



Scottish Natural Heritage
Dualchas Nàdair na h-Alba

All of nature for all of Scotland
Nàdar air fad airson Alba air fad

8 March 2013

petitions@scottish.parliament.uk

c/o Andrew Howlett
Assistant Clerk to the Public Petitions Committee
Scottish Parliament

Dear Mr Howlett

Written Response to Petition PE1459 - J. MacKie

Thank you for consulting SNH on this petition, which calls for a review of coastal erosion protocols and the roles and responsibilities of different authorities in protecting coastlines and communities. The Committee has also requested SNH's views on the discussions that took place at the meeting on 22 January and advice on what mitigation measures can or could be put in place to protect coastal areas.

SNH policy on coastal erosion and defence

Our advice on coastal erosion and defence is generally based on the following overarching [policy](#):

Most beaches in Scotland are inherently dynamic in character and are subject to periodic coastal erosion. Along with sediment transport and deposition, this erosion is necessary for the creation, conservation and integrity of many of our unique coastal habitats, landforms and landscapes. As far as is possible within the constraints of public safety, SNH advocates approaches to erosion management which retain the natural coastal habitats, processes and landscapes and which enable Scotland's coastlines to evolve naturally with minimal human intervention.

This policy recognises that intervention may be required for reasons such as the protection of health and safety, homes, and important infrastructure. We provide the following advice in its support:

- proposals for all new coastal defences* (*or other forms of mitigation) should be based upon a knowledge and understanding of their effects upon natural sedimentary processes and, therefore, coastal evolution elsewhere;
- all major new coastal defence schemes* should form part of a strategic plan for the management of erosion and defence within the coastal cell or sub-cell concerned;
- in accordance with the Environmental Impact Assessment (Scotland) Regulations 1999, Planning Authorities should require a formal Environmental Impact Assessment of any proposed coastal defence scheme* likely to have a significant environmental effect upon a 'sensitive location'¹, even if the scheme itself lies outwith such an area; and
- development of unprotected shorelines should be discouraged where such developments could not be adequately safeguarded over the lifetime.

¹ Sensitive locations include Sites of Special Scientific Interest, National Scenic Areas, Special Protection Areas (and proposed SPAs), Special Areas of Conservation (and candidate SACs). For European sites there should also be an appropriate assessment in accordance with the Habitats Regulations 1994.

We have also published a 'Guide to Managing Coastal Erosion in Beach/Dune Systems' and often provide this to communities alongside links to other relevant guidance.

In the context of this general policy, we would like to respond to particular points raised by the petition and parliamentary discussion as follows:

1. National aspects raised within the petition and discussion.

a. The petitioner calls for a review of Coastal Erosion protocols.

SNH anticipates that climate change will make coastal erosion and coastal flooding more likely in the coming decades. Although on large sections of Scotland's coastline this is unlikely to be a problem, there are sections which are likely to become more vulnerable. We are investigating the implications for the Natural Heritage and how this can be used to inform more sustainable coastal management options. We are also collaborating with SEPA to better understand Scotland's susceptibility to coastal erosion as part of Flood Risk Management Appraisals. Given this broader perspective we consider that strategic approaches, supported by good data will be increasingly required to manage future coastal erosion and flooding. We would therefore agree with the petitioner that there would be merit in a review of the procedures for dealing with coastal erosion and flood risk to ensure that there is a shared and transparent approach to these issues.

b. The petitioner calls for Local Authorities to be compelled to prevent loss of private and public property.

We are concerned about the implications of the petitioner's call for "*Local Authorities [to] have the legal responsibility and liability to carry out works to prevent loss of property (both private & public)*". Such an approach is likely to lead to a proliferation of piecemeal demands for defence works with considerable unpredictable consequences on coastal processes and the natural heritage. The public purse would then be responsible for the repair (in perpetuity) of defences protecting private assets. In our view, planning for shoreline management and coastal defences should be carried out strategically, but the use of public funding to defend private assets would only be appropriate where some wider public interest could be demonstrated.

c. The petitioner raised questions over the roles and responsibilities of organisations carrying out emergency engineering works on the coastline.

Local Authorities have powers under CPA (1949) as the Coastal Protection Authority to carry out emergency coastal defence works. Under the Nature Conservation (Scotland) Act 2004 there is an exemption from the need for consent to carry out emergency operations on a SSSI. In these situations, the details of the emergency and the operations carried out must be notified to SNH as soon as practicable after the emergency. Supplementary guidance on the roles of relevant organisations is outlined in the recent [CREW](#) report.

d. The petitioner raised concerns over the limited amount of coastal defence work that has been carried out in Scotland, compared with elsewhere.

The proportion of a country's coastline that is defended (or needs to be defended) depends on geological, geomorphological, meteorological/ocean processes and historical planning decisions. Although there aren't any detailed national statistics on coastal defences, we believe the majority of Scotland's extensive coastline (around 70%) is composed of highly resilient rock, a smaller extent (around 29%) is composed of softer unconsolidated sediments (gravels, sands and silts) and an even smaller extent is defended (around 1%). The large proportion of resilient rocky shore should be seen as a valuable natural asset for Scotland. On our 'soft coastlines' (e.g. beaches and saltmarshes), it is now widely recognised that sympathetic management can improve flood and erosion resilience more effectively and cheaply than using hard defences (Adaptation Scotland conference in 2012).

e. The petitioner raised a concern that coastally eroded sediment deposited in the sea is causing major problems to the environment.

We consider that near-shore habitats will generally be accustomed to the effects of episodic storm events as a naturally dynamic part of their function. Although one of the climate change scenarios is an increased risk from storm events, at present we are not aware of any locations where increased near-shore sedimentation has damaged marine habitats or species. We respectfully point out that there is no evidence to support or disprove the petitioner's statement about the sea becoming shallower at Kingston, nor of the loss of 6 million tons of shingle from the Kingston beaches.

f. Consultees should not have the power to block decision making

As one of many consultees, SNH does not have the power to block proposals. We provide advice to the Competent Authority (Moray Council in this case), which then makes a decision on the basis of all advice (including the views of residents). Competent Authorities have the power to approve works whilst there are outstanding objections from consultees, although this is subject to a number of limitations where proposals could have an adverse effect on the integrity of a European site (as would be the case at Kingston) designated under the EU Birds (special Protection Areas) or Habitats Directive (Special Areas of Conservation).

2. Local aspects raised within the petition and discussion.

a. Local views have been ignored

SNH does not agree that '*local views are pushed aside*'. We regularly attend public meetings which gather and discuss the views of local people. Moray Council has commissioned various investigations over the years to appraise alternative approaches at Spey Bay. SNH has also commissioned specialist advice to assist the Council.

b. The petition suggests that SNH is stopping intervention

Interference with natural (dynamic) systems is often risky but that doesn't mean that nothing could or should be done. It is true, however, that we consistently advise against the use of hard engineering in situations where it would interfere with the natural processes and the implications are unclear or damaging. SNH has provided advice at Spey Bay for at least 17 years. We have advised against the installation of hard defences on the open coast at Spey Bay, principally because we are not convinced the intervention will work and, indeed, may make the situation worse for Kingston (unintended consequences). We also have concerns about the impact they might have on the natural heritage interests including those of the Special Area of Conservation. If the Competent Authority concludes that intervention is necessary at Kingston we would consider the best option to be beach recharge, which works with, rather than against, natural processes. We advised this approach in 1995/96, and it was done successfully, offering reasonable protection for 10 or 15 years. Like all forms of intervention, hard or soft, subsequent management is required to maintain effectiveness.

c. Local views are 'pushed aside' in favour of computer models

SNH has participated in public meetings in recent years, where local views have been sought. The management of the Spey mouth is a complex issue as it is a highly energetic natural system. Therefore it is critical to understand the consequences of any forms of intervention before starting. There are numerous examples on Scotland's coastline of coastal defences which have had unintended consequences. Modelling along with other site specific investigations will help identify the likely impacts and responses to alternative approaches.

In the case of Kingston, Moray Council has decided to monitor the situation by undertaking regular surveys of the shingle beach profile. The Council recently commissioned Royal Haskoning Ltd to independently analyse their survey data. This analysis found that while the shape of the ridge changes regularly, the volume of material within it has remained fairly constant. Moray Council will be able to provide more detail, but the consultant's opinion was that the mobile nature of the constantly changing, but intact shingle ridge was key to providing protection from wave action by dissipating its energy. While we fully understand the concern and alarm of some residents at Kingston, the recent severe storm did not cause any damage to the village, which demonstrates the effectiveness of this natural barrier. This consultant also

identified a number of other important issues relating to the dynamism of this coast line which meant that hard engineering would be likely to cause more harm than good to the interests of Kingston. We note that this conclusion accords with the advice we have provided for many years.

d. SNH documents state that “no works should be done to prevent erosion” and “mother nature should be allowed to take her course and that any man-made structures in the way should be allowed to go.”

We do not recognise the above wording from any SNH documents. However, we have provided measured advice on various proposals over the years and have stated our concerns over the anticipated inefficacy of hard intervention (sea walls etc) and the knock-on impacts of such defences on erosion management in the future and elsewhere. We have been supportive of beach reprofiling work which proved successful in 1995/96.

e. SNH would not allow ‘alien stone’ to be used as defences in the SSSI

We support the use of hard defences where they are necessary and where the consequences are predictable and acceptable. We do not believe this to be the case at Kingston. Elsewhere, in situations where hard stone defences would be appropriate, we have historically advised that using similar rock types to those found nearby helps the defences appear less conspicuous.

f. SNH will not sanction rock armour.

As stated previously, we do not have the statutory power to sanction or block proposals, but we provide advice to those that do. During public meetings and consultations we have provided advice on options at Kingston. We have promoted the potential use of beach recharge whilst cautioning against the use of hard engineering. The primary reason for this is that we are unconvinced that hard defences would have the desired effect of alleviating erosion and flood risk. They could lead to unintended deleterious consequences for Kingston, expensive continuing repairs, extension of the defences into the future and potential further intervention along the coast. The longer term implications of the approach on the SSSI have actually been a secondary concern compared to these broader considerations.

g. Local forums have achieved nothing so far

The Lower River Spey Forum was successful in its objectives. It was formed to agree a method of works in the lower River Spey that could be carried out without negatively impacting on all of the river’s interested parties. The outcome was consent from SNH for The Crown Estate to do ‘minor works’ within the river as and when was required. Since then agencies have met and agreed that Moray Council could carry out some more substantial work. In fact SNH was instrumental in steering that work which has been carried out to date. The work has not produced any undesired effects, and has hopefully given the community of Garmouth some comfort that things can be done and that the Council will carry out work where this is sustainable.

I hope that this response is useful for the Committee's considerations, but please contact us if anything further would be helpful.

Susan Davies
Director of Policy and Advice