EXECUTIVE SUMMARY

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State Party
United Kingdom of Great Britain and Northern Ireland

State, Province or Region
Caithness and Sutherland, Highland Region (Scotland)

Name of the nominated property
The Flow Country

Geographical coordinates to the nearest second

Component Part 1
A'Mhoine-Hope-Loyal

Coordinates of central point: 4°26'39"W 58°23'00"N

Component Part 2
Fiag

Coordinates of central point: 4°35'49"W 58°11'25"N

Component Part 3
West Halladale

Coordinates of central point: 4°02'46"W 58°23'57"N

Component Part 4
Skinsdale

Coordinates of central point: 4°06'26"W 58°10'07"N

Component Part 5
East Halladale

Coordinates of central point: 3°41'48"W 58°19'47"N

Component Part 6
Munsary & Shielton

Coordinates of central point: 3°20'06"W 58°23'53"N

Component Part 7
Oliclett

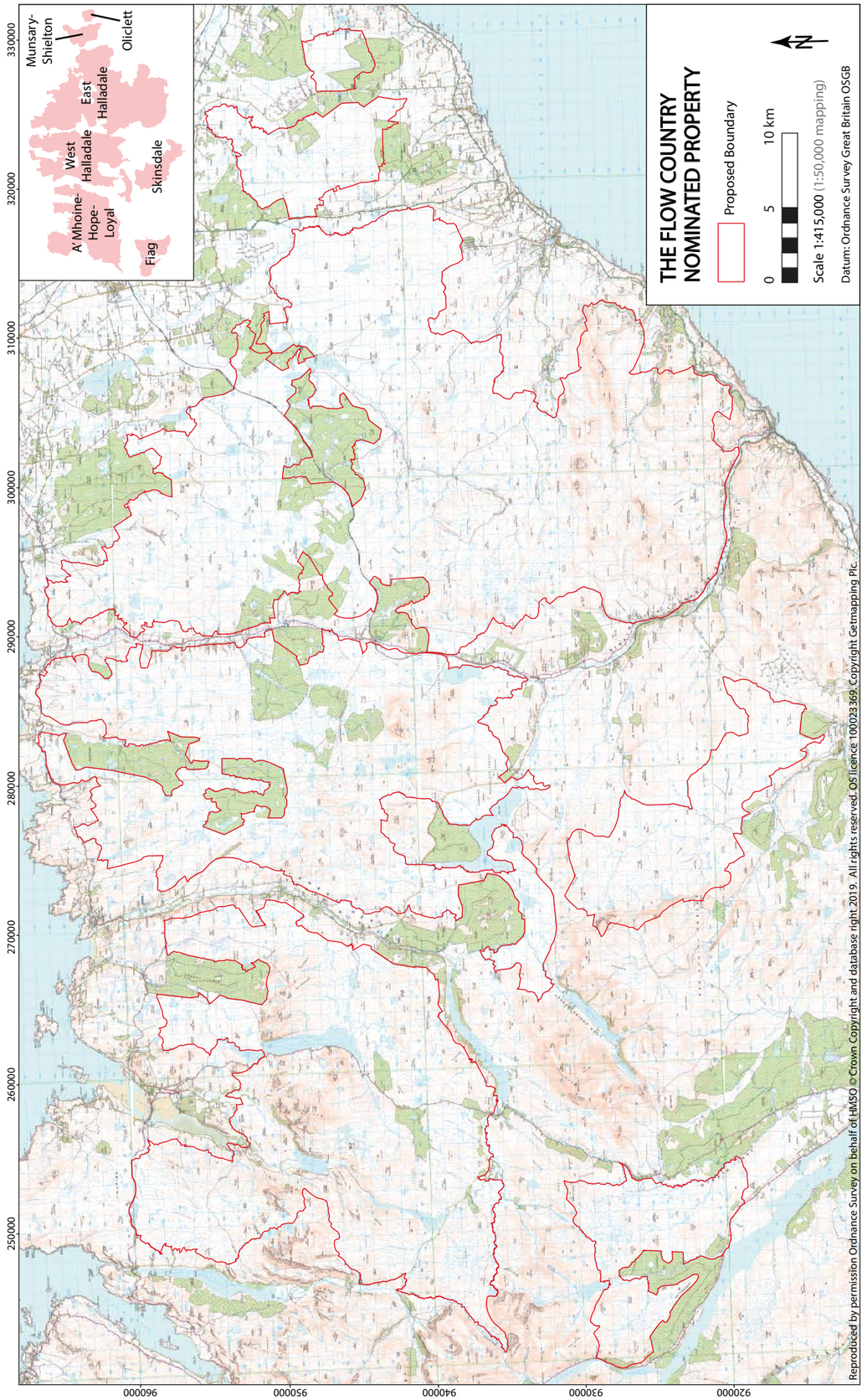
Coordinates of central point: 3°13'40"W 58°22'47"N

Textual description of the boundary of the property

The nominated property comprises seven component parts which span the historic counties of Caithness and Sutherland in Highland Region, Scotland. The boundaries have been drawn to encapsulate all of the attributes which have been identified as contributing to the proposed Outstanding Universal Value (OUV), including: the most extensive and diverse example of blanket bog found globally; the archive of peatland development it stores and its utility in learning and research; the carbon it stores and continues to sequester; its impact on associated riverine habitats; and the species associations it holds, including the birds, plants and the genetic diversity it sustains.

The boundary of the nominated property is therefore drawn to contain areas of the Flow Country blanket bog landscape that are in the most natural condition, the majority of which is contained within Sites of Special Scientific Interest (SSSI) and other designations. Areas adjacent to the blanket bog landscape that are functionally important as hydrological units and provide protection to the property's values are also included, as are areas that are otherwise surrounded by blanket bog and form part of the wider blanket bog landscape. Areas that are under restoration (from historical drainage or forestry), or with potential to be restored, are also included as there is sufficient evidence to suggest that well managed restoration will lead to the reinstatement of functional blanket bog. The area of the nominated property is circa 190,000 hectares.

The property has no specified buffer zone. Areas important for the protection of OUV outside of the boundary are protected through a combination of national and local planning policy, and the wider protection afforded by the existing high-level designations.



Opposite: The proposed boundaries of the nominated property - 1:415k scale.

Id n°	Name of the component part	Coordinates of the Central Point	Area of Nominated component of the Property (ha)	Map N°
001	A'Mhoine-Hope-Loyal	4°26'39"W 58°23'00"N	42,438	1.4
002	Fiag	4°35'49"W 58°11'25"N	8,450	1.4
003	West Halladale	4°02'46"W 58°23'57"N	41,735	1.5
004	Skinsdale	4°06'26"W 58°10'07"N	11,387	1.5
005	East Halladale	3°41'48"W 58°19'47"N	75,536	1.6
006	Munsary & Shielton	3°20'06"W 58°23'53"N	5,989	1.6
007	Oliclett	3°13'40"W 58°22'47"N	1,491	1.6
		Total area (in hectares)	187,026	

Criteria under which property is nominated

(ix) Examples representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.

The Flow Country is the most extensive and diverse example of an actively accumulating blanket bog landscape found globally.

(x) The most important and significant natural habitats for in situ conservation of biological diversity, including those containing threatened species of Outstanding Universal Value from the point of view of science or conservation.

The Flow Country contains an exceptional example of the biodiversity found within a blanket bog landscape. The geographical position of The Flow Country and the diversity of habitats result in biological associations unlike any other found globally. Furthermore, the scale and connectivity of the property afford resilience to the ecosystem and the species it contains.

Cultural Landscape

No

Draft Statement of Outstanding Universal Value

a) Brief Synthesis

The Flow Country property is the most outstanding example of a blanket bog ecosystem in the world. With its intricate network of pools, hummocks and ridges, the bog stretches across some c. 190,000 hectares of northern mainland Scotland, with the property boundary comprising seven discrete, but adjacent areas. The underlying peat has been accumulating for the past 9,000 years and the bog displays a remarkable range of features resulting from the climatic, altitudinal, geological and geomorphological gradients found across the region. Alongside the extensive record of peat accumulation that The Flow Country contains, and the store of carbon this represents, the ecological processes that result in peat formation continue to sequester carbon on a very large scale.

The Flow Country blanket bog also provides a globally significant natural habitat for an internationally important assemblage of specialist biodiversity. The area supports a unique and distinctive assemblage of birds, with a combination of arctic-alpine, temperate and continental species not found anywhere else in the world. This is a result of the site's location and the diversity of blanket bog habitats it contains, combined with the patchwork of connected farming and coastal landscape elements within the wider setting.

Protection for The Flow Country is provided through international and national designations, as well as national and local planning policies, and there is scope for future expansion of the site through restoration of adjacent degraded blanket bog. The area is also considered to be the type-locality for the description of blanket bog and so represents a significant research and educational resource.

b) Justification of Criteria

Criterion (ix) – The Flow Country is the most extensive and diverse example of an actively accumulating blanket bog landscape found globally.

Since the glaciers receded from Scotland climatic conditions, in combination with the underlying geology, the resultant topography, and the biogeography have led to the formation of a vast and diverse blanket bog landscape that stretches across the north of Scotland. The persistent precipitation-fed waterlogging of the soil has led to an expanse of peat bog, c. 400,000 hectares, that blankets the landscape, including hills, slopes and hollows, together forming a globally rare and significant peatland ecosystem. Of this, nearly 190,000 hectares is identified as suitable to be included within the property, on the basis of current quality and continuity of habitat.

The Flow Country therefore represents the most extensive, near-continuous, high quality and near-natural blanket bog landscape found globally. The active processes of blanket bog formation have continued uninterrupted for 9,000 years, and the diversity of blanket bog features is not found anywhere else on Earth. Moreover, the processes of blanket bog formation provide an outstanding example of carbon sequestration and long-term storage on a massive scale.

The blanket bog also provides an incredible record of its formation, preserved as pollen and plant fossils, and telling a story of its past flora, fauna, climate, palaeoecology and human influence. This is also important for helping us understand the future functioning of this and other blanket bogs globally.

Criterion (x) – The Flow Country contains an exceptional example of the biodiversity found within a blanket bog landscape. The geographical position of The Flow Country and the diversity of habitats result in biological associations unlike any other found globally. Furthermore, the scale and connectivity of the property afford resilience to the ecosystem and the species it contains.

The blanket bog of The Flow Country is a globally significant natural habitat for the conservation of biodiversity, not least because of its unique and specialised assemblage of flora and fauna, but also because of the rarity of the ecosystem and the declining condition and extent of comparable ecosystems globally.

The diverse range of blanket bog features that The Flow Country contains, such as pools and hummocks, support an exceptional and specialised blanket bog biodiversity and holds biological associations unlike any other blanket bog found globally. This diversity is a consequence of the overlapping distributions of species typical of both arctic and temperate climatic zones and is further influenced by altitudinal and climatic gradients, and geological diversity found across the site.

The property includes some species that are rare, scarce or threatened, but it is the distinct assemblage of specialised flora and fauna within a high-quality blanket bog that make The Flow Country so significant, along with its pivotal position at the crossroads of bird flyways and migration routes. Furthermore, the scale and connectivity of the property afford resilience to the ecosystem and the species it contains.

c) Statement of Integrity

The Flow Country property comprises seven discrete but adjacent areas totalling around 190,000 hectares, which encompass a large expanse of actively accumulating blanket bog ecosystem. The overwhelming majority of the blanket bog within the property boundary is in near-natural condition. The remainder includes areas of blanket bog that are undergoing restoration, and areas that are expected to be restored in the short to medium term.

The property is of sufficient size to contain all the elements of Outstanding Universal Value (OUV) needed to demonstrate the ecological and biological processes, and the biodiversity that comprise this globally significant ecosystem. These include the blanket bog itself, the wider peatland landscape complex in which it lies and the finer elements, including intricate pool systems, diverse surface patterning, fens, and the range of flora and fauna that all of these systems support. The climatic, altitudinal, geological and geomorphological gradients that occur across The Flow Country all contribute to ensuring that the variety of features that make up blanket bogs are represented. Furthermore, the boundaries of the nominated property are largely defined on the basis of the hydrological elements that comprise the blanket bog, and therefore ensure ecosystem integrity and coherence.

Large areas of the wider Flow Country peatland have suffered from poor historical management decisions in relation to matters such as drainage and woodland creation, but the boundary has been chosen to include only those areas of deep peat which are in good condition or have the ability to return to a near-natural state within the next 10-25 years. It is expected that in time, it will be possible to integrate some of the more degraded bog in the wider Flow Country into the property.

d) Requirements for protection and management

Around 73% of the area within the proposed property boundary has the highest level of statutory protections, with national regulation and policy reflecting their national and international significance, including those originally introduced via the EU Habitats and Birds Directives leading to Special Protection Area (SPA) and Special Area of Conservation (SAC) classification which are now protected through domestic legislation. The majority of the area is also protected through the Ramsar Convention. These instruments provide specific protection for the elements of OUV as set out in the Site's attributes, notably including the processes for the maintenance and formation of blanket bog, and the associated flora and fauna.

Further to the statutory protection, peatlands – particularly those containing peat greater than 50cm in depth – are protected through planning policies, both at Scottish national and local levels. There are specific planning policies at national level in relation to both World Heritage Sites and areas of peatland that afford them effective protection from development proposals that might impact adversely on OUV. Moreover, where the boundary is not coincident with existing environmental designations, protection will again be ensured by national and local planning policy; the Local Authority will have regard to the Management Plan as a material consideration.

The property has no buffer zone. Areas important for the protection of OUV outside of the boundary are protected through a combination of national and local planning policy, and the wider protection afforded by the existing high-level designations. Buffer zones also have no basis in Scottish law, so would not add more protection than is already in place.

Management of the Site's OUV will be guided by a single clear Management Plan, developed by a stakeholder partnership comprising key landowners and managers, government agencies, local communities and scientific experts, and also through public consultation. The key management opportunity is bog restoration, and potential threats include commercial forestry and unwanted tree regeneration, inappropriate deer management, water management and drainage, intensive agriculture, inappropriately sited and/or designed wind farms, burning and climate change. A key requirement for the management of this property lies in continued strong and adequately resourced coordination and partnership arrangements focused on the World Heritage property.

Name and contact information of official local agency

Organisation:
The Highland Council

Address:
Glenurquart Road
Inverness
IV3 5NX

Tel: 07767 161065

Fax: none

E-mail: steven.andrews@highland.gov.uk

Web address: https://www.highland.gov.uk/

Opposite: Pool and *Racomitrium* hummock below Ben Hope. [photo: Steven Andrews]

Glossary

Acrotelm:
the fibrous uppermost layer of the peat where water movement and exchange is rapid and fluctuations in the water table lead to variable moisture content.

Bog:
acidic waterlogged ombrotrophic peat forming system.

Blanket bog:
rain fed peatland that blankets the topography, often comprised of a number of units, each characterised by their topographic position and morphology (watershed, spur, valley side, saddle, etc.), and that are defined by their hydrological integrity. The hierarchy of bog units is illustrated in section 2.

Blanket bog landscape:
a landscape where blanket bog predominates, larger blanket bog 'catchments' abut, covering extensive tracts of land. These often include elements of fen and raised bog.

Blanket bog ecosystem:
the blanket bog considered alongside the biological community that it supports, and that contributes to its development.

Catotelm:
the deep peat which underlies the acrotelm. This peat layer is characterised by near constant water content, very slow hydraulic conductivity and no access to atmospheric oxygen.

Dubh lochans:
the local name for the pool systems which characterise much of the blanket bog. Their black (dubh) colour comes from the dark, peaty water they hold and the peat substrate which forms the bottom of the pools. Some of these pools are also extremely deep. For 'lochan' see below.

Fen:
peatland development associated with ground water run off. Fens are often mineral enriched, relative to blanket bogs.

Flush:
area within a peatland where ground water seeps out resulting in a mineral enriched setting and associated flora.

Loch(an):
Scottish term for body of water – lake. Lochan is the diminutive form: small loch.

Mire:
a peatland that supports peat forming vegetation.

Ombrotrophic:
in relation to a bog this term refers to the water source being solely atmospheric (rain fed).

Paludification:
rain fed waterlogging of the ground leading to the development of peat forming plants and subsequently to the development of peat.

Patterned ground:
this refers to the combination of microfeatures, including: hummocks, high and low ridges, pools, mounds, hags, etc (illustrated in section 2), that make up the varied surface textures that occur across blanket bogs.

Peat:
an amorphous organic rich deposit formed by the steady accumulation of semi-decomposed plant material. Waterlogging prevents complete decomposition of the plant material.

Peatland:
a region where the soil is predominantly composed of peat.

Raised bog:
peatlands that originated from the infilling of depressions. Continued growth leads to a domed upper surface.

Sphagnum:
a genus of moss, often referred to as bog moss or peat moss, that is important in peat formation. It is abundant throughout the Flow Country.

Quaking bog:
an area of the bog that quakes with every footfall. This is usually the case due to the high saturation of both the upper fibrous layer (acrotelm) and the underlying deep peat (catotelm), the latter verging on a liquid state. Traversing such areas can be hazardous, even when walking on the ridge systems.