National Planning Framework 4

Analysis of responses to the Call for Ideas Executive Summary

Scottish Government
Riaghaltas na h-Alba
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Introduction

Context

The National Planning Framework (NPF) is a long-term plan for Scotland that sets out where development and infrastructure is needed to support sustainable and inclusive growth. The current framework - NPF3 - was published in 2014 and the Scottish Government has now begun a process of review and preparation of a new framework – NPF4. The Scottish Government's Transforming Planning website[1] provides a wide range of resources to support the NPF4 development process, including the early engagement stage.

NPF4 will also incorporate Scottish Planning Policy so that, for the first time, spatial and thematic planning policies will be addressed in one place. It will have the status of the development plan for planning purposes. This is a change to the current position and will mean that its policies will have a stronger role in informing day-to-day decision making.

A Call for Ideas on NPF4 was launched on 9 January 2020 and closed on 30 April 2020.

Profile of respondents and responses

In total, 328 respondents made a submission to the Call for Ideas. The majority of respondents were organisations (259 respondents) with Energy-related respondents (49 respondents), Local authorities (33 respondents) and Development or property management related respondents (30 respondents) being the largest groups. There were also submissions from 69 individual members of the public.

The submissions received were very diverse, with variation based on focus, structure and length. They ranged from relatively brief statements primarily addressing one issue, through to very extensive submissions.

All responses to be published are available from the Scottish Government's website[2].

This summary

While any ideas could be submitted, the Scottish Government noted that they were particularly interested to hear thoughts on **five key issues** namely:

- What development will we need to address climate change?
- How can planning best support our quality of life, health and wellbeing in the future?

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[1] See https://www.transformingplanning.scot

[2] https://www.transformingplanning.scot/national-planning-framework/call-for-ideas/

- What does planning need to do to enable development and investment in our economy so that it benefits everyone?
- What policies are needed to improve, protect and strengthen the special character of our places?
- What infrastructure do we need to build to realise our long-term aspirations?

This summary gives an overview of the themes raised at these five key issues questions.

The full analysis report, which also includes an analysis across 32 planning policy themes, of comments on the Housing Technical Discussion Paper and provides an overview of National Development submissions, can be found on the Scottish Government's website.

What development will we need to address climate change?

Reaching the target of net zero emissions by 2045

The urgency of tackling climate change was a theme of many responses with a view that NPF4 offers a real opportunity to place the planning system at the heart of the climate change agenda, and that NPF4 will be crucial to ensuring that all decisions consider the net zero by 2045 target.

There was a call for NPF4 to be fully aligned with Scottish Government's Climate Change Plan and with the with the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019,, including by supporting the delivery of local climate change adaptation frameworks. It was also suggested that a more overarching and joined up approach, that better reflects current understanding than Scottish Planning Policy (SPP) now does, will give planning authorities a better basis to include achievable and realistic policies in their Local Development Plans (LDPs). Other comments referred to the importance of land use to tackling climate change, including through the alignment of NPF4 with the Land Use Strategy.

Respondents often highlighted particular areas of planning policy which they saw as key. These are summarised in turn below.

Sustainable energy: There was support for maximising the contribution of renewable electricity generation to meeting the net-zero target in a sustainable way and it was suggested that NPF4 should be clear that a significant increase in the generation of renewable energy will be required. There were calls for NPF4 to support the development of energy storage capacity and there were frequent references to the need to improve grid infrastructure and capacity. While the importance of onshore wind was often acknowledged, there were differing views on the extent to which it should be prioritised. There were calls for a presumption in favour of consent for renewable energy projects, consents in perpetuity, and reviews of the policy on Wild Land

Mapping and landscape capacity studies. There were calls for NPF4 to promote decentralisation of electricity generation including small scale local and off-grid production as well as promoting community energy and energy co-ops.

Sustainable and active travel: The importance of supporting the National Transport Strategy 2 was highlighted, along with the need for a major shift in emphasis from roads and cars to walking, cycling and public transport. There were calls to consider the location and design of new developments with a view to reducing dependency on cars, and to provide safe walking and cycling routes. This was sometimes associated with the need to prioritise or invest in active travel infrastructure and improvements to public transport. The role of multi-modal transport hubs and encouraging multi-method travel were highlighted and it was suggested there should be investment in transport interchanges. The importance of decarbonising transport was also noted and there were calls for a greatly increased charging network for electric vehicles.

Nature-led approaches and green infrastructure: The inter-relationship between the climate change emergency and the natural environment was highlighted and it was argued policies designed to contribute to meeting net-zero carbon targets must also take account of opportunities to enhance biodiversity and aid nature recovery. The important roles of peatland in storing carbon, maintaining biodiversity and flood mitigation were all highlighted. There were also many references to the benefits of green infrastructure including providing a carbon sink or otherwise contributing to climate change targets, contributing to flood management and enhancing biodiversity.

Circular economy: There was broad support for development of a circular economy and embedding of zero waste principles in NPF4, including a presumption in favour of enhancing, repurposing or maintaining existing infrastructure and the repair and re-use of existing buildings. This was sometimes connected with unlocking the potential of vacant and derelict land, protecting greenbelts or creating and preserving greenspaces. Respondents commented on requirements for appropriate infrastructure for a circular economy and sustainable waste management and the importance of waste prevention, re-use and recycling was also noted.

Design and energy efficiency of buildings: Many of the comments addressed the critical role of the built environment in the mitigation of, and adaptation to, climate change. General comments included that properties must be low carbon by design and that this could be taken forward through changes to Building Standards. It was suggested that reducing greenhouse gas emissions over a building's lifetime needs to be at the top of the hierarchy of factors in the planning permission decision making process. There were calls for all new homes to be certified to Passivhaus standard. The value of the re-use of existing buildings over new build was highlighted, along with the importance of retro-fitting efficiency measures for the existing building stock.

Carbon sequestration or capture: A range of issues were raised in relation to carbon capture, sequestration or offsetting. They included that one approach could be offering carbon sequestration opportunities, such as through woodland creation and management, peatland restoration and wetland creation and management. Another theme was in relation to Carbon Capture and Storage (CCS). It was suggested that there is no credible scenario for meeting net zero targets that does not include CCS and that Scotland is uniquely placed to take advantage of the opportunities CCS presents.

Opportunities to support jobs and the economy

There was a call for NPF4 to set out a framework to stimulate and encourage job creation, and the potential to create 'green' job opportunities was highlighted, including to replace jobs lost in the fossil fuel-based industries. The potential of low carbon sector businesses was highlighted, including in relation world-class training and research facilities.

In addition to the wider green economy, there were specific references to NPF4 offering the opportunity to create a positive development context for renewable energy, which can help in promoting investment in renewable technologies and development on the ground. It was suggested that affordable renewable power could transform Scotland's economy in the medium and long term, and that as Scotland has been at the forefront of renewable energy developments there is great potential to build on this, especially with the transferable skills and expertise that exist through the oil and gas sectors.

Other issues highlighted included localising production of goods and services, such as local food production for communities and localised energy production and distribution. It was suggested this would create jobs within communities, reducing the need to travel to access goods, services and jobs. The potential for job creation to support improvements to energy efficiency and other retrofitting of the existing building stock was also highlighted.

Specific recommendations included that NPF4 should identify clusters and activity with the greatest potential to address climate change and that this could relate to a business sector or infrastructure capacity. There was a view that, as NPF4 will provide a national perspective, it needs to show how different clusters of business sectors, population, skills and infrastructure interlink and connect Scotland to provide solutions. There was also reference to creating potential low carbon, sustainability focused investment hot spots and that if these strategically critical sites are identified in NPF4, regional economic partnerships can then collaborate in relation to sites in their area.

More resilient places

The importance of creating sustainable, resilient places was a theme for many respondents, including that the presumption in favour of sustainable development should remain a component of national planning policy. It was suggested that, if Scotland is to meet its emissions reduction targets, it needs to deploy a more purposeful land use planning approach to encourage more development that supports inclusive growth, wellbeing and the sustainability agenda.

In terms of protection against flooding, there was agreement that land required for flood management now and in the future should be safeguarded and that development on flood plains should be discouraged or prevented. The benefits of natural flood management were often referenced, including the need to manage rainwater close to where it falls. It was suggested flood management needs to be considered in the management of all land with both farming and forestry/tree planting playing roles in flood mitigation.

A requirement for improved integration between the flood risk management and coastal protection planning activities of Scottish Environment Protection Agency and local authorities and local development planning was suggested, and some respondents argued that there should be consideration for policies on managed coastal retreat from at-risk areas.

With particular reference to developing in a sustainable way, it was suggested that a whole systems approach that considers the environmental, social and economic impact of any planning decision should be presumed. It was suggested that delivering sustainable development is a key function of the planning system but that support and guidance is required.

Climate change friendly places in the future

In terms of what climate change places might look like, ideas often centred around having addressed many of the challenges identified in order to reach the target of net zero emissions by 2045.

The focus tended to be on our places being well connected through sustainable travel options, including that integrated, low carbon public transport options that would mean the use of cars in residential areas and town centres would be a relative rarity. Active travel would be the norm and would have been supported by investment in safe and well-placed walking or cycling routes that connect with public transport options. More localised services would allow people to access much of what they need closer to home.

Flood risk would have been reduced through nature-based solutions and urban air quality would have been improved through the creation of more urban green spaces. These urban green spaces would be connected via local,

regional and ultimately national networks, providing carbon sequestration and, with the right planting in the right places, resources for locally grown foods within each community.

Some comments focused on the urban or suburban form, and the density of development. They included that benefits flow from increased urban densities, including playing a critical role in determining carbon emissions and the carbon intensity of a given population. Other comments included that, while increased urban density has a clear link with reducing carbon emissions, a policy framework is required that achieves this without compromising on quality of place. There was also a call for NPF4 to include a specific policy setting out the need for the highest standards of sustainable design and construction.

It was also suggested that NPF4 should support inclusivity and community wealth building, including by ensuring that communities are all benefiting from the local economy through support for a diverse range of local businesses and approaches to create a resilient community.

Supporting our quality of life, health and wellbeing in the future

Where we might want to live in 2050

Many comments focused on the type of communities in which people might want to live in the future, with successful placemaking often seen as central to the purpose of planning and integral to achieving many of Scotland's National Performance Framework Outcomes. There was a consensus that placemaking should remain central to NPF4, and that the new planning framework should continue to identify the qualities of successful places in Scotland.

Placemaking was seen as connecting many planning policy themes, and as key to both delivering new development as well as regenerating existing communities. Engaging with local communities was seen as key, with NPF4's role being to set the strategic and policy content for that engagement. There were calls for a community-led approach to be taken, including by placing a greater emphasis on community priorities established by effective and inclusive consultation.

It was suggested that whether it be social or private, new housing should be built in places where communities can thrive, residents have access to services and are well connected, and with a view to creating healthy sustainable lifetime communities. In 2050 the aspiration should be that Scotland is made up of communities with a good balance of affordable and high-quality housing options and that meet the needs of people at all stages of life. Most essential services including education, health, community facilities and food will be accessed at a local level. Other types of facilities or services,

such as local hubs with office space shops, safe play spaces and sports facilities will also be important, and it was suggested that the COVID-19 crisis has highlighted importance of a range of local services being available.

It was argued that NPF4 should require developers and planning authorities to consider the impact of new development on existing community facilities, and any requirement for new facilities that the development may generate. One suggestion was that, wherever possible, new homes should be built within the existing boundaries of towns and villages to allow easy access to existing community facilities. There was also a view that development obligations and conditions should be used to provide facilities if capacity would otherwise be exceeded.

By 2050, it was thought that the design and layout of communities will encourage healthy lifestyles and promote wellbeing. An accessible and inclusive environment will help sustain better health, prevent isolation and promote participation, with an opportunity for planning to promote building and environmental design standards which prioritise accessibility, inclusion and integration for all residents. It was suggested that planning can affect quality of life and wellbeing in many ways, including as part of Scotland's whole system approach to health improvement.

Connections were made to the health and wellbeing impact of other planning themes, including green infrastructure and having access to greenspaces and nature, sustainable transport and promoting and enabling active travel. It was suggested that the planning system has been progressive in its acknowledgement of place and its influence on the health outcomes of society in recent years and that NPF4 provides an opportunity to define and further support the attainment of desirable social and health outcomes within planning policy and applications, and to align the development process with wider aspirations for better wellbeing outcomes.

Finally, it was thought where we live in 2050 will very much be influenced by how we live and work, and that while there will always be a pull towards the cities and urban areas, advances in technology will create opportunities to live in a wider range of locations and yet remain connected.

How many and what types of homes we will need

It was suggested that NPF4 presents an opportunity to assist in shaping an evolving housing system in line with the ambitious vision and principles of 'Housing to 2040'. It was also suggested that Local Place Plans, LDPs and Regional Spatial Strategies (RSSs) all have a role to play and that NPF4 should allow scope for regional and local priorities to be considered. NPF4 should also ensure that the planning system is empowered to enable forms of development which enhance existing places, and to resist poor quality housing that is not sustainable.

There was a call for homes for all to be a central objective for NPF4, with the importance of those homes being affordable also highlighted.

In terms of whether there should continue to be a focus on delivering new homes, some respondents considered that the Scottish Government should (continue to) set housing targets. There were some references to the national targets for affordable new homes, including how local or regional plans are seeking to support the Scottish Government in meeting those targets. More generally, there was a suggestion that new homes should be classified as essential infrastructure and that there should be a pan-Scotland all-tenure housing delivery target of 25,000+ homes a year.

The shortage of available affordable housing, and the subsequent social and economic repercussions, were seen as critical to the health and wellbeing of the individuals and families affected. Other comments included that investing in affordable housing generates significant benefits for the economy and that ensuring that investment can be realised in rural areas, including to support local employment and skills development, is worthy of support from planning policy.

Some respondents identified reasons or factors which they considered to be limiting the number of new affordable homes Scotland can provide. These included the development of new build housing being monopolised by volume builders and that ambitious targets for affordable housing cannot be met without the delivery of private housing and the associated infrastructure it delivers.

Respondents commented on the particular challenges associated with delivering affordable housing in rural, remote and/or island communities. In terms of the impact of a lack of appropriately located, fit-for-purpose housing, the challenges faced by island communities, including in relation to population decline and the sustainability of local services, were highlighted. It was suggested that NPF4 needs to enable distinct and responsive approaches to affordable housing delivery for rural and islands areas.

In terms of the focus of policy going forward, suggestions included that it should take account of quality and design and the importance of placemaking, of creating high-quality and well-functioning places and mixed communities, and of how new housing can accommodate a range of needs as part of better integrated communities. It was seen as important not to focus simply on numbers but also on quality including the design of new homes and that they are accessible and built to lifetime homes standards.

In addition to comments relating to new supply, some respondents addressed issues associated with the existing housing stock. These included that refurbishment, adaptation and improvement of existing stock and associated community regeneration have a role to play in a refocusing on quality of

housing. The importance of continuing to tackle empty homes was also highlighted.

Encouraging more people to live in rural Scotland

There was support for using the planning system to stem depopulation in sparsely populated areas. Among requirements identified as necessary for rural populations to be maintained or increased were sufficient housing, employment and educational opportunities, with an associated requirement for good digital connectivity. The need for a balanced population profile, with economically active people encouraged to live in rural areas, was highlighted.

It was seen as important to continue to differentiate between different types of rural areas, and to recognise that rural areas close to towns and cities may experience very different pressures, with concerns of an increase in *ad hoc* residential development, or creating commuter housing in attractive areas of countryside.

The need for a strong emphasis on how to bring multiple benefits to depopulated areas was highlighted, as was a rural infrastructure first approach, with longer term strategic planning to address issues such as transportation, health and education. Stronger links between planning, housing, infrastructure and economic policies were argued to be necessary if ambitions for rural areas are to be successful.

The particular challenges and potential around supporting business and employment in rural and island locations were highlighted. It was reported that the leading recommendation from the National Council of Rural Advisers' *New blueprint for Scotland's rural economy* (2018)[3] was that a vibrant, sustainable and inclusive rural economy can only be achieved by recognising its strategic importance and effectively mainstreaming it within all policy and decision-making processes. It was suggested that NPF4 needs to recognise the context and challenges are different in rural and island areas.

Enabling development and investment in our economy

What our economy might look like in 2050

There was broad support for an approach that promotes business and industrial development through sustainable and inclusive economic growth while safeguarding and enhancing the natural and built environments. It was argued that the presumption in favour of sustainable development should remain a component of national planning policy.

The connection was often made between inclusive economic growth and reducing inequality and tackling deprivation and it was noted that sustainable

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[3] Available at: https://www.gov.scot/publications/new-blueprint-scotlands-rural-economy-recommendations-scottish-ministers/

and inclusive prosperity is a central objective of the NPF and one to which all other policies should work. With particular reference to developing in a sustainable way, it was suggested that a whole-systems approach that considers the environmental, social and economic impact of any planning decision should be presumed.

It was thought that the economy in 2050 will look very different as it moves to decarbonise and that NPF4 should set the framework for sustainable investment in Scotland's national, regional and local economies. It was suggested that, for inclusive growth across the country to be achieved, it will be important to prioritise investment in areas where growth lags behind and also to ensure a regional approach is taken to enable economic growth. RSSs were expected to help with this.

One current spatial disparity highlighted was that between east and west. It was reported that economic activity, investment patterns and associated demand for house building, contrasts significantly across Scotland, particularly in terms of an east-west divide across central Scotland. It was suggested that NPF4 should be informed by a revised national economic strategy that considers the disparity of investment and growth between the east and west coast areas of Scotland. Similarly, there was a call for the prioritising of rural and western communities to reduce population shift to the east of the country.

The importance of connecting people to economic opportunities was highlighted, with specific suggestions including directing provision, including of large public sector developments and possibly National Developments, towards areas most in need of an economic boost. Promoting growth corridors as a means of linking hubs of economic activity and generating stronger outputs and improved outcomes for areas experiencing economic challenges was also proposed.

To enable planning authorities, and by extension LDPs, to allocate land which will meet the needs of various economic sectors, it was suggested that NPF4 should set out a process through which business and industrial land audits can be informed by up-to-date market intelligence and robust demand forecasting. Introducing a policy presumption against the loss of economic land to alternative land uses was also proposed. However, it was also suggested that while relevant policies must be prepared to protect existing business parks and premises, there should be flexibility to allow alternative developments if the industry would no longer be in use and the building or business park is unsuitable for any other business use.

Responding to challenges and building resilience

The impact of both Brexit and the current COVID-19 pandemic on Scotland's economy were noted and it was suggested that greater importance be placed on the need to find sustainable investment models and low carbon, secure and rewarding jobs. Domestic supply chains will need to be stronger to ensure

future resilience. It was suggested that Brexit brings specific risks to island authorities, including because they benefit currently from high levels of support from a wide range of EU funding initiatives and a high proportion of the island workforce being employed in Brexit-sensitive industries.

Respondents commented on changing working patterns and their implication for the planning system, including meeting the key challenge of ensuring that premises and infrastructure meet changing business needs.

The internet and e-commerce are likely to continue to be a key driver of economic activity, and it was suggested that the trend toward home-working, which was widely seen as likely to be accelerated by the COVID-19 crisis, will lead to changes in requirements for both commercial and domestic properties. It will be important to accommodate the need or preference for increased home or agile working as part of future development and investment. This may require a reconsideration of the size of houses and layout of residential developments as people seek additional space to work from home and there being more of a focus on mixed use developments which offer the potential to live and work in close proximity and which offer flexibility of use depending on demand. The connection was frequently made between changes to working patterns and the need for robust and easily accessible digital infrastructure.

In terms of COVID-19, the potential to support a green recovery, including by maximising the role of nature-based solutions in a new economy and supporting lower carbon lifestyles with the long term benefits they bring, was highlighted. Specific suggestions included focusing on the low carbon, green economy. The potential of low carbon sector businesses was highlighted, including in relation to world-class training and research facilities. In addition to the wider green economy, there were specific references to NPF4 offering the opportunity to create a positive development context for renewables which can help in promoting investment in renewable technologies and development on the ground.

Other sectors identified as offering potential for growth included the agriculture and food industries, leisure and tourism, the blue economy, and the construction sector, including around tackling the skills shortage across the county to undertake energy efficiency measures and retrofitting.

Improving, protecting and strengthening the special character of our places

Special places that will need protection in the future

In terms of specific places thought to require protection, a suite of new national parks was proposed, including in Galloway and in the Borders. Consideration of a role for Coastal and Marine National Parks was also suggested. In addition, there were calls for greater protection for Scotland's

most important wildlife sites, for ancient woodlands and for Ramsar sites - wetland sites designated to be of international importance.

It was argued NPF4 should retain or strengthen protection for Wild Land, although concerns were also raised that existing protections act as an effective bar to renewable energy development and that any further protection risks having a detrimental effect upon economic development and social sustainability in some areas.

Locally designated sites were argued important to both the sense of place of local communities and in attracting tourism, with UNESCO Biospheres given as examples of the type of sites that might be appropriate for local designation. It was suggested many of the landscapes most valued by local people in rural Scotland are designated as Local Landscape Areas or Special Landscape Areas, and that these should be given strong protection from damaging development in NPF4.

The potentially negative impact of high volumes of tourism was also highlighted and it was argued that the infrastructure to support tourism should be prioritised.

The future for rural, coastal and island communities

A balanced population profile with economically active people living in the area was identified as important to sustain rural communities. Housing, employment opportunities and infrastructure for transport, schools, shops, healthcare services, community facilities and digital connectivity were all suggested to be necessary.

With respect to coastal areas, the importance of integration between terrestrial and marine planning systems was highlighted. There were calls for coastal protection including for infrastructure to take account of sea level rise /storm surges and for an emphasis on safeguarding and enhancing coastal ecosystems and the natural protection services they can provide. However, it was also suggested that managed coastal retreats should be considered as the most sustainable approach in some places.

A one-size-fits-all approach to coastal planning policy was argued to be inappropriate for smaller islands where most land would be coastal in character. The need to island-proof NPF4 was also noted.

Unlocking the potential of vacant and derelict land

There were calls for a stronger commitment to unlocking the potential of vacant and derelict land. Adopting a brownfield first policy and strengthening the level of presumption in favour of brownfield development were both proposed while the potential for stimulating large-scale community renewal in some of Scotland's most deprived neighbourhoods was noted. In addition to providing opportunities for development including house building, it was

argued Vacant and Derelict Land sites could provide scope for renewable energy generation or for green infrastructure including parks and allotments.

National Development status was suggested for co-ordination and delivery of priority brownfield sites and clear national targets for the reuse of derelict land were proposed.

What city and town centres might look like

It was suggested that town centres need to evolve away from their traditional retail role into hubs where a range of social, health, cultural and leisure activities are also concentrated. Increasing residential use was also thought likely and a requirement for improved public spaces for social interaction and activity was identified.

Green belts

Those who expressed a view on green belts often commented on their value or the need to protect them. There was sometimes a concern that the integrity of green belts is under threat, primarily from housing development and there were calls for green belt policy to be strengthened with use of brownfield sites prioritised.

An alternative perspective was that green belt policy needs to be reviewed and reconsidered or that, if a particular place or area needs to be protected for specific reasons, the use of a specific landscape designation would be more appropriate. It was argued that land that does not meet green belt objectives should be released for other uses, including specifically for the delivery of homes.

Views were mixed with respect to how prescriptive NPF4 should be in identifying the issues for planning authorities to consider when designating green belts and determining planning applications. Although existing guidance provided by SPP was suggested to be sufficient, it was also thought that more prescriptive advice could be provided in terms of assisting with the designation of green belts. Clarity about acceptable land uses within green belt areas was seen as particularly important.

Getting the most out of productive land

There were calls for a focus on food production, integration of food into the planning system and for greater protection for agricultural land. However, it was also argued that SPP goes too far in protection of agricultural land, especially with respect to land that is not of prime quality.

Protecting and restoring peatland

The important roles of peatland in sequestering and storing carbon, maintaining biodiversity and flood mitigation were all highlighted. However, there were differing perspectives on the priority that should be placed on

preserving peatlands, with some respondents arguing that the climate emergency means protecting peatland should not be allowed to hinder the necessary increase in generation of renewable energy. Others thought protecting peatlands should be a National Priority or that there should be a presumption against the disturbance or removal of peatlands. There were calls for an end to commercial extraction of peat from viable or restorable peatland or from all peatlands.

Respondents also pointed to the importance of restoration of peatlands, with suggestions this should increase and that, where possible, peat-forming function should be restored.

Planning blue and green infrastructure

There were calls for a 'blue/green infrastructure first' approach in NPF4, and for blue and green infrastructure to run throughout planning policy in other areas. It was argued that blue/green infrastructure should be placed at the heart of new development and should be integral to a design-led approach. An emphasis on considering green infrastructure alongside basic requirements such as roads and drainage was advocated. There was also support for setting national standards including to ensure green infrastructure provision is applied consistently.

Attention was drawn to the importance of retrofitting green infrastructure and of enabling improvement to existing green infrastructure. The COVID-19 crisis was cited as an illustration of the importance of accessible green spaces to health and wellbeing, and the degree to which such access is limited for those living in some urban areas.

The importance of linking green spaces together to form green networks was also highlighted. These were argued important in reducing habitat fragmentation as well as providing longer distance opportunities for walking or cycling and in linking surrounding neighbourhoods with town centres.

What we can do to protect and enhance biodiversity

It was argued that, in a similar way to climate change, the importance of protecting and enhancing biodiversity should be integrated throughout NPF4. There was also strong support for applying the concept of biodiversity net gain to all development, and principles to guide its delivery were suggested.

Respondents pointed to the importance of woodlands and there were calls for creation of more woodlands, particularly of native species, in both upland and urban areas. The need to protect existing woodland was also highlighted and it was argued there should be stronger protection for ancient woodlands.

The importance of large areas and networks of habitat were also highlighted and there were calls for creation of a Scottish Nature Network as a National Development.

How we can strengthen the character and heritage of our many different places

Several respondents commented on the value of the historic environment to Scotland's sense of national identity and wellbeing. Others highlighted the contribution of the historic environment to a number of wider policy priorities and suggested it could be mainstreamed within planning policy. There was support for current policy approaches and also a suggestion that NPF4 policy on managing the historic environment should be aligned with Historic Environment Scotland's Historic Environment Policy for Scotland.

Infrastructure needed to realise our long-term aspirations

Infrastructure that will be needed in the future

There were calls for an infrastructure first approach and for prioritising investment decisions based on their contribution to meeting net-zero targets, in line with the recommendations of the Scottish Infrastructure Commission. Specific infrastructure projects were often proposed as National Priorities or National Developments.

In general, it was argued that a more strategic or joined-up approach is required to ensure infrastructure delivery is less fragmented. The need for alignment of NPF4 with other strategies and for improved collaboration between local authorities, developers and infrastructure providers was suggested. Issues associated with funding were also raised, including concerns with respect to loss of EU funding post Brexit.

Energy generation, transmission and storage

There were calls for NPF4 to recognise that Scotland requires a significant increase in generation of renewable energy if carbon emissions targets are to be met, and it was argued that the planning system should do more to support this. Improvements to the electricity grid were also suggested to be needed to facilitate more dispersed generation and greater capacity. As well as infrastructure required for electricity from onshore wind, solar and hydro, the need for onshore infrastructure associated with electricity from offshore wind, tidal or wave energy was also highlighted.

Increased capacity for energy storage was also identified as a priority with battery storage and pumped hydro both argued to be important. Co-location of compatible technologies – typically wind, solar and battery storage was suggested.

The need for appropriate infrastructure associated with hydrogen production, storage and distribution was also noted.

Carbon capture and storage infrastructure

Infrastructure to support carbon capture and storage was proposed, including new or refurbished pipelines for transportation of captured CO_2.

Transport and active travel

Improved public transport was seen as key to reducing car use and associated carbon emissions and it was suggested services need to be both of better quality and better integrated. Transport hubs allowing transfer between different modes of transport, including active travel options, were advocated. With respect to active travel there were calls for a better network of good quality footpaths and cycle paths, not only linking housing developments with town centres but also connecting to longer distance paths and cycle routes. A requirement for secure cycle storage was highlighted.

Elements of blue/green infrastructure

It was argued that there should be a blue/green infrastructure first approach, with provision of elements of blue/green infrastructure considered an integral part of the design process for any new development, and with consideration of blue/green infrastructure running throughout planning policy in other areas.

The multifunctional nature of blue/green infrastructure was highlighted with the important contribution to surface water and flood management often referenced. The importance of green space as part of active travel networks was also noted, as was the extent to which green space is an integral element of place, placemaking and sustainable development.

Other infrastructure needed

Other elements of infrastructure suggested to require improvement included:

- Mains water supply and sewerage.
- Road and rail networks.
- Digital infrastructure.
- Waste management infrastructure, including facilities to support development of more of a circular economy.

Making better use of existing infrastructure capacity, including through innovation

Several respondents commented on the Infrastructure Commission's recommendation with respect to making use of existing assets. It was suggested that a whole-life based approach should be a key consideration in the creation of new infrastructure and that there should be a strong presumption for reuse and repurposing over new build.

Consenting repowered onshore wind developments was suggested as an example of making use of existing assets, as was use of the existing canal network as a component of 'smart' water management systems.

Where transport connections will be needed to support future development

There were calls for improvement to both road and rail networks, with works to several individual roads or rail lines suggested to merit National Development status. Increased rail freight capacity and further electrification of freight routes were also proposed, as were improved road and rail connections to both ports and airports.

It was also argued that rather than taking infrastructure to development sites, development should be focused around existing infrastructure – for example building housing near to existing transport hubs.

How digital connectivity could change the way we live and work

The COVID-19 emergency was suggested to have demonstrated that many people can work from home if adequate digital connectivity is provided and that, if sustained, this could reduce the amount of commuting necessary in the future. This could both reduce the carbon emissions associated with transport and also allow people a greater choice of where they want to live.

However, poor digital connectivity in many rural areas was highlighted and it was argued that investment in fixed and mobile digital infrastructure should be supported post COVID-19, recognising its importance as the fourth utility.

Emerging and future technologies we will need to plan for

The future importance of carbon capture and storage was suggested. Also highlighted were the requirements for energy storage, electric vehicle charging infrastructure and infrastructure for use of hydrogen as a fuel for transport.

There were calls for NPF4 and LDPs to take account of emerging technologies and be flexible in how these might be delivered in the future.

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