CONSULTATION

Response Document

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National Planning Framework 4: Call for Ideas

(Scottish Government)

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Introduction to CIEEM

The Chartered Institute of Ecology and Environmental Management (CIEEM), as the leading membership organisation supporting professional ecologists and environmental managers in the United Kingdom and Ireland, welcomes the opportunity to comment on this consultation.

CIEEM was established in 1991 and has over 6,000 members drawn from local authorities, government agencies, industry, environmental consultancy, teaching/research, and voluntary environmental organisations. The Chartered Institute has led the way in defining and raising the standards of ecological and environmental management practice with regard to biodiversity protection and enhancement. It promotes knowledge sharing through events and publications, skills development through its comprehensive training and development programme and best practice through the dissemination of technical guidance for the profession and related disciplines.

CIEEM is a member of:

- Environmental Policy Forum
- IUCN – The World Conservation Union
- Professional Associations Research Network
- Society for the Environment
- United Nations Decade on Biodiversity 2011-2020 Network
- Greener UK
- Irish Forum on Natural Capital (working group member)
- National Biodiversity Forum (Ireland)
- The Environmental Science Association of Ireland

CIEEM has approximately 600 members in Scotland who are drawn from across the private consultancy sector, NGOs, government agencies, academia and industry. They are practising ecologists and environmental managers, many of whom regularly provide input to and advice on land management for the benefit of protected species and biodiversity in general.

We welcome the opportunity to participate in the early engagement for National Planning Framework 4 and would be happy to be involved in the development process. Please contact Jason Reeves (CIEEM Head of Policy and Communications) at JasonReeves@cieem.net with any queries.

Comments from CIEEM

What development will we need to address climate change?

Think about:

- *What we will need to do to reach the target of net zero emissions by 2045.*
- *The opportunities that this could provide to support jobs and the economy.*
- *How places can be made more resilient to the long term impacts of climate change.*
- *What climate change-friendly places might look like in the future.*

Integration of environmental principles

There is a need to rebalance the planning system from being development-led to recognise the urgency of addressing the two global emergencies of climate change and biodiversity loss. NPF 4 should be based on the 17 Sustainable Development Goals, which the First Minster signed Scotland up to in 2015, recognising the importance of the sector in addressing them. The policy should also be underpinned by a clear set of environmental principles, including: **Polluter Pays, Precautionary Principle, Prevention Principle, Rectification at Source and Non-Regression.** These principles should not be caveated for certain types of development, such as national infrastructure projects.

Biodiversity net gain

NPF 4 provides a crucial opportunity to implement a requirement for developments to deliver biodiversity net gain (BNG). BNG is a stepwise approach to development that leaves biodiversity in a better state than before. We have produced a briefing on '*Biodiversity Net Gain in Scotland*'[1] which provides further detail, as well as producing the first UK principles on delivering BNG, together with the Construction Industry Research and Information Association (CIRIA) and the Institute of Environmental Management and Assessment (IEMA)[2]. Further guidance has now been published to help professionals and UK industry address this challenge and to achieve 'Net Gain' targets for biodiversity[3].

We believe that BNG can be an effective 'tool' to reverse biodiversity loss through development. We also believe that the approach could be successfully applied to agri-environment land management as part of an integrated land use strategy. To ensure effective implementation, Local Authorities would need access to competent ecological expertise and advice (preferably in-house) and funding. We feel, based on our professional expertise, that a minimum 10% net gain should be required, possibly with an overall 20% gain on developments in each Local Authority area, achieved by incentivising developers to maximise BNG.

Nature-based solutions

NPF4 should encourage the adoption of nature-based solutions, where appropriate, in order to address the climate emergency and biodiversity crisis in tandem. This will require encouraging land-owners and land managers to manage the land in a way which works with nature to deliver multiple benefits and ecosystems services. New development should incorporate such an approach.

For example, in the urban environment:

- Widespread use of rain gardens as an urban flood prevention measure.
- Green roofs and walls.
- Green communal spaces and ecological networks to be included as a requirement of any new housing build to reduce impacts of fragmentation. More greenery in town centres can also help improve air quality and support pollinating insects. These nature-based approaches will have the added benefit of providing carbon sinks, and of improving health and well-being within our communities.

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[1] CIEEM (2019) *Biodiversity Net Gain in Scotland*. Available at: https://cieem.net/resource/biodiversity-net-gain-in-scotland-briefing/ (accessed: 23/03/2020)

[2] CIRIA, CIEEM, IEMA (2016) *Biodiversity Net Gain: Good practice principles for development*. Available at: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development/ (accessed: 23/03/2020)

[3] CIRIA, CIEEM, IEMA (2019) *Biodiversity Net Gain: Good practice principles for development, A Practical Guide.* Available at: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/ (accessed: 23/03/2020)

- Protection of existing urban trees and planting of further native species in the right places.
- Incorporation of Sustainable Drainage Systems (SuDs) in housing developments. SuDs have multiple benefits in terms of water management (decreasing flow rates to watercourses and improving water quality), improving biodiversity (providing habitat for many amphibians and invertebrates) and amenity value. Although SuDs are a legal requirement for all new developments in Scotland, the design of SuDs is not always considered during initial site design and best practices are not always followed.
- More permeable ground - greenspace rather than block paving and artificial grass in housing developments.
- To reduce impact of sealed surfaces of grey infrastructure, seek opportunities to accommodate infrastructure underground or take routes through underpasses to retain valuable greenspace for absorbing and draining water.
- Natural Flood Management features implemented using catchment opportunity mapping. Better catchment management, or restoration of natural river basins, will aid in improving flood risk. There is good evidence for natural flood management techniques being able to reduce peak flood events, such as the Slowing the Flow project in Pickering, North Yorkshire.
- A focus on nature-based solutions for managing issues such as air quality in urban centres and flooding in many of our towns and cities should be the norm. 'Hard' defences should be the last line of defence in making us more resilient to climate change and its associated effects on flooding and air quality.

In the rural environment:

- Protection of woodlands as important ecosystems for carbon sequestration and retention, and statutory protection of all ancient woodland.
- Afforestation of upland areas to provide wider catchment-scale flood mitigation, following the principle of the "right tree in the right place".
- Damaging practices such as repeated muir burning should be actively discouraged due to the multiple disbenefits they bring (e.g. carbon release, biodiversity loss, increased run-off and associated flood risk). In any case, burning should adhere to Scottish Natural Heritage's (SNH) Muirburn Code, which states that "burning should not take place on peatland, except as part of a habitat restoration plan approved by SNH", recognising the ecosystem services it provides. However, there should be greater consideration of the impacts of muirburn on wider ecosystem services across a range of habitats, including protection for peatlands and continued expansion of peatland restoration via Peatland Action.
- Incentives to farmers similar to the Agricultural Bill in England to encourage farmers more to be the key stewards of the environment through management of land to meet environmental objectives, e.g. stopping up of drains to increase capacity of land to hold water and prevent flooding, grants to plant and maintain woodlands and incentives to accommodate beavers.
- Scotland is likely to face warmer, wetter winters with intense rainfall events therefore protection, maintenance and creation of habitats upstream in catchments will become essential to store water and reduce and slow flow downstream, reducing flooding to urban areas.
- Restoring coastal habitats, such as saltmarshes, to reduce the impact of storm surges and will help with the ability of Scotland's seas to capture carbon.

Net Zero

Achieving this target will require fundamental changes in how communities are planned, built and operated in Scotland. This is covered in more detail in Question 5 below, however, facilitating low

carbon transport and lifestyles is essential. Communities where people live close to places of work, food production, education and leisure, decentralisation of essential utilities, and a focus on nature-based solutions are all fundamental to (a) reducing existing emissions and (b) restoring the biodiversity that is fundamental to properly functioning ecosystems and hence aiding in stabilising climate change.

Substantial gains have been made in the process of de-carbonising our energy system. This should remain a focal point in our goal of achieving net zero. However, increased attention should be facilitated through NPF4 to de-carbonising our heating systems. New and existing technologies for heating our homes and businesses should be actively promoted. District renewable heating schemes have great potential.

There needs to be further investment in public transport and active travel options. A large-scale shift away from private car transport in our towns and cities is required, diverting space away from the car and instead to the bicycle, bus, tram etc. New housing developments which are being built on former 'green belt' as our towns and cities grow, should be required to include creation of safe, segregated active travel routes into city / town centres.

Opportunities that this could provide to support jobs and the economy

Localising production of goods and services, such as local food production for communities and localised energy production and distribution, would create jobs within communities, reducing the need to travel out of local areas to access goods, services and jobs. The latter is especially important for our more deprived urban communities as well as remote and island communities where access to affordable public transport to get to job opportunities or even supermarkets is often a key barrier to improving the quality of people's lives in these communities. The current COVID-19 outbreak has seen local food shops responding more rapidly to the changed circumstances than supermarket chains due to their shorter supply lines.

Scotland has been at the forefront of renewable energy developments and there is great potential to build on this especially with the transferable skills and expertise that exist in Scotland through the oil and gas sectors. The planning system should promote investment and development of a low carbon, circular economy. Investment in new technology should be supported to further make energy usage more efficient, thereby reducing our overall needs and emissions. Protection, management and creation of habitat will create jobs in the green sector.

What climate change-friendly places might look like in the future.

Our places will be greener, more connected, with more localised services and people enabled and empowered to use low carbon forms of transport such as walking or cycling; and inter-community travel facilitated by low carbon public transport. Use of cars in residential areas and town centres would be a relative rarity and focussed on people with disabilities and on essential services. Flood risk will be reduced through nature-based solutions and urban air quality will be improved through better urban green spaces. These urban green spaces will be connected via local, regional and ultimately national networks, providing carbon sequestration and, with the right planting in the right places, resources for pollinating insects to pollinate locally grown foods within each community.

How can planning best support our quality of life, health and well-being in the future?

Think about:

- *Where we might want to live in 2050.*
- *How many and what types of homes we will need.*
- *How we can encourage more people to live in rural Scotland.*

- *Whether we could target development to address longstanding differences in health and quality of life.*
- *Whether and where we might need new settlements, and regeneration of existing communities.*

The focus for homes, new/existing communities and inclusive (etc.) places should be on localised:

- Services
- Food production
- Improved inter-community public transport connections
- Providing access to greenspace for all

This change of focus from the current situation will make communities more self-contained and resilient, less reliant on travel out of local areas for basic goods and services, and less reliant on large, globalised or centralised networks for energy, food or water supply. All of these factors, whether they result in local power stations supplying single neighbourhoods or community vegetable gardens and orchards providing access to greenspace and healthy food in deprived urban areas[4], will be aimed at reducing the health inequalities that pervade these areas. For rural communities, being more self-contained will reduce the carbon footprint and the costs of living in such areas and, coupled with good public transport, will reduce the isolation of such communities.

There should be a general presumption against construction of new housing on greenfield sites, and NPF4 should do more to encourage the re-development of brownfield land following individual site assessments. Areas of land suitable for vegetable and fruit production in and near cities should receive greater protection. Access to nature and fostering nature connectedness has been shown to have significant impacts on mental and physical health[5].

New homes should be energy efficient and large-scale new housing developments should be required to include low carbon heating systems. In addition, opportunities for micro electricity generation should be investigated. Any development should be built with improved public transport links with de-carbonised public transport in mind which would need to be incentivised by low-cost travel.

Although the desire to increase the rural population may bring benefits, this has to be carefully considered to ensure that it does not disproportionately impact upon our countryside. For example, increased populations bring a multitude of pressures upon sensitive habitats and species, and planning needs to consider these potential effects. Many of our rural towns are in need of regeneration, and the priority for rural re-population should be to make these places better for people and nature first, rather than constructing new settlements. This can be done through regeneration of vacant or derelict land (VDL) and buildings, which should be incentivised over greenfield development in NPF4. The Scottish Land Commission and the wider Vacant and Derelict Land Taskforce have already done a lot of work identifying VDL sites and potential opportunities for bringing this land back into productive use. We recognise that there are many rural and island

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[4] *The WHO's Breathe Life 2030 project notes that "Policies that promote diets rich in plant-based foods, particularly among middle- and high-income populations with plentiful food choices, can lower healthcare costs while reducing methane emissions from livestock production."*

[5] Bosch M. and Sang Å.O. (2017) Urban natural environments as nature-based solutions for improved public health – A systematic review of reviews, *Environmental* Research, 158, pp. 373-384.

communities which are suffering from depopulation. Well managed crofting agriculture can have many benefits for wildlife, but is vulnerable to a lack of young people coming into the sector.

Key to increasing the rural population, particularly for young and working age people, will be ready access to high speed internet and mobile phone coverage. The ability of people to work from home can deliver carbon saving benefits and contribute to people's general well-being by allowing flexibility in lifestyle.

For any new builds, Passive House principles should be embedded as standard with supply chain considered as well. A low carbon circular economy should be underlying everything.

To make places more inclusive, diverse, vibrant, resilient and empowering we should ensure equitable access to greenspace (both in terms of amount and quality), sustainable transport routes and blue-green infrastructure. Greenspaces should be connected and provide a green 'highway' to all areas of the town or city.

People should feel involved and empowered through the planning process. Local people should be aware of their local development plan with ample opportunities to input into their development and revision. Planning decisions should be at the heart of communities with Citizen Assembly engagement in planning decisions. Providing quality greenspace in planning could create a sense of pride in the local area. Sense of pride will encourage local residents to care for their area and hold Local Planning Authorities to account if not cared for. For example, several of the parks in the City of Edinburgh are well managed by local volunteers.

What does planning need to do to enable development and investment in our economy to benefit everyone?

Think about:

- *What our economy might look like in 2050.*
- *How planning can anticipate and respond to the economic challenges of Brexit.*
- *What the key sectors might be and what infrastructure they may need to support them.*
- *What type, scale and distribution of business and industrial land and premises will be needed.*
- *Where significant investment sites might be.*
- *How economic opportunities could improve, or be accessible from, places where deprivation is concentrated.*

The planning system should promote investment and development of a low carbon, circular economy. Scotland should seize the opportunity, as it did with renewable energy, to be a world leader in the development and implementation of new technologies which help to solve the challenges we face. There are substantial economic benefits to be achieved from doing so, as other countries around the world seek to deal with the same problems.

Planning should seek to stimulate economic growth only where it is sustainable and does not further drain our natural capital.

The economy will include a well-established green sector involved in habitat management and creation working with all other development sectors. Biodiversity Net Gain and wider Environmental Net Gain will be widely implemented. Planning will be based on integrated modelling exercises including all required areas of expertise and will no longer comprise upload of separate word documents of different experts.

Key sectors in this area will be farming, energy, transport (including aviation) and housing. There will need to be infrastructure to support farmers delivering multi-benefits so as well as food production they are delivering water retention, pollination, carbon storage, cooling, air quality etc.

Support will be provided for localised power generation and grids so that the general public are not dependent on large energy companies for supplying energy. Rather than automatically looking to upgrade capacity of the electricity grid to allow long range transmission with associated losses, a clean-energy revolution is needed, with investment directed at facilitating electrification of heating and transport via renewables, local generation of power, storage of electricity and moving energy intensive businesses closer to where the electricity is being generated. Scotland already meets a high proportion of its energy generation from renewable energy, yet this will need to increase further and energy generation from fossil fuels will need to further reduce. The supply chain for renewables will equally be net zero emissions.

Every building will have solar panels fitted as standard and or greenspace (green/brown roofs/walls). Every building will have the highest rated insulation A++ and other grade insulation will not get planning consent. Similarly builds with fitted appliances will only be consented if A++ energy efficiency.

How can planning improve, protect and strengthen the species character of our places?

Think about:

- *What special places will need protection in the future.*
- *What the future might be for our rural, coastal and island communities.*
- *How we could unlock the potential of vacant and derelict land.*
- *What our city and town centres might look like in the future.*
- *Whether we need to think about the concept of green belts.*
- *How we can get the most out of our productive land.*
- *How we can protect and restore peatland.*
- *How we can plan blue and green infrastructure.*
- *How we can strengthen the character and heritage of our many different places.*

NPF4 should include the adoption of biodiversity net gain, as outlined in our response to Question 1, and natural capital principles as a way of valuing and enhancing nature and the services it provides. New development should be required to achieve biodiversity net gain and should consider natural capital at all stages of the planning process, including soils.

NPF4 should encourage the adoption of nature-based solutions and sustainable land management practices which deliver multiple benefits for people, the environment and the economy. These communities should be recognised for their wealth of natural resources, especially solar, tidal, wave, wind, quality freshwater and peatland resources. Local people will have jobs in renewable energy maintaining transmission and distribution of energy. They will be self-sufficient in energy..

NPF4 should adopt strategic land use strategies as way of reducing land use conflicts and increasing recognition of the role of communities of interest and more balanced approaches to land use decisions. The policy should also provide support for developing whole landscape-scale approaches to nature protection and management, recognising the problems of edge effects, the need for wildlife corridors and to overcome fragmentation of habitats.

Brownfield sites should be prioritised in development, subject to Ecological Impact Assessment on a site by site basis. Vacant and derelict land (VDL) sites could all be assessed for their current and future biodiversity potential using biodiversity net gain metrics, to aid in identifying VDL sites that could be re-purposed for use as part of blue and green infrastructure networks. For example, VDL can be converted to allotments which are in high demand in most areas or, in some areas, may be incorporated as part of a green network and allowed to regenerate naturally through ecological succession resulting in a great resource for invertebrates to thrive.

What special places will need protection in the future?

The existing local, regional and national networks of designated areas should be defined by their ecosystem functions, with national areas receiving, as a minimum, the same level of protection as they have had as part of the EU's Natura 2000 network.

Protected areas should be defined not merely for the habitats and species that they support but for their ecosystem services – not in terms of their potential monetary value but for their vital functions – especially for peatlands as an essential carbon sink.

As well as statutory and non-statutory designated sites for nature conservation, connecting habitat should be equally protected as the value of ecological networks will be increasingly important with changes in climate due minimise effects of associated shifts in species ranges.

Mature trees will have similar protection to veteran trees recognising the important ecosystem services they provide. In England, development is only considered on Ancient Semi-Natural Woodland sites (ASNW) if it is of 'wholly exceptional' purpose. Scotland needs to meet a similar, if not much greater standard. Considering the high biodiversity and fragility of ASNW sites and remnant soil features of Planted Ancient Semi-Natural Woodland sites (PAWS etc), these habitats should be exempted from development. This also has benefits for carbon sequestration and wider ecosystem services e.g. ancient woodland fungi and micro-organisms with antibiotic or other properties.

Peatland

Peatland restoration should continue to be funded and both private and public landowners encouraged to implement restoration measures. There should be stricter guidelines on what operations can take place on peatland e.g. severe limitations on peat extraction and approved developments must be restorative in nature e.g. paludiculture enterprises. Farmers that have peatland on their land should receive payments for maintaining peatlands; keeping carbon locked away.

Green belts

Green belts should as a default encompass buffer zones >50m between development/human activities and wildlife habitat e.g. woodlands. There is evidence of edge effects extending for at least 30m into woodlands immediately adjacent to housing developments. A buffer zone should take into consideration the maximum anticipated canopy/root plate size of UK native trees and add an additional distance e.g. 10-20m to avoid current problems with developers only considering trunk dimensions and therefore damaging roots or justifying drastic trimming back of mature trees. For sensitive habitats such as ancient woodland, this should be extended to at least 70m to avoid chemical or physical impacts.

Current fines for developers damaging trees are often factored into development budgets which therefore is not a sufficient deterrent. Fines should be proportional to the scale of the development or made much larger to act as an effective deterrent.

City and town centres of the future

Many of the nature-based solutions related to climate resilience outlined in our response to Question 1 should be mainstreamed in our future city and town centres e.g. green spaces and ecological networks, inclusion of rain gardens, permeable driveways and renewable energy.

Local green communities will have biodiverse urban green spaces that can perform a variety of functions, for example: local food production, pollination control, air quality improvements and health benefits. Blue and green infrastructure needs to be planned not merely to look at carbon calculations but must include biodiversity net gain – implemented using sound ecological knowledge to ensure that such infrastructure delivers true benefits for biodiversity and hence for the vital ecosystem services that biodiversity supports.

New developments over a certain size or energy expenditure (particularly cooling/heating) should incorporate green roofing/walls/infrastructure of some kind which should also meet standards for quality habitat for pollinators. Energy savings have already been demonstrated for several large-scale projects with green roofing.

All buildings will have facilities to recycle paper, plastic, cans, food, glass, textiles, batteries and electronics and more, without having to make special trips to a large recycling centre which might be miles away from home. These will be linked with regional recycling centres. Where materials are not recyclable, they should be biodegradable. These could then be sent to biodegrading facilities which exist in Scotland, retaining jobs and money in the economy. As much as possible materials used should be re-useable, recyclable or biodegradable.

Efforts to retain cultural assets should be increased. Old buildings can be re-purposed or re-built through re-use of the building materials where safe.

What Infrastructure do we need to plan and build to realise our long-term aspirations?

Think about:

- *What infrastructure we will need in the future.*
- *How we can make better use of existing infrastructure capacity, including through innovation.*
- *Where transport connections will be needed to support future development.*
- *Where our international gateways, hubs and links will be in a post-Brexit world.*
- *How we can sustain our lifelines.*
- *How digital connectivity could change the way we live and work.*
- *Where our natural resources for energy are.*
- *What emerging and future technologies we will need to plan for.*

Linking into previous responses, our infrastructure of the future should:

- Make access to reliable and affordable public transport accessible and time efficient
- Allow for active travel into and around our towns and cities
- Include low carbon heating systems for our homes and businesses
- Revolve around a low carbon, circular economy, with an aim for zero waste.

A fundamental shift in current thinking around strategic transport is needed. The Strategic Transport Projects Review 2 is very focused on road infrastructure. This will ultimately do little to address the challenges of climate change, reduce rural depopulation, or improve access to goods

and services in deprived urban areas. Development and green infrastructure should be synonymous.

There must be a fundamental shift towards:

- Local walking and cycle networks within communities, in high quality greenspaces to improve air quality and health, building on existing schemes
- Provision of safe, physically separated cycle routes in cities to all areas and in-between to encourage people to cycle for work and pleasure
- Provision of on-street bike storage in cities and towns in all areas to provide people (especially in flats or tenements) with secure places to store bikes
- Routes built for pedestrians first, then bicycles, then cars to reduce impact of poor air quality
- Strong intercommunity public transport networks, using electric trains and buses to link smaller rural communities with the larger cities as needed
- Localised food production and greater use of rail freight for transport of goods where local production is not possible for foods or other goods.
- Localised energy production for every community, creating local jobs for the construction, operation and maintenance of such infrastructure and reducing the pressure on areas such as our uplands, currently key areas for wind energy production which also contain most of our peatlands.
- Digital connections for all communities to improve connectivity and reduce the need for travel on roads or by air. This could include digital access to key services such as education and some aspects of healthcare, thereby reducing the some of the issues with isolated rural communities and deprived urban communities and reducing the need for large scale transportation infrastructure that can damage our natural spaces. One of the consequences of the Coronavirus outbreak may be that organisations discover the advantages of people working at home and of effective videoconferencing.

Our international gateways post-Brexit should avoid locations and options which are sensitive to the climate and ecological crises. Ferry routes for freight and people to the rest of Europe should be promoted and/or reinstated. Rail links to our international ferry ports should be a priority, getting lorries off the road, making the environment cleaner and safer. Consideration could be given to how new rail lines could be constructed to avoid the fragmentation of the landscape. Better public transport services with integrated transport options/good connections and good reliability will make public transport more viable/attractive, coupled with incentivising through lower fares.

Planning laws should allow for more innovative technologies to be incorporated into developments.

In terms of infrastructure and emerging technologies we need:

- A move to a de-carbonised transport network – potentially needing an upgrade of the national grid capacity
- Integrated habitat networks and green infrastructure, for example, by continuing and expanding the work of the Central Scotland Green Network
- Improvements in battery storage capacities
- Green hydrogen capability
- Significant transformation in heating systems
- Potential electrification of flight

- Installation of solar panels as part of any new housing and more effective storage of energy via batteries
- Biofuels as a medium-term measure

All products should be designed for the full lifecycle of the product, where the designer is responsible for the end-use of the product. For planning, the expected life of the development should be known as well as what will be done with the development at the end of its life.