



Scottish Natural Heritage
Dualchas Nàdair na h-Alba
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By email to: sea_gateway@gov.scot

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**Environmental Assessment (Scotland) Act 2005
01563 Scoping - Scottish Government - Integrated Impact Assessment National
Planning Framework 4**

Dear Antonia

Thank you for your consultation on the above scoping report received from the Gateway on the 24th February.

I have only focussed on the Strategic Environmental Assessment element of the integrated impact assessment scoping report and our comments are detailed below. I have split our response into two sections. General comments focus on the scope of the assessment, the methodology and objectives, while more detailed and technical comments are provided, in terms of the environmental baseline, in Appendix A.

Given the current COVID-19 crisis, I appreciate that these are unusual times and staff resources are stretched more than usual. I would offer the support of SNH to help with assessment process as the NPF progresses on from the *call for ideas* stage. In light of the fall-out from the pandemic, the climate emergency and biodiversity crisis, the environment, has to be seen as a solution to ensuring future sustainable economic growth and the SEA presents the ideal opportunity to embed this into NPF4. Please do not hesitate to call if you wish to discuss further.

General comments

We welcome the scoping in of all the environmental topics including the consideration of geodiversity issues.

The proposed reporting of findings as a narrative, supported by assessment matrices and constraints mapping is appropriate. We would recommend that the mapping should also represent the spatial opportunities and not be limited to the constraints.

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There is a lot of good information presented in the Evidence Base appendix but it is sometimes a bit disjointed and it is not always clear how this will inform the assessment of the effects from the policies and proposals in the National Planning Framework. We would welcome the opportunity to work with you further as the assessment process progresses and develop the links between the baseline and assessment approach.

Thank you for picking up the changes to the SEA example objectives in Table 2 following our earlier meeting. I note geodiversity has been mentioned in column 1 along with both soils and landscape. I suggest landscape would be the more appropriate of the two. In terms of soils, it would be more helpful to widen the scope to all soils – *Safeguard and improve soil health, protect soil resource and soil functions of all soil types in Scotland*.

The relevant environmental objectives in section 3.1.7 could make mention of specific Soil and Geodiversity objectives. Soil objectives focus on promoting the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland to protect soil carbon stock, reducing loss of resource from erosion / landslide. Geodiversity objective are broadly aimed at protect from damage and disturbance, and consider need to make space for nature by allowing natural process happen now and under changing climate.

We note that the Environmental Report will be out for public consultation alongside Parliamentary consideration for a period of 120 days. We are happy with this consultation timescale although we accept in this rather uncertain time that this may change.

I hope the comments above and in the technical appendix are of use and should you wish to discuss these further, please contact me on 07787 105905 or e-mail me at fiona.rice@nature.scot. I look forward to working with you as the assessment process progresses.

Yours sincerely

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Appendix A - Baseline Environmental Information

I have detailed below our specific technical comments in respect of the baseline narrative and data sources. As mentioned, we would be happy to work further with you on assessing the effects against the specific technical elements in our remit, principally biodiversity, soils, landscape and geodiversity and climatic factors.

Biodiversity, Flora and Fauna

Section 1.2.3 refers to 2009 data which has now been superseded. The UK Biodiversity Action Plan is no longer actively supported, but remains one of the criteria for selecting habitats and species on the Scottish Biodiversity List (SBL). Reference 9 in the report, State of Nature Scotland Report 2019: <https://www.nature.scot/state-nature-scotland-report-2019> provides a more up to date assessment for habitats and species, including those outwith protected sites. Optionally the text in Section 1.2.3 regarding the UK Biodiversity Action Plan might be replaced by expanded text in Section 1.2.4 citing the State of Nature Scotland Report 2019.

Section 1.2.8

The references do not specifically support the statements regarding the condition of upland habitats. A more useful reference would be a link to the relevant page on Scotland's Environment Web which provides graphic representation of feature condition. The page can be located here: <https://www.environment.gov.scot/data/data-analysis/protected-nature-sites/>

Section 1.2.10

Using Scotland's Environment Web (March 2020), 18.3% of "raised bog" features are in unfavourable condition. This provides a more recent interpretation of data than that provided by reference 14.

Section 1.2.13

Figure 1 - It would be helpful to include Rockall.

Orange Text box - Biodiversity, flora and fauna - Key Pressures

We recommend changing text from "**Spread of invasive species and wildlife disease** - much of this has arisen from a growing global trade of plants and animals" to "**Spread of invasive species and wildlife disease** - some of this has arisen from a growing global trade of plants and animals".

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has recently published assessments of the direct and indirect drivers of biodiversity loss. The summary for policymakers report is a useful reference in connection with biodiversity loss and might be included within the reference list: <https://ipbes.net/global-assessment>

References 7 and 22 are both for features in favourable condition. It would be better to refer to the most recent publication, reference 22 rather than both reference 7 and reference 22.

Soils

Table 1 – Environmental Data sources

It would be helpful if the soils dataset was not restricted to a single soil type or single land use. This section should include *Soil risk maps*, the *Soil map of Scotland* and *National soil map of Scotland* - all data sources are available in the Scotland Soil Website - <https://soils.environment.gov.scot/resources/peatland-restoration/>

Blue Text Box – Soil – Existing Environmental Protection Objectives

There is no overarching national legislation for soil protection in Scotland, but there is a wide range of policy instruments that protect some aspects of soil through soil's interactions with

other environmental topics. The Scottish Soil Framework 2019 set out to co-ordinate existing policies that relate to soils through better integration of the topics in policies and guidance. We suggest the reference to geological sites should be considered under landscape and geodiversity.

Please note that Scotland's peatland do not play a key role in regulating atmospheric pollutants as suggested in para 1.7.3. We recommend that the first half of the paragraph is replaced with:

Scotland's soils play a key role as the main store of terrestrial carbon, most of it being held in peatland soils. The role of healthy peatland in sequestering soil carbon, helping reducing downstream flood risk and benefitting biodiversity is recognised in the Scotland's National Peatland Plan and special consideration under planning system.

We recommend that para 1.7.4 is replaced with:

Scotland has a diverse range of soils, generally more organic, more acidic, more leached and wetter than those of most other European countries. Over 25% of Scotland is used for arable crops (mostly in the eastern half of the country) and improved grassland, mostly on the more mineral soils of the central belt and in lowland areas and predominantly found in the south west. The remainder of the country is occupied by semi natural habitats over more organic soils with over 20% of Scotland being cover in peatland habitat on peat soils.

In para 1.7.6, please note that although over 60% of the designated peatland at SSSI has been assessed as being in favourable condition, 70% of all Scotland blanket bog and 90% of all raised bog area has been damaged to some degree.

It may also be useful to mention that urban soils usually show a greater variability in properties than similar soils in a rural setting. They commonly show higher concentration in urban anthropogenic pollutant markers and low level of organic matter.

Orange Text Box – Soil – Key pressures

The most important pressures affecting soil are climate change and changes in land use and land management practices.

Climate change could directly threatens soil health and functions, mainly due to changes in soil wetness, soil temperature and result in an increase in soil degradation leading to loss of organic matter, habitats, erosion and compaction. Indirect impact from change in land use and management practices to adapt and mitigate impact of climate could also have significant impact on soils (INNS, competition to reduce land bank).

Change to land use and land management from can result in a range of threats to soil including:

- **Change in soil organic matter** will impact on soil health and its ability to hold carbon, water, nutrient and contaminants, and sustain biodiversity. Soil Organic matter underpins most of the fundamental soil properties and soil functions. Loss of soil and degradation of the soil surface conditions of existing soils or soil reinstated following planning activities will have a direct impact on soil health.
- **Soil pollution and contamination** can be locally significant and threats to soil can be exacerbated by mis-use of chemicals; waste management and recycling operations during development.

Climatic Factors

Blue Text Box – Existing Environmental Protection Objectives

We welcome the reference to mitigation in the existing environmental protection objectives. However, it would be helpful to reference the Scottish Government Scottish Climate Change Adaptation Programme. This is particularly relevant given that best scientific knowledge sees global temperatures set to rise by c.2degrees C.

<https://www.gov.scot/publications/climate-ready-scotland-scottish-climate-change-adaptation-programme/>

We appreciate, given the frequency that data changes it is hard to keep up-to-date, but it would be helpful if the carbon references could be updated.

There needs to be clarity around what is meant by 'peatland'. Peatland is not a soil. In paragraph 1.4.4, we recommend the following amended text – 'Scotland's soils are the biggest terrestrial store of carbon in Scotland with peat soils (or soils under peatland habitat) alone holding around 1.6 billion tonnes.....'

In section 1.4.6. reference should also be made to the work by Dynamic Coast: Scotland's Coastal Change Assessment. <http://www.dynamiccoast.com/>

With regard to figure 2, the data would be more accessible if it related to Scotland rather than the whole of the UK.

Air

Orange Text Box – Air Key Pressures

Nutrient nitrogen and especially ammonia mainly from agriculture should be flagged as key pressures.

It would be helpful if the following report should be referenced
https://uk-air.defra.gov.uk/library/reports?report_id=994

Cultural Heritage and Historic Environment

Given the cross-cutting nature of many of the SEA topics, we recommend you include the following text:

Ancient forms of soil management have left their imprints in our landscape across Scotland i.e. Lazy beds and other raised beds, machair and plaggen soils. These landforms are not only sensitive to human intervention but also change in climatic factors that can increase loss of soils protecting their features or force change in how the land is used.

Another unintended consequence of climate change is that to maintain or repair historic building and sites at risk of degradation, access to appropriate repaired material may be needed (soil, clay and other rock material) to maintain the characteristic of the vernacular. Very often sourcing of such material was very local and many of the ancient quarry sites have been reused, backfilled or have been designated.

Landscape and Geodiversity

We welcome references to landscape and geodiversity benefits, and the diverse and distinctive nature of them. The importance of all landscapes, rooted in the European Landscape Convention (ELC) is noted, but even with this, this there is a focus on designated areas – reinforced by the list of Environmental Data Sources. These only include Wild Land Areas and designations, contrary to the ELC. We have suggested some minor text amendments to help adjust this balance.

We advise including Landscape Character Assessment in the "Baseline Data" column. This is because – as noted in parts of the text - the European Landscape Convention acknowledges that all landscapes, not just designated or other valued areas, are important. The SNH website is the source for this. Coastal character assessment should also be mentioned in this table, also available from the SNH website.

Blue Text Box – Existing Environmental Protection Objectives

Although the opening sentence mentions "the importance of all landscapes", and has the ELC as its foundation, it does not reference landscape character (which is the ELC approved basis of taking landscape into account, and in which Scotland led the way). Instead, it

focuses on designated landscapes. This misses out prevailing thinking on the importance of quality local places helping health and well-being, not just designated areas. (Human health is mentioned in the final paragraph but with a focus on recreation and sense of place rather than being wider.)

We recommend that the following sentence could be added into this text box - "Scotland's long-established national coverage of landscape character assessment, and policies to take character into account, align us with the Convention."

Section 1.9.3

We recommend the text should read – 'The character and quality of Scotland's'. This would reinforce the all-landscapes approach, rather than the current over-focus on designations, and align with paragraph 1.9.7. Similarly, we suggest adding at the end of the 4th sentence in this paragraph "... can make an important contribution to quality of life and local distinctiveness and identity."

The **blue text box** makes no reference to geodiversity. We suggest that this text is augmented with the following paragraph:

'The environmental protection objectives set out in legislation and policy for geodiversity are broadly aimed at protecting geological and geomorphological features from damage and disturbance, principally by identification and conservation of areas of particular value. A hierarchy of protection has been established from national to local level. Addressing the impacts of climate change on the natural environment is also a longer term aspiration.'

Section 1.9.5 should also include the following paragraph

At national level Sites of Special Scientific Interest affords protection to the majority of internationally and nationally important geodiversity assets under UK and Scottish legislation. The remaining internationally and nationally important geodiversity assets ('unnotified GCR sites') are in some cases protected by local legislation (e.g. in National Parks). Geodiversity assets of regional or local importance may be protected as Local Geodiversity Sites but coverage is not complete.

In Para 1.9.8 it would be helpful to note after the first sentence: 'Geodiversity assets are also expected to be affected by climate change'. Similarly, we recommend that the last sentence is amended to read:

*'However, mitigation and adaptation measures are expected to have a greater influence on Scotland's landscapes, geodiversity and quality of life than the direct effects of climate change.'*⁷

In Para 1.9.9 it would be useful to note 'These areas are also very important recreational resources, which is dependent on the landscape, geodiversity and environmental quality of these areas.'

Para 1.9.10 could be augmented in respect of geodiversity to the effect, 'In addition to aquaculture development, energy generation development, including on and offshore windfarms can impact landscape, geodiversity and seascape if poorly sited and designed.'

Orange Text Box - 'Landscape and Geodiversity - Key Pressures

This section currently has no mention of geodiversity. We suggest the following changes could help to address this omission.

Para 1, sentence 1 - 'Competing land uses remain a principal threat to managing geodiversity and landscape change.'

Para 2, sentence 1 - 'With climate change it is likely that some geomorphological processes will alter in intensity or even in nature, with freeze-thaw processes decreasing, land being

lost to the sea, increased flooding, and changed distribution patterns of natural and semi-natural habitats.'

Para 3, sentence 1 - 'Natural landscapes, landforms and geodiversity assets can be lost, destroyed or obscured as a result of inappropriate building or infrastructure development, waste practices, and associated pollution, commercial afforestation or extraction processes.'

Para 4, sentence 1 - 'Restricting rivers and coasts as a solution to local erosion or flooding, can have adverse effects on water and sediment flows, and alter natural geomorphological processes, which can destroy wildlife habitat and reduce landscape value and diversity.'

Material Assets

Orange Text Box - Material Assets – Key Pressures

We suggest you add a sentence to end of Para 1: 'Development may also 'sterilise' mineral resources by making them inaccessible.'

Environmental Objectives across other Plans, Programmes and Strategies

Reference should be made within the Landscape and Geodiversity section to:

- **Wildlife and Countryside Act 1981**
Core legislation on geodiversity across the UK which explains the protection afforded to geological and geomorphological features. Applies to the terrestrial environment and inshore waters. This legislation has been amended in part by the Nature Conservation (Scotland) Act 2004.
- **Scottish Geodiversity Charter 2012**
The Scottish Government supported Scotland's Geodiversity Charter encourages the promotion and management of Scotland's geodiversity and better integration of geodiversity into policy and guidance, consistent with the economic, social, cultural and environmental needs of Scotland. This will help to protect a crucial aspect of our natural heritage and deliver more sustainable management of Scotland's natural resources.