falco tinnunculus*), Moorhen (*Gallinula chloropus*), Swallow (*Hirundo rustica*).

Threats: Disturbance, introduction of invasive non-native species.