

WET WOODS LIFE PROJECT

HYDROLOGICAL SURVEY CONTRACT BAT/PA18/99/00/37

ABERNETHY

Final Report October 1999



Abernethy Loch Garten Osprey mire

Redgate/NDR (ES), 1999

Submitted to

**Neil M Wilkie, Project Manager
Scottish Natural Heritage
Fodderty Way
Dingwall Business Park
Dingwall IV15 9XB**

Produced by

**Alison E F Mackay
Egret Consultancy
East Cottage, Lettoch
North Kessock
Inverness IV1 3XB**

WET WOODS HYDROLOGICAL SURVEY

ABERNETHY

1.0 SUMMARY

As part of the European Commission (EC) funded Wet Woods LIFE Project, on behalf of the Caledonian Partnership, a hydrological survey was commissioned by Scottish Natural Heritage (SNH) to assess the condition of the bog woodland habitat of Abernethy. The site includes part of the Cairngorms candidate Special Area of Conservation (cSAC), Site of Special Scientific Interest (SSSI) and Special Protection Area (SPA). A range of management options were identified to preserve or improve site condition.

An initial survey was completed using both desk and field exercises. Desk work covered relevant literature on hydrological studies, interpretation of aerial photographs and examination of photomontages, previous NVC surveys, historical maps and estate records, current site management reports, analysis of maps looking at current land use, geomorphology, topography, soils, geology and water catchment analysis, limited meteorological data and current drainage management plans.

Field exercises consisted of gathering data on the physical attributes of each site, such as peat depths, watercourses, location and condition of drains, vegetation, forest physiognomy and condition, management operations, topography, mire status and surface water movement. Verification of the information found from the desk studies was ascertained, and any new data added.

Principal findings for Abernethy are that forestry and agricultural drainage operations on site have contributed to the degradation and erosion of the bog woodland habitat in varying degrees. Remnants of bog woodland are displayed in a unique range of habitats due to the irregular glacial topography.

Several distinct hydrological units have been identified on the Abernethy site – Three Topo-hydrological Units (THU) –Loch Garten, Osprey Mire and Duack Burn, and four Bio-hydrological Units (BHU) – Upper Garten, Osprey Mire, Wester Duack Burn and Duack Burn.

(These units are illustrated in the map appendices, p.34, in map 8 ‘Proposed Management Boundaries’ and map 9 ‘Summary of Hydrological Management Features’.)

Recommended essential management to restore and enhance the bog woodland habitat consists of a comprehensive clearfelling of all non-native plantations growing on former bog woodland sites; an appropriate thinning of existing Scots pine; blocking of all active forestry drains; and the blocking of key open drains which have been altered in the past.

Long-term management would be to restore all areas of former bog woodland. Ideally, objectives would be the blocking of all drains that are influencing the hydrology of the site, and the felling of all non-native trees in peatland areas.

Due to the rarity of the Abernethy Caledonian pine habitat and bog woodland system in Scotland, the protection of this mire is of prime conservation interest. The hydrological units as defined within this report can be used to give a flexible approach to the hydrological management of the site, and contribute towards improving and safeguarding the condition of the wooded bog community.

2.0 ACKNOWLEDGEMENTS

This report was co-authored with Neil Redgate and David Holmes, with the principal fieldwork undertaken by:

Philip James	Habitat Surveyor & Ecologist 25 Station Crescent, Fortrose IV10 8SZ <i>ph</i> 01381 620162, <i>email</i> philip.james@cali.co.uk
Neil D Redgate	NDR (Environmental Services) 24 Harland Road, Castletown, Caithness KW14 8UB <i>ph / fx</i> 01847 821495, <i>email</i> consultancy@ndres.co.uk
René ter Schiphorst	Ter Schiphorst Environmental Consultancy 6 Woodlands Farm Cottage, Dingwall IV15 9TT <i>ph</i> 01349 864407, <i>email</i> Rene.TerSchiphorst@cali.co.uk

Data analysis, digitising and map production was completed by:

David W Holmes	Milton GIS Wellesbourne, Milton, Drumnadrochit IV63 6UA <i>ph</i> 01456 450264, <i>email</i> milton@netcomuk.co.uk
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