

WET WOODS LIFE PROJECT
HYDROLOGICAL SURVEY CONTRACT BAT/PA18/99/00/37

INSHRIACH

Final Report October 1999



Inshriach mire with pool system

James, 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

INSHRIACH

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 Inshriach. 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 and forest design plans, 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 Inshriach are that commercial forestry and associated 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 from inactive, degraded peatland, planted nutrient poor waterlogged soils, and active bog woodland.

Several distinct hydrological units have been identified on the Inshriach site – one Topo-hydrological Unit (THU), and six Bio-hydrological Units (BHUs) – Mires 1-5 and Lochan Gorm.

(These units are illustrated in the map appendices, p.35, in map 7 'Proposed Management Boundaries' and map 8 'Summary of Hydrological Management Features'.)

An area of bog woodland between mires 5 and 6 was shown to have existed previously, from earlier surveys. Afforestation has caused the decline of this wet wood.

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 and the blocking of all active forestry drains.

Further management objectives would be the blocking of all drains that are influencing the hydrology of the site, and all non-native trees felled in peatland areas.

Ideal scenarios are the restoration of mire 2 (which was previously linked to mire 3); the felling of trees between mires 5 and 6 to benefit the hydrological strength of the site; and consideration of re-creating the original path of the canalised Allt a'Mharcaidh Burn.

Long-term management would include establishment of hydrological sampling procedures and monitoring programmes to gauge the ongoing effects of any restoration work.

Due to the rarity of the Inshriach Caledonian Forest 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 maintaining the natural regeneration 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
----------------	--

Thanks to Neil Wilkie, Wet Woods LIFE Project Manager for advice and liaison throughout the project, and the following staff at Scottish Natural Heritage (SNH) for their time and assistance: Simon Cohen, Andrew Coupar, David Duncan, Steve North and the reception staff at SNH Aviemore and Dingwall offices.

For advice on forestry matters and permission to go on site, we are grateful to the following people at Forest Enterprise (FE), Inverness: Fred Milwood who kindly assisted with information on several occasions, Keith Black, David Jardine, Jack Mackay and Ken Sinclair.

For support with site equipment, thanks to Russell Anderson and Shaun Mochan of Forest Research, Edinburgh. And for loan of Ordnance Survey data for the project: Lachlan Rennick, Heather Shirra and Phillippa Vigano from SNH Edinburgh. For permission to use aerial photographs within this report, staff at the National Monuments Record of Scotland, Edinburgh.

For borrowed literature and their time, staff at the Royal Botanic Gardens Library, Edinburgh, Stuart Brooks of the Scottish Wildlife Trust, and James Ploughman and Norrie Russell of the Royal Society for the Protection of Birds (RSPB) Forsinard.