



Habitat Action Plan

'Woodlands'



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Habitat Definition

In Shetland, there is no natural/semi-natural/relict woodland such as Berriedale in Hoy, Orkney. Relict trees and shrubs are confined to very small groups or as individuals in isolated locations, such as cliffs, ravines and holms on lochs. All are at risk, from grazing and browsing - from erosion, changes in water level, and nesting birds (see Jay 1994). All other woodland is plantation, varying in size and age. There are broadleaved, coniferous and mixed woodland in this category.

All woodlands are substantially rich in associated flora and fauna (e.g. ferns, mosses, lichens, fungi, invertebrates, and breeding and migrant birds).

- **Natural/Semi-natural woodland.** In Shetland this consists only of isolated pockets or “refugia” of relict trees and scrub, apart from dwarf and creeping willow (see below). It is generally believed that any significant cover of Holocene woodland disappeared c. 3000bc, either due to climatic change or human influence, or both. This woodland, according to palaeo-ecological research, consisted of pioneer species such as alder, aspen, birch, hazel, rowan and willow.
- **Relict trees, scrub, and woodland plants.** These form part of Shetland’s “native” and indigenous dendroflora. (i.e., woody plants, not planted or sown by human agency), and include the following:

Some of these are extremely rare in the Shetland context (see Scott et al. 2002). Their distribution is recorded in Scott and Palmer (1987), Jay (1995), and Scott et al. (op.cit.). (Species such as *Salix herbacea* have been included, although forming part of fellfield vegetation, because they can associate with mycorrhizal fungi, e.g. *Boletus edulis*, *Cantharellus cibarius*, which may themselves be relicts of woodland ecosystems

Cornus suecica, which is very rare in Shetland, is found in birch forests with *Empetrum nigrum* in oceanic and subalpine Fennoscandia (Wielgolaski 2001). Sub-shrubs such as the latter, ferns and herbs, which are often found on land with limited or no grazing livestock, and/or in company with relict trees, may also be survivors of woodland.

- **Planted native woodland.** Some small areas have been recently planted with “native” trees, comprising the following species: *Alnus glutinosa**, *Betula pubescens*, *Corylus avellana*, *Populus tremula*, *Rosa canina*, and *Salix spp.* Some of these species have also been planted in other (mixed) woodlands.

**Alnus glutinosa* has been included because, although no relict trees remain, remains of alder wood have been found in peat, and pollen deposits in mire and loch sediments indicate its presence in the Holocene period.

It must be noted, however, that only *Populus tremula*, some *Salix* species, and a (very) few *Sorbus aucuparia* of genuine Shetland origin have been planted.

- **Plantation Woodland.** (Including gardens, where the latter are defined as immediately surrounding or adjoining a house, and enclosed by wall or). Such woodland may be sub-divided as follows: a) Broadleaved; b) Coniferous; c) Mixed. A further sub-division: mature (over 20 years old), and immature (under 20 years) may also be made. Jay surveyed mature plantations in 1993. A table and map of these and more recent plantings are included as an appendix

Mature broadleaved: Unst: Halligarth: Yell.

Woodland habitats in Shetland are small, and vulnerable to wind and salt exposure. However, there is evidence of scrub and woodland habitats from that was removed approximately 2,000 years ago. They are a resource that holds important populations of breeding birds, lichens, and fungi. They provide shelter from the wind and are present in many of the older gardens around Shetland. Over the past 20 years, there has been a renewed interest in tree planting, and gradually the landscape is changing again.

Prior to human habitation on these islands, areas of woodland, tall herb and fern communities dominated the landscape of Shetland. Examples of this are found on freshwater island holms, burnsidings, inland rocky crags, and in areas of sheltered coastline where relict sites still show signs of evidence. Indicators that woodland once

existed in Shetland include the presence of twigs, branches, stems, and roots of trees buried in peat, and pollen found in extracts of loch and mire sediments. Flora present on Shetland today also contains examples of native plants, normally associated with woodland habitats. There are also scattered relict survivors of woodland tree species. The landscape in Shetland pre 3000 BC would have been profoundly different compared to what it looks like today.

Culture and Folklore.

Very little of Shetland culture or folklore relates to trees or woodland; this is not surprising, given the lack of tree cover on the islands; however the causes may be historical rather than geographical, as noted above. There is evidence that the pith of common elder *Sambucus nigra* - (which is sometimes found near to old or ruined croft-houses) - was used as a wick in "collie" lamps.

Current Status

Relict trees Shetland Amenity Trust (SAT) has undertaken or participated in three projects to conserve relict trees. To date aspen, hazel, rowan, and willow species have been taken into cultivation and steps are being made to establish breeding populations of these. Some relict sites have been recorded from grazing animals and are regularly monitored.

Plantations. Several mature plantations, such as those at Kergord, are maintained by SAT, and have been recently extended or replanted in windblown areas. SAT has been responsible for approximately 10 hectares of new woodland in the last decade, and numerous private initiatives have been undertaken. The allocation of Locational Premium (see below) to Shetland in the Scottish Forestry grants Scheme (SFGS) has resulted in contracts covering approximately 8 hectares in 2003 – 2004, and this expansion is likely to continue for the next two years at least.

Sites of Importance Kergord (Weisdale), Halligarth (Baltasound, Unst), Helendale (Lerwick), Gorie (Bressay), Voe, Voxter, Catfirth, Gott, Strand Loch, Sullom Plantation, Leagarth (Fetlar), Scalloway Conservation Area, Tresta, Bigton, and Lerwick Conservation Areas (2).

Ecology & nature conservation importance.

Woodland in the UK encompasses a huge range of ecological variation, and even within the Shetland context with its distinct lack of tree cover there are many different habitats where trees are found, including cliff faces, holms in lochs and along burn-sides as well as fertile and relatively sheltered areas, such as the valley of Weisdale. Management has to be tailored to different areas, depending on the actual conditions and soil types present.

Advice on management for existing sites or new planting is available locally from:

Scottish Natural Heritage (SNH) for the relict tree SSSI's.

Shetland Amenity Trust (SAT) Shetland Woodland Strategy and Woodland Information note on selecting suitable sites and trees.

Shetland Crofters and Farming Wildlife Advisory Group (SCFWAG) and Scottish Agriculture College (SAC) for information on agri-environment and Scottish Forestry Grant Schemes.

UK Biodiversity status

Due to the unique nature of woodlands in Shetland, along with their sparse and fragmented distribution, Woodlands that occur on the Islands do not necessarily fit into any specific category as identified under Broad Habitat types or UK priority habitats

Current Threats

Grazing by Sheep and rabbits – This damages and in some cases, destroys sites. Saplings are very vulnerable to this. Only a very limited amount of land on Shetland is suitable for growing crops. In recent years, livestock subsidies have increased, hence putting pressure on farmers to intensify this land for grazing, thus increasing stock numbers. There is no evidence of agricultural intensification in Shetland.

Extreme weather conditions – strong winds, drought, waterlogging, and exposure to salt spray – These are perennial problems for trees in Shetland. Poorly situated trees are susceptible to damage although some species appear to be more resistant than others.

Soil conditions – due to the predominantly acid nature of soil in Shetland, these conditions are only suitable for a limited amount of tree species.

Lack of appropriate management - aftercare is a necessity especially for young trees as well as on-going maintenance. For example competition from grass can overwhelm saplings, and weed control is a necessity for establishment on most sites. "Beating up" (replacing) losses is important. Fencing and water-gates need regular inspection. Even mature trees have been ring-barked by sheep in extreme winter conditions. Maturing plantations may require thinning, in particular to reduce risk of windblow.

Unintentional/Intentional damage – This includes herbicide application on adjoining/adjacent land, animal grazing, animal escapes through dykes/fences, inappropriate grass cutting, i.e. with strimmers, and vandalism.

Changes in the water table - Permanently saturated soils, or soils where the water flow is very slow can easily damage tree habitats, as this creates anaerobic decomposition. This also has a detrimental effect on the stability of the tree/s. Water extraction and increased drainage can also have a detrimental effect to the survival of trees, as well as the occurrence of droughts.

Erosion – through peat digging, watercourses being changed as a result, vehicular erosion, natural processes, sheep erosion (overgrazing & paths), and inappropriately sited footpaths.

Development – Through the creation of more housing, there is more disturbance, dust, shade, ground compaction, soil removal, and drainage patterns are changed. E.g. Strand Loch plantation.

Fragmentation (Relict Trees) - There is little opportunity for regeneration of wildlife corridors.

Nutrient Enrichment (Guano), and fertiliser. Some relict tree sites are considered to be threatened by nesting fulmars which are leaving large concentrations of guano on branches, foliage and surrounding ground (Jay 1995). Fertiliser applied to improved hill ground may also cause damage to trees or shrubs in the area.

Introduced plant species. Apart from some grasses and broadleaved weeds of arable ground, which adversely affect the growth of saplings, there is little damage caused by introduced species. An exception may be salmonberry *Rubus spectabilis*, which can rapidly create impenetrable thickets in the understorey and out-compete other shrubs and shade out ground flora. *Rhododendron ponticum* has not caused a problem in Shetland, and even Japanese knotweed *Fallopia japonica* in its one woodland station at Kergord has not spread appreciably in fifteen years.

Pest/disease damage– Sitka aphid causes widespread defoliation of shoots of Sitka spruce. Various sawflies defoliate willows, sometimes with devastating effect, and winter moths periodically infest trees. On the whole however, trees in Shetland remain largely free of serious pests and diseases.

Current Action.

SAT offers grant aid for environmental improvement schemes, which can improve woodland or garden areas using native flora; matching funds must be obtained from other funding providers, and projects must be of benefit to the community.

SNH currently provides positive management agreements for SSSIs. A new scheme called the Natural Care Strategy aims to significantly extend support for positive management on SSSIs, either directly through SNH's own programmes or through incentives provided by other agencies. SNH also provides grants for woodland and tree-related conservation, amenity, recreation, access, and interpretation. SNH offers grant aid for School grounds projects including hedgerows, native tree planting and tree nurseries, and costs for non-native trees are also considered. SNH can also give advice on projects that aim to improve the natural heritage and support its sustainable use.

Grant aid includes:

Forestry Commission Grants Following the publication of the Scottish Executive's Scottish Forestry Strategy

the old Woodland Grant Scheme and the Farm Woodland Premium Scheme were reviewed to give them a greater Scottish focus. The resulting new scheme – the Scottish Forestry Grants Scheme (SFGS) – encourages the creation and management of woods and forests to provide economic, environmental and social benefits.

Grants are available for improving the diversity of the farmed and crofting landscape with the aim of providing shelter, creating habitat for wildlife and improving the attractiveness of the landscape. There are also grants to improve riparian habitat on the banks of burns and lochs. Such woodland increases the ecological diversity of the riparian habitat, providing corridors for wildlife and aiding in the retention of pollutants draining from agricultural land thus improving water quality.

Farmland premium is available to SFGS applications of 1 hectare and over and is intended to compensate for farming income foregone.

In support of the Shetland Woodland Strategy the Forestry Commission offers additional funding in the form of a Locational Premium to encourage the planting of new woodlands. To qualify applicants are assessed against several criteria based upon the aims of the Shetland Woodland Strategy.

The locational premium makes up the grants to easily cover the costs of a small plantation so it is a good time to be thinking about planting trees.

Rural Stewardship Scheme There are options under the RSS to receive funding for managing woodland with the aim of enhancing and extending the areas of the native or semi-natural habitat and also to help the survival of the associated flora and fauna.

The grant is only available to existing native or semi-natural woodland where Forestry Commission grants are not appropriate to the site.

Environmentally Sensitive Area Scheme Under the Shetland ESA scheme grants were available for protecting and enhancing areas of existing woodland. Funding was provided for stock and rabbit proof fencing to exclude grazing animals and trees could be purchased for restocking and extending existing plantations. There is now automatic entry into the RSS for farms already in the ESA.

SEERAD – CCAGS – Funding of woodland initiatives, e.g., farm woodland premium scheme, CCAGS shelterbelt grants, Administration and funding of RSS. Initiatives in croft diversification

Shetland Enterprise Company Funding of SAT projects and/or related commercial enterprises: funding of community woodlands whereby jobs may be created and tourism developed, for example by improved access and interpretation.

Statutory Protection

Sites of Special Scientific Interest SSSIs are the main nature conservation designation in Great Britain. The purpose of the SSSI system is to safeguard for present and future generations a series of sites that are individually of high natural heritage importance and, in total, represent the diversity and geographical range of habitats, species, geological, and geomorphological features throughout Britain. Following notification of a site as a SSSI, owners and occupiers are required to consult SNH before management changes are made that may be damaging to the natural heritage.

In Shetland there are three SSSIs that support relict tree and scrub vegetation. The location of designated woodland SSSIs has not been published in this report due to the sensitivity of some relict tree sites. By not promoting these sites, it is hoped to avoid any adverse effects on their condition.

Special Areas of Conservation SACs are classified under the EC Habitats and Species Directive for and give protection from development that might damage the integrity of the site unless for reasons of “over-riding public interest”. There are no SACs for woodland in Shetland.

Tree Preservation Orders Statutory protection may be afforded to trees through the serving of a Tree Preservation Order. Planning authorities make Tree Preservation Orders under section 160 of the Town and Country Planning (Scotland) Act 1997 where ‘it is expedient in the interests of the amenity’. They may be used to prohibit (subject to certain exceptions) the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except with the consent of the planning authority, and to secure replanting where permission has been given for felling. The detailed procedures are set out in the Town & country Planning (Tree Preservation Order and Trees in Conservation Areas) Regulations 1975, as amended.

There are two confirmed Tree preservation Orders in Shetland, protecting trees at Helendale and Montfield in Lerwick

Conservation Areas. "Under section 172(3)(a) of the Town and Country Planning (Scotland) Act 1997 works to trees in a Conservation Area require prior notification to Shetland Islands Council, as Planning Authority. This is to give the Council the opportunity to consider whether it wishes to make the trees the subject of a Tree Preservation Order."

Action Plan Objectives, Targets and Actions

Objective 1 *Increase awareness and appreciation of the importance of this habitat in Shetland*

Target 1.1 Involve all Schools from across Shetland by 2005, by incorporating with RSPB, SNH during schools week

Target 1.2 Access issues – Promote appropriate awareness to landowners and general public

Target 1.3 Develop, and strengthen links with other groups within, and outwith Shetland that are involved in nature conservation projects

Target 1.4 Promote the benefits of agri-environment schemes aimed at conserving this habitat

Objective 2 *Increase shrub and field layer diversity.*

Target 2.1 Improve biodiversity of woodlands as a whole - ongoing

Target 2.2 Prevent deterioration of woodlands

Objective 3 *Survey and map woodland resource.*

Target 3.1 Establish monitoring programme for key sites by 2006

Target 3.2 Survey all defined Shetland sites for species, age, condition, and management by 2006

Target 3.3 Work alongside SBRC and SNH to create the map and database by 2005/2006

Objective 4 *Increase broadleaf and native tree species across Shetland at a minimum of 2 hectares per annum*

Target 4.1 Promote continuation of SFGS locational premium for foreseeable future

Target 4.2 Encourage island propagation for hardy native trees

Target 4.3 Promote schemes aimed at new planting of this habitat, e.g. SEERAD, SFGS, etc

Target 4.4 Raise awareness of trees suitable to the climate, and other conditions to persons buying trees

Objective 5 *Ensure no net loss of woodland in area and quality*

Target 5.1 TPOs, SSSI, regular surveys of all existing woodland

Target 5.2 Promote through postcards and informative posters, the importance of this habitat

Target 5.3 Seek to protect all vulnerable sites and individual trees from grazing damage

Target 5.4 Encourage landowners and occupiers to value this habitat for its biodiversity benefits through talks, workshops, etc

Associated plans

Freshwater Habitat Action Plan, AgriBAP, Ungrazed Areas, Roadsides, Community Action Plans, Hawkweeds

References

- Jakobsen, J: The place names of Shetland
- Jay, S.C. Shetlands' native trees. Shetland Amenity Trust, 1994. (Unpublished)
- Jay, S.C.: Plantations and Shelterbelts, Shetland Amenity Trust, 1993 (Unpublished)
- Johnston, J.L: A Naturalist's Shetland, T & A D Poyser 1999
- Scott, W., Harvey, P., Riddington, R., Fisher, M: Rare Plants of Shetland, Shetland Amenity Trust 2002
- Scott, W. & Palmer, R: The Flowering Plants and Ferns of the Shetland Islands, The Shetland Times 1987
- Wielgolaski, F. E. (ed): Nordic Mountain Birch Ecosystems, UNESCO/Parthenon 2002

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Action Table

Action	Potential Deliverers		Year (to be complete or in place by)						Meets Number	Objective
	Lead Deliverer	Partner Deliverer	2004	2005	2006	2007	2009	2014		
Use appropriate woodlands as a resource for environmental education with schools and community groups. Include woodland activities in Schools week when possible. Produce Posters & postcards on Shetlands trees, Include information in school grounds Resource chest for school use, provide information for Youth groups	SAT	Ranger service, SFSG, RSPB, SNH	*	*	*	*	*	*	1	
Local access forum to produce leaflets & Posters. Increase awareness through local press releases.	SIC	SAT SNH LS	*	*	*	*	*		1	
Create links and share information	SAT	SAT	*	*	*	*	*	*	1	

with the Faeroes, Iceland, Western Norway, as well as Orkney and the western isles.		LS SCFWAG SNH							
Promote woodlands to crofters/farmers through farm walks and inclusion in agri-environment promotional information/leaflet	SCFWAG	SAT SAC	*	*	*	*	*	*	1
Ensure that aims to improve woodland diversity is included in future consultations of the Shetland Local plan	SAT								2 1
Provide information on locally suitable woodland species in posters and leaflets. Hold tree planting workshops	SAT	SIC SAT SCFWAG	*	*	*	*	*	*	1 2 5
Create Area Woodland map to illustrate the distribution of woodlands within Shetland and the main tree species present. Create database to include details of woodland age, size and species composition.	SBRC	SNH SAT			*				2 3 4 5

Undertake surveys of Shetland tree sites to provide information for Area Woodland Map	SAT	SNH SBRC	*	*	*				2 3 4 5
Work with other organisations within Shetland to share information on woodland resource.	SAT	SNH SBRC	*	*	*	*	*	*	3
Offer support on practical tree planting operations and grant aid through forestry grant schemes	FC SAT SCFWAG	SAT RSPB SIC SNH	*	*	*	*	*	*	2 3 4 5
Identify expertise and secure funding to enable island propagation of native trees	SAT SIC SCFWAG	SNH SEERAD Shetland enterprise FC	*	*	*	*	*	*	4 5
Increase awareness of available schemes and sources of potential funding and advice through Press releases, Leaflets and Newsletters	SCFWAG	SEERAD SAT	*	*	*	*	*	*	1 2 4 5
Encourage planting of tree species suitable for the	SAT SCFWAG		*	*	*	*	*	*	1 4

local climate and conditions, provide advice on relevant species, include information in leaflets and posters										5
Encourage safeguarding of existing woodland resource through statutory protection e.g. TPOs and SSSI legislation and by provision of advice to general public	SNH SIC SAT		*	*	*	*	*	*	*	3 5
Circulate promotional material to schools & general public	LS SAT	SNH Rangers	*	*	*	*	*	*	*	1 4 5
Liaise with private and public landowners to protect sites from grazing damage through appropriate fencing, etc. Ensure that woodland HAP requirements are included within future Local plans. The initial stages of the review have started already	SCFWAG	SAC SNH SAT Land managers	*	*	*	*	*	*	*	1 3 4 5

with initial update publications for both the Structure Plan and the Local Plan possibly due out towards Autumn 2005.									
Undertake talks, workshops, community meetings etc. on the value of woodlands in Shetland	SAT	LS	*	*	*	*	*	*	1 5
Update woodland strategy	SAT		*	*	*				1 3
Increase woodland stock of local provenance	SAT	SCFWAG	*	*	*	*	*	*	4

