Sites of Special Scientific Interest

Wester Ross Lochs	Wester Ross Lochs SSSI comprises 12 upland lochs and associated islands lying between 25m and 320m above sea level to the north-west of Kinlochewe.
	Most of the site is in remote, upland terrain. The nutrient poor freshwater lochs have intricate shorelines and islands and support a characteristic flora.
	A group of lochs support nationally important numbers of Black Throated Divers (Gavea arctica).
Ardlair – Letterewe	An extensive upland site rising from the north-eastern shoreline of Loch Maree, taking in the Letterewe Forest and the Fisherfield Forest and located between the settlements of Kinlochewe and Poolewe in Wester Ross. It is notified for its mosaic of upland habitats and upland habitats, as follows:-
	Notified natural features
	 Woodlands; Upland oak woodland; Upland Birch woodland;
	 Upland habitats; Upland assemblage.
	Part of Ardlair – Letterewe SSSI is also part of the Loch Maree Complex Special Area of Conservation (SAC).
	Part of Ardlair – Letterewe SSSI is also part of the Little Gruinard River Special Area of Conservation (SAC) Designated for the European Species Atlantic Salmon.
	Part of Ardlair – Letterewe SSSI is also part of Wester Ross Lochs Special Protection Area (SPA) designated for the breeding bird, Black Throated Diver.
Meall an t-Sithe and Creag Rainich	Meall an t-Sithe and Creag Rainich Site of Special Scientific Interest (SSSI) is located in Wester Ross, 17km south of Ullapool. This site is in two parts. It contains nationally important exposures of metamorphic rocks belonging to the Moine Supergroup.
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	This site is of national importance for research and education as the type locality for the Meall an t-Sithe pelite, and for containing unique evidence for the relative timings of movement of the Sgurr Beag Thrust and the Moine Thrust. These rocks were originally formed around 1000 million years ago on an ancient seabed as sands and muds. Later (probably around 800 million years ago) they were metamorphosed at high temperatures and pressures. This turned the sandstones into 'psammites' and the mudstones into 'pelites'. However, the rocks in the east part of the site ('Glenfinnan Division' rocks) were partially melted, forming a rock type called 'migmatite'. The type area for part of this 'Glenfinnan Division migmatite', known as the 'Meall an t-Sithe pelite', is found in the eastern part of the SSSI.
	In the west portion of the SSSI, two thrust faults occur – the Sgurr Beag Thrust (known geologically as the Sgurr Beag slide) lying to the east of the Moine Thrust. Both faults formed during a mountain-building event around 430 million years ago and both caused rocks from the east to move up and over rocks to the west. The importance of the site lies in its unique evidence for the relative times that movement occurred on these two faults.
	Intrusions of a pale, coarse grained 'pegmatite' rock have been deformed by movement on the Moine Thrust but not by movement on the Sgurr Beag Thrust. This demonstrates that movement on the Sgurr Beag Thrust occurred first and that the pegmatites were then formed by intrusion of molten rock
An Teallach	An Teallach SSSI is located on the south side of Little Loch Broom about 11 km south of Ullapool in north-west Scotland. It is a spectacular mountain with several deep corries lined by cliffs up to 300m in height with narrow jagged summit ridges. The SSSI shows outstanding examples of glacial and periglacial geological features and supports a variety of upland heath and grassland habitats with nationally rare plant species.
Creag Chorcurach	Creag Chorcurach Site of Special Scientific Interest (SSSI) lies in Wester Ross. It is part of an escarpment on the eastern side of Strath Beag at the head of Little Loch Broom. This site contains a section through the Moine Thrust Zone, including a feature known as the Dundonnell Structure. Creag Chorcurach SSSI is a key locality which helps geologists to understand the Moine Thrust Zone, the mechanisms involved in continental plate movements and the sequence of events that led to the development of the Thrust Zone.
	The Moine Thrust is a large, low angled fault (or fracture) in the earth's crust, which is exposed along a line from Loch Eriboll to the Isle of Skye. When England and Scotland collided around 430 million years ago, the rocks of the Moine Supergroup were pushed westward along the Moine Thrust by up to 100km. Beneath the Moine Thrust are a number of other thrusts in the Moine Thrust Zone.
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	The geology of the Dundonnell Structure gave geologists convincing evidence that the Moine Thrust is the oldest thrust in the Moine Thrust Zone and that subsequent thrusts developed beneath it, carrying older thrusts on top of them. In the Dundonnell Structure, the Moine Thrust has clearly been folded and domed by the accumulation of younger thrust slices beneath it. The lowest and youngest thrust slice exposed in the Dundonnell Structure is made up of ~530 million year-old Fucoid Beds (fossil-bearing mudstone). Above this is an older thrust slice of Pipe Rock (quartzite with distinctive worm burrows, and slightly older than the Fucoid Beds); and above this a thrust slice of ~1000 million year-old Torridonian sandstone. Above the Torridonian sandstone thrust slice is the Moine Thrust and its overlying Moine rocks. Also of importance and exposed in the SSSI are the Sole Thrust (the lowest, youngest thrust in the Moine Thrust Zone), and the rocks to the west, known as the 'Foreland', which have not been affected by the Moine Thrust Zone.
Dundonnell Woods	The evidence displayed at this site contributes to geologists' understanding of thrust belts across the world and Creag Chorcurach SSSI is therefore of international importance for geological education and research. Dundonnell Woods SSSI lies 8 km south of Ullapool at the head of Little Loch Broom in Wester Ross. The site includes one of the best examples of deciduous woodland in north-west Scotland. This site has the most northerly substantial stand of Ash in Britain and the hillside Ash Alder community is unique in Wester Ross.
Fannich Hills	The Fannich Hills SSSI is a large upland site which is located between the A835 and the A832 roads in the north- west Highlands. It has close affinities with Beinn Dearg SSSI and together they provide representation for the upland vegetation communities of Central Ross and Cromarty. The more acid geology of the Fannich Hills means it supports lower number of calcium loving plants.
	 Notified natural features:- Geological - quaternity, geology and geomorthology; Quaternity of Scotland; Geological: Structural and Methomorphic – Geological Mone Biological - Upland Habitats: Upland Assemblage: Biological - Invertebrates Biological - Invertebrates
Achanault Marshes	 Biological- Invertebrates: flies Achanalt Marshes Site of Special Scientific Interest (SSSI) lies 7 km west of the village of Lochluichart and south of the A832 Garve – Achnasheen road in central Ross-shire. The SSSI includes the water bodies of Loch Achanalt and Loch Odhar and the surrounding floodplain of the River Bran – all at an altitude of 120 metres. This site has extensive semi-natural flood plain habitats supporting a diverse assemblage of wetland breeding birds.
Corrieshalloch/	

Corrieshalloch Gorge	Corrieshalloch Gorge Site of Special Scientific Interest (SSSI) lies in Wester Ross, 19 km south-east of Ullapool. This nationally important site is a classic example of a gorge formed by glacial meltwater rivers. The gorge is flanked by nationally important Birch woodland which provides suitable habitat for the nationally rare cranefly <i>Lipsothrix</i> ecucullata.
Fionn Loch Islands	The site comprises three small wooded islands which lie to the northern end of Fionn Loch, 8 km east of Poolewe between Loch Maree and Gruinard Bay. They contain fragments of the original vegetation cover of Wester Ross. Few such sites remain and they are therefore important in illustrating the diversity of habitats and species of the woodlands that once covered extensive areas of the district.
	Each of the islands has its own character. Eilean Fraoch has a low growth of Alder, Birch and Rowan with a strong heath element in the ground flora. Eilean nan Corrichean is dominated by Birch with Holly, Rowan, Alder and Ash and some Pine, whilst Eilean a' Gharbh Uillt is ringed with tall Ash and has a dense, almost pure stand of ancient holly trees in the middle. The ground flora associated with the islands is particularly rich, with ferns and characteristic woodland herbs abundant. Species include mountain fern, lady's fern, great woodrush, heather and bilberry.
Cailleach Head	Cailleach Head Site of Special Scientific Interest (SSSI) lies in Wester Ross, 15 km north-west of Ullapool and 2 km north-west of Scoraig. This nationally important site comprises the 'Cailleach Head Formation', which represents the youngest known Torridonian rock sequence. Torridonian rocks were deposited between 1 billion and 800 million years ago, in a semi arid to sub-tropical environment.
	The site is important because of the exposures of rhythmic alterations of sediments, known as 'cyclotherms'. This is one of the best exposed sequences of such cyclotherms in Britain. The sedimentary sequence at Cailleach Head includes sandstones, siltstones and dark coloured shales. Some of the sandstones contain sedimentary structures such as ripple marks, indicating deposition in shallow running water. There are 20 dark shale and silt sequences, interspersed with sandstones which suggests that there was a cyclical alternation between lake environments and alluvial fans. An alluvial fan is a triangular-shaped mass of sediment, deposited when a watercourse passes from a confined channel into a more open area. The layered deposits of fine material with coarser material indicate cyclical fluctuations of water levels within the lake; the finer silts being laid down in deeper, calm environments while the course grained sediments were laid down under shallower, faster-flowing conditions.
	The grey shales in the sequence contain phosphatic lenses created by the presence of microfossils of simple algae. These microfossils, originally detected by the geological survey nearly a century ago, are an important element of the Torridonian Group flora. They were the first microfossils of this age to be recognised in Britain.
Loch/	

Loch Maree	Loch Maree SSSI is notified for its geologic interest, native pinewood and loch habitats, breeding Black Throated Divers and its assemblages of vascular plants, beetles and dragonflies.
	Loch Maree is important for paleoecological studies and paleo-environmental reconstruction. The pollen stratigraphy from the loch sediments and from basins on the islands (supported by radio carbon datum) provides valuable record of flandrian vegetation history in north-west Scotland. In particular, the results provide a detailed picture of the regional and local history of Pine in the area. The results suggest that the decline in Pine abundance after about 4,250 years ago was in response to climatic change.
	Loch Maree is one of the finest examples of clear, nutrient poor standing water in the UK. It is a large, peat loch and whilst many parts of its shorelines are unsuitable for plant growth, due to strong wave action and rocky outcrops which extend below the surface, good stands of aquatic vegetation can be found in the more sheltered areas at the east and west ends and around the islands. Dense beds of alternate flowered water milfoil and stoneworks occur at the east end of the loch whilst Water lobelia, Bulbus rush and Quilwart are common on the predominantly sand and silt sub-strait around the islands. The small lochans on the Eileann Sebhainn, the largest island, contain the nationally scarce six-stemmed water wort.
	The islands in Loch Maree, particularly the three largest, support one of the least disturbed remnants of Native Scots pine woodland in Scotland. The woodland is one of a group of native pinewoods in Wester Ross which is genetically distinct from the other Scottish pinewoods. These woods have retained a high degree of genetic variation and have affinities with the pinewoods of Spain and southern France.
	The vegetation of the lands comprises a mosaic of Scots pine woodland and myre communities. Upright Juniper, a species which is not found to any great extent in other pinewoods, is locally abundant. On most of the island, the Pine woodland has a varied age structure with large mature trees and a matrix of younger trees. There are very few deciduous trees although nationally scarce Rock whitebeam occurs locally. In the wettest areas within the forest, there are small scale examples of Scandinavian type "bog woodland".
	The woodland ground flora is more typical of the Pinewoods of central and eastern Scotland with driers areas dominated by Blaeberry. The loch shore bordering the Pinewood contains a number of uncommon plants such as Marsh clubmoss, Royal fern and Bog haregrass. A typical ground flora dominates the myre areas with a number of uncommon plants present including the nationally Scarden brownbeat sage.

<u>Special</u>/

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Special Areas of Conservation (SAC)

Fannich Hills	Qualifying interests: Alpine and Boreal heaths, Blanket bogs, European dry heaths, Northern Atlantic wet heaths with Erica tetralix, Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea, Siliceous alpine and boreal grasslands, Siliceous rocky slopes with chasmophytic vegetation, Siliceous scree of the montane to snow levels.
Little Gruinard	Qualifying interests: Atlantic Salmon
Loch Maree Complex	The qualifying interests for which the site is designated include Alder woodland on flood plains, Alpine and sub-alpine heaths, blanket bog, bog woodland, plants in crevices on base rich rocks, Caledonian forest, depressions on peat sub-straits, dry heaths, tall herb communities in addition to the variety of other interests.

Special Protection Areas (SPA)

Achanalt Marshes	Achanalt Marshes comprises the water bodies of Loch Achanalt and Loch Odhar with associated semi-natural grassland and fen communities interspersed with heathland and mire. This is a key part of the most extensive river valley flood plain in Easter Ross which still retains abundant semi-natural vegetation.
	The boundary of the SPA is coincident with that of the Achanalt Marshes SSSI. The site qualifies under Article 4.1 by regularly supporting, in summer, a nationally important population of the Annex I species wood sandpiper Tringa glareola with an average of 3 breeding pairs between 1991-1995, representing 50% of the British breeding population.
	The site is also of interest for its assemblage of breeding waterfowl which includes, wigeon Anas penelope (six pairs), teal Anas crecca (five pairs), mallard Anas platyrhynchos (14 pairs), tufted duck Aythya fuligula (10 pairs), oystercatcher Haematopus ostralegus (three pairs), lapwing Vanellus vanellus (three pairs), dunlin Calidris alpina (three pairs), snipe Gallinago gallinago (seven pairs), curlew Numenius arquata (seven pairs), redshank Tringa totanus (six pairs), greenshank Tringa nebularia (four pairs) and common sandpiper Actitis hypoleucos (five pairs). The figures in brackets are the average number of breeding pairs recorded in the five-year period 1991-1995.
Wester/	

Wester Ross Lochs	The Wester Ross Lochs Special Protection Area (SPA) comprises a cluster of thirteen lochs in the Wester Ross area of north-west Scotland. These are (from west to east): Loch Kernsary, Loch a'Bhaid-luachraich, Lochan Dubh Druim na h-Airde, Loch Fada, Loch na Moine Buige, Fionn Loch, Loch na h-Uidhe, Lochan Beannach Mor, Lochan
	Beannach Beg, Loch a'Mhadaidh Mor, Loch Garbhaig, Lochan Fada and Loch an Sgeirach. These lochs have intricate shorelines and islands and mostly support a typical oligotrophic fauna and flora. Several of the islands support relict examples of the original vegetation cover of Wester Ross. The boundary of Wester Ross Lochs SPA follows that of the Wester Ross Lochs Site of Special Scientific Interest (SSSI) and part of the Ardlair-Letterewe SSSI.
	Wester Ross Lochs SPA qualifies under Article 4.1 by regularly supporting a large population of black-throated diver Gavia arctica (minimum of six pairs, 3% of GB population) which is of European importance. There are nine black-throated diver territories present within the site but not all are occupied each year. This population has higher than average productivity (one and a third times the national average during 1986 to 1998) and the combination of large population size and high productivity means that the site makes a significant contribution to the production of fledged chicks in Scotland as a whole. The density of individual territories within the SPA is higher than the British
	average.

<u>National Scenic Area (NSA)</u>

Wester Ross	The area combines six of the great mountain groups of Scotland. The names of the outstanding individual peaks and their profiles are perhaps better known than the slopes of the mountains themselves, and the descriptive literature is full of hyperbole, at which few beholders of the scene would demur.
	To traverse the area from the beetling crags and precipitous corries of the Applecross Forest to the jagged teeth of An Teallach is to experience a sustained crescendo of mountain scenery which could leave no spectator unmoved. Murray has described Liathach in the Torridon Group as 'the most soaring mountain in the North,' and many writers concur with his opinion that An Teallach 'is one of the half dozen most splendid mountains in Scotland,' and that 'its eastern corrie, Toll an Lochain, is one of the greatest sights in Scotland.
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It would be superfluous to describe the individual qualities of all the intervening mountains. For most people their names will suffice to conjure up the splendour of the scene: Ben Damph, Beinn Eighe, Beinn Alligin, Slioch, A'Mhaighdean, Mullach Coire Mhic Fhearchair, Beinn Làir, Beinn Dearg Mhor. The area is frequently described as the last great wilderness of Scotland, but contains much that is of a serene and gentler beauty than the rugged splendour of mountain fastnesses.
Loch Maree has been described as 'one of the two most excellent of Scotland's big inland waters' (Murray) and 'the embodiment of what is called Highland Grandeur' (Weir). Of Loch Torridon, Wainwright writes: "Without the loch, Torridon would be a fearful place, but with it, there is not a grander prospect to be found in Scotland". Many other water bodies, notably Loch Shieldaig, Loch Damh, Loch Clair, the Fionn-Fada lochs, Loch-na-Sealga and Loch Tournaig contribute variety of character to the scene.
With the exception of the Fionn-Fada group these lochs have in varying degrees shores which between rocky headlands are frequently wooded with semi-natural woodlands of Oak, Birch, and Scots pine, which together with moorland and scrub soften the lower lying parts of the area to make a gentle foil for the starker mountains. Around the coast Gruinard Bay, Loch Ewe and Loch Gairloch exhibit a pleasing mixture of beaches, islands, headlands, inlets, woodlands and crofting settlements. The bleaker promontories of Rubha Mor and Rubha Reidh, though not of high intrinsic scenic merit in themselves, are visually inseparable from the mountain backdrop and only at Red Point does the rather plain local scene lose the advantage of this prospect.