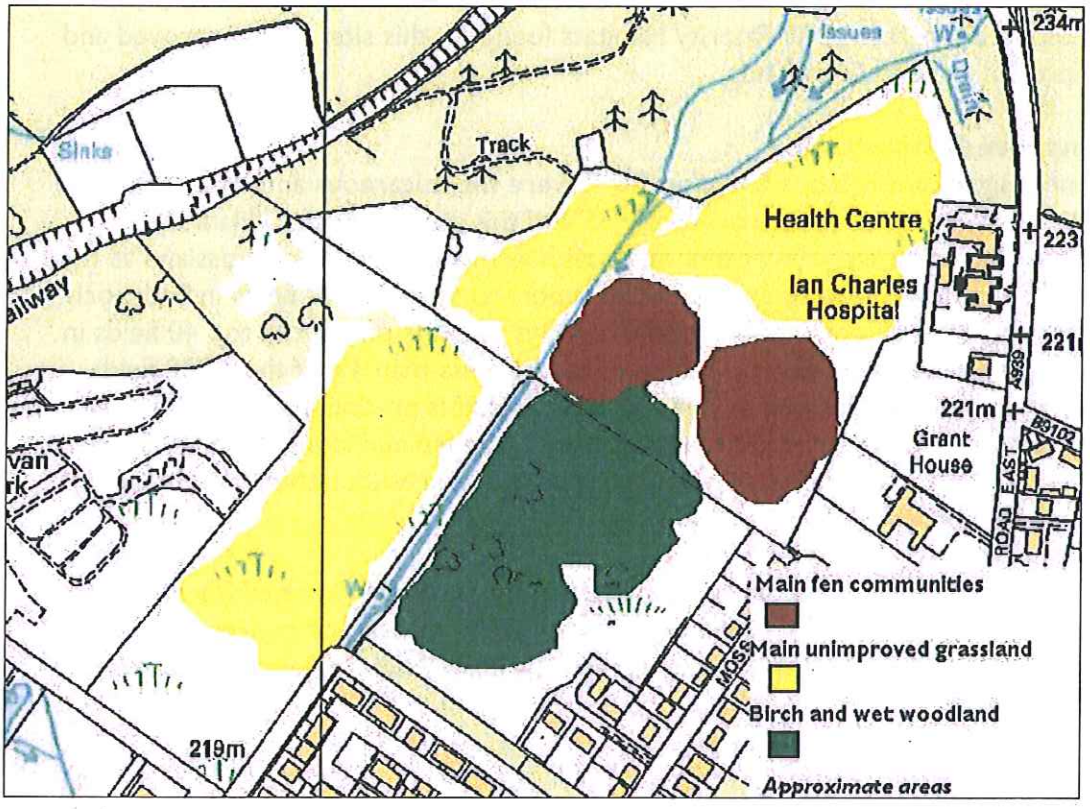
2009 CNPA Supplementary Habitat Information GS/H1
2008 CNPA HLM Survey Information GS/H1

Summary of Biodiversity Data

This Summary of the biodiversity data related to the site including allocations H1 and Env within the local plan

Habitats

The site is a mixture of semi-improved grassland, wet or rough unimproved grassland, birch woodland and fen. See map below for an approximate representation of the key habitat types.



The majority of the site is grassland and contains an interesting mix of National Vegetation Classification types (NVC) including a number of species rich communities. The mixture of communities suggests that this is long established grassland that has neither been reseeded nor ploughed. It has been under grazing from livestock for a long period and part of the site may have been a traditional hay meadow. These types of unimproved grassland types are of high biodiversity value and are uncommon. They are very important habitats for a wide variety of invertebrates, mammals, fungi, birds and flowering plants including several species of national significance.

In addition, the recent in-bye survey of grasslands in Badenoch & Strathspey (Brendan O'Hanrahan, 2006 and 2007) indicated that the frequency and distribution of such moderately species-rich grassland is unusual in a national context. The report suggested that Badenoch & Strathspey could be the most important area in Scotland for species-rich grassland.

The in-bye survey identified the presence of the following NVC Communities across the site: U4b U4c, U5c, CG10a, M6a, M6c, M15a, M25a, M17a, MG1, MG6-U4b, MG9, MG10, M23b, H10, S4, S19 and W11.

Four of the NVC communities identified at this site (M15, H10, CG10a, and M17) are important habitats under the EC Habitat Directive Annex 1: H4010 wet heath, H4030 dry heath, H6210 calcareous grassland and H7130 blanket bog. Furthermore, 6 Priority Habitats under the UKBAP are also present on this site: Upland Heath; Blanket Bog; Upland Calcareous Grassland; Upland Flushes, Fens & Swamps; and Upland Birchwoods and Wet Woodlands. These also correspond to 6 Priority Habitats under the Cairngorms LBAP Upland Heath, Blanket Bog; Calcareous Grasslands, Fens, Birch Woodland and Wet/Riparian Woodland. There are 3 additional Cairngorms LBAP Priority Habitats found on this site: Acid, Improved and Unimproved Neutral Grasslands.

Unimproved Grasslands

The most significant habitats found at this site are the calcareous and unimproved grasslands which make up approximately 35% of this site. Brendan O'Hanrahan mentions that there were few other fields with as much species-rich grassland as this site in the whole of Strathspey. The in-bye report surveyed 1,340 fields in Badenoch & Strathspey (from Laggan to Cromdale) and this site was one of the top 40 fields in terms of vegetation richness and species diversity. Less than 4% of the 1,340 fields surveyed were as species rich as this site. This habitat is predominately in the area behind the hospital between the pine plantations, the fen and along the burn. More fragmented areas of species-rich grassland and fen are present between the caravan park and the birch wood.

This type of grassland is uncommon in Scotland and becoming increasingly rare due to continued agricultural improvement, over or under grazing, or conversion to other land uses such as forestry, development (primarily housing) or more rarely arable cropping.

Fens

The site has fen habitat which covers approximately 20-25% of the site, mostly located to the rear of Grant House, with smaller areas of fen communities found in the unimproved grassland areas across the site. Fens are a type of peat-forming ecosystem (or mire) and differ from the other mire type, bogs, as fens are more nutrient rich and thus support a much richer range of species.

Fens are uncommon in the Cairngorms occurring locally in some areas and are often fragmented, the result of centuries of agricultural improvement. This is a varied habitat category but is typically dominated by sedges and their allies, rushes, grasses, wetland herbs, and bryophytes. Vegetation is generally short and the habitat overall supports a rich flora of vascular plants with some rare species. Fens are usually present on areas of deep peat, and peat depths of over 1 metre are present at this site. The fens in the Cairngorms represent 10-25% of the UK fen habitat resource, being nationally and internationally important. This site contains a small community of NVC 17a mire that is globally rare.

Birch and wet woodland
There is an extensive area of birch woodland in the south eastern part of the site. Birch woodland is the dominant broadleaved tree in the Cairngorms. This would appear to be natural woodland with evidence of coppicing and is heavily grazed by livestock (primarily horses) and rabbits, with the ground layer dominated by grasses. The birch woodland extends on to areas of fen habitat, forming a small area of wet or bog woodland, a rare habitat type.

Other habitats
The site contains areas of acid and improved grasslands comprising 20% of the site. These are the product of heavy grazing, reseeding, nutrient enrichment with fertilizers and selective herbicide spraying. Such grassland communities are species poor and generally do not support rare or unusual species. In particular, the area of grassland between Grant House, the hospital and the A939 is very species poor and of low ecological value.

There is a small area of species-rich wet heath, a typical heathland community in the north and west of the UK. There are many small areas of standing water and bog pools, associated with the wet grassland and fen communities. There is also a more open water body or pond directly behind the hospital that is quite large and is permanent in nature (although water levels can vary).

A burn runs across the centre of the site running nearly north-south, and is of high ecological status being unpolluted and of natural appearance (although it was canalised historically, prior to the first edition OS map of 1874). A number of ditches or field drains cross the site, all now redundant and filled with vegetation though some still containing running water. One of the redundant ditches leading into the hospital grounds was possibly once lined with a hedge that is now a scatter line of trees. These freshwater channels support a good diversity of species.

There is a scattering of trees, primarily Scots pine with some birch to the north-west of the site next to the caravan park, on the steep ground, with a more typical open woodland ground flora. The final habitat of note is the remains of a derelict drystone wall running east-west across the centre of the site that is only just visible. Such walls, even when derelict, are important habitats for a range of species such as lichen, bryophytes, invertebrates, amphibians and reptiles.

Adjacent habitats
The site is bounded to the east by the settlement of Grantown, the open grounds of the hospital and Grant House, the A939, a horse paddock, rear gardens of houses on Mossie Road, and the riparian corridor of the burn next to the housing development at Seafield Avenue. To the north is a fairly dense conifer plantation (primarily Scots pine) on a site on the Ancient Woodland Inventory. The west side is bounded in part by native woodland and the caravan park (partly screened by line of trees). The south of the site is a minor road with large gardens on the opposite side of the garden and open fields, much of these being an active fen or species-rich grassland.

Species

Mammals

The site is widely used by a variety of mammals, though it has not been systematically surveyed. Rabbits are very common and contribute to the grazing patterns across the site. Stoat, field vole and common mole are also present. Two UKBAP Priority Species are regularly seen on the site: hedgehog and red squirrel. Squirrels are restricted to the woodland areas of the site and there are no reports of active dreys (though there has been no survey for dreys). The area is used as a foraging area for bats, though there are no records of species type or any know roosts within the trees on the site.

Birds - waders

This site is critical to breeding waders and is one of the most significant natural heritage interests of the site. The site supports important breeding populations of the UKBAP Priority Species lapwing. Other key wading birds such as Curlew (another UKBAP Priority Species), Snipe, Oystercatcher and Redshank have all been recorded breeding at this site. All four of these species are Cairngorms LBAP Priority Species. The importance of this site for breeding waders was first noted and highlighted to CNPA staff by Stephen Corcoran, Cairngorms Biodiversity Officer, and David Bale, CNPA HLM Group Head, in 2005.

Lapwing, redshank, curlew and snipe have all declined significantly in Scotland and the UK in recent years. For example, the UK lapwing population declined by 48% between 1994 and 2004. Badenoch & Strathspey is the most important area for breeding waders on the UK Mainland (reported in "2005 Badenoch & Strathspey Breeding Farmland Waders Survey", Mitchell, 2007) but even here numbers of Redshank declined by 25%, Curlew by 28%, Snipe by 30% and lapwing by 43% between 2000 and 2005.

Prior to 2008 the site was not systematically surveyed for breeding waders but good records are available from a local ornithologist and from CNPA employees for 2005 and 2006 (see table below). In 2008 and 2009 the site was surveyed by Stephen Corcoran, Cairngorms Biodiversity Officer, using the standard methodology for breeding waders (see Mitchell, 2007) although the site was only visited once during each breeding season rather than the standard 3 visits. The results are set out below.

Table 1. Numbers of Breeding Waders at "The Mossie", Grantown

Year	Curlew	Lapwing	Oystercatcher	Redshank	Snipe	Chicks	Nest/eggs	Notes
2005	present	present	present			present		Casual record
2006 (1)	2	12	12	2	2	present		Informal survey of site
2006 (2)		18	2			6 broods		Informal survey from hospital
2007	present	present	present			present		Casual record
2008		25	10		3		3 nests with eggs	Standard RSPB survey
2009 Poor survey condition	1	10	14	1	3		2 nests	Standard RSPB survey

Putting the significance of the site in context, the density of breeding waders at this site (during 2008) was the second most important site for breeding waders compared to the 46 regularly surveyed wader sites in Badenoch & Strathspey (surveyed in 2005 in Mitchell, 2007). A further 12 sites in the River Spey catchment were surveyed in 2006 as part of Cairngorms FWAG's Action for Breeding Waders Project (Blackburn & McKnight, 2007) and none of them supported waders of higher density than this site at Grantown.

The breeding waders are primarily found in the grassland and fen area behind the hospital towards the burn in the west and the birch woods to the south; and in the grassland area between the caravan site and the burn. This high density is a reflection of the complex matrix of different wet and dry grassland habitats, open water and fens found at the site, and the general open nature of the site (wading birds require open fields and avoid using habitat directly next to dense woods and high fences or walls). Other factors such as hydrology and a history of livestock grazing are also important.

Other birds

The grassland areas of the site support breeding populations of other UKBAP Priority Species such as Song thrush†, Reed bunting†, Skylark†, Linnet†, Twite† and Starling that have all been recorded during the breeding season. The birch woodland and scatter trees also support Bullfinch†, Lesser redpoll and House Sparrow, three other UKBAP Priority Species. Other birds that are know to use the site include Meadow pipit, Siskin†, Cuckoo, Kestrel, Buzzard, Black-headed gull, fieldfare, redwing, mistle thrush, goldcrest, woodcock, willow warbler, blackbird, great tit, coal tit, blue tit, chaffinch and dunnock. (Those marked † are also Cairngorms LBAP Priority Species).

The UKBAP Priority Species, Capercaillie†, is present in nearby Anagach Woods (specifically designated as a SPA for this) and does occasionally use the plantation to the north of the site and across the A939. The Badenoch & Strathspey Conservation

Group has raised concerns about the impact of additional recreational disturbance on Capercaillie as a result of the site being developed. The CNPA have carried out an Appropriate Assessment of this particular aspect and concluded that the additional houses were unlikely to have a negative impact on the qualifying interest of the Anagach Wood SPA (i.e. Capercaillie). However, no assessment has been undertaken on the potential impact on Capercaillie using the woods adjacent to the H1 site.

This extensive list of bird species using the H1 site is a reflection of the diversity of habitats present on the site. Records are from a number of individuals including Dr Gus Jones, Keith Duncan, David Hetherington (CNPA Ecologist), David Bale (ex-CNPA HLM Group Head) and Stephen Corcoran (Cairngorms Biodiversity Officer).

Amphibians and reptiles

Two UKBAP Priority Species are present on the site, Common toad and Common lizard, both species experiencing widespread declines, as well as Common frog. These species have not been subject to systematic survey but were noted on the site by Stephen Corcoran, Cairngorms Biodiversity Officer. Toad and frog spawn was found on the site in the large open body of water behind the hospital and lizards are likely to breed on the site as well given the diversity and structure of the habitats present.

Invertebrates

The interesting mix of unimproved mesotrophic grassland, base-rich fen and improved acid grassland supports a diverse community of invertebrates. These include 5 UKBAP Priority Species of butterfly: Northern brown argus†, Pearl-bordered fritillary†, Small pearl-bordered fritillary, Small heath and Large heath† (†Cairngorms LBAP Priority Species). Northern brown argus has its stronghold in Scotland and is restricted to calcareous grasslands where its larval food plant rockrose grows, so has a very localised distribution. Similarly, Scotland is now considered the stronghold for Pearl-bordered fritillary and this species breeds in open woodland (usually birch) with bracken. A further 10 species of other butterflies are found at the site: Orange tip, Peacock, Small tortoiseshell, Scotch argus, Ringlet, Meadow brown, Red admiral, Painted lady, Common blue and Green-veined white. The Badenoch & Strathspey area of the Cairngorms is considered one of the 20 "Key Survival Zones" by Butterfly Conservation across the UK.

The bog pools and open water also support a number of damselfly and dragonfly species including Red damselfly, Golden-ringed dragonfly and Black darter. While a species of yellow ant was commonly noted in the grasslands.

The site is an important area for hoverfly and leafhopper species, with extensive communities of these invertebrates recorded recently by Dr Jones. These include 8 species of leafhopper and a first record for Scotland for the leafhopper *Arthaldeus striifrons*, making this the only known site in Scotland for this species. At least 31 species of hoverfly have been recorded by Dr Jones, and they include 3 new species records for the Cairngorms National Park (*Helophilus trivittatus, Eriozona syrphoides* & *Xylota jakatorum*):

Table 2. List of Hoverfly species recorded at "The Mossie", Grantown

Genus	No. of Species
Arctophila	1 species
Cheilosia	1 species
Chrysotoxum	1 species
Epistrophe	1 species
Episyrphus	1 species
Eriozona	1 species
Eristalis	6 species
Helophilus	2 species
Lejogaster	1 species
Leucozona	1 species
Melanostoma	2 species
Merodon	1 species
Neoascia	1 species
Platycheirus	1 species
Rhingia	1 species
Sericomyia	1 species
Sphaerophoria	2 species
Syritta	1 species
Syrphus	3 species
Xylota	2 species

This diversity of invertebrate species is a reflection of the quality and diversity of the habitat mosaic at the Grantown H1 site. These records are the result of occasional recording by individuals such as Dr Gus Jones and the Cairngorms Biodiversity Officer, Stephen Corcoran.

Plants

The section on habitats gives a breakdown of the various NVC communities found on the site. During a survey of the site by CNPA staff (Dr David Bale and Dr Andy McMullen) in October 2005 the species listed below on table 3 were found to be present. Of particular note is a large population of the UKBAP Priority Species of Field gentian (*Gentianella campestris*) along both banks of the burn behind the hospital and also occurring less frequently in the dry grassland areas across the site. This declining species is known locally from a few sites across Badenoch & Strathspey. Common rockrose (*Helianthemum nummularium*) is present within the calcareous grassland communities and is an important food plant for the North brown argus butterfly.

Table 3: List of Plants found onsite at the 'Mossie'

Gentianella campestris	Climaceum dendroides	Spahgnum papillosum
Galium verum	Lophocolea bidentata	S. magellanicum
Alchemilla vulgaris	Chiloscyohus polyanthus	S. auriculatum
Succissa pratensis	Carex panicea	S. cuspidatum
Vicia montana	Carex echinata	S. rubellum
Sphagnum palustre	Carex rostrata	S. compactum
Sphagnum subsecundum	Juncus squarrosus	S. capillifolium
Sphagnum recurvum	Juncus acutiflorus	Odontoschisma sphagnii
S. tenellum	Tricophorum caespitosum	Cephalozia connivens
S. acutifolium	Viola palustris	Lophozia ventricosa
Calliergon cuspidatum	Succissa pratensis	Eriophorum angustifolium
C. cordifolium	Potentilla palustris	Myrica gale
Aulacomium palustre	Achillea ptarmica	Drosera spp.
Drepanocladus revolvens	Cirsium palustre	
Drepanocladus fluitans	Nardus stricta	
Pseudoscleropodium purum	Molinia caerulea	

Fungi

Recent research indicates that the unimproved grasslands of Scotland are of exceptional importance for fungal conservation compared with other countries in Northern Europe. The H1 site in Grantown contains a diverse and interesting assemblage of grassland fungi especially waxcaps. 12 species of waxcap fungi were recorded at the site by Dr Gus Jones during a brief survey (Hygrocybe punicea, H. splendidissima, H. punicea, H. quieta, H. chlorophana, H. marchii, H. laeta, H. pratensis, H virginea, H psittacina, H. coccinea & H. insipida). A local mycologist (Ern Emmett) also noted that the birch woods contained a good mixture of fungal species including a rare Red Data Book species and that the site merited further investigation by an experienced mycologist during the fruiting season.

Fish

The burn across the site (possibly called "Meadow Burn") supports 2 UKBAP Priority Species of fish, Brown trout and Atlantic salmon, as well as lamprey species (Brook lamprey definitely recorded by local resident Jimmy Mitchell). These species all spawn in this burn.