

2018 Habitat Survey

Technical Summary of Guernsey, Herm and Associated Islands 2018



Environment Guernsey
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States of Guernsey
Agriculture, Countryside and
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**Biodiversity
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INTRODUCTION

In 2018 the States of Guernsey, Agriculture, Countryside and Land Management Services commissioned Environment Guernsey to conduct a phase 1 habitat survey of Guernsey and Herm. The purpose of the survey is to map all of the natural and semi-natural habitats and boundaries in accordance with guidelines created by the JNCC. By repeating this survey every 10 or so years, a picture of the changing landscape of Guernsey may be created. The results of these allow more informed land management policy and planning decisions, and can be used to advise Environmental Impact Assessments (EIAs).

During the spring and summer of 2018, a team of 3 surveyors assessed the whole island and its boundaries using the habitat designations as set out by the JNCC. A total of 4,442ha (27,108v) of terrestrial land and 1,080ha (6,591v) of intertidal land was surveyed with land classified as one of 42 designated habitat types. This was achieved through a combination of field surveying and aerial photographic interpretation.

The results were then analysed and published in full in the 'Technical Report of Guernsey, Herm and Associated Islands 2018'. The report analysed in detail the island wide trends of the habitats of Guernsey in the past 19 years and how the island has changed in that time.

Technical Summary

This report is a brief summary of the full Technical Report, which can be found on the **States of Guernsey's website** or (<https://gov.gg/article/154884/Habitat-Survey>) for further information. The summary report highlights some of the key findings of the Technical Report, and discusses some of the causes and consequences of the observed habitat changes. The key findings in this summary document represent the habitats which have seen the most significant changes, or are most ecologically important. As a result, many of the habitat classifications have been omitted.

This report is to be used as a summary aid; highlighting trends over Guernsey as a whole, without providing details of site specific changes. For more in depth detail on all surveyed habitats and changes in specific locations, please refer to the Technical Report.



INCREASE IN WOODLAND

Historically, the abundance of woodland in Guernsey has fluctuated according to current land use, with most ancient woodland likely to have been cleared for agriculture by the ice age. Guernsey's native woodland consists of tree species such as ash (*Fraxinus excelsior*) and pedunculate oak (*Quercus robur*), and, more recently, self-seeded non-native sycamores (*Acer pseudoplatanus*). This woodland, classified as Semi-natural Broadleaved Woodland, often supports a diversity of lichens, mosses, plants, invertebrates and birds. The biodiversity of a woodland largely depends on its species composition. Newly planted woodlands often contain a variety of species, some of which may be non-native conifers, such as Monterey pine (*Pinus radiata*), which support less biodiversity in comparison to native species.

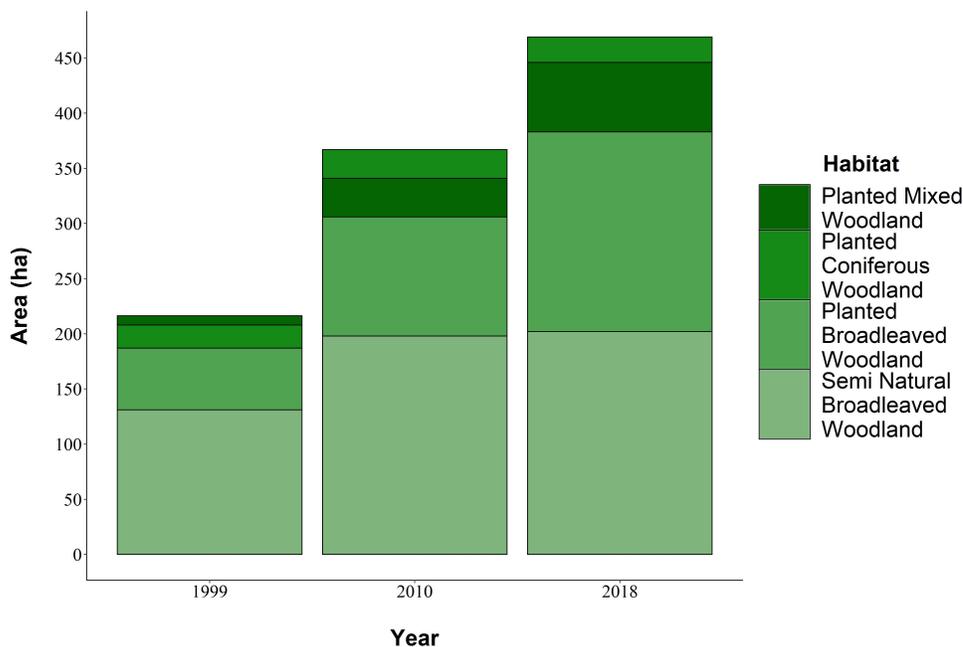
Three major woodland trends have been identified:

- The area of all woodland types has increase by 131% since 1999.
- The most abundant type of woodland is Semi-Natural Broadleaved Woodland which accounts for 3.2% of Guernsey's total area.
- Planted Broadleaved Woodland has increased by the largest amount, at 223% since 1999.

The increase in woodland is due to a combination of natural succession from scrub, and an abundance of newly planted woodland, such as through the Free Tree initiative.

The increase in area of woodland may beneficial to the island due to the diversity it supports, and also because it absorbs carbon - playing a valuable role in climate regulation. Counter-intuitively, this trend might have led to a localised loss of biodiversity as woodland has developed on land of high conservation value, such as species-rich dry grasslands. For example, 25ha of Semi-improved Grassland changed to woodland, due to natural succession or planting.

In the future, management plans could aim to maintain and improve the biodiversity value of woodland by selecting appropriate native tree species to be used in planting schemes and managing established woodlands sensitively to maintain biodiversity and reduce the impact of invasive species.





INCREASE IN GARDENS

Whilst small gardens were not included in the habitat surveys, large gardens, parks and estates were surveyed and classified as either Amenity Grassland or Parkland. Amenity Grasslands are highly managed, closely mown grasslands, whereas Parklands are a mixture of highly managed grassland but with scattered trees.

Frequently, gardens are intensively managed using herbicides, regular mowing, and seeding to produce manicured lawns, as a result they have lower associated biodiversity. Gardens which are sensitively managed, however, will likely support greater biodiversity.

Two major garden trends have been identified:

- Amenity Grassland has increased by 33%, due to increased management intensity.
- Parkland has increased by 155%, though there was a slight decrease since 2010.

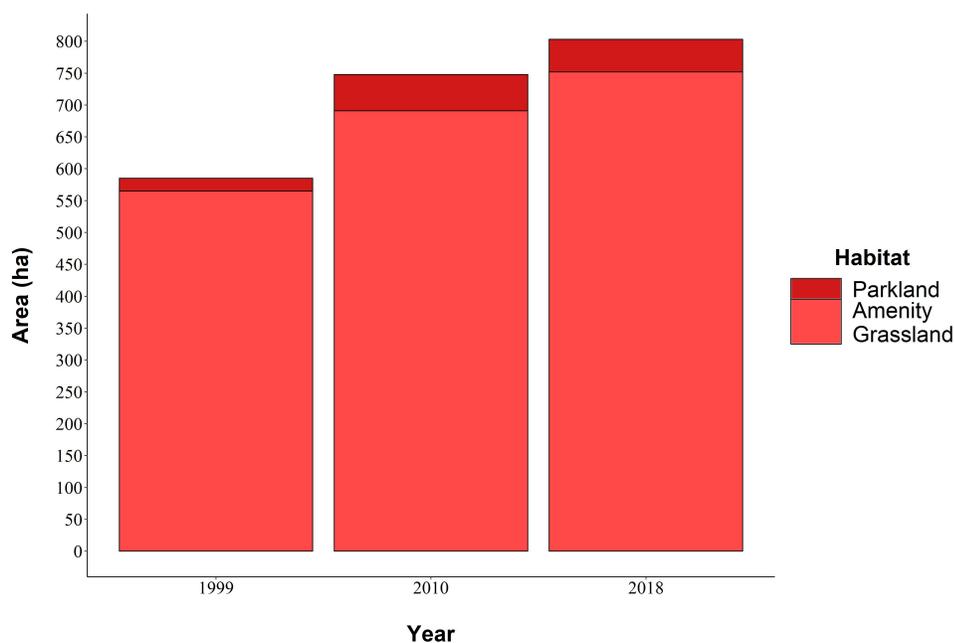
The increase in garden habitats is likely reducing Guernsey's biodiversity by replacing habitats of high ecological value with low value alternatives.

Where gardens were identified on land which was formally used for agriculture, they were also noted as being an Extension to Curtilage, which has in-

creased by 39% since its classification in 2010. In 2018, 187ha of land was identified. Where Extensions to Curtilage takes land out of agricultural production, this may have socio-economic implications. As private landowners can often afford to pay more for land than farmers, the cost of land across the island is likely to become increasingly expensive which in turn will increase the cost of agriculture.

Earthbanks are an important part of Guernsey's landscape, both environmentally and culturally, however they are also threatened by intensive management practices. In 2018, 29km of Earthbanks were classified as 'Gardened'. Such Earthbanks may be planted with non-native species or be covered by artificial liners or turf. This can greatly reduce their biodiversity, reducing the available refuge for species from species rich grasslands, which are extremely threatened (page 5).

The biodiversity that gardens support will depend largely on the species planted in them and how they are managed. The value of these habitats may be enhanced with sensitive management and principles of 'wildlife gardening', such as planting native species, reducing cutting regimes and restricting the use of pesticides.





INCREASE IN SCRUB

Scrub is the intermediate stage in the natural progression between grass and woodland, and, in Guernsey, is dominated by brambles (*Rubus fruticosus*), gorse (*Ulex europaeus*) and blackthorn (*Prunus spinosa*), or willow (*Salix cinerea*) in wetter areas. It commonly establishes in areas with limited disturbance, such as abandoned fields, borders or cliff land due to reduced management such as grazing or cutting. Scrub can support a variety of birds and insects by offering food and nesting sites, but it represents a loss to biodiversity when it overwhelms more 'at risk' and biologically diverse habitats, such as species-rich grasslands.

There are two categories of scrub classified in the habitat survey; Dune Scrub, which establishes in sandy soils, and Dense Scrub, which establishes on other soils.

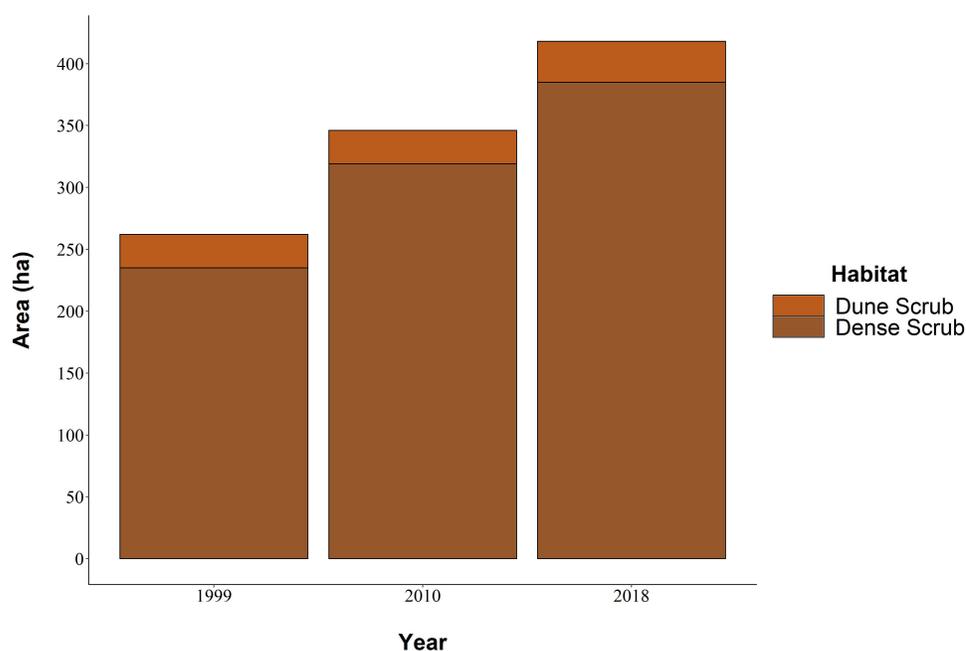
Two major scrub trends have been identified:

- Dense Scrub has increased by 64% since 1999.
- Dune Scrub has increased by 20% since 1999.

Scrub has increased on Guernsey due to reduced management or abandonment. For example, one of the largest areas of Scrub is along the southern cliffs; once grazed and cut for furze, this land has since been abandoned and become encroached by scrubby species. This, in turn, has led to the loss of species-rich grasslands and heathlands once found there.

The rate of expansion of Dense Scrub has increased over the 19 year time frame of these surveys, often establishing on more diverse habitats such as species rich grasslands, which is likely to have led to a decline in the biodiversity associated with those habitats.

Clearance of scrub and additional management initiatives will be required to address this trend and prevent establishment of Scrub on habitats that are of high conservation importance. These initiatives could build on the success of the Conservation Herd, which has restored several Coastal Grasslands and Heathlands.





DECLINE IN SPECIES-RICH GRASSLAND

Historically, species-rich grasslands were the dominant habitat type. Most were used as pasture for dairy cattle and livestock or as hay meadows. Before industrial farming, the low intensity management would have supported a high diversity of wild flowers and associated insects.

Grasslands are classified based on their floristic diversity and their soil moisture; i.e. dry and wet grasslands. There are four types of species rich grassland; Unimproved Grassland, Semi-improved Grassland, Unimproved Marshy Grassland and Semi-improved Marshy Grassland.

Unimproved grasslands have a high floristic diversity which is indicative of sensitive, low intensity management. They are often cut or grazed annually which allows delicate species, such as the loose-flowered orchid (*Anacamptis laxiflora*) to survive. Semi-improved grasslands have slightly lower density of wildflowers but are still considered very diverse. They are likely to be managed, or have historically been managed, slightly more intensively.

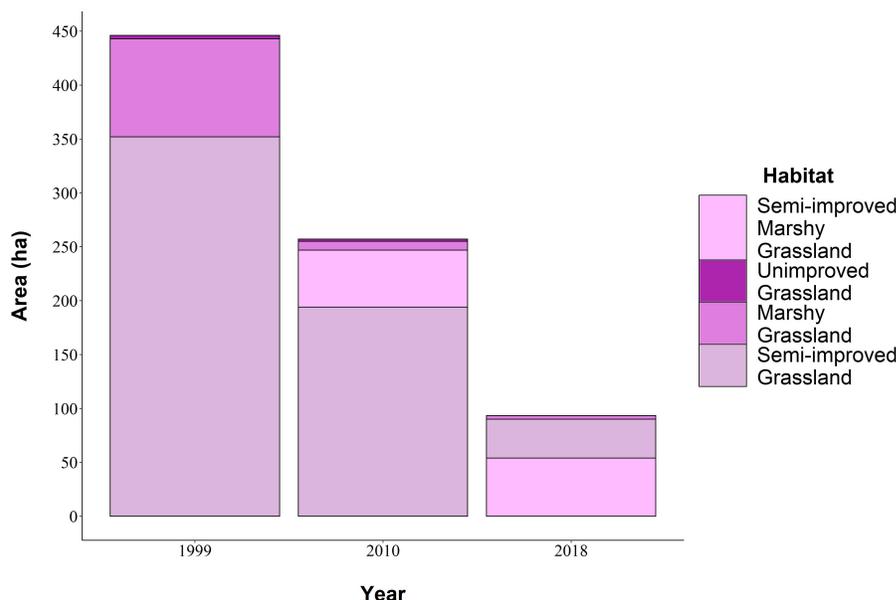
Three major species rich grassland trends were identified:

- Unimproved Grassland has become **extinct** on Guernsey. In 1999, 3.1ha were classified.

- Semi-improved Grassland has decreased by 90%.
- Combined, Unimproved and Semi-improved Marshy Grassland have decreased by 37%.

These losses have been caused by a combination of reduced management, which allows scrubby species to establish which shades out delicate wild flowers, or intensive management, such as a frequent cutting regime, ploughing and reseeded or applications of pesticides. The decline in species rich grasslands is of concern as the total area lost is the largest of all habitats on Guernsey and they have high ecological value due to the unique floral and faunal communities that they support. Guernsey's remaining species-rich grasslands are especially noteworthy as many local examples are of international significance.

Conservation strategies and changes in grassland management will be required to preserve remaining grasslands. The restoration of damaged grasslands require long-term management to ensure their reestablishment and conservation. Despite the local extinction of Unimproved Grassland, the unique species it supports are still present on Grass-covered Earthbanks that have minimal management, which would allow recolonisation in the future.





DECLINE IN HEATHLANDS

Heathlands, once common on Guernsey, has declined significantly due to a reduction in grazing practices which have allowed the establishment of Scrub. Furthermore, it relies on nutrient poor, acidic and wet soils which are less prevalent on the island due to fertiliser application, draining and addition of nutrients from acid rain. Heathland is now only found at a few locations around the coast, in areas that are unsuitable for agriculture and which have thin, acid soils.

Heathland is characterised by the presence of species of heather, such as bell heather *Erica cinerea* and, more rarely, common heather (*Calluna vulgaris*). These habitats are biologically important as they support specialist species such as Dartford warblers (*Sylvia undata*) and emperor moths (*Saturnia pavonia*).

There are two categories of heathland classified in the habitat survey; Coastal Heathland, which establishes on acid soils overlying bedrock, and Dune Heathland, which establishes on Sand Dunes.

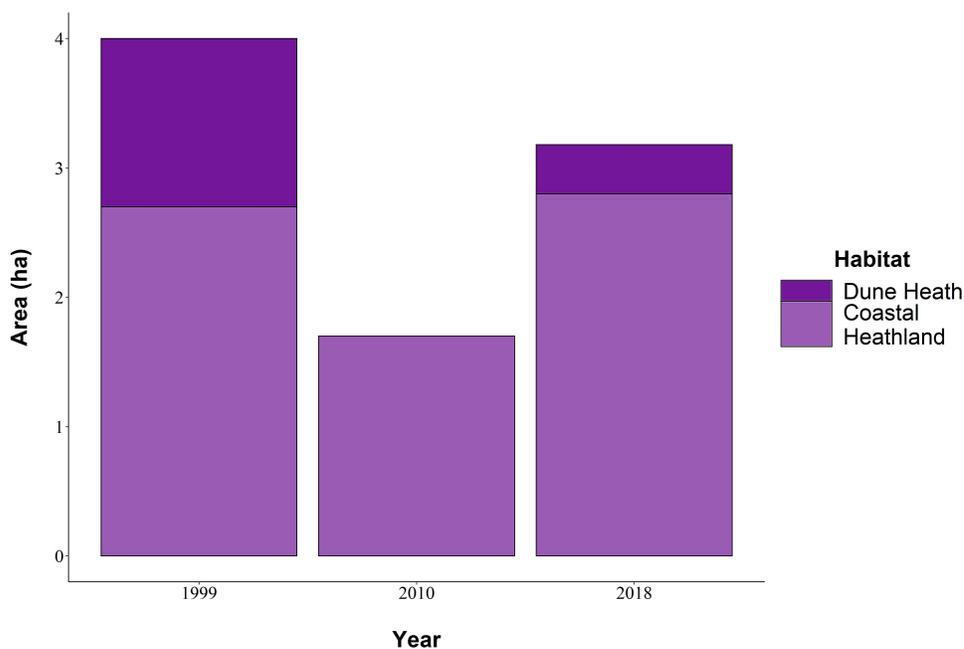
Two major heathland trends were identified:

- Coastal Heathland declined significantly between 1999 and 2010 but is starting to recover
- Dune Heathland was lost from Guernsey between 1999 and 2010, but small areas have been restored in 2018.

The re-establishment of Heathlands since 2010 is due to the introduction of appropriate management techniques and demonstrates the potential benefit of conservation measures.

Dune Heath, however, has recovered to only 70% of the area it covered in 1999 and so is vulnerable to local loss from extreme environmental events or unsympathetic management.

Given the ecological value and scarcity of both these habitats, further sensitive management strategies may need to be implemented to ensure its future protection.





INCREASE IN SOUR FIG

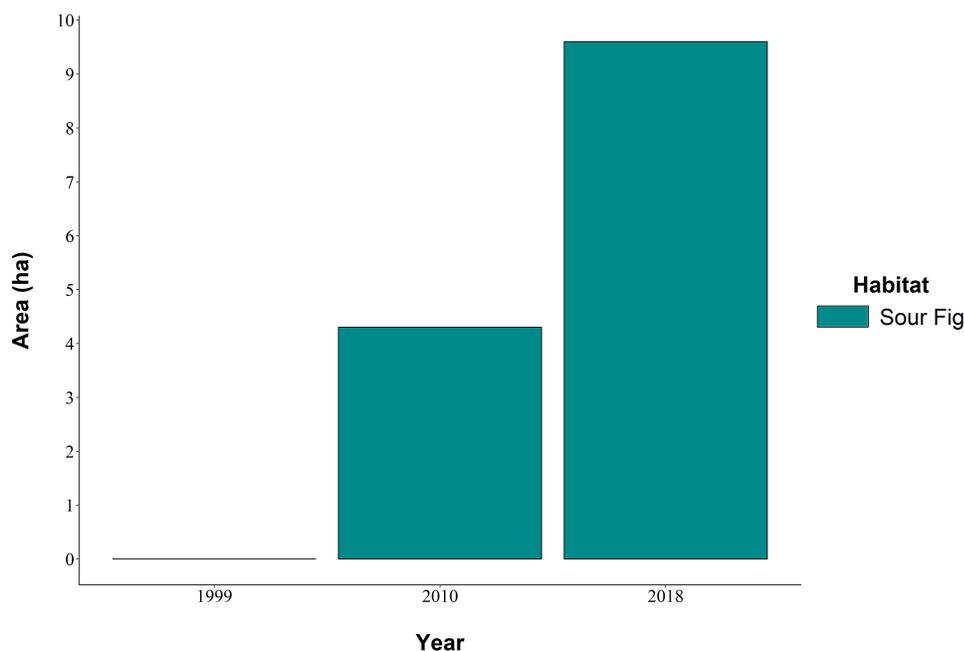
One of the largest threats to coastal and cliff habitats is the establishment of the invasive sour fig *Carpobrotus edulis*.

Introduced as an ornamental plant from South Africa sometime before 1886, it has since escaped and spread along the coastal habitats across Guernsey, in particular on grasslands along the southern cliffs and west coast. It forms dense mats which smother native wildflowers creating a monoculture. Attempts have been made to control the sour fig, coordinated between several local charities, by physically removing it. Whilst labour intensive, this is a successful management technique and native grasslands have been re-established following removal, such as at Fort Pezeries.

- Sour Fig has increased by 123% since it was first surveyed in 2010.

This spread has led to decreases in the area of cliff habitats and coastal grasslands. These habitats are important for many seabirds and raptors, some of them rare on Guernsey such as peregrine falcons (*Falco peregrinus*) or sand martins (*Riparia riparia*), as well as unique flora and fauna such as green tiger beetles (*Cicindela campestris*) and solitary bees and wasps.

The significant increase in the area of Sour Fig is despite the efforts of local groups to remove it, indicating that a coordinated effort and increased resources will be required to reduce its spread in order to protect Guernsey's coastal habitats.



INCREASE IN DISTURBED LAND

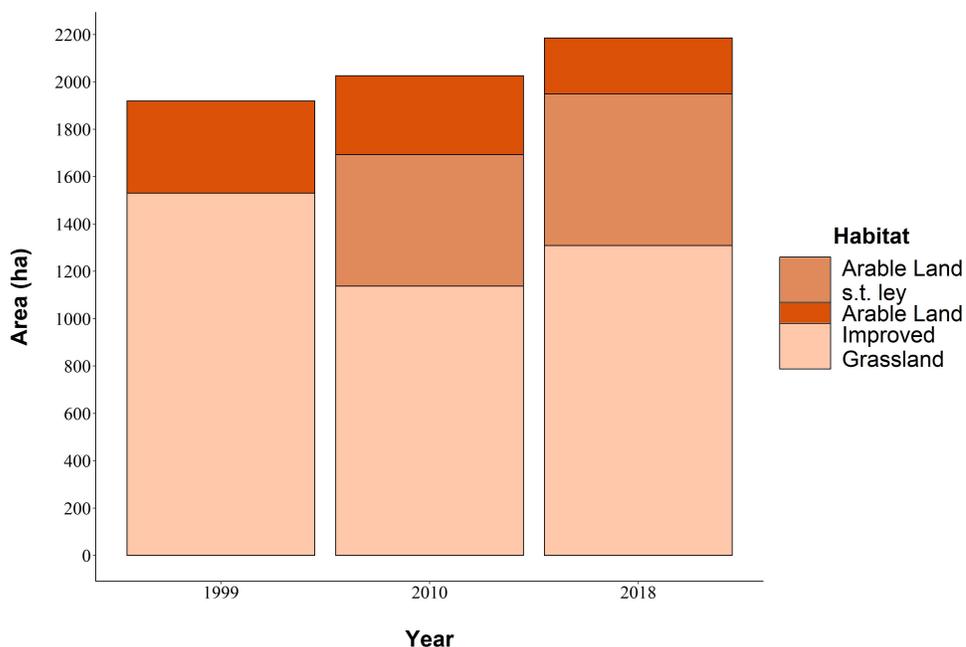
Disturbed land encompasses three habitat classifications; Improved Grassland, Arable Land and Arable Short-term Leys. This is land used mostly for agriculture, horticulture and for some private use. Roughly 1,260ha is used in the dairy industry and 256ha is used for horses. Both Improved Grassland and Arable Short-term Leys are intensively managed grasslands used for grazing or silage. Leys are often seeded with a single species of high productivity grass, such as ryegrass (*Lolium* sp.), and maintained with applications of fertilisers and pesticides. When left for several years it becomes indistinguishable from Improved Grassland and so will be classified as such. Arable Land is often planted with crop species including potatoes, maize and some fodder varieties, such as fodder beet. It is also managed intensively to reduce the prevalence of pests and diseases.

For farms to remain financially viable they must manage their land in order to ensure both maximum yields and productivity, however, due to these management practices, these habitats support limited biodiversity.

Two major disturbed land trends were identified:

- In total, the abundance of these three classifications has increased by 14% since 1999.
- Arable Short-term Ley was first included as a classification in 2010, since then it has increased by 15%.

The loss of permanent grasslands not only reduces floral diversity but also threatens the health and structural integrity of the islands soils. Soil degradation also leads to the release of carbon stored in the grasslands and, as a result, increases Guernsey's contribution to climate change. The need to manage land intensively is likely to have been amplified by the loss of agricultural land to extensions of domestic curtilage (see section 'increases in gardens' above). Strategies which prioritise permanent pastures and reduce reliance on applications of artificial fertilisers and pesticides may lessen the environmental impact and increase their ecological value.





DECLINE IN SPECIES-RICH HEDGING

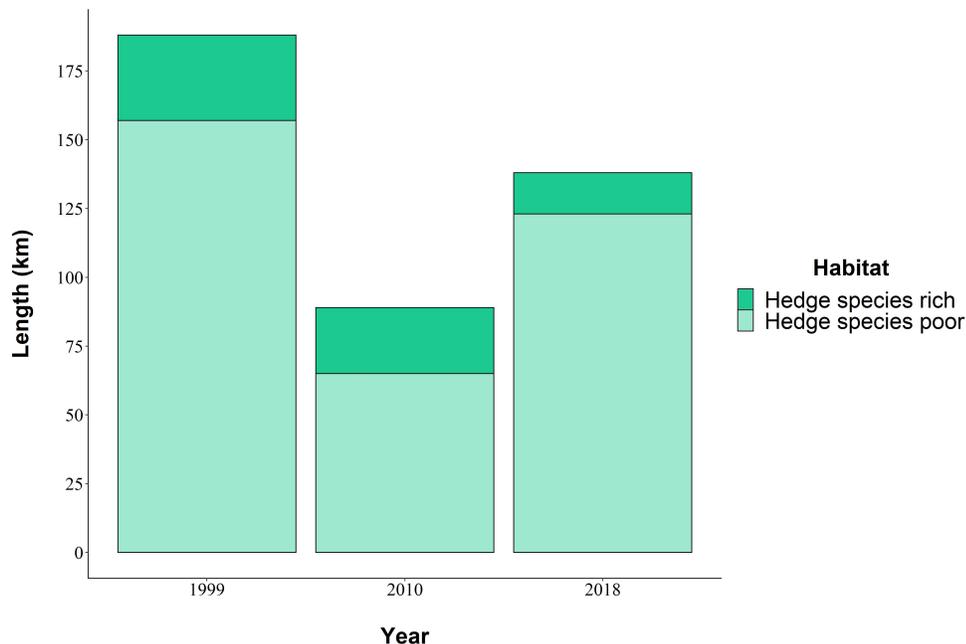
Hedges are important refuges for wildlife and are corridors which maintain connectivity between fragments of natural land. Historically, hedges comprised of mostly native shrubs with standard trees interspersed, most commonly Guernsey elm (*Ulmus minor* 'Sarniensis'). Regular cutting maintains a dense hedge which provides cover for nesting birds whilst the undergrowth supports a diversity of insects and small mammals. Species-poor Hedges are those hedges which have been planted with a low diversity of, often non-native, species such as leylandii (*Cupressus x leylandii*) or griselinia (*Griselinia littoralis*). They do not support the same diversity of wildlife.

Two hedge trends were identified:

- Species-poor Hedges increased by 89% between 2010 to 2018.
- Species-rich Hedges have decreased by 52% since 1999.

These trends are mostly due to the planting of non-native hedging along the boundary of existing domestic curtilage or new developments and is likely to indicate a decline in the biodiversity associated with Species-rich Hedges.

Conservation strategies may be required to encourage planting native plant species in hedges to maintain their diversity.





CAUSE AND SIGNIFICANCE OF CHANGE IN HABITATS

The changes in habitats identified during the Habitat Surveys are caused by changes in land management strategies. Many important habitats are degrading due to either too little or too much management.

1 **Abandonment:**

Marginal sites in Guernsey are not suitable for modern agricultural use and so have been abandoned. Without an appropriate level of disturbance, land is quickly colonised by bracken, scrub and subsequently woodland. This has contributed to the loss of highly biodiverse habitat, such as species rich grasslands and heathlands. Scrub supports lower species diversity than these grasslands so this trend is likely to have led to a reduction in Guernsey's overall biodiversity.

2 **Intensification:**

The trend to the increase productivity of agricultural land has led to a reliance on artificial fertilisers, pesticides and herbicides as well as regular ploughing and reseeded. This can not only harm sensitive species but also leads to soil degradation, releasing stored carbon which increases Guernsey's contribution to climate change. A review of agricultural policies may be required to reduce these pressures on agricultural land.

The expansion of domestic curtilage is also likely causing a decline in biodiversity. This land is mostly converted to intensively managed Amenity Grassland, reducing the floral diversity in the sward. This practice removes land from agricultural use, often leaving the remaining land to be farmed more intensively to compensate the loss.

A review of planning policy and additional measures, such as implementation of Lawful Use regulations may be required to better understand and limit this practice. Education on wildlife gardening and more sensitive and appropriate management techniques may help enhance the biodiversity value of local gardens.

3 **Invasive Species:**

The increase in Sour Fig, despite attempts to control its spread via pulling, suggest that more resources and effort are required to tackle the problem. Sour Fig is in the early stages of invasion on Herm, where it might be more easily eradicated with adequate resources.

The removal of fig and establishment of native grassland at Fort Pezeries demonstrates that with appropriate resources it can be successfully dealt with.



SUGGESTIONS TO INCREASE BIODIVERSITY OR LIMIT ITS LOSS

Below are management suggestions and policy changes which may help address the causes and impacts of habitat changes described above. Advice and suggestions for specific habitats is included in the full report.

1 Increase biodiversity value of woodland.

- Facilitate balanced management to maintain the biodiversity of woodlands
- Focus new tree planting on habitats of lower biodiversity value and on boundaries.

2 Increase the value of local gardens

- Educate landowners on the benefit of wildlife gardening and support local initiatives such as The Pollinator Project.

3 Reduce the loss of species rich grasslands to scrub and woodland.

- Increase management of sites such as the south coast cliffs to reduce the extent and establishment of scrub. This may be achieved through large clearances or through controlled burning regimes.
- Re-introduce grazing where possible with the support of local livestock keepers and initiatives such as La Societe Guernesiaise's Conservation Herd.
- Consider enlisting other species of animals, such as goat and pig, to combat of spread of scrub especially on sites that are too small for mechanical cutting or not suitable for grazing by cattle

4 Protect dry grasslands

- Where possible, reduce the frequency that grasslands are cut. Ideally cut once or twice per annum and ensure that the arisings are removed. Restrict more frequent cuttings to areas of grassland required for access.
- Use less intensive cutting methods where practicable, such as scything or grazing, to promote more diverse grassland ecology.
- Consider affording remaining species rich grasslands legal protection to prevent their loss or ensure any loss can be appropriately mitigated.
- Monitor grasslands to ensure that they are being appropriately managed and that these lands are not succeeding scrub.

5 Protect boundaries

- Review the hedge cutting legislation to prevent disruption to breeding birds and to ensure cutting is not too harsh. Encourage at least 5cm of vegetation to be left when cut.
- Consider introducing regulations to prevent the covering of Earthbanks with artificial liners or artificial turf.

