

Net Zero, Energy and Transport Committee  
Scottish Parliament  
Edinburgh  
EH99 1SP

25 October 2023

Dear Ben

**NET ZERO, ENERGY AND TRANSPORT COMMITTEE – FOLLOW UP TO SESSION ON 3 OCTOBER**

Thank you for inviting NatureScot to the NZET Committee meeting on 3<sup>rd</sup> October to give evidence on NatureScot's general priorities and the Circular Economy (Scotland) Bill. Thanks also for your follow up email requesting further information on points raised at the Committee and on items that the Committee did not get to due to time constraints.

Please find attached the follow up information you requested.

Yours sincerely,

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**NatureScot** | Great Glen House, Leachkin Road, Inverness, IV3 8NW

## NZET Committee follow up points from evidence sessions on 3 October 2023

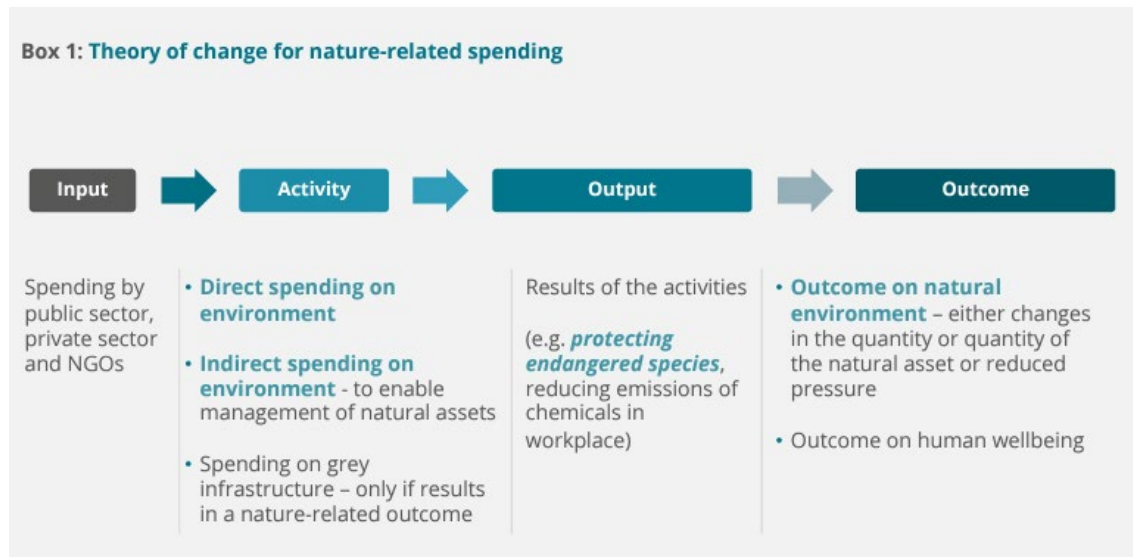
### NatureScot

#### Environmental regulators session – item 1

- In response to a question from Douglas Lumsden, you agreed to share figures in relation to how much of the Scottish Government’s £250million peatland restoration funding has been spent to date (09:58)
  - approximately £40m of the £250 million committed in the Infrastructure Investment Plan for peatland restoration has been spent in the three year period 2020/21 to 2022/23.
- In response to a question from the Convener, you committed to provide further clarification on the £20 billion figure used by NatureScot in its assessment of funding required to fully restore nature, and the methodology behind this estimate (10:05)
  - The figure of £20 billion comes from a report produced by eftec and Rayment Consulting Services for the Green Finance Institute in 2021. It is a mid-point estimate indicating the scale of investment deemed likely to be required to tackle the twinned climate and biodiversity crises. Costs involved in delivery are highly variable. While this figure is not intended to drive policy or investment decisions, it is an important indication of the scale of challenge. The estimate is founded on policy and spending commitments in July 2021 and does not account for potential changes in future. The following has been extracted from the report.
  - The purpose of the project was to assess the finance gap for spending on actions such as (i) nature-based solutions and (ii) where the spending primarily results in one of the nature-related outcomes, across the UK, the devolved administrations and Overseas Territories over the next 10, 20 and 30 years.
  - The nature-related outcomes that are within the scope of the project are based on policy commitments. The project accounted for the overlap between items of spending that are likely to deliver multiple outcomes, as much as data allows, to avoid double counting. These outcomes (and the central estimate of the finance gap in Scotland 2022-32) were:
    - Clean water (£3 billion)
    - Protect/restore biodiversity (£8 billion)
    - Reduce flood risk through natural flood management (no Scottish estimate)
    - Improve bio-resource efficiency (£476 million)
    - Climate mitigation through bio-carbon (£9 billion)
    - Enhance biosecurity (no Scottish estimate)
    - Improve access and engagement with natural environment (£1 billion)
    - Multiple outcomes (£2 billion)
  - Required and committed/planned spending were estimated through a review of available evidence, not through a full-scale modelling of the need and actual

spending. The report did not comment on cost-efficiency or effectiveness of delivery but simply what's been stated/committed/planned. There could of course be cheaper ways of delivering the goals which would reduce the finance gap. Eftec calculated the 'finance gap', which could be filled by public, private, third sectors and/or investors.

- The project used a Theory of Change approach to decide what is within and out of the scope of the project. This approach is summarised below.



- The project team collected, analysed and aggregated available evidence to populate the theory of change in Box 1 above for each of the seven outcomes in the scope.
- The approach consisted of collating available evidence on committed/planned and required spending. The results do not claim to represent a comprehensive calculation of spending requirements and hence finance gaps. The following steps were taken:
  - Collect evidence through desk-based research, consultations (including through the project board) and modelling of spending data where this was possible.
  - Synthesize evidence to bring together different baselines, targets, time periods and assumptions including an assessment of the relevance of the evidence for the scope of the project.
  - Aggregate spending evidence, including adjustments for overlaps and recognising gaps in spending.
- Detailed points of methodology include:
  - Central estimate took an optimistic spending assumption that the current committed spending continues.
  - Much of the primary evidence came from the UK Government's 25 Year Environment Plan, which does not have an equivalent in Scotland.
  - Required spending at the UK level was disaggregated to Devolved Administrations (DAs) and vice versa, where appropriate data was available.

- Committed spending at the UK level was disaggregated to DAs, where appropriate data was available, but spending at DA level was not extrapolated to other DAs nor the UK given differences in budgets across DAs, unless spending was reported per hectare.
  - The assessment of the project team and board is that the orders of magnitude for the finance gap are right but that all results are likely to be underestimates given the gaps in the data and assumptions that had to be made to extrapolate and apportion available evidence. An important limitation is that most public budgets are set for compliance or overall delivery of departmental / organisational duties. They are not itemised and linked to intended outcomes. This not only makes estimating the finance gap difficult but is also likely to hinder efforts to monitor and evaluate performance.
  - The report notes that ‘data is better for England, with gaps in Devolved Administrations’.
  - [Annex 1](#) – Detailed sources used for Scotland’s central estimate.
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- In response to a question from the Convener, you agreed to provide further clarification on who will carries the risk for any infringements relating to carbon credits, and if there is the potential for public money to be lost (10:06)
  - In the context of NatureScot’s MoU with Hampden & Co, Lombard Odier and Palladium there is no potential for public money to be lost as a result of financed projects failing to deliver the expected carbon benefits. NatureScot will not be responsible for project delivery, nor will NatureScot be investing directly in any projects or the carbon credits derived from them.
  - More generally, there are risks for land owners and project developers (suppliers) around their liability for delivering verified carbon units to buyers from Pending Issuance Units (PIUs) which are essentially a 'promise to deliver' a Woodland Carbon Unit or a Peatland Carbon Unit. The division of risk lies mainly with landowners and project developers in the first instance although where a contract has been put in place with a buyer the risks will be subject to the specified contractual conditions. Insurance products are emerging that may help to mitigate risks on both sides. The Woodland Carbon Code and the Peatland Code, funded by FIRNS, are working with three legal firms to create a standardised buyer/seller contract and look into what is required for liability and insurance.
  - The two codes have special arrangements to cover unavoidable failure such as may be caused by severe weather or tree disease. They do this by operating 'buffer' accounts which allocates a significant proportion of the units from every project in a shared account from which units can be drawn down or borrowed to cover these losses.

## Circular Economy Bill – item 2

### Circular economy strategy and targets

1. What role could a statutory circular economy strategy play in transitioning to a circular economy and what should it include?

Is there anything missing in the Bill's provisions specifically in terms of the governance and framing of the strategy?

The circular economy is an essential part of the transformation to net zero and to delivery of the Scottish Biodiversity Strategy. The strategy would be stronger if it were explicitly aligned to the 5-yearly carbon budget horizons required of the Climate Change Plan and review cycles for nature targets in the forthcoming Natural Environment Bill.

2. Should statutory targets be included on the face of the Bill rather than being set in regulations?

Our knowledge on the requirements for a circular economy, especially a biological circular economy, is not yet perfect. We would prefer meaningful targets to be set through regulations, based on a sound framework set out on the face of the Bill.

- a. What data or knowledge gaps need to be filled to set and monitor targets effectively?

Where specific metrics and methodologies are lacking (e.g. carbon and material footprints, aspects of regenerative land management), qualitative targets (e.g. clear principles and a direction of travel) could be used, providing a framework in which to agree more specific quantifiable measures through 5-yearly reviews (see Question 1). In some cases, for example land use, the measures may need to be highly specific to avoid homogenising land management practices and simpler measures may stifle the diversity required for nature to thrive.

- b. Are there international examples of circular economy targets that Scotland could learn from?

We are not aware of many international examples of a comprehensive shift to a biological circular economy. But there are some examples of good practice for specific features. For example, The [Swiss National Soil Strategy](#) aims to preserve soil functions for the long term. Two laws support the policy ambition of 'no net soil loss': one insists that any excavated soil is re-used as soil, and another covers both [topsoil and subsoil](#).

3. How should targets be developed to drive the adoption of key principles of a circular economy, and how do you expect circular economy targets will work alongside other key environmental targets such as net zero and forthcoming targets in the proposed Natural Environment Bill?

Targets should be informed by a clear hierarchy (examples below geared for land use)

- AVOID - Prevent impact from the outset by rethinking the need to own things through new business models, virtualisation, and by designing out waste, for example with the help of alternative proteins and by making better use of existing buildings
- REDUCE - Minimise impacts, for example by increasing recycling of textiles to make new garments and by substituting inputs in production, for example protein sources for cattle or recycled content in paper
- REGENERATE - Drive regenerative outcomes in agriculture and forestry and other parts of the bioeconomy, to improve soil health, carbon sequestration, nutrient retention and diversity to build resilience
- RESTORE - Circular interventions can also be complemented by efforts to assist the recovery of degraded ecosystems
- TRANSFORM - Drive systemic change, notably by tackling the root causes of biodiversity loss across different drivers

(from Sitra, 2022, [Tackling Root Causes - halting biodiversity loss through the circular economy](#))

This is implied in Section 6, but the framework could be more specific.

Targets for a circular economy should fully align with the 5-yearly carbon budgets required of the Climate Change Plan and the targets, including their review cycles, in the forthcoming Natural Environment Bill.

- a. Are there potential tensions between consumption, or consumption emissions targets, and our existing terrestrial emissions targets – and if so, which should be prioritised?

The key issue here is ‘leakage’ which describes the consequences of decisions taken in Scotland to reduce emissions or environmental impact for supply chains and impacts on emissions and impacts in other parts of the world.

Emission reductions over the last 30 years in the UK and Scotland have been at least partially offset by increasing emissions and environmental impacts in other parts of the world, as we continue to consume the products of heavy industry and rely on global food systems (e.g. [Comparison of Scotland's carbon footprint and its territorial emissions](#); University of Leeds [Consumption Emissions over Time](#)). Studies also show that although we are producing products more efficiently, we are using more of them ([Changing environmental impact of products](#)). Recent work by the JNCC helps to make visible the [environmental impacts of UK supply chains](#) including a [dashboard of environmental impacts embedded in commodity consumption](#) and an experimental statistic ([Global biodiversity impacts of UK economic activity / sustainable consumption](#)).

Where there are tensions, and where it is possible to do so, the environmental impact should be prioritised, wherever it occurs. While it might be tempting to, for example, focus on territorial emissions and impacts, emissions are all the same to the atmosphere and oceans and, increasingly, environmental impacts have regional or global consequences.

## **Household waste**

We do not have any comments to make on these questions.

4. What is happening outwith the Bill to improve enforcement and prevention of flytipping?
  
5. Is there anything else you would like to see on the face of the Bill on household waste? For example, is there no need for legislative change in relation to the management of business waste?
  
6. What is your view on whether there is a need for additional use of waste charging as suggested in some responses to the Call for Views?

## ANNEX 1: DETAILED SOURCES USED FOR SCOTLAND CENTRAL ESTIMATE

Nature-related outcome	Output	Source		Gaps specific to Scotland <sup>1</sup>
		Required spending	Committed spending	
Clean water	All clean water	EA (2015)	WICS (2020)	<ul style="list-style-type: none"> <li>Unclear how much committed spending in Scotland targets its environment plan</li> </ul>
Protect and/or restore biodiversity	Increase and restore protected freshwater and terrestrial sites to favourable condition	Matt Rayment (2021)	Matt Raymond (2021), National government committed spending,	<ul style="list-style-type: none"> <li>No specified commitments identified, though the 2020 Challenge for Scotland's Biodiversity refers to intention to "meet the targets for favourable condition of Natura sites and the Sites of Special Scientific Interest (SSSIs)"</li> </ul>
	Create/restore priority habitats outside protected sites	Matt Rayment (2021)	No data available	<ul style="list-style-type: none"> <li>No specific commitment identified</li> </ul>
	Protect endangered species	Matt Rayment (2021)	No data available	<ul style="list-style-type: none"> <li>No specific commitment identified</li> </ul>
	Increase species abundance	Matt Rayment (2021)	No data available	<ul style="list-style-type: none"> <li>No specific commitment identified</li> </ul>
	Woodland creation and management	Matt Rayment (2021)	Scottish Government (2021a)	
	Peatland restoration	Matt Rayment (2021)	Scottish Government (2021b)	
	Increase the proportion of protected and well-managed seas	eftec & ABPmer (2018), McCrea-Strub et al. (2011), Marine Conservation Society	Scottish Government (2021c)	

<sup>1</sup> These do not include gaps found across all nations



		(2020), RPA (2020)		
	Ensure populations of key marine species are sustainable	No data available	No data available	<ul style="list-style-type: none"> <li>No specific spending (commitment/required) identified</li> </ul>
	Ensure seafloor habitats are healthy and sustainable	Wildlife and Countryside Link (2020)	No data available	<ul style="list-style-type: none"> <li>No specific commitment identified</li> </ul>
	Achieve Biodiversity Net Gain	No data available	No data available	<ul style="list-style-type: none"> <li>No targets/mandates set for Scotland</li> </ul>
Reduce flood risk	Reduce risk of flooding through natural flood management	NIC (2018)	Scottish Government (2021b)	<ul style="list-style-type: none"> <li>No required spending data reported for FCERM (overall) for Scotland</li> </ul>
Improve bio-resource efficiency	Increase sustainability of fish stocks	Wildlife and Countryside Link (2020), Marine Conservation Society (2020)	Institute for Government (2021)	
	Sustainable soil management	Matt Rayment (2021)	Matt Rayment (2021)	
Improve access and engagement with natural environment	Provide accessible green and blue space	eftec et al. (2019), Vivid (2020)	LGBF (2020)	<ul style="list-style-type: none"> <li>No data on changes in spending for national parks in Scotland</li> </ul>
	Safeguard and enhance landscape features	Glover (2019), Matt Rayment (2021)	Glover (2019)	
Climate adaptation through bio-carbon	Climate mitigation through bio-carbon	CCC (2020a)	eftec (2021)	
Enhance	Reduce risks from	No data available	No data available	

biosecurity	invasive species			
	Reduce risks of animal disease	Gunn et al. (2007)	No data available	
	Reduce risks of plant disease	No data available	No data available	

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