

**Resolution CM/ResDip(2008)1
on the revised regulations for the European Diploma for Protected Areas**

*(Adopted by the Committee of Ministers on 20 February 2008
at the 1018th meeting of the Ministers' Deputies)¹*

Appendix 5: Model plan for annual reports

Annual report for the year 2018

Annual reports should describe the changes that have taken place since the previous year in dynamic terms of management and function and not be limited to basic data. Any new text or map introducing a change in the situation of the area should be attached to the annual report.

State: Scotland

Name of the area: Fair Isle

Year and number of years since the award or renewal of the European Diploma for Protected Areas:8

Central authority concerned:

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¹ As amended by Resolution CM/ResDip(2014)2 on 2 July 2014 at the 1204th meeting of the Ministers' Deputies.
Internet : <http://www.coe.int/cm>

1. Conditions: List here all conditions which were attached to the award or the renewal of the European Diploma. Explain either how the conditions have been totally complied with or detail the progress in complying with the conditions. Please also indicate any unresolved difficulties that you have encountered.

1. in recognition of the internationally important seabird colonies and associated marine environment currently experiencing severe pressure, the United Kingdom and Scottish Governments should use the powers invested in them through the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010 to establish the protected marine area which has been called for in successive diploma renewals. A new protected marine area should be in conformity with the Fair Isle Marine Action Plan (FIMP);

Three main activities were undertaken during the year. The first was securing Charitable Status. This was achieved in early autumn and the MPA is now officially a SCIO (Scottish Charitable Incorporated Organisation). The second was working on funding applications to support a Project Officer and finalising a job description for the post. The third was planning. This involved steering committee meetings and further discussions with stakeholders, all of whom remain supportive of the MPA project. A major point of discussion was identifying and reviewing potential research studies to push the project forward in the field. The MPA was always seen as a cooperative venture and Fair Isle was identified during discussions as attracting and dovetailing into, research by other partner organisations. Examples in 2018 were: a Scottish Natural Heritage funded study, in partnership with Fair Isle Bird Observatory, of the effectiveness of disturbance techniques to keep skuas *Stercorarius* away from flight approach lines – as they are a potential risk factor to planes; and a review of Fair Isle's sea-related cultural landscape values as part of a Maritime Heritage project led by Charlotte Slater from the North Atlantic Fisheries College in partnership with the Fair Isle and wider Shetland community.

2. Recommendations: List here all recommendations which were attached to the award or the renewal of the European Diploma. Explain either how the recommendations have been totally complied with or detail the progress in complying with the recommendations. Please also indicate any unresolved difficulties that you have encountered.

1. the needs and aspirations of the local community, as detailed in the FIMP, should be fully taken into account, as should the fragile socio-economic situation;

2. all efforts should be made to solve the problem of the disposal of plastic in general and agricultural baling plastic in particular.

1:

Fair Isle Unified Low Carbon Electricity Storage and Generation Project

This project entailed the erection of three wind turbine generators and a grid development of approximately five km of buried cable and electrical infrastructure comprising transformers, control building and a series of ground mounted photovoltaic panels. The electricity generated is fed into a bank of batteries housed in the control building, which is situated in the centre of the Isle close to the fire station and community hall. This 24/7 supply replaces the previous system, latterly based on one wind generator supported by diesel powered generators during a set daytime period of 14 hours.

Fair Isle has long been at the forefront of green energy, as demonstrated by the first commercial wind turbine in the UK, erected in 1982. This Fair Isle Renewable Energy Scheme is managed by the Fair Isle Electricity Company and its move to Low Carbon Energy has already received a national accolade, winning the Judges Award for Outstanding Project Across all Categories at the Scottish Green Energy Awards 2018.

4g service

There are also advanced proposal for 4g signal provision to the island which will improve, emergency response, the viability of island based business, of island communications for islanders and the visitor experience.

Fair Isle School

Environment continues to be an integral part of the curriculum at Fair Isle school, under the skilled tutelage of Pat Thomson. The wild flower garden was maintained and improved while regular nature walks enhanced their knowledge of the local environment. In the autumn, chance encounters with long-eared owls *Asio otus* prompted research into the ecology of the species, published by the children – as were other research

projects – in the *Fair Isle Times* weekly newsletter. The children were also asked to find appropriate Fair Isle names for the three new wind turbines and set about designing a logo for the Fair Isle MPA.

Bird Observatory and Ranger Service

The Fair Isle Ranger Service continued to be hosted by FIBO, though open to all visitors and island residents. The offering includes: general and specialist walks for birds and other subjects such as archaeology in conjunction with island expertise; involvement in environmental education activities; talks by staff, islanders, researchers and visitors covering a wide selection of subjects. Part of the offer is 'self-guiding walks' leaflets. Work is currently underway to expand this resource with a series of identification sheets aimed at the beginner, so far encompassing waders, seabirds and other resident birds.

Long-term scientific studies

The long-term studies continuing in 2018 were: high profile monitoring of seabirds by FIBO as part of the national Seabird Monitoring Programme, begun in 1986 and coordinated by the UK's Joint Nature Conservation Committee; three monitoring sites feeding constant effort records to Butterfly Conservation's National Moth Recording Programme (www.mothscount.org); systematic logging of Fair Isle cetacean and migrant butterfly records (FIBO); full data from the Fair Isle Meteorological Station, now highly automatised including the recording of sea surface data as part of the UK Meteorological Office network. The study into Arctic skua feeding patterns during the breeding season by staff of the British Trust for Ornithology in conjunction with FIBO was conducted for the second consecutive year as was the Glasgow University study of foraging patterns of guillemot and kittiwake. Also in its second year was a study of great skuas as an aircraft collision risk, funded by Scottish Natural Heritage with input from FIBO. This work was based around data collected by NTS through the work of a seasonal ranger post monitoring habits of nesting, fledglings and adolescent birds. This year the focus was on the effectiveness of disturbance measures incorporating a second field worker funded by the National Trust for Scotland.

2: Da Voar Redd Up

The annual Voar Redd Up took place on 28-30 April 18. This is a Shetland-wide charity funding event, organised on Fair Isle by the children. This ensures that at least the roadsides and beaches are tidy for the visitor season. The children keep data records and report less rubbish than in 2017. However, the biggest task was cleaning the beaches. This is an annual headache due to a continuous flow of materials derived from the sea. Twine, general plastic and lots of plastic bottles were plentiful, each putting sealife at risk. The children estimated 25% plastic bottles, 43% other plastics, 13% textiles/nets, 1% glass bottles, 2% cans, 10% other metals, 1% wooden material and 5% other materials. Whereas the sea (and users of the sea) is the source for most of the rubbish, air-borne balloons often arrive on the isle from distant parts. These too are an acknowledged risk to sea mammals, and the children are very aware of this.

3. Site Management: List here any changes to the European Diploma holding site management, in relation to both terrestrial and aquatic environments (as appropriate), and in relation to staff and finances, since the last annual report was submitted to the Council of Europe. Please also indicate any unresolved difficulties that you have encountered.

Alan Rankin (arankin@nts.org.uk – 0) was appointed as the National Trust for Scotland Island Operations Manager with effect from April 2018.

Alan Rankin has worked closely with the island throughout the year supported closely by Estate Surveyor North, Alan Barrow

4. Boundaries: Give details of any changes to the boundaries of the European Diploma holding site since the last annual report was submitted to the Council of Europe. If there are any changes, please attach an appropriate map to this report. Please also indicate any unresolved difficulties that you have encountered.

No Change

5. Other information: List here any other information about the European Diploma holding site which you consider should be provided to the Council of Europe.

Fair Isle weather

The year 2018 will be remembered for extended periods of at times exceptional weather. The early part of the year was very wet, constant rain and waterlogged fields. It then switched to one of the driest summers on record. In September it returned to a pattern of rain and gales, almost exclusively from the western sector. Each had an effect of environmental events and performance during the year. In particular, the dry summer encouraged the flowers of dry habitats, but suppressed some of the wetland species. Da Water, home to rare breeding wetland birds, virtually dried out completely though fortunately there was still a modicum of standing water left as the young fledged.

Flora

The Fair Isle flora is very well known yet there are still surprises and 2018 had more than its fair share. The biggest surprise of the year was undoubtedly the substantial dog rose *Rosa canina* shrub rediscovered half way down the cliff at Shieldi Geo. It was last reported by a 14 year old island girl in 1917. It had numerous flowers and it is possible that its flowering is restricted to exceptionally dry summers. This, combined with its location tucked in well down the cliff, may explain how it had gone unnoticed for 101 years

Other population changes included a weather-affected “no show” (zero plants) of sundews *Drosera rotundifolia* in an atypically dry Dumlin’s Sink where 565 were counted in 2017. The prostrate juniper population has been gradually expanding its range on the hill but also in the south where a small scattered population has established across the Rippack close to the new turbines.

There has been debate for some years about the occurrence of male fern *Dryopteris filix-mas* on the Isle. This has now been resolved. A cluster was found growing in a hole sunk into the bank of the Gilsetter burn just above the Funniequoy mills by visiting fern expert Hazel Metherell. Its characters were all on show apart from the spore cases.

Work has been begun to decipher the range of eyebright *Euphrasia* taxa across the isle. A *Euphrasia* study group from Edinburgh University brought with them UK eyebright specialist (and President of the Botanical Society of the British Isles) Chris Metherell. The study is ongoing and will hopefully shed greater light on this major component of Fair Isle summer vegetation.

Fungi

August was astonishing for its mushrooms. The first rains after one of the driest summers in recent memory brought out carpets everywhere. In early August, several fields were full of field mushrooms *Agaricus campestris*, several hundred per field, unprecedented numbers. After mid month it was the turn of the horse mushroom *Agaricus arvensis* to appear in number. The huge large-spored mushroom *Agaricus macrosporus* by contrast was absent from some regular sites as were waxcaps *Hygrophoraceae* in September and the wood blewit *Lepista nuda* at the end of the autumn.

Marine biota

Moderate numbers of many-ribbed jellyfish *Aequorea forskaelli* were recorded in July-August. This is the second year running for this warm temperate/sub-tropical species. Another vagrant from afar was buoy barnacle *Lepas fasciculatus*, clumps of which washed up on South Haven beach. There have only been two previous Isle records. Cast on to the same beach were several *Codium fragile* var. *fragile*, an alien seaweed originally from Japan, and Fair Isle’s third record of eel-grass.

Insects

There was a stream of interesting moth migrants throughout the first twenty days of August, including dotted clay *Xestia baja* (2nd Fair Isle record), gold spot *Plusia festucae* (3rd record), *Agonopterix nervosa* (2nd record) and the first records of *Agonopterix subpropinquella*. A small number of a tiny black and white micro proved to be *Caryocolum vicinella*. There has been just one previous record but this is an overlooked resident for sure as its foodplant is sea campion. Attached to the right forewing of the dotted clay was a dead ant. It was clinging on by its jaws and may have died during the journey: an interesting example of phoresy. The passenger was a worker common garden ant *Lasius niger*. The only species native to the isle is the northern red ant *Myrmica ruginodis*.

Birds

Hardly a year goes by without an addition to the Fair Isle bird list. This year it was crag martin *Ptyonoprogne rupestris*, a species more associated with Mediterranean Europe and with few previous British records. Concurrently, a song sparrow *Melospiza melodia* appeared, the fourth record for the isle of a North American species which rarely strays across the Atlantic. Spring migration was strong in two pulses, late March-early April and again in May. A feature was a record number of hawfinches *Coccothraustes coccothraustes*. Prolonged westerly winds in autumn depressed the volume and diversity of passage migrants and, though there were a number of regular rarities, it was one of the poorer autumns for visiting birdwatchers. The best birds were a White's thrush *Zoothera dauma* and a male Siberian rubythroat *Luscinia calliope*, the last appearing after the birdwatcher season which was a shame as Fair Isle has an almost complete monopoly of this species in the UK. A feature of both migrant periods was early records: earliest ever lesser whitethroat *Sylvia curruca* in spring, earliest ever autumn yellow-browed warbler *Phylloscopus inornatus* and second earliest autumn records for Richard's pipit *Anthus richardi* and lanceolated warbler *Locustella lanceolata*.

The dry summer weather did not prevent red-necked phalarope *Phalaropus lobatus* breeding for the second year. There was one female, two males, two nests and probably three young fledged. An unexpected bonus was pintail *Anas acuta* breeding for the first time at the same location. A female and 9 young suddenly appeared, though all but one were predated prior to fledging. No male was seen and it is suspected that the brood comprised pintail x mallard *Anas platyrhynchos* hybrids.

Seabirds

There are some signs of optimism for the seabirds in a breeding season of mixed results. Unfortunately, this does not extend to the black-legged kittiwake *Rissa tridactyla* as numbers in the monitoring plots dropped to their lowest ever, continuing the sad decline of a species which was once so numerous the islanders likened the clouds of birds coming off the cliffs ahead of an approaching plane to a 'snowstorm'. There were slight declines in the numbers of northern fulmars *Fulmarus glacialis*, European shags *Phalacrocorax aristotelis*, Arctic terns *Sterna paradisaea*, black guillemots *Cephus grylle* and Arctic skuas *Stercorarius parasiticus* in the monitoring plots, with the last falling to 28 apparently occupied territories (AOT), the lowest total since 2013. In terms of productivity, the bonxie (great skua *Stercorarius skua*) was one of only two species to fledge fewer chicks per nesting attempt than in 2017, with numbers dropping by around a third to 0.35 chicks fledged per AOT; intraspecific predation was an issue for a number of nests, particularly later in the season. Given the very high number of breeding bonxies, the productivity rate still represents 183 chicks fledged. Arctic skuas fared very poorly: only one chick fledged, most breeding attempts aborted at the start or failing at egg stage.

On a more positive note, it was the best year ever for the gannet *Morus bassanus* (4,291 AONs) and bonxie (520 AOTs) populations, whilst the razorbill *Alca torda* monitoring plot recorded the highest numbers since 2006. The main good news came from the productivity studies however, where almost all species showed an increase on last season's poor figures. The most notable results included puffin *Fratercula arctica* (0.90 chicks fledged per egg laid) and razorbill (0.79 chicks fledged per egg laid), both the highest figures ever recorded in the monitoring plots. There were also pleasingly good seasons for guillemot *Uria aalge* (0.58 chicks fledged per egg laid, the second best year in the last 12), kittiwake (0.47 chicks fledged per AON, the third best year in the last 16), Arctic tern (0.13 chicks fledged per nest, the fourth best year in the last 18) and shag (0.9 chicks fledged per AON).

Marine

The cetacean highlight of the year was a small pod of long-finned pilot whales *Globicephala melaena* in September. This species is not uncommon in Shetland waters (though becoming scarcer) but rarely comes close to Fair Isle. Pods of killer whales *Orcinus orca* were seen on several occasions, mainly in the spring. Sightings of Minke whales *Balaenoptera acutorostrata*, Risso's dolphins *Grampus griseus* and white-sided dolphins *Lagenorhynchus albus* were mainly in late summer and early autumn. Harbour porpoise *Phocaena phocaena* was recorded for the second successive year but there was only one report of white-beaked dolphins *Lagenorhynchus albirostris*. These last two species have declined severely in both numbers and regularity in Fair Isle waters over the last 30-40 years.

The 2018 grey seal *Halichoerus grypus* pup count was 46, the same as the year before. No common seals *Phoca vitulina* were seen during the year.

Terrestrial

After a long period of major population growth during the milder winters of this century, there has been a recent marked decrease in the number of rabbits *Oryctolagus cuniculus*. It has been suggested that the cause could be RHG, Rabbit Haemorrhagic Disease (RHG), currently prevalent in Scotland. This disease can be carried on air currents. As the majority of RHG deaths occur within burrows it is very difficult to detect so the cause remains speculative and may prove difficult to verify.

A bat roosting under the eaves of an outhouse at Koolin in January proved to be Nathusius' pipistrelle *Pipistrellus nathusii*. Another bat in November was not identified to species. Bats remain little detected but they may be more regular than previously thought, with Nathusius the bat species most likely to occur – though common pipistrelle *Pipistrellus pipistrellus* has also been recorded (October 2015).

Fish

The main feature of the year was the complete absence of full-grown whitefish inshore. A poor start to the Saithe *Pollachius virens* season was followed by huge numbers of good quality fish in early-mid May. There were plenty of very small ones too. Mackerel *Scomber scombrus* were very patchy. This did not necessarily mean an absence as the plankton levels in the sea were very high and with natural food readily available the fish may not have needed to target bait. This may explain the fewer numbers of ling *Molva molva* coming to bait. The summer seas were also full of small gadoids and there were sufficient sizable sand-eels *Ammodytes* to suggest early signs of population recovery (also noted by the FIBO seabird team). A considerable number of juvenile fish shoals probably contained mainly whiting *Merlangius merlangus* with some haddock *Melanogrammus aeglefinus*. Unusual species included a topknot *Zeugopterus punctatus* while an Atlantic horse-mackerel *Trachurus trachurus* in August is the first caught since the 1970s.
