

## Current Status - UK and Local

LBAP Partnership Area Status: Local Priority Species

Aspen is Scotland's only native poplar species. It is widely distributed across the country, but only found in large numbers in north-east Scotland. In Scotland Aspen is usually found standing alone or in small groups and pure woodland stands of aspen are extremely rare. It is estimated that only 160ha of Aspen woodland remain today in Scotland, with just 25ha protected by a statutory designation.

Records for Aspen in the LBAP area are extremely limited with only 20 stands officially recorded by the Botanical Society of the British Isles. Of these, only three are presumed to be of ancient origin but there are two other records in neighbouring areas, one in Glasgow and one in North Ayrshire.

These stands typically comprise one or two trees which are to be found clinging to the sides of steep upland gorges. The three remaining stands of aspen in the LBAP Partnership area, of presumed ancient origin, are all found in locations which are inaccessible to browsing animals.

## Ecology and Management

Aspen is associated with well-drained, moist, mineral soils. It was a very early post-glacial colonist, forming the first woodlands after the Ice-Age alongside birch, rowan, hazel and willow. Nevertheless, the species can tolerate a wide range of soil types and grows from sea level up to or just beyond 550m in sheltered locations.

It is now an under-represented component of natural woodland types in Scotland but has a strong association with ancient woodlands. Aspen supports a unique living community containing many rare species including moths, flies, bryophytes, lichens and fungi that occur nowhere else in the UK.

Aspen is one of the last trees to come into leaf. The trees have distinctive coppery coloured leaves when they first open, before turning green. In the autumn the leaves turn a brilliant yellow or more rarely red in some individuals. The leaves make a characteristic fluttering sound when stirred by the wind. Aspen are dioecious, so individual trees can be either male or female. Trees flower in March or April before the leaves appear, with both sexes producing catkins. Pollinated female catkins ripen in summer and release tiny seeds. For some reason, as yet not fully understood, seed production is rare in Scotland. Aspen is a short-lived species with few individuals surviving beyond 100 years, partly because its soft, white wood is not resistant to rot fungi. Aspen's main method of reproduction, however, is vegetative and it can be very prolific at producing a mass of suckers or new stems growing off the roots of mature trees.

## Factors causing loss or decline

The most likely cause of decline in the distribution of Aspen, given that its foliage is very palatable to browsing animals, is the inappropriate grazing of Aspen stands, especially young stems, by livestock, rabbits and deer which suppresses natural regeneration.

The scarcity of the species in the LBAP Partnership area, the distance between stands and the often solitary nature of the trees means that individual specimens are often isolated from the opposite sex, reducing the likelihood of seed generation.

Others factors to be considered include the shortage of suitable planting stock, especially stock of local provenance, to support new woodland plantings.

Generally there is a lack of research into the ecology and management of Aspen. Research into Aspen is in its infancy but we do know that Aspen has bark which is alkali this makes it an important host for more primitive plant species like mosses, liverworts and lichen to grow on. Consequently the trees biodiversity value is greater than the value of the tree alone as it supports other valuable species including associated UK Priority Species: A hoverfly (*Hammerschmidtia ferruginea*), a leaf rolling weevil (*Byctiscus populi*), dark-bordered beauty moth (*Epione vespertaria*), and 2 bristle mosses (*Orthotrichum gymnostomum* & *O. obtusifolium*).



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LBAP



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# ASPEN

(*Populus tremula*)

Aspen is a smallish tree with grey bark. It rarely produces seed, so its main method of reproduction is vegetative, with new suckers, or stems, growing off the roots of mature trees.

The leaf stalks of aspen are flattened and very flexible near the leaf blade giving rise to the characteristic fluttering of its leaves in the slightest breeze. Its quivering leaves have been the foundation for the tree's bad reputation in folklore and superstition.

## Opportunities and Current Action

Trees for Life instigated an Aspen project in 1991, looking at research into propagation methods, protecting regenerating stands and old trees, undertaking mapping and survey work as well as raising awareness of aspen.

There has been an increased interest in Aspen and the species that it supports, which is leading to new research. Recent work has identified 4 species new to Scotland associated with Aspen and has highlighted Aspen's importance in the forest ecosystem.

There are currently controversial plans to re-introduce European Beaver (*Castor fiber*) to Scotland after an absence of around 300 years. Aspen is a favourite food of the European Beaver so if the re-introduction goes ahead increased planting of this tree could provide an important component of their diet.

Key priorities are to ensure the survival and viability of the remaining stands of aspen and to increase the population and distribution of the species across the LBAP Partnership area.

Natural regeneration as well as planting will be used. A tree nursery will be established to propagate cuttings from existing trees for replanting. Further surveys will be undertaken to establish the sex of existing trees and to establish the presence of further stands of ancient origin in the area.

Accepting that the population of ancient origin aspen in the LBAP Partnership area is extremely low, material (seed and cuttings) will be sourced from outwith this area (although within the local provenance zone) for propagation in the nursery, to increase the genetic diversity of the population. Some of the identified stands are within Clyde Muirshiel Regional Park and so could benefit from management agreements with the Park Authority. Outside the park, liaison with local landowners will be necessary.

## Objectives and Targets

Objective 1	Protect the existing stands of Aspen identified to be of ancient origin
Objective 2	Establish the current distribution and population status
Objective 3	Increase the Aspen's population in the LBAP area
Objective 4	Identify suitable sites for Aspen planting

We will achieve these objectives by:

Action	Actioned by	Timescale
Liaise with all relevant landowners to erect fenced enclosures around existing stands, where appropriate, to remove grazing pressures and to encourage natural regeneration	BULB CMRP	2009 - 2011
Identify and establish new areas for planting including using fenced enclosures	BULB CMRP	2009 - 2011
Monitor existing trees to establish their sex	BULB	Ongoing
Undertake a publicity campaign inviting the public to contribute information on the occurrence of other trees in the area	BULB	Ongoing
Establish a tree nursery including a propagation unit	BULB	2009 - 2011
Take cuttings from existing trees identified within the local provenance area to propagate in the nursery	BULB	2009 - 2011
Exchange seed, root cuttings and saplings with other interested parties	BULB	2009 - 2011
Plant saplings from a range of sources in each planting site to encourage successful pollination	BULB CMRP	2009 - 2011
Promote genetic research to establish provenance of existing trees	BULB	2009 - 2011
Investigate uses of aspen including timber products, phytoremediation of contaminated land and ground stabilisation	BULB	2009 - 2011

## Links with Other Action Plans

Broadleaved and Mixed Woodland; Common Juniper

Further Information can be obtained from [BULBLochwinnoch@hotmail.co.uk](mailto:BULBLochwinnoch@hotmail.co.uk)

