

CONON ISLANDS SPECIAL AREA OF CONSERVATION (SAC)

CONSERVATION ADVICE PACKAGE



Site Details

Site name: Conon Islands

Map: <https://sitelink.nature.scot/site/8230>

Location: Highlands and Islands

Site code: UK0013575

Area (ha): 120.64

Date designated: 17 March 2005

Qualifying Features

Qualifying feature	Assessed condition	SCM visit date	UK overall Conservation Status
Alder woodland on floodplains*	Unfavourable No change	7 August 2009	Unfavourable-Bad

Notes:

Assessed Condition refers to the condition of the SAC feature assessed at a site level as part of NatureScot's [Site Condition Monitoring \(SCM\)](#) programme.

Conservation status is the overall condition of the feature throughout its range within the UK as reported to the European Commission under Article 17 of the Habitats Directive in 2019.

*Denotes Habitats Directive priority habitat

Overlapping Protected Areas:

[Lower River Conon SSSI](#)

Key factors affecting the qualifying interest

The riverine wood habitat is found as discrete strips or lines of trees due to historic clearance of woodland along the river that has removed most of the true alluvial forests, leaving just fragments, many of which are relatively recent in origin. As is common with these residual alder woods on floodplains it occurs in association with other woodland types and with other wetland habitats such as fens.

Alder woodland on floodplains comprises woods dominated by alder *Alnus glutinosa* and willow *Salix* spp. on flood plains in a range of situations from islands in river channels to low-lying wetlands alongside the channels. The habitat typically occurs on moderately base-rich, eutrophic soils subject to periodic inundation.

As this woodland habitat is dynamic in nature the structure and function are best maintained within a larger unit that includes the open communities, mainly fen and swamp, of earlier successional stages. This is not the case at Conon Islands SAC where often quality agricultural land is directly adjacent to the SAC.

Key management issues that are preventing this site from being in favourable condition are non-native species including Himalayan balsam, rhododendron and sycamore present and seeding into the site and, changes in local and catchment hydrology that are negatively altering the flooding and flow regime. Grazing at the appropriate level (low to moderate) is another management issue that should be monitored.

Further information about Alder woodland on floodplains can be found on the [JNCC website](#).

Conservation Objectives for Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0] (Alder woodland on floodplains)

1. To ensure that the qualifying feature of Conon Islands SAC is in favourable condition and makes an appropriate contribution to achieving favourable conservation status.

Favourable Conservation Status (FCS) is considered at a European biogeographic level. When determining whether management measures may be required to ensure that the conservation objectives for this site are achieved, the focus should be on maintaining or improving the contribution that this site makes to FCS.

When carrying out appraisals of plans and projects against these conservation objectives, it is not necessary to understand the status of the feature in other SACs in this biogeographic region. The purpose of the assessment should be to understand whether the integrity of the site (see objective 2) would be maintained. If this is the case then its contribution to FCS across the Atlantic Biogeographic Region will continue to be met. Further details on how these assessments should be carried out in relation to maintaining site integrity is provided by objective 2 (including parts a, b and c). If broader information on the feature is available then it should be used to provide context to the site-based assessment.

Note that “appropriate” within this part of the conservation objectives is included to indicate that the contribution to FCS varies from site to site and feature to feature.

2. To ensure that the integrity of Conon Islands SAC is restored by meeting objectives 2a, 2b and 2c for the qualifying feature.

The aim at this SAC is to restore the Alder woodland on floodplains in a favourable condition as a contribution to its wider favourable conservation status. Therefore any impacts on the objectives shown in 2a, 2b, or 2c below must not persist so that they prevent the achievement of this overall aim. When carrying out appraisals of plans or projects the focus should be on restoring site integrity, specifically by meeting the objectives outlined in 2a, 2b and 2c. If these are met then site integrity will be restored. Note that not all of these will be relevant for every activity being considered. Any impacts on the objectives shown in 2a, 2b or 2c below must not persist so that they prevent the restoration of site integrity. Temporary impacts on these objectives resulting from plans or projects can only be permitted where there is certainty that the features will be able to quickly recover.

This objective recognises that the qualifying habitat is exposed to a wide range of drivers of change. Some of these are natural and are not a direct result of human influences. Such changes in the habitat’s extent, distribution or condition within the site which are brought about by natural processes, directly or indirectly, are normally considered compatible with the site’s conservation objectives. An assessment of whether a change is natural or

anthropogenic, or a combination of both, will need to be looked at on a case by case basis.

2a. Maintain the extent and distribution of the habitat within the site

The extent of the Alder woodland on floodplains feature, taken from the Standard Data Form, has been estimated at 55.49ha and represents the amount of often complex, yet limited, mosaic of several individual stands of habitat. This should be maintained or allowed to increase through natural regeneration or restoration; there should be no measurable net reduction in the extent of the habitat and its distribution throughout the site.

This will include the avoidance of effects that could lead to a permanent reduction in the extent or distribution of the habitat such as inappropriate water levels, tree disease (e.g. *Phytophthora*), agricultural reclamation, fire and dumping of waste.

2b. Restore the structure, function and supporting processes of the habitat

This habitat depends on hydrological conditions that lead to a high water table, wet conditions and sufficient variation to allow channel dynamics and vegetation succession to occur. Such variation is already heavily reduced at this site due to a combination of flood defences and river control via hydro schemes. Protecting hydrological conditions aims to allow for an abundance of key tree species that

- Can colonise the floodplain substrate (wet, unstable) and thrive (tolerance of high water table) pioneer species recolonising riparian habitats after disturbances
- Can create important habitat structure for freshwater invertebrates and fish
- Can support a wide variety of terrestrial invertebrates, whilst overhanging the water surface (providing food for fish and other aquatic predators)
- Can provide leaf litter with a rapid decomposition rate, high levels of nitrogen, moderate levels of phosphorous and low levels of refractory carbon
- Provide moderate shade, especially over the water surface
- Can capture or fix nitrogen and make it accessible to other parts of the ecosystem

Restoring the original flow of the river where possible e.g. through reinstating back channels will help ensure the natural processes continue to shape the site.

A key measure that will restore the structure, function and supporting processes of the habitat at this site is addressing the widespread colonisation by non-native tree species (namely sycamore) and invasive species such as Himalayan balsam, skunk cabbage, *Physocarpus opulifolia*, grey alder *Alnus incana* and rhododendron. The high prevalence of these non-native species, greater than 10% of all vegetation at many sample points, is the main reason for this feature not being assessed as favourable. Control of non-native and invasive species, especially Himalayan balsam, is critical.

In addition regeneration of non-native seedlings and saplings should be present in no more than 10% of the woodland.

Maintaining low to moderate grazing levels that allow trees, shrubs and ground flora to develop naturally to flower and fruit (which is particularly important on drier margins) is also important.

The age structure of the woodland should be diverse with any given sample location having two age classes present and the whole site having at least three age classes present. This aspect of the habitats function is currently not met across the site. In the long term, the site should have a low level of grazing by red and roe deer (or other native herbivores), which allows trees to regenerate and which helps to prevent too many trees of a single age from dominating the wood in dense stands in future decades.

The presence of standing deadwood is also important to the structure of this habitat, with at least 50% of sample points having four standing deadwood or fallen trees visible.

2c. Restore the distribution and viability of typical species of the habitat

Many Alder woods on floodplains are dynamic, being part of a successional series of habitats. At Conon Islands SAC this Annex I habitat falls mainly within the following NVC type(s):

W5 *Alnus glutinosa* – *Carex paniculata* woodland

W6 *Alnus glutinosa* – *Urtica dioica* woodland

W7 *Alnus glutinosa* – *Fraxinus excelsior* – *Lysimachia nemorum* woodland

The key tree species found in this habitat are alder *Alnus glutinosa* and willow species *Salix pentandra* and *Salix cinerea* where the water table is consistently high. Drier areas support ash *Fraxinus excelsior*, oak *Quercus robur* and birch *Betula pubescens*.

These transitions from wet to drier woodland and from open to more closed communities provide important ecological variation. The ground flora is correspondingly varied. Greater tussock sedge *Carex paniculata* occurs in very wet areas near Easter Moy and guelder rose *Viburnum opulus* occurs on Garrie Island.

The main fen communities are dominated by tall sedges such as bottle sedge *Carex rostrata*, and bladder sedge *Carex vesicaria* forming dense stands which grade into tall herb fen with meadowsweet *Filipendula ulmaria* and skullcap *Scutellaria galericulata*. Where flooding is more seasonal neutral grassland occurs. This is particularly well developed on Moy Island and a range of characteristic herbs such as wood cranesbill *Geranium sylvaticum* and northern bedstraw *Galium boreale* occur. Also present are a number of less common species like lesser butterfly orchid *Platanthera bifolia*. Other locally abundant species are branched bur-reed *Sparganium erectum*, reed canary-grass, *Phalaris arundinacea* and water horsetail *Equisetum fluviatile* the site also hosts less common species such as the lesser butterfly orchid *Platanthera bifolia*.

Exposed river gravels are an important part of the site, providing niches for regeneration of alder. The mouth of the river, where conditions are more saline and coastal, supports saltmarsh and brackish fen with salt tolerant plants dominated by tall herbs and grasses. Extensive reed beds dominated by *Phragmites australis* are also present in tidal areas near the mouth of the river.

The removal of non-native species from the site is key in ensuring these species are distributed throughout the site properly.

The alderwood habitat is also home to non-plant typical species such as roe deer *Capreolus capreolus*.

Conservation Measures

Conon Islands SAC is notified as a Site of Special Scientific Interest and management changes described on the list of Operations Requiring Consent must have prior consent from SNH (NatureScot).

Current and recommended management for Alder woodland on floodplains

Issue	Measure	Responsible party
Grazing	Maintain grazing at low to moderate levels to ensure the structure and	Land manager

	function of the habitat remains favourable.	
Maintenance (or, where feasible, restoration) of the natural hydrological regime	Ensure developments do not negatively impact the hydrological conditions this site relies upon. Where possible backwaters should be reinstated to help the habitat maintain itself naturally. Any such works should take into account protected species that utilise the waterway.	Land Manager SEPA
Avoidance of introduction and control of non-native species/pathogens	Maintain ongoing efforts to control non-native species and explore further options for their removal/control. Ensure understanding of their impacts is understood by landowners/site users and encourage best practice biosafety.	Land manager, Cromarty Firth Fisheries Trust, NatureScot
Climate change	Discussions on options available and participation in available local, national and international initiatives	Land manager, Local authority, Scottish/UK government, NatureScot
Future threats	A coordinated resilience planning process should be developed to respond to anticipated future threats to the habitat. Management actions arising from the resilience planning process, and site-level plans, should be implemented to anticipate future threats to the habitat on the site This resilience work may also include further research to understand the vulnerabilities of the habitat.	NatureScot Land managers

Contact details: NatureScot
Fodderty Way
Dingwall Business Park
Dingwall
IV15 9XB

Telephone: 01463 701 610

Approved on 28 October 2020 by:

Greg Mudge
Principal Advisor
International Designations

Graham Neville
Area Manager
Northern Isles & North Highland