Bio Diversity

Jersey Forget-me-not

(Myosotis sicula Guss*)*

Action Plan

States of Jersey

1. Current status

1.1 *Myosotis sicula* is a small low growing annual, bearing blue flowers between April and August.

1.2 *M. sicula* is considered native in Jersey on damp sandy ground in open, sunny places, which are not overgrown by larger plants.

1.3 *M. sicula* is distributed across southern and western Europe from Turkey to Portugal and north to north-west France.

1.4 It was first recorded by A.J. Wilmott in 1922 at L'Ouaisné, where it was last seen in 1957, and by a small pond at Noirmont, which is now its only site. Apart from this one site in Jersey *M. sicula* occurs nowhere else in the Channel Islands or the British Isles.

1.5 *M.sicula* is not included in the UK red data book for vascular plants; since: "the Channel Islands are excluded on phytogeographical as well as political grounds, their flora having a greater affinity with that of the nearby European mainland." (RDB 1999)

1.6 In Jersey *M.sicula* is listed as rare.

2. Current factors causing loss or decline

2.1 Loss of sites.

2.2 Falling water table leading to drying out of ponds and slacks

2.3 Competition from larger aquatic plants, the introduced alien plant *Crassula helmsii* and over shading by *Salix spp*.

3. Current action

3.1 Partly successful attempts are being made to control *C.helmsii*, and the area where *M. sicula* grows is regularly cleared.

4. Action plan objectives and targets

4.1 Establish an *ex-situ* programme to maintain the genetic diversity of *M. sicula* in Jersey, by 2008

4.2 Maintain and enhance existing populations by 2009.

4.3 Introduce a monitoring programme, by 2009.

4.4 Restore to former site by 2011.

5. Proposed actions with lead agencies

5.1 Policy and Legislation

5.1.1 Continue to safeguard the status of Noirmont SSI area and proposed site of reintroductions.

5.2 Site Safeguard and Management

5.2.1 Identify with certainty all existing sites, by 2009 (Action: ED). Undertake management for the species at all these sites. (Action: ED - CMT)

5.2.2 Maintain suitable conditions by clearance at existing site. (Action: ED - CMT)

5.3 Species Protection and Management

5.3.1 Bring seedlings into cultivation by 2008. (Action: ED & Durrell)

5.3.2 Restore *M. sicula* to former site by 2011. (Action CMT)

5.3.3 Introduce a monitoring programme to monitor the status of all populations, by 2008. (Action: ED)

5.3.4 Establish an ex-situ programme to maintain the genetic diversity of *M. sicula* in Jersey, by 2008. (Action ED)

5.3.5 Maintain and enhance existing populations by 2008. Including controlling Sweet Flag *Acorus calamus*. (Action ED)

5.4 Advisory

5.4.1 None proposed

5.5 Future Research and Monitoring

5.6.1 Introduce a monitoring programme to monitor the status of all populations, by 2008. (Action: ED)

5.6 Communications and Publicity

5.6.1 None proposed

5.7 Links with other Action Plans

5.7.1 This Action Plan will be implemented alongside the *Cyperus fuscus* Biodiversity Action Plan since it has similar habitat requirements.

Jersey Forget-me-not *Myosotis sicula* Guss

○ records pre 1984 ● records before and after 1984

Distribution of Jersey Forget-me-not in Jersey, by 1 Km square.

Source: 'Flora of Jersey', Le Sueur, 1984 & Data collected by Société Jersiaise and Environment Department, 2008

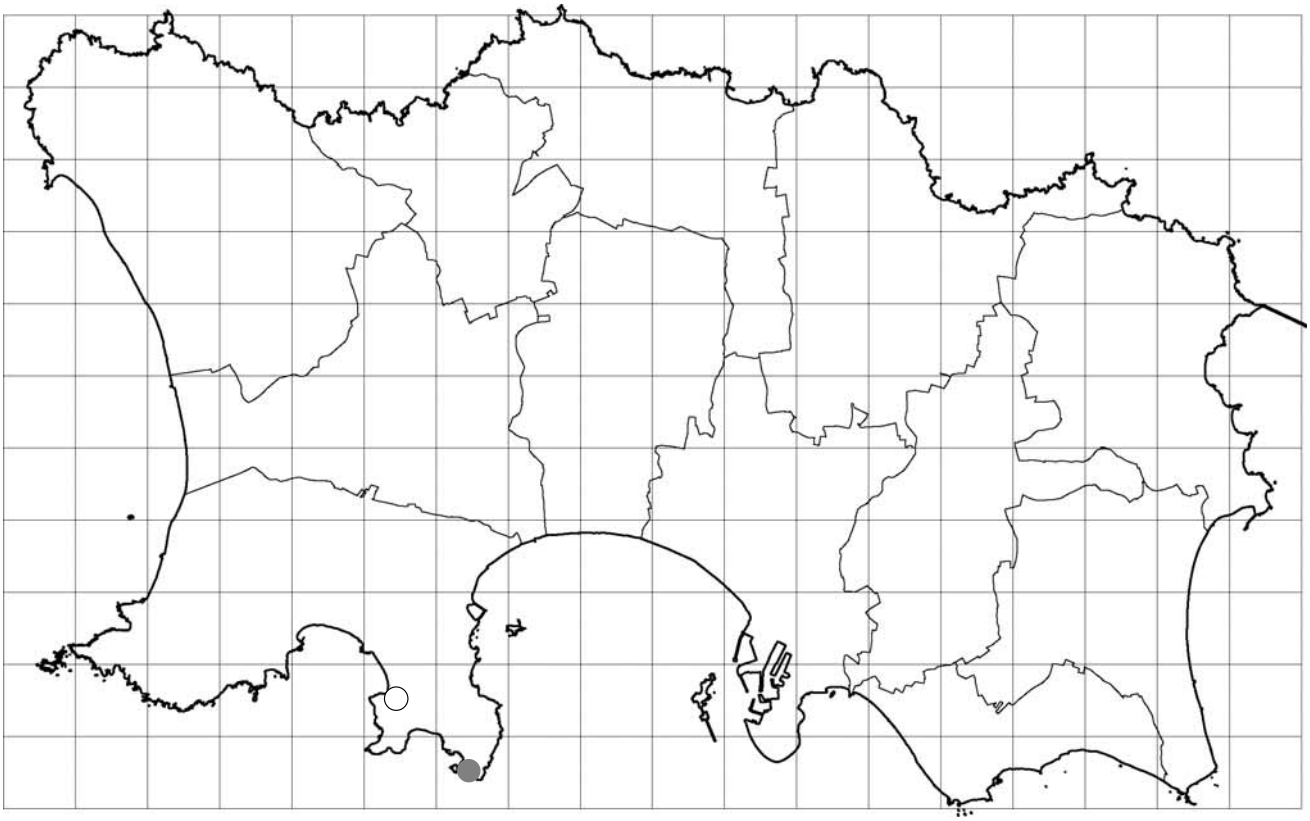

Photo Credit: John Pinel

BioDiversity

Atlantic Puffin

(Fratercula arctica)

Action Plan

States of Jersey

1. Current status

1.1 Breeding visitor. Puffins breed on Jersey's north coast after spending the winter at sea. Wintering birds may be seen following storms in the Atlantic but typically the species is only seen in Jersey waters March-early August.

1.2 Atlantic Puffin is a common and widespread species on both sides of the northern Atlantic. However, Jersey Puffins are at the southernmost edge of the species' range, forming part of a distinct English Channel sub-population with other colonies in Cornwall, Scilly Isles, Dorset, Alderney, Sark, Herm and Sept-Îles, France. Further colonies in this sub-population, notably in France, have become extinct. There have been marked declines in all of the English Channel colonies during the 20th Century although exact causes are typically poorly known and may be varied. The largest current colonies are at Île Rouzic (Sept Îles) France and Burhou (Alderney).

1.3 In Jersey, Puffins nest in burrows only in the north coast cliffs from Plémont east to Grand Becquet and Douet de la Mer in St Ouen – a stretch of approximately 1.2km of north-facing cliffs. This short stretch of cliff has been the only major site for nesting Puffins recorded except for a few birds that were reported breeding near Grève de Lecq (St Ouen) in 1924 (Dobson 1952). Birds nest principally in rock crevices although some may burrow into soil in areas of the cliff inaccessible to predators.

1.4 It has proved very difficult to estimate exact numbers of Puffins in Jersey as nests are below the cliff top and birds do not stand at burrow entrances. All population estimates have been taken from the number of birds collecting on the sea below the cliffs and/or flying in from the sea to their nests. Dobson (1952) reported a population of 200-300 pairs during 1911-1914 but that this decreased rapidly from 1915 and may have been as few as 20 pairs by 1950 and 10 pairs a few years later. Numbers may have been relatively stable since the 1960s.

1.5 Population counts 1998-2007 (Société Jersiaise records) show no obvious recent trend but give an average over 10 years of 16.9 birds recorded at the colony each year. Single birds seen on the sea close to colonies during the early part of the breeding season may represent pairs (the other bird is invisible at the nest) (Walsh *et al.* 1995). It is possible that counts made in July include non-breeding birds (Walsh *et al.* 1995); however, it is likely that the 2000 count did not and may have truly represented 16 pairs. Therefore, a population in recent years of 10-20 pairs is possible. The 2007 count may represent a dramatic decrease; however, weather conditions during the breeding season were not conducive to observation and may have influenced counts.

1.6 Demography (age and sex structure of the population), survival and recruitment in the Jersey population are unknown and make the true status difficult to establish.

1.7 The Puffin is fully protected under the Conservation of Wildlife (Jersey) Law 2000.

2. Current factors causing loss or decline

2.1 Several likely causes for this decline have been suggested mirroring those elsewhere in the English Channel sub-population or other parts of the species' range.

2.2 Declines in Puffin numbers have been widespread and gradual throughout the species range during the 20th Century suggesting common factors acting over a wide geographic area (Mitchell *et al.* 2004): the most likely factor is generally considered to be the deterioration in the food supply during the breeding season resulting from a warming of the sea. No study has been undertaken to determine the decline of the Puffin in Jersey and, therefore, the exact causes of the long-term decline are unclear; however, predicted global warming is likely to further worsen this situation and lead to a northward shift in the Puffin's distribution.

2.3 Sandeels *Ammodytes* sp. , a major food item for nesting Puffins (Lowther *et al.* 2002) have declined in the north Atlantic, declines that may be attributed to warming seas and excessive harvesting (Furness 2007) and these declines have undoubtedly impacted on the success of many breeding seabirds (Fisheries Research Services 2003).

2.4 In recent years there have been increases in population levels of snake pipefish *Entelurus aequoreus* in the north east Atlantic, possibly also as a result of rising sea temperatures (Johns & Halliday 2007). An effect of this increase is that many seabird species, unknown to feed on snake pipefish before 2004, are feeding these fish to young that are unable to digest or either even swallow the new prey resulting in choking or starving to death (JNCC 2007, Harris *et al.* 2007). This new threat to breeding seabirds has been recorded at many sites in the UK. The effects on Jersey's seabirds of these changes in local fish stocks are unknown.

2.5 The Puffin's reliance on inaccessible cliff crevices in Jersey and an apparent unwillingness or inability to use the grassy cliff tops is assumed to be driven by

Year of count	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007*
Max. no birds	22	32	16	16	12	10	16	22	18	5
Date of count	-	3/7	23/4	30/5	3/6	5/7	6/6	2/7	11/7	1/7

Data from Société Jersiaise records.

predator pressure. Norway rat *Rattus norvegicus* (and possibly before it the now extinct ship rat *R. rattus*) and domestic cat *Felis cattus* are undoubtedly present on the cliffs as is domestic ferret *Mustela putorius furo*.

2.6 Large gulls (*Larus. argentatus, L. fuscus and L. marinus*) nest on the cliffs and may also be a threat through pressures on both feeding and nesting Puffins (Finney *et al.* 2003). However it is most likely high densities of mammalian predators that have restricted the Puffin to inaccessible reaches of the cliffs and have prevented recolonisation of more suitable grassy areas.

2.7 Oil pollution in local seas, especially following wrecks of the *Torrey Canyon* (1967) between Scilly Isles and Cornwall, the *Amoco Cadiz* (1978) off Brittany and the *Erika* (1999) in the Bay of Biscay, may have had disastrous effects on Puffins wintering at sea.

2.8 Nesting Puffins and other seabirds are susceptible to disturbance when collecting on the sea close to breeding sites, particularly when carrying fish for young in the nest (Speckman *et al.* 2004; Hentze 2006). There is no exclusion zone around the Puffin sites in Jersey. Human disturbance is probably minimal but the Puffin cliffs have no exclusion fencing and are not fully protected.

2.9 Existing and proposed developments in the Plémont vicinity may have an impact on nesting seabirds but direct evidence is difficult to establish.

2.10 Recruitment rates in Jersey's Puffins are unknown and the population may be ageing and either not breeding at all or producing only a very small number of young. It is possible that such long-lived birds might remain at a colony even if no longer reproducing successfully. The exact cause of the reduction and possible cessation of breeding may have happened several years ago and now be impossible to determine accurately. In this case, the small numbers of Puffin may return faithfully each year to the colony yet in fact be biologically extinct.

3. Current action

3.1 Puffins and other nesting seabirds are counted by voluntary observers on an ad hoc basis during the breeding season and data stored by Société Jersiaise.

3.2 Puffins in Jersey were included in three major UK seabird surveys: Operation Seabird in 1969-1970; *The Seabird Colony Register* in 1985-1988; *Seabird 2000* in 1998-2002.

3.3 A report (Atlantic Puffin *Fratercula arctica* and other seabirds at Plémont) on the situation with Puffin population in Jersey was written as part of the planning process for proposed developments at the old holiday camp site at Plémont (Young 2008).

4. Action plan objectives and targets

4.1 Full protection of nesting sites and birds at sea in vicinity of sites.

4.2 Establishment of 'Jersey Seabird Working Group' a group dedicated to implementing this action plan and other seabird species where necessary.

4.3 Detailed monitoring of Jersey Puffins and identification of main threats to their survival. Develop strategies for studying demography and establishing breeding rates etc.

4.4 Stabilisation of decline and spread of nesting birds to suitable mammal-free areas.

5. Proposed action with lead agencies

5.1 Policy and legislation

5.1.1 Atlantic Puffin is fully protected throughout the English Channel through national legislation in UK and France, Jersey (Conservation of Wildlife (Jersey) Law 2000; States of Jersey 2007) and Guernsey (The Protection of Wild Birds (Amendment) Ordinance 1951 and The Control of Birds Ordinance 1985). Each of these States is also a signatory to international agreements that cover Puffins including the Bern Convention on the conservation of wildlife and natural habitats (COE 2007). In the UK the Atlantic Puffin is an 'amber' species: a species with an unfavourable conservation status in Europe (BTO 2007).

5.1.2 Investigate the establishment of protected areas of clifftops to include all current and recent Puffin nest sites. This protected area may be extended to include other seabirds such as Razorbill *Alca torda* and Northern Fulmar *Fulmarus glacialis* at other sites on the north coast. (Action: ED)

5.1.3 Investigate the establishment of exclusion zones on sea area below Puffin sites. Exclusion must be complete but may be only March-August inclusive. (Action: ED)

5.1.4 All future developments in vicinity of seabird cliffs must be sensitively planned and include an impact assessment (EIA) to investigate potential threats to the birds. (Action: ED)

5.2 Site safeguard and management

5.2.1 Investigate the establishment of protected areas of coast at Plémont headland through exclusion of humans and invasive mammals through fencing. Area may prove suitable for burrow nesting of Puffins and other seabirds e.g. European storm-petrel *Hydrobates pelagicus*. (Action: ED).

5.2.2 Investigate the possiblility of fencing areas of clifftops to prevent disturbance with the permission of land owners. (Action: ED)

5.2.3 Investigate designation areas of sea in vicinity of colonies as no-boat/no-fishing zones and enforce exclusion. (Action: ED, Fisheries & Marine Resources)

5.2.4 Investigate sources of funding for safeguarding and management of these areas.

5.3 Species protection and management

5.3.1 Establish Jersey Atlantic Puffin Watch to provide detailed study of populations under the Jersey Biodiversity Partnership including all concerned parties e.g. Environment Department, National Trust for Jersey, Société Jersiaise, DURRELL, Marine user groups (Action: ED).

5.3.2 Investigate control of invasive mammals within protected (and fenced) Puffin sites through programmes of eradication. (Action: ED, DURRELL, SJ).

5.4 Advisory

5.4.1 The States of Jersey have produced a Jersey Marine & Coastal Wildlife watching code, 'Safe for wildlife –safe for you' leaflet outlining codes of conduct on Jersey's coastal waters. These leaflets can be found on the States of Jersey website and are distributed at various locations around the Island. (Action: ED)

5.5 Future research and monitoring

5.5.1 Following establishment of a new protected site, methods for improving nesting and, possibly, translocation of Puffins from a site outside of Jersey (see Kress & Nettleship 1988, Valigra 2007) will be investigated by the Jersey Seabird Working Group. (Action: ED, DURRELL, SJ)

5.6 Communications and publicity

5.6.1 Use media to highlight the presence, legal status and local and international conservation requirements of this species. Communicate results of any surveys that give population changes. (Action: ED, DURRELL, SJ)

5.6.2 Provide guidelines and training on sympathetic use of the coastal zone to key stakeholders through the implementation of the Coastal Zone Management Plan. (Action: ED)

5.7 Link with other action plans

5.7.1 Measures taken to improve habitat for Puffins will also benefit other marine and coastal bird species.

Atlantic Puffin *Fratercula arctica*

● records from 2008

Distribution of Atlantic Puffin within Jersey, by 1 Km square.

Source: Data collected by Société Jersiaise and Durrell Wildlife Conservation Trust, 2008.

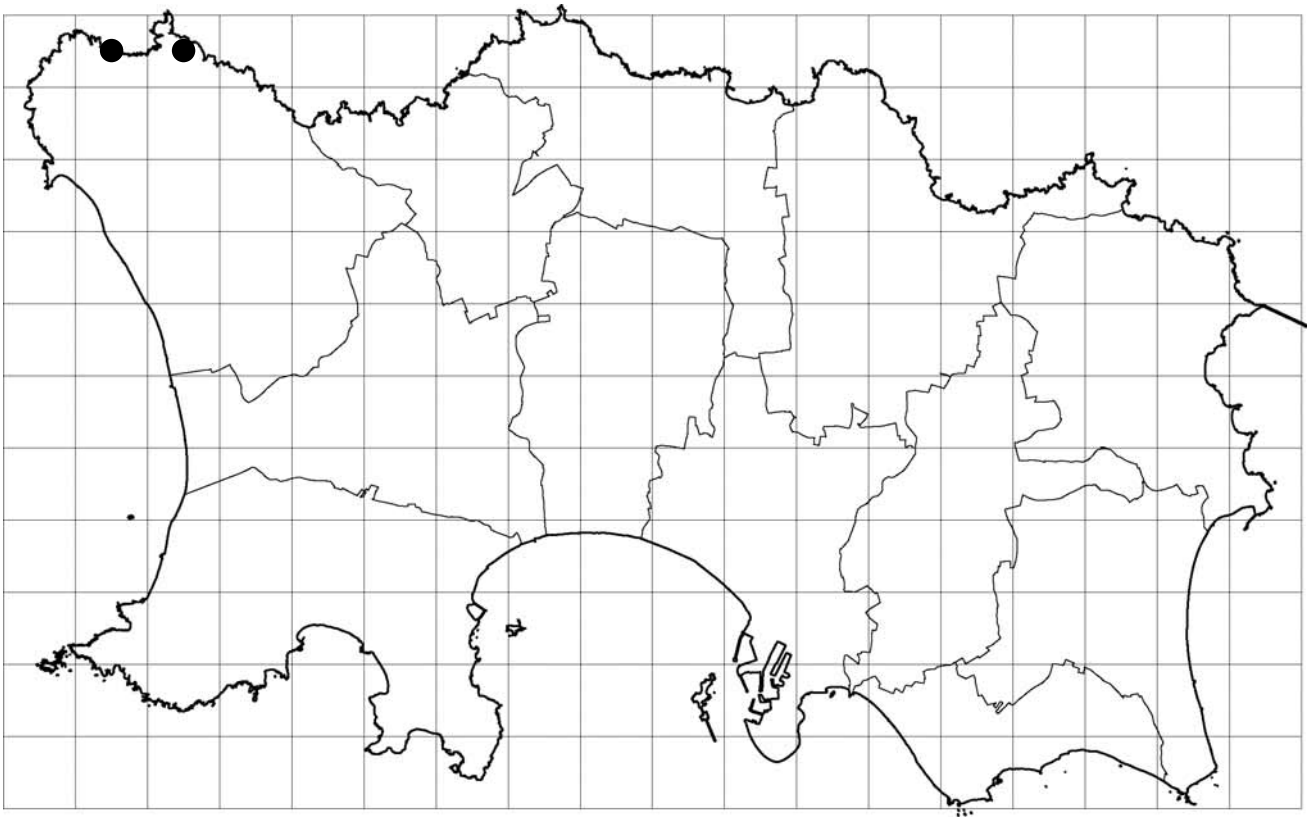

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Photo Credit: Paul Hillion

BioDiversity

Brent Goose

(Branta bernicla)

Action Plan

States of Jersey

Current status

1.1 Three subspecies of Brent Goose are currently recognised. The Dark-bellied Brent Goose *Branta bernicla bernicla* is the most numerous globally and winters exclusively in western Europe. The population is estimated at 200,000, on a slight decline since the 1990s. Pale-bellied Brent Goose *B.bernicla hrota* nests in the Canadian Arctic and Greenland and winters in eastern USA and small areas of western Europe. This population is believed to be stable at approximately 33,000 (Delany *et al*., 2007). Black Brant (Brent Goose) *B.bernicla nigricans* nests in eastern Siberia, Alaska and Canada and winters along Pacific coasts (Wernham *et al*., 2002).

1.2 All three subspecies are autumn migrant and winter visitors. Brent Geese have been wintering in Jersey since at least the seventeenth century (Le Sueur, 1976). Numbers rose substantially in the 1970s and have remained stable in recent years. Since the late 1990s annual counts have exceeded 1,000. The majority are Dark-bellied, whilst numbers of Pale-bellied rarely exceed 100 and only 5 Black Brant have been observed since 1982 (Société Jersiaise). They are known to migrate along the same route each year, stopping to rest and spend the winter at traditional sites (Young *et al*., 2002).

1.3 The earliest returning birds have been seen in late August although in most years the first birds are seen in mid-September (Young *et al*., 2002). Numbers typically peak in January or February. They begin to leave in late March, the last flying north in late May. Not all birds recorded in autumn stay in the island; some possibly moving to sites on the French coast (Young *et al*., 2002).

1.4 On their winter grounds Brent Geese are restricted to coastal habitats where they graze on intertidal Eelgrass beds *Zostera sp*. and saltmarsh and roost at sea. Feeding on improved grassland has become common as the Eelgrass beds are depleted in mid-winter and spring (Ward, 2004).

1.5 Brent Geese have historically been attracted to the Eelgrass beds in St Aubin's Bay and Grouville Bay (Le Sueur, 1976), the most heavily utilised area at low tide being between West Park and Bel Royal. Dark-bellied eventually occupy each of the Island's bays from St Catherine to L'Etacq whereas Pale-bellied only visit St Aubin's Bay. As the winter progresses and at high tide many of the Dark-bellied tend to feed inland in fields (Young et al., 2002). Observation of ringed birds has indicated that geese remain faithful to the same bay each year and rarely move between bays (Young et al., 2002).

1.6 Winter 2006/7 counts reached a maximum in January of 1405, of which approximately 46 were Pale-bellied (Société Jersiaise). Brent Goose population dynamics and breeding success are influenced by numbers of rodents (e.g. lemmings) and their predators in the Arctic breeding grounds – the years following a lemming crash are poor for the geese. Only 2% of birds counted over the 2006/7 winter period were juveniles, indicating a poor breeding season in 2006.

1.7 All species and subspecies are fully protected under the Conservation of Wildlife (Jersey) Law 2000.

2. Current factors causing loss or decline

2.1 It is well documented that Brent Geese tend to congregate at traditional sites and remain faithful to those sites year after year. This heavy reliance on a small number of sites at critical points in the annual cycle and reluctance to move to other sites makes them particularly vulnerable to local extinctions as a result of habitat loss or excessive disturbance at one of these sites. Wintering groups are potentially made up of birds from the same breeding area and local extinctions in winter may lead to losses of all breeders from some Arctic sites.

2.2 Physical and human disturbance - recreational and commercial activities are all factors which could impact on population numbers both in breeding areas and on migration. Brent Geese need to feed through the winter to develop body condition for the return migration and for arrival in the arctic. Disturbance during vital winter feeding will potentially affect on their condition and survivability later in the year.

2.3 Habitat loss and fragmentation in breeding areas and traditional wintering sites - coastal development and land reclamation.

2.4 Food availability – the species' dependence on *Zostera* spp. during stages of the annual cycle particularly on migration, leaves it vulnerable to changes in abundance of *Zostera* beds through disease, pollution or climatic factors- in the 1930s a wasting disease largely destroyed *Zostera* beds worldwide leading to a crash in the Dark-bellied population. More recently further declines in *Zostera* abundance have been noted elsewhere in Europe (Ward, 2004).

2.5 Agricultural conflict - a growing tendency by Brent Geese to supplement their food supply by foraging inland is leading to an increase in disturbance from landowners who find them to be a nuisance (Ward, 2004). Presently it is not known whether this is a problem in Jersey.

2.6 Climate change – the species is likely to suffer from the indirect and direct effects of climate change in breeding, staging and wintering grounds through changes in, for example, food and habitat availability (EHS, 2008).

3. Current action

3.1 **International** - The Brent Goose is classified as a SPEC 3 species in Birdlife International's Species of European Conservation Concern which means that it has an unfavourable conservation status in Europe, (Ward, RM, 2004). The species appears on the 'Amber' list of the 'Population States of Birds in the UK, Channel Islands and the Isle of Man because 20% or more of the North-west European Brent Goose population occurs in the UK during the non-breeding season, 50% or more of the UK non-breeding 'population' can be found at 10 or fewer sites and because it has an unfavourable conservation status in Europe (Gregory *et al*., 2002).

3.2 The Pale-bellied Brent Goose is listed under Category A (2) of the Africa-Eurasian Waterbird Agreement (AEWA), prepared under the Bonn Convention on Migratory Species due to the fact that the population size lies between 10,000 and 25,000 (AEWA)

3.3 The Dark-bellied Brent Goose is listed under Category B (2) b and c of AEWA because there are more than 100,000 individuals in the population in need of special attention due to dependence on a threatened habitat type (Ward, 2004).

3.4 An International Single Species Action Plan (ISSAP) and Flyway Management Plan have been prepared for each of the Pale-Bellied and Dark-bellied. These documents provide frameworks for the implementation by Range States of National Action Plans for the conservation and management of the two populations (Ward, 2004).

3.5 International protection of important wetland habitats for the Brent Goose is provided through the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat and through the Bern Convention on the Conservation of Wildlife and Natural Habitats. In the United Kingdom the majority of wintering sites receive strict protection in the form of Special Sites of Scientific Interest (SSSI) and specially protected areas (S.PA) (Ward, 2004).

3.6 Monitoring and assessment of the global population is coordinated by the Goose Specialist Group of Wetlands International which holds a database of count information at site, national and international level. Colour-ringing and satellite tracking are also carried out throughout the species' flyway providing valuable information on migratory patterns (Ward, 2004).

3.7 **National** - At National level annual site-based monitoring and colour-ringing has been carried out for over twenty years within the Wetland Bird Survey (WeBS) jointly run by the British Trust for Ornithology, the Wildfowl and Wetland Trust, the Royal Society for the Protection of Birds & the Joint Nature Conservation Council.

3.8 **Local** - Detailed records of the species' arrival each autumn and numbers and distribution along the Island's shoreline and inland have been maintained by the Ornithology Section of the Société Jersiaise for many years. Numbers of juveniles, coloured ringed birds from elsewhere and birds colour-ringed in Jersey are also monitored.

3.9 Jersey's Island Plan 2002 includes many policies to protect Jersey's marine and coastal environment

3.10 Development control on marine zone Conditions are included in any planning applications which may affect existing or potential habitat of this species.

3.11 Important key site - Grouville Bay lies within the south-east coast Ramsar Site.

4. Action plan objectives and targets

4.1 To maintain, record and improve Brent Geese populations wintering in Jersey.

4.2 To implement international and national conservation management requirements as agreed by Range States within the ISSAs for the species.

4.3 To maintain and enhance the current status of habitats particularly of Eelgrass beds (see BAP).

4.4 To define adequate levels of minimal disturbance through control of potentially damaging activities.

4.5 To accurately map all varieties of Eelgrass distribution with the aim to maintain and if necessary extend Eelgrass beds in Jersey's coastal waters (Objective 4.1 of Eelgrass beds (*Zostera spp*.) Biodiversity Action Plan).

5. Proposed actions with lead agencies

5.1 Policy and Legislation

5.1.2 Implementation of Coastal Zone Management Strategy and ensure that it incorporates the conservation needs of Brent Geese, integrating them with the management of other waders and Eelgrass beds. (Action: ED)

5.1.2 Co-operation with UK and International Working Groups to implement international/national Species Action Plans. (Action: ED)

5.1.3 Provide legal habitat protection through marine Site of Special Interest designation (Action: ED).

5.2 Site safeguard and management

5.2.1 Ensure that Brent Geese and their conservation management requirements are recognised and site protection policies are included in eg. Planning requirements. (Action: ED)

5.2.2 Identify key inland sites and encourage appropriate conservation management through the Countryside Renewal Scheme (CRS). (Action: ED)

5.3 Species management and protection

5.3.1 Safeguard populations on key sites. Monitor and maintain observations. (Action: Société Jersiaise)

5.3.2 Continue to contribute to species conservation through participation in the National Species Working Groups as specified in the AEWA Single Species Action Plans for the Dark-bellied and Pale-bellied Brent Goose. (Action:Société Jersiaise & ED)

5.3.3 Ensure that direct and indirect disturbance of Brent Geese populations is minimised. (Action: Société Jersiaise, ED)

5.4 Advisory

5.4.1 Assess whether key sites both coastal and inland are appropriately protected by existing legislation and if not develop appropriate protection. (Action: ED)

5.4.2 Provide advice and support through CRS on habitat management to landowners of inland sites. (Action: ED)

5.5 Future research and monitoring

5.5.1 Build up and expand information base of numbers and distribution of Brent Geese in Jersey. Continue to contribute to the monitoring of overall populations at national and international level. (Action: Société Jersiaise, ED)

5.5.2 Undertake research into levels of physical disturbance at coastal sites. (Action: Société Jersiaise & ED)

5.5.3 Undertake research into the use of inland habitats to help inform the importance of such habitats. (Action: Société Jersiaise & ED)

5.5.4 Compare distributions with locations of SSI/Ramsar sites. If required expand SSI. (Action: Société Jersiaise & ED)

5.6 Communications and publicity

5.6.1 Use media to publicise the presence, legal status and local and international conservation requirements of this species. Communicate results of any surveys that give population changes. (Action: Société Jersiaise & ED)

5.6.2 Provide guidelines and training on sympathetic use of the coastal zone to key stakeholders through the implementation of the CZM Plan. (Action: ED)

5.6.3 Promote coastline as of international and national importance for the Brent Goose. (Action: Société Jersiaise & ED)

5.7 Links with other Plans

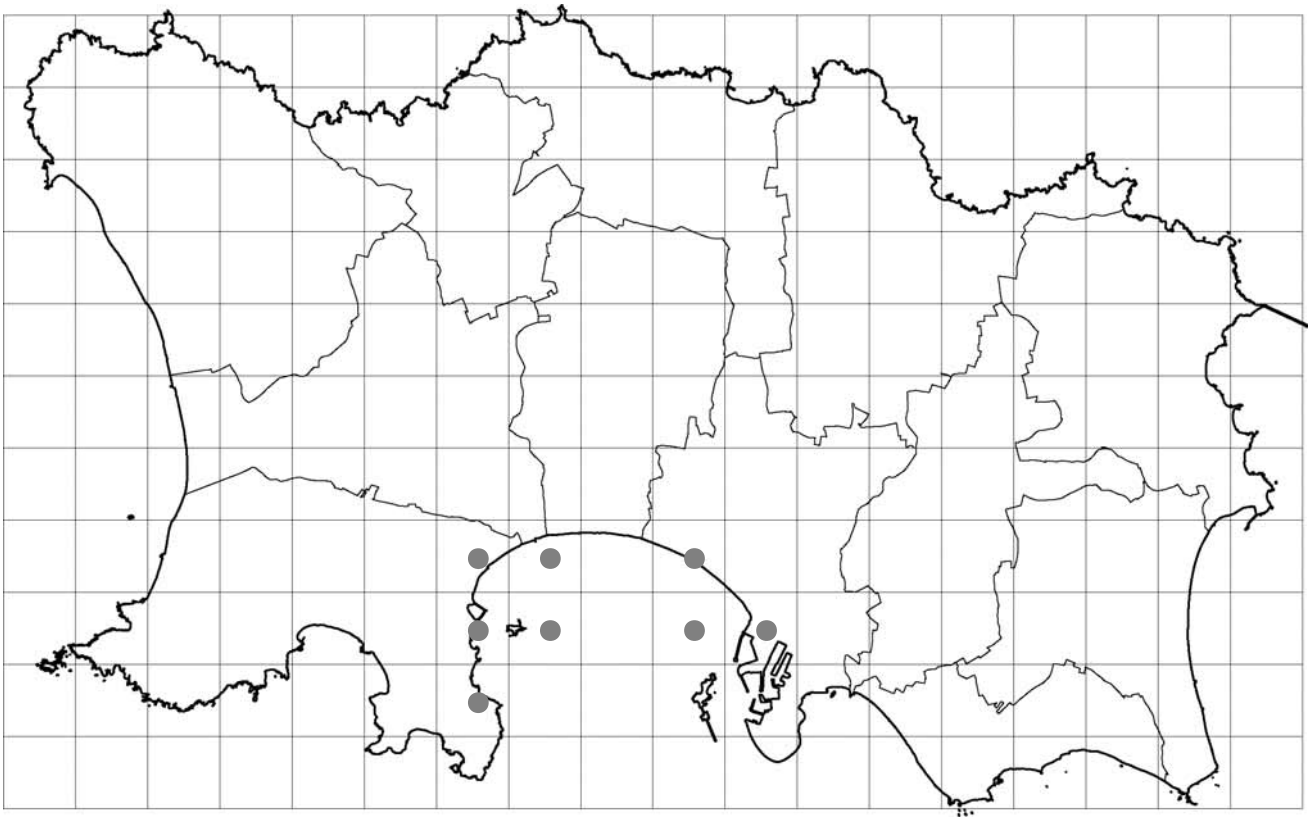
5.7.1 Should be considered with Eelgrass , other winter wading birds and Intertidal biodiversity action plans

Pale-bellied Brent *Branta bernicla*

● records from 2008

Distribution of Brent geese within Jersey, by 1 Km square.

Source: Data collected by Durrell Wildlife Conservation Trust, Société Jersiaise, and the Environment Department 2008.



Dark-bellied Brent *Branta bernicla*

● records from 2008

Distribution of Brent geese within Jersey, by 1 Km square.

Source: Data collected by Durrell Wildlife Conservation Trust, Société Jersiaise, and the Environment Department 2008.

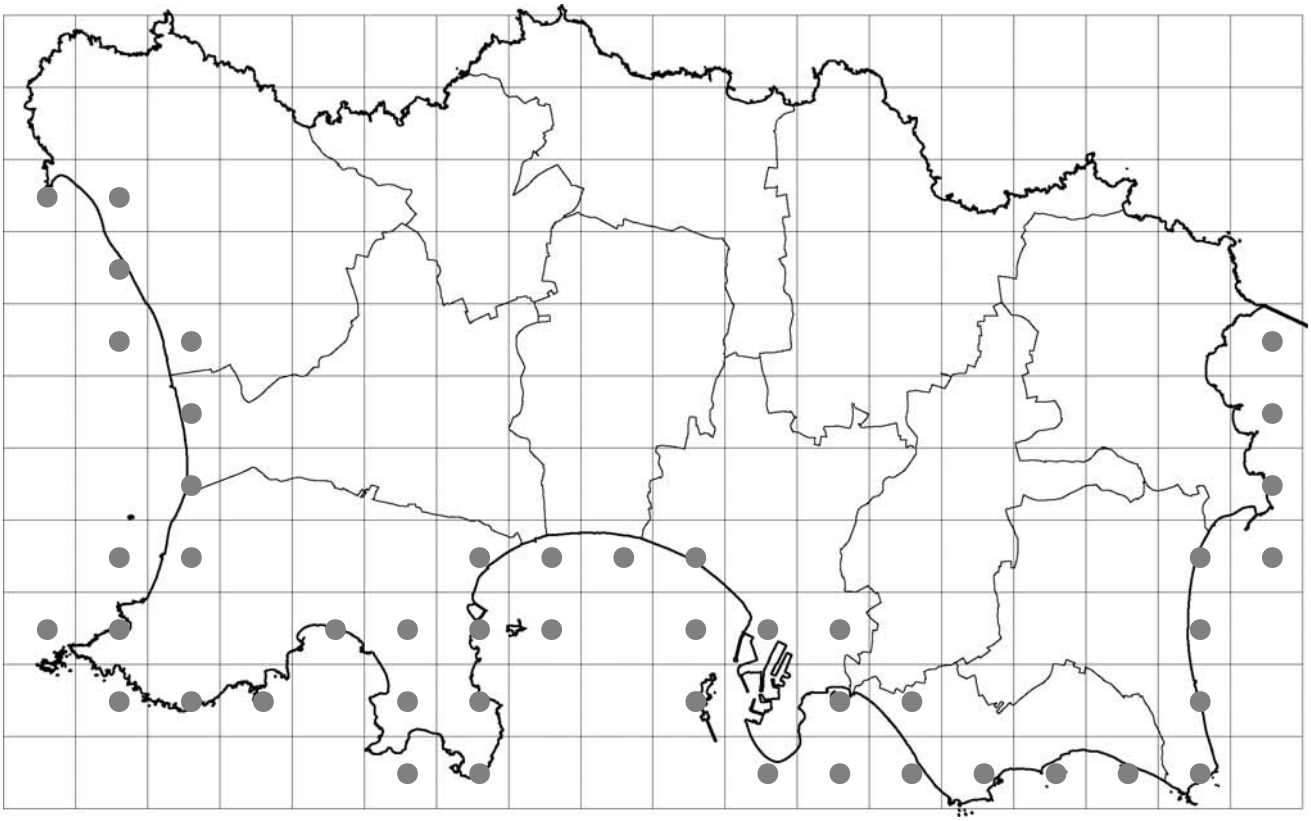


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Photo Credit: Michael Dryden

BioDiversity

Ormer

(Haliotis tuberculata)

Action Plan

States of Jersey

1. Current status

1.1 Ormers have a high social value in Jersey and are considered to be a part of the Island's heritage, (Morel, 2003). Although Ormers are not exploited for commercial purposes, recreational fishermen from all generations search and gather Ormers for consumption.

1.2 Ormers have a wide geographical range from the Channel Islands in the north to Senegal (Africa) in the south. Ormers live within the rocky shore and sub-tidal zones and are rarely found past a depth of 13m (Hayashi, 1983) but can survive in depths up to 20m. Ormers prefer areas of high currents where water is rich in oxygen. Adults avoid direct sunlight and are found under crevices, overhangs and boulders, but can be plentiful on open rock surfaces covered with seaweed. Ormers have a tendency to form and maintain aggregations (clusters) (Forster, 1967).

1.3 Ormers are herbivorous and collect food with a toothed radula (tongue). The Ormer has a 'foot', covered in tentacles, which is involved in both predator and prey detection and enables the Ormer to move. Forster (1962) felt it was probable that Ormers normally live in a retreat from which nightly feeding excursions are made, however, they may not return to the same retreat. Juvenile Ormers feed mainly on micro-algae whereas adults trap drifting seaweed. They bring food to their mouths and macerate it, after which it is passed through the oesophagus into the stomach and onto the intestine. Waste products are then excreted into the branchial chamber and released into the external environment through the holes in the shell cavity (Morse and Hooker, 1985).

1.4 The respiratory organs in Ormers consist of two parallel gills (ctenidia), which can be found on the left of the shell muscle, in the mantle cavity (Halls, 1990). Oxygenated water is taken up, passed over the gills and dispersed out through the holes in the shell, (Morel, 2003). The muscular foot contracts to aid this process (Halls, 1990).

1.5 The reproductive organs are also situated in the mantle cavity, which allows easy release of sperm and eggs into the surrounding environment. The colour of the Ormers gonads are the only distinguishing feature between female and male; therefore Ormers are known as dioecious. Ripe females' gonads can be blue, brown or green but the male gonads are usually cream (Morel, 2003). *Haliotis tuberculata* spawn from August through to September (Cochard, 1980).

1.6 Different spawning seasons have been found to occur in each of the Channel Islands, with the Islands further north having later spawning times (Hayashi, 1980). The average size of an Ormer after a year's growth is approximately 15 mm. The minimum size at which an Ormer first becomes sexually mature is 40-50mm and it takes 3-4 years for them to reach the minimum landing size of 90mm across the shell (Morel, 2003). Ormers can live up to 15 years in their natural environment (Morel, 2003).

1.7 Organisms that predate on *Haliotis tuberculata* include, humans, octopus, starfish, wrasse and velvet crab. Omers protect themselves against predators by moving their shell tightly onto the substratum with which they are attached (White et al, 1996). Once attached to the substratum in this way they are almost impossible to remove without force. Techniques for anthropomorphic removal include a strong knife or an 'Ormering Iron' (this is a 2 foot long metal bar with a flattened hook at one end (Halls, 1990).

2. Current factors causing loss or decline

2.1 **Disease:** Disease is probably the greatest threat to the local population of Ormers. In recent years several bacteria *Vibrio* spp. have been responsible for significant mortalities of Ormer in Jersey and the adjacent French coast. Any increase in temperature of coastal waters caused by global warming is likely to exasperate this particular problem (Pers. Comm. Morel, 2007).

2.2 **Predation:** There are reported cases of damage to shells by the boring sponge *Cliona lobata* which appears to be widely spread in Guernsey (Forster, 1967) and therefore could be a potential problem in Jersey waters. When *Cliona lobata* attaches to an Ormer it erodes a proportion of the shell away leaving it susceptible to predation from crabs and wrasse. Some localities in Guernsey showed that 95% of the natural mortalities were caused by *Cliona lobata* (Halls, 1990).

2.3 **Fishing for Ormers:** Ormers have a tendency to form and maintain aggregations (clusters), which make them vulnerable to fishing (Dowling et al., 2004). Shepard (1984) discovered that when the abalone, *Haliotis laevigata* were placed 1m apart they had formed an aggregate within 3 days. This has implications for the wild populations when targeted by recreational fishing because whole populations can potentially be removed at one time, leading to a reduction in productivity and regeneration (Babcock and Keesing, 1999).

3. Current action

3.1 Due to the biology and the social importance of this species the fishery is carefully managed by the States of Jersey Fisheries and Marine Resources Section. The management of Ormers includes both research into the species and specific legal restrictions placed on recreational fishermen.

3.2 The legal restrictions placed on recreational fishermen include:

- SCUBA-diving for Ormers is not permitted.
- There is a minimum landing size for Ormers which is 90mm.
- Fishing for Ormers may only take place from the 1st October until the 30th April.
- During the Ormering season, fishing may only take place on the first day of each new or full moon, and the three following days.
- It is also an offence to either possess fresh Ormers or export them at any time other than between the 1st October and the 30th April and then only on the first day of a new or full moon and the five days following.
- (This information was obtained from the Fisheries and Marine Resources Section, all legal information stated in this report was correct at the time of printing, alteration may occur in the future).

4. Action plan objectives and targets

4.1 Maintain and enhance current population numbers.

4.2 Continue the current research into the Ormer population of Jersey.

4.3 Ensure the continued awareness amongst recreational fishermen of the legal status and conservation requirement of this species and promote appropriate habitat management with Jersey's Coastal Zone Management Strategy.

5. Proposed activities with lead agencies

5.1 Policy and legislation

5.1.1 Ormers are protected under the Fisheries (Jersey) Law 1994 and subordinate legislation; at the current time there is no need to increase this protection (Action ED – Fisheries).

5.2 Site safeguard and management

5.2.1 Continue monitoring this species to increase and enhance our knowledge of its biology, ecology and environment (Action: ED - Fisheries).

5.3 Species protection and management

5.3.1 There is no commercial fishery for Ormers.

5.3.2 The Ormer is protected under the Fisheries Law to ensure that the fishery is sustainable.

5.3.3 The recreational fishery is managed through closed seasons and SCUBA diving for Ormers is not permitted.

5.3.4 A bag limit (i.e. the maximum number allowed to be taken at any one time) for the collection of Ormers will come into force in 2008.

5.4 Advisory

5.4.1 Laminated minimum size fishing cards are available, which outline the legal requirements that recreational fishermen must follow. Another leaflet, the Ormer in Jersey, outlines the biology of the Ormer and the management measures in place.

5.5 Future research and monitoring

5.5.1 Continuation of current research and monitoring by the Fisheries and Marine Resources Section. Stock assessments are undertaken annually to assess the state of the population. (Action: ED – Fisheries).

5.6 Communications and publicity

5.6.1 The Fisheries and Marine Resources Section has produced leaflets detailing the regulations in place. These leaflets/cards can be found on the States of Jersey website and are distributed at various locations around the Island.

5.7 Link with other action plans

5.7.1 None proposed.

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Ormer *Haliotis tuberculata*
● records from 2003
Distribution of Ormers in Jersey, by 1 Km square.
Source: Data collected from Fisheries & Marine Rescores Section, 2008.

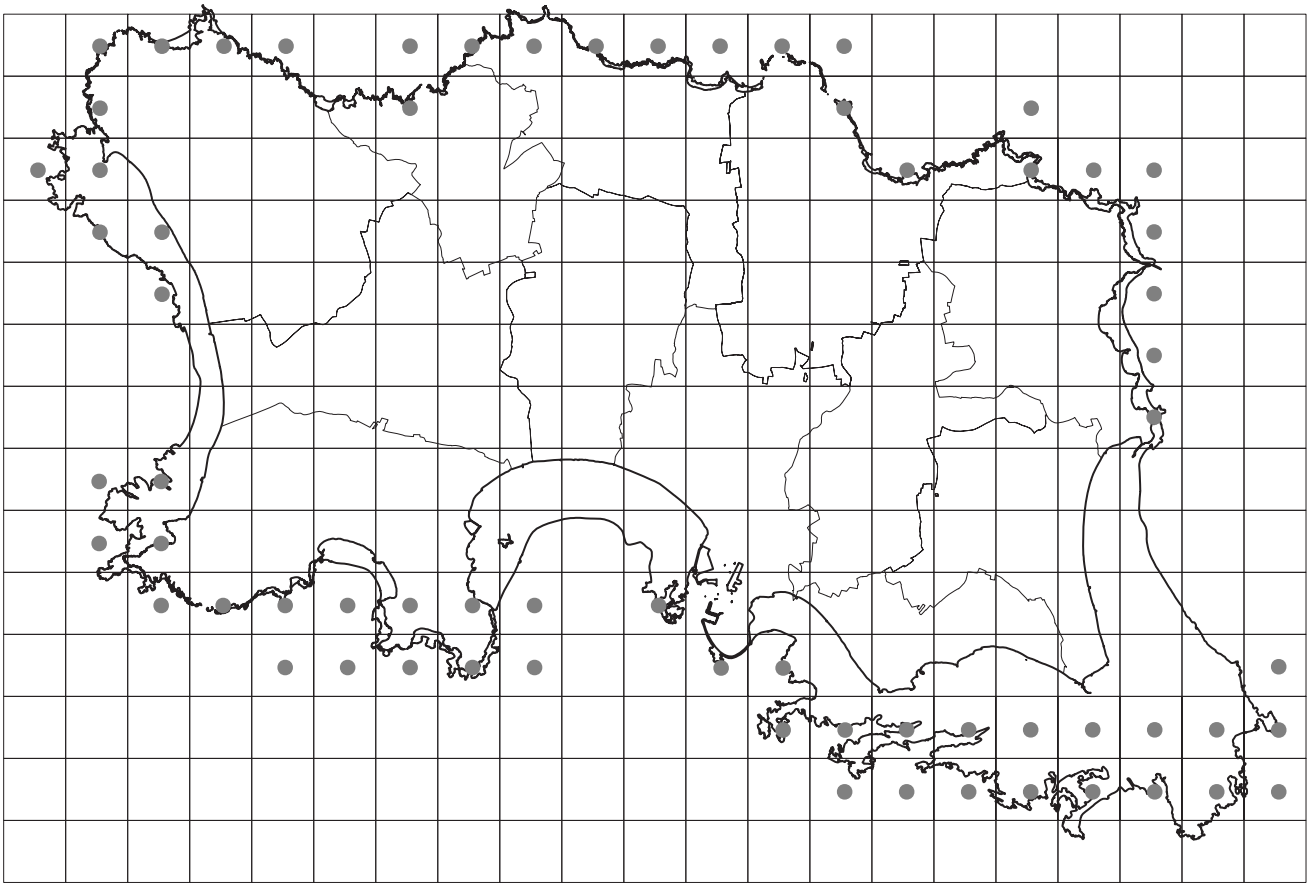

Photo Credit: Greg Morel

Bio Diversity
Habitat statement
Urban

States of Jersey

1. Current Status

This statement draws attention to and emphasises the importance of wildlife habitats in Jersey's urban environment. It records what has been achieved, what is being done, and what is still needed to enhance the value of these areas to wildlife. This statement is included with relevant Biodiversity Action Plans for Jersey (BAPS).

There are three key objectives which are;

- To safeguard and enhance the biodiversity found in the urban areas of Jersey.
- To increase people's contact and understanding of biodiversity in urban areas and stimulate local action/ownership.
- To promote sustainable development that contributes positively to urban habitats and hence the quality of life of an urban society.

Jersey's overall population density of 750 persons per km^2 may be compared with that of approximately 950 per km2 in Guernsey and 133 per km^2 in the Isle of Man (both from 2001 Censuses). The 2001 Jersey Census stated St Helier and the neighbouring suburban parishes of St Clement and St Saviour together accounted for more than half (55%) of the total population but constituted less than a fifth (19%) of the total land area. St Helier had the highest population density (3,292 per km^2); Trinity had the lowest (221 per km^2). The population density of the suburban parishes St Clement and St Saviour was almost four times that of the other non-urban parishes.

Within urban areas there are a number of habitats used by wildlife, including open spaces, road corridors, private gardens and associated ecological niches found within built-up areas. For the purposes of this habitat statement they are defined as urban habitats. Urban habitats can be divided into the following potential urban habitats:

Each of the urban habitats below contributes individually to a mosaic of habitats which can make up an integral part of Jersey's urban areas.

2. Current factors affecting the habitat

The main factors which alter the overall structure of urban habitats are:

- New development and redevelopment have a direct impact on urban areas when they damage or destroy valuable wildlife habitats. Development works, such as new housing, open space, work places and transport-infrastructure should protect urban habitats which enhance biodiversity.
- Urban green space management often consists of highly managed; largely artificial landscapes used for many competing interests and maintained using methods not always sympathetic to urban wildlife. A more integrated approach to management is needed paying attention to the needs of wildlife, which regards maintenance of biodiversity as a key management aim.
- Gardening practices can be the source of introduced species with the capacity to cause damage to native habitats and species. Also use of gardening chemicals can cause harm to wildlife habitats.
- Domestic pets can have adverse impacts on wildlife in certain circumstances e.g. cats predate on native wildlife, although they can assist in eradicating pest species like rats.
- A lack of progress in awareness of the importance of biodiversity issues in urban areas to both local residents and through public bodies and elected members.
- Urban air quality is a key factor as to whether many species will colonise towns with success.

Town parks Town squares Communal Gardens Public Gardens Playing Fields	Parks, playing fields, public gardens and town squares are those areas of open spaces which are large publicly accessible or managed landscapes primarily for public amenity and recreation.
Urban Trees Planted shrubberies	Linear features composed of woody species planted along the boundaries of roads, gardens, parks or open space around schools and other institutions.
Private gardens	Private open space surrounding residential dwellings, with the householder having the sole responsibility for management. Not including communal open space surrounding residential dwellings.
Church Yards/Cemeteries	Managed or unmanaged grounds owned by the parish.
Buildings and other artificial structures	Roofs, lofts, soffits, fascia boards, sheds and green houses. Areas that wild animals use in the built environment, such as swifts, house martins and bats.

3. Current Action

3.1 Legal status

A number of species and their habitats (i.e. dens, nests and access to these) are associated with urban areas and developments. These are protected under the Conservation of Wildlife (Jersey) Law 2000.

The Planning and Building (Jersey) Law 2002 sets out, as one its express purposes, to protect, enhance and conserve the 'biodiversity' and 'general amenity' of the Island. Protection of habitat is given legislative effect principally through articles 50-56 of the law which enable the listing of Sites of Special Interest, where that particular interest might be inter alia, zoological, ecological, botanical, geological or archeological. There are other legal provisions which exist to protect buildings, places and trees where the protection of habitat may be an ancillary benefit.

The Island's planning policy framework is provided by the 2002 Island Plan. There are no planning policies which explicitly seek to protect or enhance habitats and/or urban habitats in particular, but there is a range of policies which seek to protect the range of urban habitat types relative to other planning objectives, especially visual amenity.

The Island Plan is presently the subject of review and consideration of inherent urban habitat protection should be integral to the review process.

Most Jersey parks are protected under the Policing of Park (Jersey) Regulations, 2005, which have a number of Acts that protect and safeguard the parks' flora and fauna. For example you cannot wilfully disturb, ill-treat, injure, kill, take, and attempt to kill or take any animal, bird, fish or egg or handle, destroy, cut, injure, pluck any trees, shrubs, leaves, plants, flowers, fruits and seeds.

3.2 Management, research and guidance

A number of schemes can be used to enhance urban habitats as well as raise the quality of life for urban dwellers. On the edges of the town, green spaces/green zone backdrops can help to form a buffer between two or more built-up areas, bringing the countryside to the urban doorstep and providing habitat for flora and fauna. In this context, an urban habitat (green space) may be agricultural land without public access, but it still performs an important visual and environmental function.

3.2.1 **Management**

In Jersey, urban habitats are managed primarily for their amenity, functional use or aesthetic landscape value. Resources for managing the conservation value are often very limited. However sources of funding like The Jersey Ecology Fund – "a financial resource available for support of local environmental projects" is a fund that promotes nature conservation in town schools and town organisations as a priority, for example nature gardens, nature trails and pond creation. All of these promote biodiversity in the urban environment as well as giving town communities direct contact with nature conservation.

A 'List of Protected Trees' is available, which protects a particular tree or trees from being removed, or from work or damage which might lead to the loss or decrease of their amenity value. This means that the permission of the Minister for Planning and Environment is required to cut down, lop or otherwise alter, harm or interfere with a tree on the 'List of Protected Trees'. All types of trees, including single trees, groups of trees, shrubs, saplings, bushes and hedges can be included in the List of Protected Trees. Trees can be added to the List on a provisional basis where it is felt necessary to give them immediate protection: this might be where they are threatened with removal or damage.

3.2.2 **Research and Monitoring**

In recent times growing numbers of nesting Herring Gulls have become a nuisance to town dwellers. A 10-year programme, carried out in St Helier since 1997, gathered information through an annual nest count to see whether there was a yearly increase in seagulls that nest on urban roofs as well as highlighting foraging and behaviour changes in the colony.

A Wall Lizard Survey carried out in an urban public garden investigated lizard abundance and distribution including identifying preferred characteristics of habitats and vegetation important to them and other wildlife.

At present, a number of Island-wide surveys encompass the urban environment e.g. Garden Bird Survey, Glow-worm Survey, ToadWatch and other questionnaire surveys used to establish Island wide distributions of species.

The Jersey Bat Group was reformed in September 2006 as part of the Jersey Biodiversity Partnership. A keen group, they have taken responsibility for monitoring bat roosts. This task requires a minimum of four volunteer workers counting bats as they leave the roost at dusk. Additional roosts have been identified as a result of an awareness campaign and from the screening of planning applications. Bats are important, protected species that often rely on roosts in buildings and urban areas.

During 2005 the States of Jersey produced 'The State of Jersey Report' including an integrated monitoring programme for Jersey in order to carry out 'State of the Environment' monitoring. One project in conjunction with this programme is the Jersey Butterfly Monitoring Scheme. Butterflies are important indicator species for general invertebrate health and also act as indicators of overall environmental and habitat quality. The scheme is a recording and monitoring project and included within it are three urban sites: Howard Davis Park; Westmont Park and Green Street Cemetery. The scheme will enable us to monitor changes at individual sites and, by comparison with results elsewhere, to assess the impact of local factors such as habitat change caused by management and land-use changes.

Research and monitoring projects for urban biodiversity can apply for funding to the Jersey Ecology Fund.

3.2.3 **Guidance**

The Environment Department officers provide guidance and advice on urban habitat issues. A number of leaflets, booklets and literature are available relating to wild and urban habitats e.g. Bats and Buildings, Birds and Buildings, Herring Gulls –A Review, Pollution – Water made clearer, Tree planting, Wall Lizards, Squirrels and other related topics, which can be applied to urban species and habitats.

Further action is to be taken by creating supplementary planning guidance for developers and residents highlighting best practice when working and living around urban habitats.

4. Conservation Direction

The Jersey Biodiversity Partnership, which was set up in 2006, is an informal partnership of more than 50 organisations and individuals committed to preserving and enhancing biodiversity in Jersey. Partners support the Jersey Biodiversity Projects in a variety of ways; with funding, time, expertise or other resources. Volunteers play an invaluable role in monitoring various groups of species and are also involved in conservation and research projects, community projects, species and habitat surveys, public participation surveys and collaboration with public sector and private partners. The partnership provides a forum where ideas, policies, programmes and problems can be discussed by a representative group of those with a stake in Jersey's environment e.g. non-governmental organisations such as Jersey Trees for Life, St Helier Parish in Bloom, The National Trust and Jersey Action for Wildlife. All these organisations and more are key groups in co-ordinating urban habitat conservation projects in the Island.

The aims of the partnership with regard to urban habitats are proposed as follows:

- Broaden and deepen understanding of sustainable development and the role that biodiversity conservation plays, through all urban communities, both in the built-up environment, and in parks and green spaces;
- Encourage Planning applications to include appropriate ecological information on all applications which can help maintain or improve local biodiversity;
- Encourage partners to implement Jersey's Biodiversity Action Plans (BAPs) in all urban areas;
- Delivery of environmental action at the local level (local environmental organisations need to work with their local communities e.g. urban schools);
- Contribute to monitoring / research projects when appropriate e.g. garden bird watch, installing bat boxes e.g. 'ECO-ACTIVE';
- Promote an urban environment where quality of life and quality of environment are integral;
- Maintain the existing diversity and extent of wildlife in all urban areas, expanding the range and distribution of rare and common species and enabling this resource to be utilised as an educational tool;
- Encourage people to take more environmentally sustainable informed decisions;
- Promote wild space in urban areas as an educational resource to inform communities about local wildlife in the context of the wider environment.

These aims recognise that local communities have a role to play in shaping their own future and this should be an attempt to empower local communities in the decision-making process.

Contacts

Further information about;

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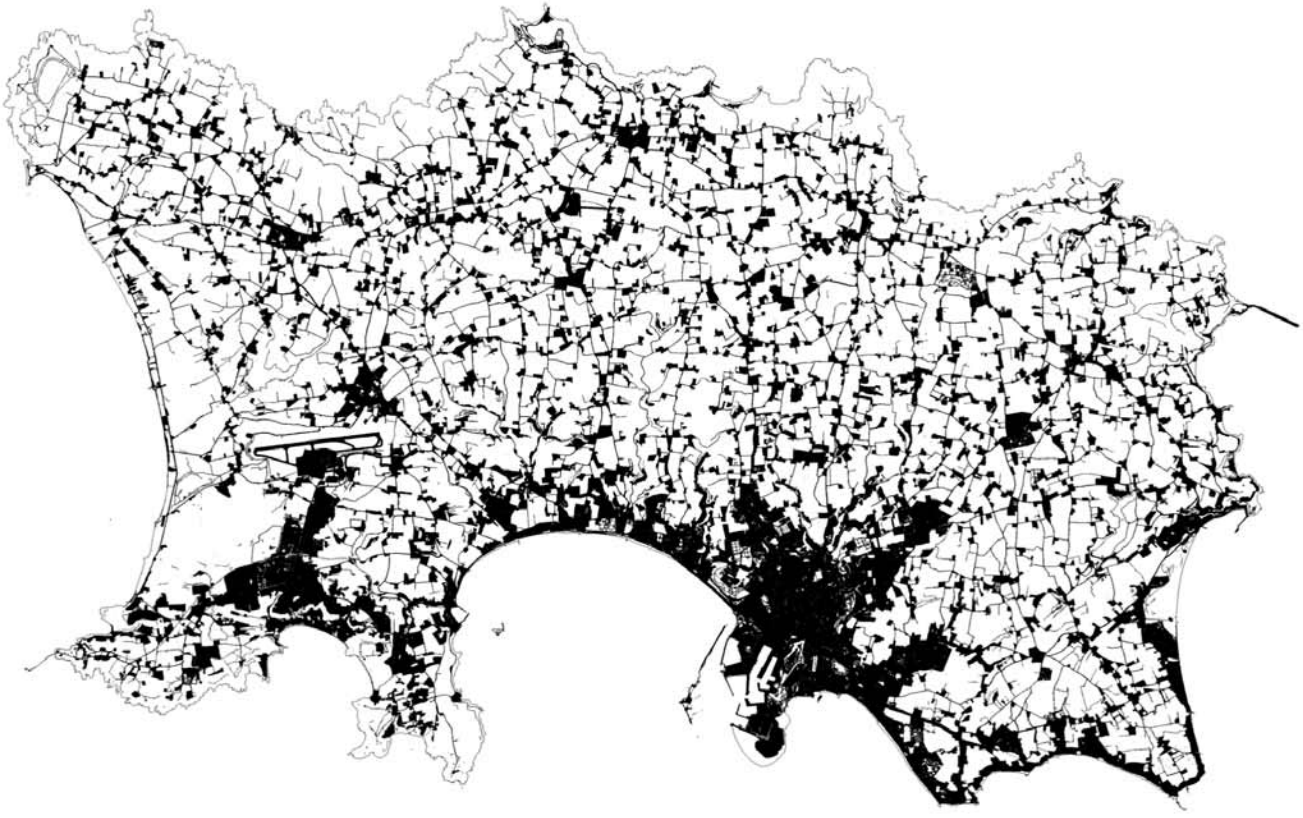
This habitat statement and Jersey's Biodiversity Partnership contact; Nina Cornish, Tel: 01534 441624, email n.cornish@gov.je

The Island Plan Review contact; Ralph Buchholz Tel: 448443, email: r.buchholz@gov.je should you have any queries regarding the review.

Protected trees contact Policy and Projects Section of the Planning and Building Services Department at South Hill, St. Helier, Jersey, JE2 4US or PolicyProjects@gov.je.

Jersey's Urban Areas
Source: Jersey Mapping, 2007



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- Working with the grain of nature – A Biodiversity Strategy for England

Photo Credit: Environment Department