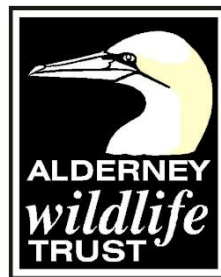


Longis Nature Reserve Annual Action Plan 2022

Report compiled by: Ellen Smith

Reviewed by: Roland Gauvain, Lindsay Pyne, Justin Hart and Mel Broadhurst-Allen

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Alderney Wildlife Trust

48 Victoria Street

Alderney, GY9 3TA

Channel Islands

conservation@alderneywildlife.org

www.alderneywildlife.org

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Executive Summary

As a multi-habitat, species-rich site, Longis Nature Reserve requires a dynamic and bespoke action plan which can be easily adapted according to changing environmental demands. Longis provides important social and environmental services for the island; as a popular recreational area for residents and visitors, alongside the mosaic of habitats found here which are vital for a large number of species. Our action plan has been designed to balance the needs of these different entities, and to meet the objectives set out in the Longis Reserve Management Plan 2017-2021 (Manzano-Rubio and Whyte, 2017). The Management Plan was ratified by the General Services Committee (GSC) of the States of Alderney (SoA) in 2017 and requires the production of an Annual Action Plan and Review. This Action Plan is informed by the key objectives of the 2021 Review.

Due to the pressures brought about by the Covid Pandemic in 2020-21 it has been necessary to role forward the Management Plan 2017-21 into 2022, with the commitment to complete the development of a new 5 year strategy for public consultation and SoA ratification before the end of 2022.

Background

The Longis Reserve (Figure 1) is Alderney's oldest Nature Reserve established in 2003 under a Memorandum of Understandings and agreements between the Alderney Wildlife Trust (AWT), the SoA and several private landowners. The AWT manages the site for the purpose of wildlife conservation while ensuring that the established public use of the site is not affected.



Figure 1 Boundaries of Longis Reserve

The Reserve covers around 80ha at the eastern end of the island. It contains fifteen different terrestrial habitats and forty-nine marine biotopes. Two freshwater ponds provide key habitats for some of Alderney's flagship species and the coastal areas and common are important areas for Alderney Sea-Lavender, Sand Crocus, and the Glanville Fritillary. The reserve as a whole is a crucial refuge for breeding and wintering birds.

It also encompasses significant historical features including numerous bunkers and other German and Victorian fortifications. Longis Common is the site of numerous Bronze Age and Roman artefacts which are part of the rich cultural history of Alderney's landscape.

Aims and Objectives

The Longis Reserve Management Plan (LRMP) (Manzano-Rubio and Whyte, 2017) is the primary management tool defining the main aims guiding the long-term management of the Longis Reserve. The specific guidance for 2022 will be further informed by the 2021 Action Plan (Harper, 2021) and Review (Harper, 2021).

AIM 1: To increase the knowledge about the natural value of the Longis Reserve and its importance within both local and international context.

AIM 2: To conserve the natural value of the Longis Reserve by preserving the diverse range of habitats and species.

AIM 3: To advance the education of the public about the natural value of the Longis Reserve and promote a sustainable recreational use of it.

Within each of the main aims laid out in the LRMP, there are a series of key objectives. To work towards these objectives (listed below), a series of actions will be undertaken in 2022.

Objective 1.1 To update existing data about the size and condition of the important habitats of the Longis Reserve.

Objective 1.2 To update existing data about the breeding status and presence of the important species of the Longis Reserve.

Objective 1.3 To promote scientific research in the Longis Reserve's ecological features, and ensure the results of this research are available to the wider community.

Objective 2.1 To maintain the current size, plant communities and species richness of dune grasslands and coastal grasslands present within the Longis Reserve.

Objective 2.2 To maintain an appropriate balance of tree and shrub cover in the area surrounding Longis Pond, whilst maintaining, and if possible increasing, the current size and species richness of open water and reedbed, allowing and encouraging their natural expansion into adjacent grasslands.

Objective 2.3 To develop Mannez Pond's surrounding vegetation into a wet woodland whilst maintaining the current size and species richness of open water.

Objective 2.4 To maintain the current size and species richness of Houmet Herbé's heathland.

Objective 2.5 To maintain existing Mannez scrub in a favourable status for breeding Dartford Warblers.

Objective 2.6 To maintain the current size, plant community and species richness of Longis open dune.

Objective 2.7 To maintain the current habitat and species richness of the Longis Reserve's marine environment.

Objective 3.1 To maintain the current level of access and its condition.

Objective 3.2 To increase on-site signage about boundaries, features and management of the Longis Reserve whilst maintaining visual impact to a minimum.

Objective 3.3 To maintain and if possible, enhance the existing infrastructure i.e. Longis and Mannez bird hide facilities.

Objective 3.4 To involve the community in regular events and activities.

Actions

A Gantt chart detailing the timetable of works is presented in Appendix 1.

1. Ecological surveying and monitoring

Objective 1.1 seeks to update the existing data about the size and condition of the important habitats of the Longis reserve. To achieve this the following actions are proposed for 2022:

Action 1.1.1 Phase 1 Surveys

The most recent Phase 1 Habitat Survey of Longis reserve was carried out in 2019. We have set the intention of conducting another survey in 2022. This is to allow for the identification of changes in habitat types within the reserve and to evaluate the impacts of conservation action and the Alderney Grazing Animals Project (AGAP).

Actions for 2022:

- Complete another Phase 1 Habitat Survey, perhaps looking to employ a post-graduate student to undertake this study.
- Compare the updated maps to previous versions to assess land use changes and the success of management actions.
- Use updated map to evaluate the AGAP strategy.
- Investigate into using UKHab survey methodology on the reserve.

Objective 1.2 seeks to update the existing data about the breeding status and presence of the important species of the Longis Reserve. To achieve this the following actions are proposed for 2022:

Action 1.2.1 Reedbed monitoring

Systematically monitoring the health of Longis reedbed and the species diversity within it is important for informing the long term management strategy of the area. As of 2019 a standardised reedbed monitoring plan has been implemented (Sydanmaa, 2019).

Actions for 2022:

- Complete reedbed monitoring transects at the highest (February) and lowest (August) water levels of the year.

Action 1.2.2 Bat monitoring

There is already an established bat monitoring route through the reserve (Fig. 1), set up following the National Bat Monitoring Programme (NBMP) guidelines and methodologies (Appendix 2). The Bailiwick Bat Survey was also established in 2021, spanning until 2024. This has increased the scale and accuracy of bat recording within the site. The following survey squares fall within the site:



Figure 2: Survey squares for the Bailiwick Bat Survey which fall within the Reserve.

Actions for 2022:

- Complete NBMP surveys twice in July, following established route and methodology.
- Ensure that all Bailiwick bat survey squares are completed for both parts of the survey season.
- Ensure that all interesting recordings and analysis output is stored within the biological records centre server. See \\AWT2\Share\AlderneyRecords Centre\BiologicalRecords\Terrestrial\Mammals\BATS\Bailiwick Bat Survey_BTO.
- Ensure the survey data is available to the public by sharing it with the Alderney Biodiversity Centre.

Action 1.2.3 Butterfly monitoring

There is already a UK Butterfly Monitoring Scheme (UKBMS) transect located in the reserve (Fig. 3) and this is monitored annually following a set methodology (Appendix 3). Butterfly surveys were largely successfully completed throughout 2021, even despite lockdown.

Actions for 2022:

- Continue with the established UKBMS survey effort.
- Use historical data to draw conclusions on the butterfly populations in Longis and use this when reviewing management practise on the Reserve.

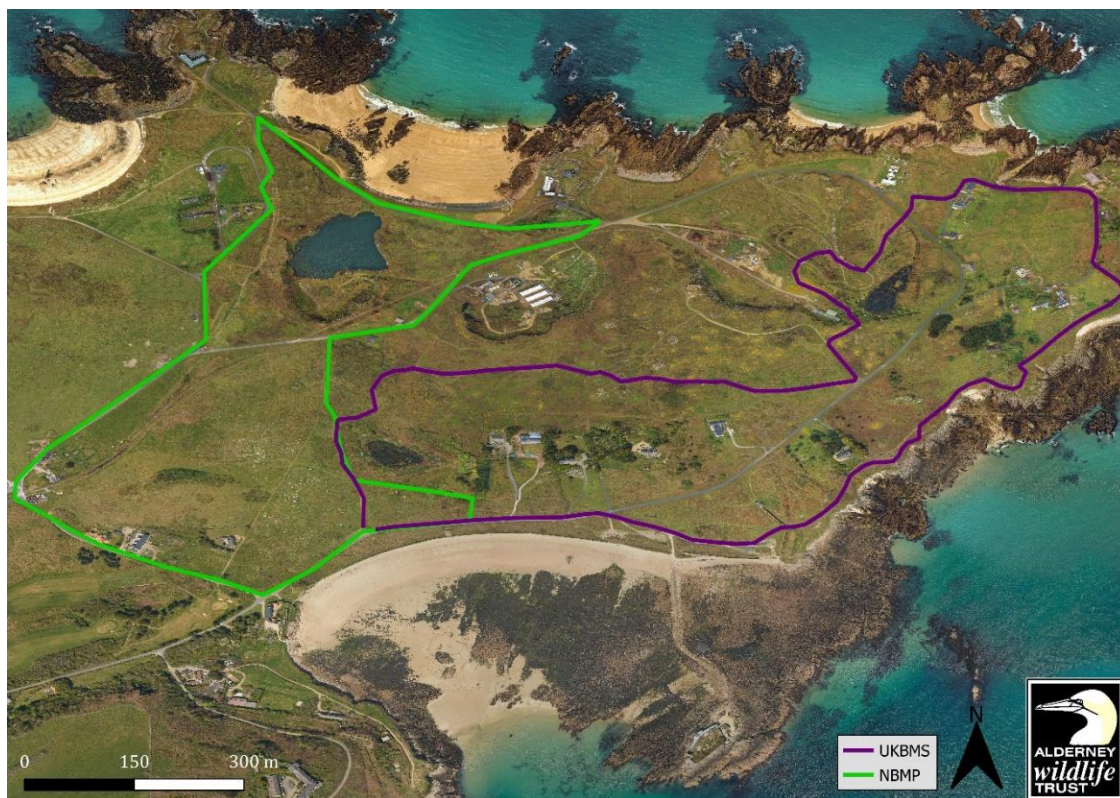


Figure 3. National Bat Monitoring Program (NBMP) and UK Butterfly Monitoring Scheme (UKBMS) transects within Longis Reserve.

Action 1.2.4 Bee monitoring

A bee monitoring plan was established in 2017 following the already established UKBMS transects (Figure 8) in 5 key locations across Alderney, with one of them passing through Longis reserve (Appendix 4). The Bumblebee Conservation Trust has now enabled transect data to be uploaded to their web portal and no longer requires paper copies be scanned and sent.

Actions for 2022:

- Continue bee surveys in the reserve as part of the island wide effort, liaising with the Bumblebee Conservation Trust.
- Continue to examine the historical data to determine if any trends are present for the abundance of Bee species within Longis reserve.
- Use findings from monitoring data to review management practices on the reserve.

Action 1.2.4 Moth monitoring

Moths are key pollinators and should be surveyed alongside bees and butterflies. The AWT runs a moth trap at Essex Farm, and it would be worth assessing the diversity and abundance of moths inhabiting the Longis Nature Reserve, particularly in light of the ongoing Alderney Grazing Animal Project operating across the reserve. See Appendix 5 for Garden Moth Scheme methodology.

Actions for 2022:

- Continue with Garden Moth Scheme, ensuring all records are submitted to the regional coordinator.
- Assess the diversity and abundance of moths found on Longis.

Action 1.2.5 Dragonflies and damselflies

Historically Mannez pond has experienced the most diverse range of dragonfly species of any site on the island, housing many of Alderney's 16 species. After 3 years of failure to maintain areas of open water within the pond a survey of dragonflies was conducted in 2019. In 2020, 5 species of dragonfly and three species of damselfly were recorded on Longis Pond. Four species of dragonfly were recorded on Mannez pond but no damselfly species were seen. The results from 2021 are slightly more negative than the previous year's; 3 species were recorded from Longis Bird Hide (2 dragonfly and 1 damselfly), and 3 from Mannez (2 dragonfly and 1 damselfly).

Actions for 2022:

- Conduct 5 x 30-minute point counts at the ponds at the following times of year: late May, June, July, August and early September. These point counts should be carried out during sunny, calm and dry weather conditions.
- Maintain areas of open water in both ponds, but especially Mannez, to recover the overall invertebrate and Odonata diversity.

Action 1.2.6 Amphibians and Reptiles

Talks began in 2020 between Guernsey Biological Records Centre (GRBC) and the Amphibian & Reptile Conservation (ARC) Trust aiming to expand the National Amphibian and Reptile Recording Scheme (NARRS) to the Bailiwick, similar to Jersey's JARRS. The aim is to create a Bailiwick atlas of herpetological fauna. Talks in early 2021 between GRBC, ARC and AWT led to agreement that the scheme would be named the Guernsey and Alderney Amphibian and Reptile Recording Scheme (GAARRS), however, delays caused by the spring COVID-19 lockdown and coordination efforts for the Bailiwick Bat Survey led to the launch of the survey being delayed to early 2022.

Actions for 2022:

- Continue discussions with the GBRC and ARC
- Incorporate these surveys into the survey programme for the Longis Nature Reserve

Action 1.2.7 Breeding birds

A variety of bird surveys are conducted on Longis Reserve due to the high presence of important species such as Water Rail. There has been sporadic participation in the BTO Breeding Birds Survey (BBS) on the reserve historically. Common Bird Census (CBC) methodology may act as a more accurate measure of the breeding birds on Longis Reserve, but requires additional surveying effort of more elusive species. All breeding bird surveys will be carried out by the Avian Ecologist.

Actions for 2022:

- Repeat the breeding bird surveys (annually or biennially) so that data can be compared over time and used to help identify the impacts of management decisions, land use and climate change in the future.
- Incorporate additional species specific surveys of more elusive species (water birds, coastal nesting waders, birds of prey and reed nesting species) following the methods outline in Gilbert et al (1998).

- Continue collecting demographic data on Swallows which can be used as a bio-indicator to reveal the qualitative status of the environment. Collaborate with the bird observatory on this project.
- Continue participation in BTO WeBS.
- Make survey data available to the public by sharing it with the Alderney Biodiversity Centre.

Action 1.2.8 Marine and intertidal surveys

The Longis Reserve boundary extends into the low water mark of Longis Bay which contains 49 marine biotypes. For the Longis Reserve Management Plan 2017-2021, a series of marine and intertidal habitat mapping exercises, intertidal species assessments and supporting citizen science projects (such as Seasearch dive/scuba surveys) were laid out. These surveys were developed to link and feed into the AWT Living Seas Programme. The most recent Intertidal habitat mapping survey of Longis Bay was completed in 2021.

Actions for 2022:

- Continue to survey for ormers during low spring tides in March.
- Phase II intertidal species assessments to be completed.
- Continuation of citizen science projects such as Seasearch, the Natural History Museum seaweed search and TWT Shoresearch.
- Develop a long-term monitoring strategy for the Eelgrass bed within Longis Bay. This should include measuring the extent of the bed and consider recommending alternatives to the traditional moorings present within the bay.
- Deployment of a FishIntel fish receiver (to detect the presence of tagged fish) and Fpod (to detect cetaceans) within Longis bay from early 2022 for 3 years. Data/deployment to be undertaken by the FishIntel Project partners.
- Ensure that the findings of the recent master's project on available intertidal survey methods are applied to the monitoring regime of the site.

Action 1.2.9 Scaly Crickets

Scaly crickets (*Pseudomogoplistes squamiger*) were discovered in Alderney in 2020. Survey methodology for this species is simple and not time sensitive and consists of burying a small trap (e.g. a cup with holes perforated in the bottom) in suitable habitat, baiting it, and leaving it overnight. An annual survey is not necessary because much of the habitat of the species does not require active management.

Actions for 2022:

- No surveys required this year but perform Scaly cricket surveys in 2023 to follow recommendation of every 3 years.

Objective 1.3 seeks to promote scientific research in the Longis Reserve's ecological features, and ensure the results of this research are available to the wider community. To achieve this the following actions are proposed for 2022:

Action 1.3.1 Promotion and use of Alderney Biodiversity Centre (ABC)

The Alderney Biodiversity Centre website is in the later stages of development. The Centre has been established to promote the centralisation of the island's biological records and to encourage the development and use of long term data sets in order to allow for stronger evidence based conservation actions.

Actions for 2022:

- Ensure that all 2021 records are uploaded to the ABC (excluding those associated with data collection schemes already connected with the National Biodiversity Network (NBN)).
- Improve citizen record collection engagement through the promotion of iRecord as a recording tool.

2. Land Management

2.1 Grassland Management

Objective 2.1 seeks to maintain the current size, plant communities and species richness of dune grasslands and coastal grasslands present within the Longis Reserve. This is currently tackled with a combination of mechanical cutting, Alderney Grazing Animal Projects (AGAP) and control of undesirable species (see section 2.4). To achieve objective 2.1, the following actions are proposed for 2022:

Action 2.1.1 Alderney Grazing Animal Project

Figure 2 highlights areas where grazing has historically been undertaken by the AGAP herd. The results of the 2019's floral survey, indicated that the current grazing intensity was lower than optimal. In 2020 plots were grazed in smaller areas than previously, the plots labelled Longis 1, 2, 3 and Coast 1a and 1b were grazed during 2020. In 2021 the herd has been replenished to 6 cows, with 1 adult female (Guernsey) and 5 juvenile males (Guernsey/Aberdeen Angus Hybrid). The current informal agreement with Stuart Cox is to continue to supplement the herd with young males on rotation. The addition of 5 new cows has helped to establish a grazing intensity closer to that required to maintain the grassland system on Longis.

Actions for 2022:

- Prioritise grazing around Longis pond to promote Common Reed (*Phragmites australis*) establishment and inhibit rank grass extent (Fig. 4, Reedbank 1).
- Push back scrub encroachment at Football by performing a mechanical cut and collect.
- Subject to COVID 19 restrictions, organise outside researchers to replicate the National Vegetation Classification (NVC) survey methods of 2004 in order to determine areas of the highest conservation value within the grazing plots, potentially a Masters student due to financial constraints. Look into securing funds for a 1 month period to pay for their cost of living.

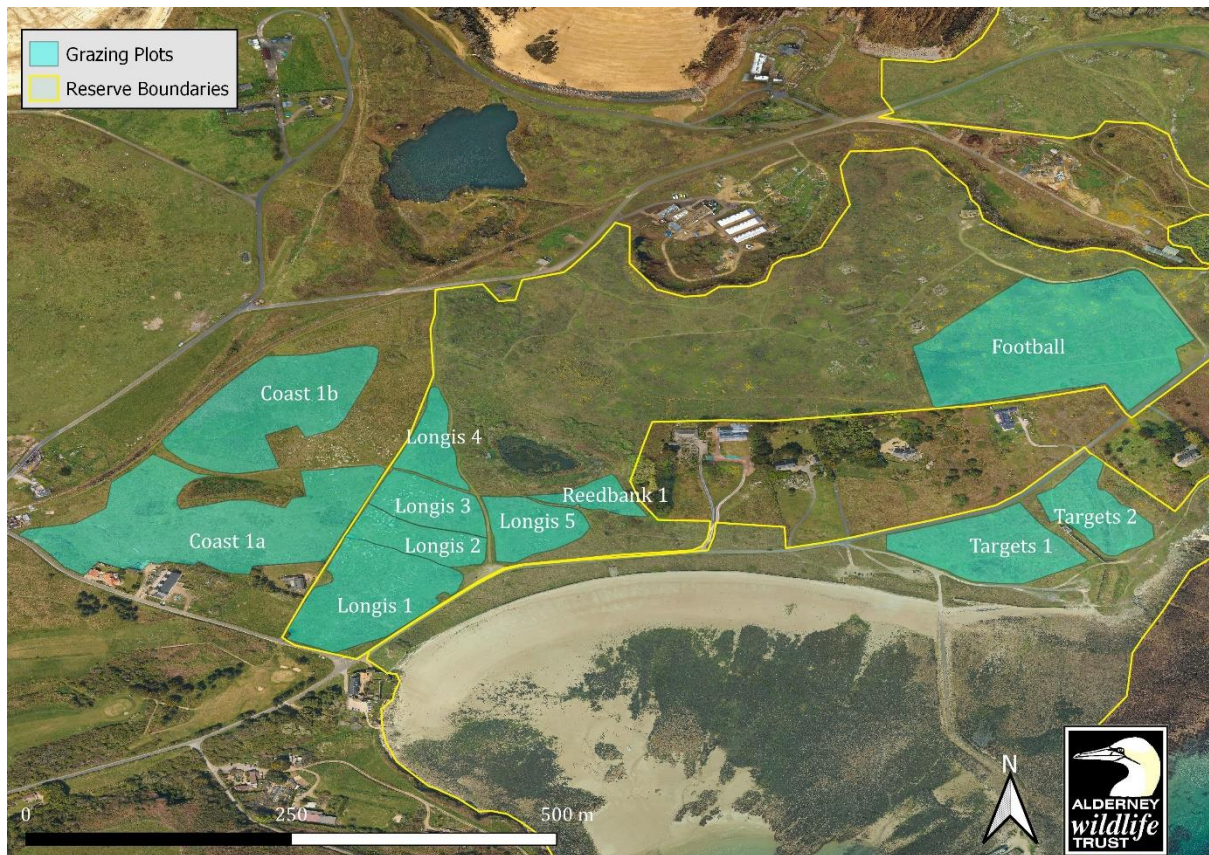


Figure 4. Alderney Grazing Project plots.

Action 2.1.2 Mechanical Cutting

In areas where cattle grazing is not feasible mechanical cuts are required. Mechanical cutting is largely undertaken along footpaths and the Houmet Herbé coastal path (Fig. 5). It is important to maintain these cutting regimes to maintain species richness and to prevent the encroachment of bracken and scrub.

Actions for 2022:

- Perform 'Lower Houmet Herbé Cut' by early spring to inhibit rank grass establishment and promote the presence of Green-winged orchid (*Anacamptis morio*) and Small-flowered Catchfly (*Silene gallica*) (Wilson, 2008).
- Identify any areas within the AGAP grazing plots which would benefit from mechanical cutting due to the understocking issue in the previous year.



Figure 5. The Houmet Herbé coastal path where grass is mechanically controlled (green areas).

2.2 Longis Pond habitat management

Objective 2.2 seeks to maintain an appropriate balance of tree and shrub cover of Longis Pond's surrounding vegetation whilst maintaining the current size and species richness of open water and reedbed, allowing and encouraging their natural expansion into adjacent grasslands.

Longis Pond is the most important freshwater habitat on the island. Ongoing management is necessary to halt the spread of invasive species and arrest the succession of the ecologically important reedbeds into scrub. To achieve this the following actions are proposed for 2022:

Action 2.2.1 Yellow-flag iris control

Although a native and valuable species to pollinators, the yellow-flag iris (*Iris pseudacorus*) can spread prolifically through a pond if left unchecked. Control is undertaken to remove as much growth as possible to allow space for other aquatic plants and reeds (Fig. 6). However, it is important to take into account the trade-off between removing this plant to benefit the reedbank and the disturbance caused by its removal to the species currently present in the habitat.

Actions for 2022:

- Collaborate with the Avian Ecologist to determine where and when to undertake mechanical removal in late summer/early autumn on a defined section of the eastern edge of the pond. Disturbance must be kept to a minimum, so it is recommended that a small digger be used for one day rather than manual removal over a series of days. Liaise with Public Works to discuss the potential of using one of their mini excavators and the costs involved.

- Continue to monitor the extent of yellow-flag iris around Longis pond.



Figure 6. Area of historical yellow-flag Iris control on Longis pond.

Action 2.2.2 Longis Reedbed management

The reedbed at Longis needs to be cut rotationally to create a varied age structure and prevent natural succession to woodland (Fig. 7).

In 2019, following advice from the National Trust Jersey, Isles of Scilly Wildlife Trust and the British Trust for Ornithology, a reedbed monitoring plan was implemented and a survey of the reedbed undertaken (Sydanmaa, 2019).

Actions for 2022:

- Continue with monitoring plan at high and low annual water levels.
- Mechanically cut the areas grazed by cattle in early 2022.
- Monitor salinity and pH and other abiotic factors in the pond throughout the year.
- Alter the path to the bird hide to avoid the current fragmentation of various patches of reed, this will need to be done with public consultation including both regular dog walkers on site and via local press.

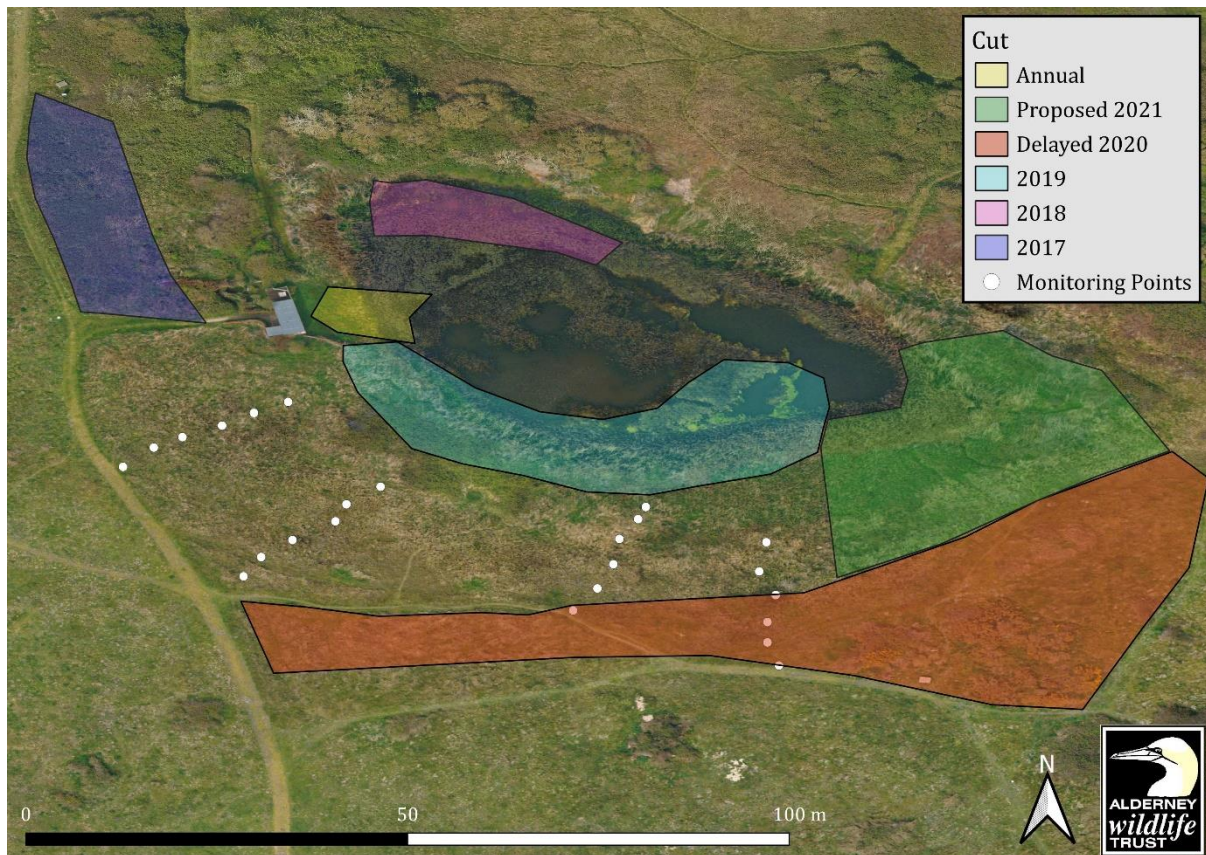


Figure 7. Work undertaken on Longis pond during the current 5 year planning cycle (2017-21).

Action 2.2.3 Tree aftercare

A screen of willow species surrounds the perimeter of the pond and the entrance to the bird hide. The screen requires regular maintenance.

Action for 2022:

- Continue cutting back the willow likely to be catching the wind.

Action 2.2.4 White poplar control

White poplars (*Populus alba*) are non-native and can quickly encroach onto an area of freshwater. They are also extremely thirsty trees; a 15m tree can consume 51 litres of water a day, whereas a beech (*Fagus sylvatica*) or birch (*Betula spp*) tree will consume a third of this. This is a particular issue in the context of a very dry 2021/22 winter. During late 2021 the cattle grazed the areas where White poplar was encroaching towards Longis Pond, which controlled the spread. Remaining saplings and young trees were removed with a brushcutter.

Actions for 2022:

- Liaise with the Public Works/Agricultural team to agree the best method to prevent the continued spread of this species.
- Establish areas most threatened by the spread of White poplar (e.g. The eastern edge and around the bird hide) and take measures to control further damage.

2.3 Mannez pond habitat management

The Mannez pond is a hotspot for dragonfly and damselfly diversity, but has seen worrying declines in species presence in recent surveys. It is also the only area on the island with lesser reedmace (*Typha angustifolia*) present.

Action 2.2.6 Mannez reedbed management

The lesser reedmace (*Typha angustifolia*) beds are an important habitat in Alderney; however, without proper management the plant can dominate a pond causing it to eventually succeed into scrub. In 2019, the reedmace was cut in early November to maintain the visibility from the hide, as part of the rotational management of the reedmace (Figure 8). As cuts were made late in 2019, cuts were not performed in 2020, but were performed in late 2021/early 2022.

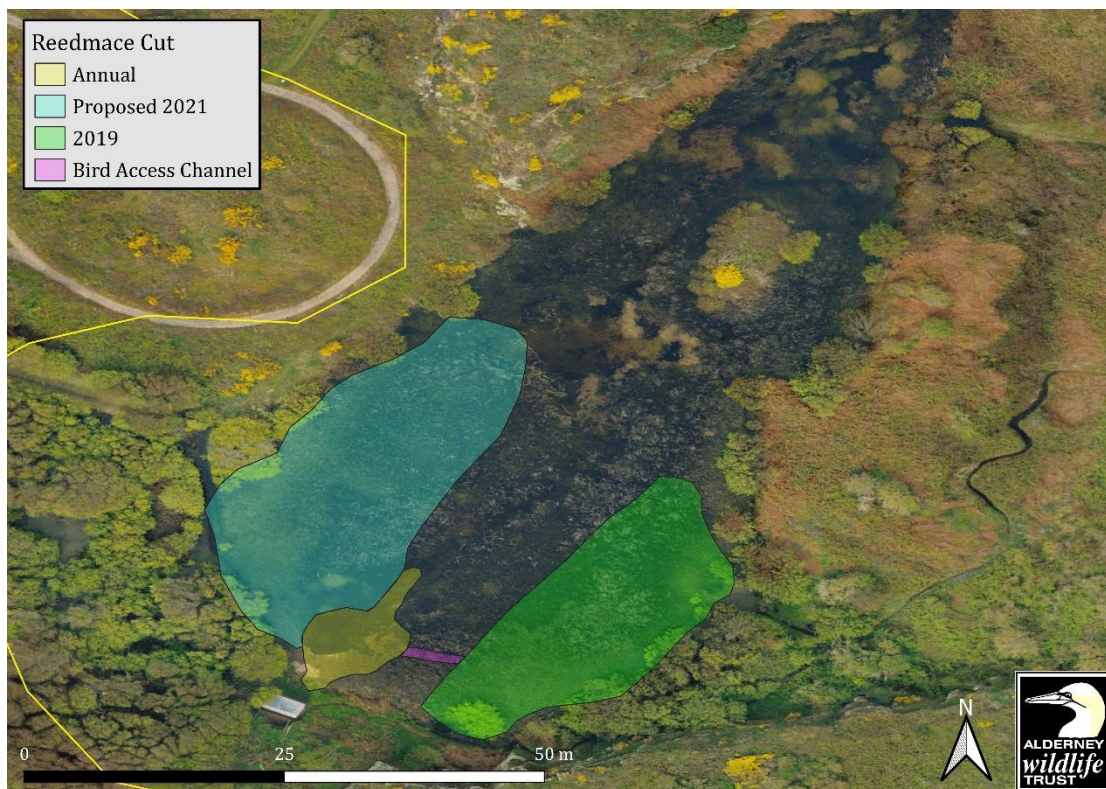


Figure 8. Work undertaken at the Mannez Pond in 2019 and planned for 2022.

Actions for 2022:

- Perform annual cuts to maintain open area in front of the hide in winter 2022 (Fig. 6).
- As part of a management scheme, $\frac{1}{4}$ of the reedmace should be cut back every two years. Cutting should next be done in 2021/22 in the area shown in Figure 6.
- Pile reedmace cuttings to provide a habitat for invertebrates and amphibians.
- See action 2.4.5 for biosecurity measures.

Action 2.2.7 Maintaining areas of open water

Areas of open water are important habitats for several species of bird, dragonfly and damselfly species. They are also vital for bat species such as Daubenton's which forage on these areas.

Alderney has a distinct lack of open water and maintaining these habitats is an important conservation objective. The action to repair the dam in late summer was not completed in 2021.

Actions for 2022:

- Establish whether it will be necessary to fix the Mannez dam in collaboration with the Ecologist. Depending on the outcome of these discussions, potentially source funding for this project.
- Control the spread of yellow-flag iris if deemed necessary.
- Control the spread of New Zealand Pigmyweed (*Crassula helmsii*) and Parrot's-feather (*Myriophyllum aquaticum*) – see action 2.4.5.

Action 2.2.8 Rusty Sallow management

Rusty sallow (*Salix cinerea*) has become well established along the southern margin of the pond. Whilst these plants are a useful screen from the path to the pond they can spread into the main areas of the pond if left unmanaged.

Actions for 2022:

- Continue ongoing maintenance.

2.4 Maintaining habitat richness and extent

Control of undesirable species are important actions required to achieve objectives 2.1, 2.4, 2.5, 2.6 and 2.7. These objectives refer to the importance of maintaining the current size and species richness of coastal grassland, heathland, scrub, open dune and marine habitats.

Action 2.4.1 Ragwort control

Ragwort (*Senecio jacobea*) is classed as a 'mauvaise herbe' and its control must be undertaken by the land manager. Ingestion of ragwort can be harmful to both animals and humans. Ragwort was controlled during 2021 in areas grazed by AGAP. However, Ragwort is a native species which supports a diverse range of invertebrates (over 200 species recorded in the UK), including the Cinnabar moth (*Tyria jacobaeae*). It is therefore important to begin a conversation with the appropriate stake holders in order to reclassify the species and perform control on a case by case basis rather than across all managed land.

Actions for 2022:

- Control ragwort during the flowering season (May-July) where it is present in areas grazed by the Grazing Animal Project herd by hand pulling and dispose far from site either by composting under tarpaulins or at the impot.
- Continue to work with Public Works department to provide a new Invasives and Non-Native Species (INNS) policy for the General Services Committee.

Action 2.4.2 *Carpobrotus* species control

Sour Fig (*Carpobrotus edulis*), Sally-my-handsome (*Carpobrotus Acinaciformis*) and Angular Sea Fig (*Carpobrotus glaucescens*) are non-native, invasive plants present in Alderney's coastal areas

where important flora species occur. If left unmanaged, they can quickly spread and smother the growth of native plants. New plants can propagate from small sections of stem so effective removal is necessary to reverse its spread. A major survey of *Carpobrotus* was conducted in 2021, with several patches falling within the reserve borders. One of the land owners, Nigel Dupont, has expressed a desire to remove the plant from his land with help from the AWT. This is a vital opportunity to remove a key source of *Carpobrotus* from the reserve and should be made a priority.

Recommendations for 2022:

- Remove patches found in adjacent private land once permission has been confirmed.
- Use mapped areas to create a more systematic removal and monitoring plan.
- Continue to use CVs to regularly hand pull areas of *Carpobrotus* spp. and dispose of through incineration at the Impot.

Action 2.4.3 Scrub control

Scrub can be a useful habitat corridor for wildlife and areas of dense scrub should be maintained. Similarly, gorse stands below a certain age have been strongly linked to the breeding success of Dartford warblers. However, limiting the spread of scrub is important to avoid it becoming dominant within Longis reserve. Much of the scrub control carried out in 2021 has been around the edges of footpaths.

It is recommended that a gorse cutting rotation plan is developed to maximise the benefit it has to local biodiversity. Furthermore, as mentioned in Action 2.1.2 the coastal heathland close to the Houmet Herbé is being encroached on by bracken and bramble. The loss of this site would be a major loss to local biodiversity and aesthetic beauty. Scrub control in the areas adjacent are thus a priority.

Actions for 2022:

- Maintain areas of dense scrub but prevent its encroachment onto grassland areas using hand tools and tractor equipment where appropriate.
- Create a varied age structure of gorse by clearing more mature stands outside of the breeding season using hand machinery and tractor mounted equipment where appropriate, with a focus on the Mannez Garenne. However, well-established areas with no undergrowth should be maintained for their habitat quality.
- Perform scrub control around the coastal heathland close to the Houmet Herbé trenches.

Action 2.4.4 Bracken control

Bracken (*Pteridium spp.*) will quickly become dominant in an area if left unchecked. Regular cutting 3 times a year is necessary to halt its spread. Bracken can spread rapidly through the rhizome and cutting alone will not damage the underground roots.

Bracken control has been one of the areas most affected by the pandemic during both 2020 and 2021, as lockdown was in force while the early cuts would have otherwise occurred. The bracken was cut in September 2021. A second winter cut should be performed before the start of the breeding season. Where dense grass and bracken are present the cutting must be collected to avoid enrichment.

Actions for 2022:

- Undertake regular cutting sessions outside the breeding season using tractor mounted and handheld equipment
- Refer to most recent management literature to ensure our removal methods are the most effective available.

Action 2.4.5 New Zealand Pigmyweed and Parrot's Feather

New Zealand Pigmyweed (*Crassula helmsii*) and Parrot's Feather (*Myriophyllum aquaticum*) are invasive non-native species which are highly competitive and can quickly smother native species. Control is necessary to maintain the extent of open water and lesser reed-mace. New Zealand Pigmyweed regenerates rapidly after control measures and can be difficult to eradicate (Ewald, 2014). This has become especially concerning after a series of very mild winters has enabled these species not to die back as normal but to continue to thrive and develop biomass year on year.

Due to the condensed practical workload and reduced resources during 2021 an invasive management plan to deal with these species was not developed. Efforts need to be made in 2022 to begin addressing this issue.

Actions for 2022:

- Implement robust biosecurity measures with the ABO Ltd. and others working in and around Mannez pond to prevent the spread from Mannez pond to Longis (see INNS policy development).
- While water level is low in summer, undertake control measures for Parrot's Feather and *Crassula* down to the rhizome through manual removal in conjunction with the reed-mace control plan (Action 2.26).
- Liaise with other Wildlife Trust's which also have Pygmyweed and Parrot's feather invasion to promote learning and collaboration in regard to eradication attempts.

Action 2.4.6 Brown-tail moth

The larvae of the brown-tail moth (*Euproctis chrysorrhoea*) can cause extremely adverse allergic reactions to both people and animals. As the brown-tail population was at a low level during 2020 there was no need to remove the tents of these moths.

Actions for 2022:

- Continue monitoring the footpaths for brown-tail moth larvae and remove where appropriate.

3. Public engagement and education within Longis Reserve

Longis Common is a popular area for dog walkers and the AWT maintains a network of footpaths throughout the site. Maintaining and improving access to the site and features is a key commitment from the AWT to the community.

Objective 3.1 seeks to maintain the current level of public access to Longis reserve and to its condition. To achieve this objective, the following actions are proposed in 2022:

Action 3.1.1 Footpath cutting

Footpaths were regularly cut to prevent scrub and grass encroachment and allow continued access. While a particularly wet summer led to increased grass growth, an increase in the frequency of cuts ensured access was maintained. In 2022 particular focus must be taken to ensure paths adjacent to the Roman Fort and Odeon visitor centres are consistently maintained throughout the year.

Actions for 2022:

- Perform regular cuts of the footpaths using the Powerscythe and tractor mounted equipment and, where appropriate, hand cutting

Action 3.1.2 Marker stones

White marker stones mark paths and important features throughout the reserve. As a public resource, these stones should be maintained. Clearly marking paths will also help to limit the disturbance of the public on sensitive areas. Marker stones were repainted and cleared several times in 2021.

Recommendations for 2022:

- Clear vegetation from around the stones
- Repaint marker stones at least once a year
- Collaborate with Visit Alderney to ensure that marker stones are properly incorporated into island and tourism literature

Action 3.1.2 Houmet Herbé trench maintenance

The trench system along the Houmet Herbé path is prone to flooding and additional work is necessary to ensure this site is safe and remains accessible to the public. During 2021 the edges of the trenches were painted white to make them more obvious. The use of a solar power pump was also trialled; however, the pump was unable to keep up with the rate of rainfall. The time resources required were greater than expected and it is not recommended to continue the effort in 2022.

Action for 2022:

- Continue to maintain the trenches as required.

Objective 3.2 seeks to increase on-site signage about boundaries, features and management of the Longis Reserve whilst maintaining visual impact to a minimum. To achieve this objective, the following actions are proposed in 2022:

Action 3.2.1 Signage, information and important features

In collaboration with Visit Alderney, signage was maintained throughout the reserve. The renovation of the Odeon means that there is a possibility that the public will attempt to drive up to the site. To avoid this temporary signage has been installed and this is to be replaced with a permanent 'No car access' sign by Visit Alderney in 2022.

Recommendations for 2022:

- Maintain signs and information boards around the site.
- Continue to work with the Visit Alderney team to improve access and information points around the site.

Objective 3.3 seeks to maintain and if possible enhance the existing infrastructure i.e. Longis and Mannez birdhide facilities. To achieve this objective, the following actions are proposed in 2022:

Action 3.3.1 Maintenance and enhancement of Longis infrastructure

The Longis Reserve is an important amenity resource for the community and maintaining the features of the site is a crucial part of its long term management. Alongside the existing historical features such as the Odeon and fortifications the AWT has constructed a number of amenity features such as the bird hides at Mannez and Longis ponds.

The bird hides at Longis and Mannez ponds are popular visitor attractions and should be kept in good order to allow full enjoyment from these areas. They were closed during the 2021 lockdown, and were then regularly monitored and maintained thereafter.

Actions for 2022:

- Regularly sweep and clean the inside of the hides
- Maintain and re-treat the outside of the hides
- Maintain and update the information boards as necessary
- Record sightings from sightings books

Objective 3.4. To involve the community in regular events and activities. To achieve this objective, the following actions are proposed in 2022:

Action 3.4.1 Conservation Volunteers

Conservation volunteers (CV) are a vital resource to the AWT, as of 17/09/2021 CVs have offered 618 hours of effort. However, engagement with under 50's has been suboptimal. Furthermore, few new regular CVs have been recruited during 2021, with several long-term volunteers retiring from the physical work. A number of new islanders have expressed interest and it is important that we continue to promote the sessions on the radio, local print media and on social media. The

physicality of the work is alienating some of the more elderly volunteers, as such, it is important to emphasise when sessions have less intense work available.

Recommendations for 2022:

- Liaise with the Outreach Officer to advertise and promote the sessions to encourage new members to join.
- Encourage individuals to get involved in longer term projects and/or take on greater responsibilities for the AWT.
- Offer a diverse and engaging work programme, suitable for all ages and abilities.

Action 3.4.2 Community Rockpooling

Rockpooling offers a great way for community members of all ages to gain greater exposure to the rich diversity of inter-tidal species found within Longis Reserve.

Actions for 2022:

- In collaboration with the Ramsar, Marine and Outreach officer's, offer both day and evening rockpooling events through the late spring and summer (dependent on COVID 19 restrictions).

Action 3.4.3 Beach Cleans

AWT's CV's performed a number of beach cleans within 2021, collecting at least 500kg of rubbish.

Actions for 2022:

- In collaboration with the Outreach Officer, promote the Big Channel Island Beach Clean event (February), particularly encouraging households to perform cleans within the coastal areas of Longis Reserve.
- In collaboration with the Outreach Officer, promote the Big Spring Beach Clean with Surfers Against Sewage (April).
- In collaboration with the Outreach Officer, organise a beach clean as part of World Oceans Day (June).

Action 3.4.4 Wildlife Trust Events Programme

Actions for 2022:

- Ensure the Longis Reserve is well represented within the events programme. Possible events could include: Wild flower walk and ID, hedgehog walk, BBQ and stargazing/night walk.
- Also include Longis with the Big Wild Weekend, Alderney Week, and the Great Nurdle Hunt.

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Appendices

Appendix 1 Gantt Chart Detailing Work Programme for the Year 2022.

LONGIS RESERVE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
AGAP												
Grassland cutting												
Bramble control												
Longis Pond/Reed-bed												
Mannez Pond/Reed-bed												
Footpath maintenance				Breeding season: avoid tractor in breeding								
Ragwort Control												
<i>Carpobrotus</i> spp. Removal												
Bracken Control												
Amenity Features												
Litter picking												
Brown Tail Moth Control												
Planning												
Aftercare of planted trees												
Survey and monitoring												
Terrestrial												
Phase 1 and NVC surveys												
UKBMS transect (butterfly)				1st April to 29th September								
BCT surveys (bumblebees)			Last Week of each month									
Amphibians (ARC and GBRC)	3 Visits											
Reptiles (ARC and GBRC)			3 Visits									
Garden Moths Scheme			5th of March to Friday 5th November									
NBMP Field survey (bats)												
Breeding Birds Survey (CBC Method)												
Wetlands Bird Survey												
Dragonfly Survey												
Intertidal (Conducted by Marine Ecologist and Ramsar Officer)												
Habitat mapping survey												
Intertiday crab surveys												
Green ormer pop. assessment												
Invasive species assessment												
Seasearch Surveys												
Eelgrass ecology survey												
Fish and shellfish assessment												

Appendix 2 Bat Conservation Trust guidelines in how to participate in the National Bat Monitoring Program

Field Survey card (noctule, serotine, pipistrelle)

Planning your survey

Survey dates: 1st to 15th July; 16th to 30th July

Materials: route map, spot descriptions, survey form/notebook

Ensure that you have read the health & safety checklist, walked your route during daylight & secured permission from relevant landowners

Be in position to start the survey approximately 20 minutes after sunset at pm

(see sunset timetable & pencil in the start time here)

Starting your survey

Just prior to starting, record the following details:

Temperature Weather conditions (cloud, wind, rain)

Date Start time

Don't forget to record the make of bat detector that you have used & your experience/skill level on the survey form

Methodology

1. Begin the first walk with your detector tuned to 25kHz.
2. Listen for noctules/serotines only. Pause to check identification if necessary & then resume.
3. If it is unclear whether a bat is a noctule or serotine, record as 'unsure'. Record results as Walk 1.
4. Ignore ALL other species.
5. At first spot, re-tune detector to 50kHz and record pipistrelle activity - common (45kHz) & soprano (55kHz) - for two minutes.
6. If you cannot identify the species of pipistrelle, record as 'unsure' under Spot 1.
7. Ignore ALL other species.
8. At the end of two minutes, re-tune your detector to 25kHz and commence Walk 2. Repeat the method until you have completed your route.
9. After completing Spot 12, stop the survey and record your finishing time.
10. Note any changes that you have made to the route.
11. If abandoning the survey at any time, record the point at which you stopped & the reason for stopping.

Appendix 3 Guidelines on how to conduct UK Butterfly Monitoring Scheme transects

WHEN TO MAKE TRANSECT COUNTS

Time of year: A full season's transect counts take place once a week for 26 weeks from the beginning of April to the end of September. Week 'one' runs from 1st-7th April, week 'two' 8th-14th April and so on, until week 'twenty-six' which runs from 23rd-29th September. You can record earlier than 1st April (25th-31st March is week 0, 18th-24th March is Week -1 etc.)

or after September (30th Sept- 6th Oct is Week 27, and so on). If the weather conditions are suitable, you should record even if there are not likely to be any butterflies present (e.g. early/late in the season) – a negative result is still a result.

How many weeks: As many weeks should be walked as possible, as gaps reduce the quality of the data and too many can render it virtually useless. The more gaps the less species-indices can be calculated. Where it has been decided that a transect is aimed a single, usually rare, species (or sometimes for two or three species) then weeks should be walked that cover the flight period(s), with zero counts at either end.

Time of week: You can record on any day of the week, but should aim to walk the transect on the first opportunity that the weather is suitable (some weeks you may not get a second chance!). You only need to record more than once a week if the weather on your first walk did not meet the criteria.

Time of day: Transect counts should ideally be made between 10:45 and 15:45 hours, though between 10:00 and 17:00 hours is usually allowable, though butterfly activity may drop off rapidly during the late afternoon so later times should be avoided.

Weather conditions: Transect walks should only be carried out in warm and at least bright weather, with no more than moderate winds and not when it is raining. The minimum criteria are either 13-17°C with at least 60% sunshine, or if there is no sunshine the temperature must be 17°C or above. Windspeed (Beaufort scale) should be no more than 5 unless the transect route is sheltered from the wind. Do not record if the temperature is below 13°C except in northern upland areas where, if butterflies are active, they may be recorded in temperatures down to 11°C. Check that conditions are suitable before you start the transect, and that if the temperature is less than 17°C there is likely to be sufficient sun.

Recording butterflies: walk at a slow, steady pace counting all butterflies seen within a fixed distance – the recommended distance is 2.5m either side of the transect line and 5m ahead. In some habitats e.g. along sea cliffs or woodland rides, it is acceptable to record at a width of 5m along one side only of the transect line. A wider area is recorded on part or all of some transects (e.g. 10m instead of 5). Always stick to the limits established when the transect was set up. Try to avoid double counting where possible e.g. when an individual butterfly repeatedly flies in and out of your recording zone. However, if you lose sight of an individual, and later regain sight of the same species do not assume this is the same individual. Do not count butterflies behind you.

Try to identify and separate all species you encounter, including where possible 'difficult' species such as Small and Essex Skipper, whites and the fritillaries. If similar species such as Small White and Green-veined White are flying together at a site you may want to net a sample (a small clear plastic pot can be very useful to temporarily confine the butterfly so it can be examined more easily – hold pot in the shade), to determine the proportion of each species present -you can then divide up your overall counts accordingly. For example, if you catch and identify 8 Small Whites and 2 Green-veined Whites, a count of 30 unidentified whites can be converted to an estimated 24 Small Whites and 6 Greenveined Whites. Note that you will need a license to capture High Brown Fritillary and the use of nets may be prohibited in some areas - contact BC for details. If you are not sure how to identify any species of butterfly you are likely to encounter with certainty then you should take a good identification guide with you. If you see interesting species outside

your recording area these should not be included in the transect count but can be recorded in the notes section at the foot of your form or on the back of the form.

Appendix 4 Guidance on recording Bumblebees during Bee Walk, Bumblebee Conservation Trust.

Recording bumblebees

- Bumblebees should be recorded on the monthly recording form. A separate form should be used for each month. Honeybees should also be noted if possible. You do not need to record solitary bees.
- Fill in the environmental and transect details first. Before you begin walking fill in your name, site, date, weather conditions and start time in the spaces provided on the form.
- Walk your transect route at a steady pace. Do not linger in hotspots to improve your count, as this will bias results.
- Record all the bumblebees you see within your 'recording box'. This extends 2m either side of you and 4m ahead. Do not look behind, and do not count bees seen outside this box.
- Where possible record the caste (queen, worker, male) of each individual as well as species, and make a note of any interesting behaviour, such as mating. Record unknown bumblebee or caste for any bumblebees you are unsure of.
- Nets and pots can be used to capture bumblebees for closer examination when necessary. For details on suppliers see the BeeWalk website.
- Ensure that all recording is completed on the form at the end of each walk. Double-check for errors and omissions, as it will be impossible to accurately fill in any blanks later.
- Where estimates have to be made (e.g. when numbers are too large to count accurately) make sure an actual figure is recorded (e.g. 45 rather than 40+).
- If something unusual is recorded, add a note at the bottom of the recording sheet to confirm that what you have recorded is correct. If it's an unusual species, it should ideally be photographed for confirmation. Unusual data will be followed up via email.
- Don't forget to fill in the finish time at the end of your walk.

Appendix 6. Garden Moth Scheme methodology

Please refer to <http://www.gardenmoths.org.uk/> for latest methodology.