

Architecture & Design Scotland

Ailtearachd is Dealbhadh na h-Alba

Designing for a Changing Climate:

Planning Reform

October 2020



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Executive Summary

One of the most important drivers for change of our time is undoubtedly the climate crisis. It impacts almost every aspect of our lives – how we live, how we move about and how we provide public services. As the scale of the challenge becomes more apparent, the different levels of spatial planning in Scotland are being recognised as powerful tools to support effective climate action.

This report has been commissioned to explore climate change in relation to place planning and provide insight to inform planning reform. It directly follows on from the pilot project Architecture and Design Scotland undertook, which considered a whole place approach to designing for a changing climate. The aim of this commission was to identify and set out key messages on place planning for decarbonisation for future development planning in Scotland, focusing on national, regional and local levels. In doing so, it has reflected on the learning from the pilot project, identifying what the content and process of the new place-based development planning should involve, and highlighting key messages for National Planning Framework 4. The commission was undertaken during the Covid-19 pandemic. This brought to the forefront the need to support greater localism and carbon conscious places to tackle both climate and health emergencies.

This commission has identified the following key messages for consideration:

- Shifting Scotland’s reliance on carbon intensive developments, services, and modes of transport, will require a whole place approach on a national scale. NPF 4 must set the right direction to meet Scotland’s carbon reduction targets over the next 10-30 years and national projects should consider the carbon ‘lock in’ effect.
- Strong place leadership sets the bar for quality, promotes collaboration, innovation and supports long term public interest. There is a vital leadership role for the public sector to work with a range of sectors. The Place Principle should be built into the delivery approach set out in NPF 4 and national developments should be required to demonstrate this in action.
- Climate change and place should remain as overarching drivers within national, regional and local development planning. Plans need to support a combination of measures to reduce, repurpose and absorb carbon and adapt to the impacts of climate change.
- The national development proposals in NPF 4 should reflect the ethos of the eight Carbon Conscious Places principles. NPF 4 needs to articulate the jeopardy on places or proposals not taking a whole place approach to climate change or taking too short-term a view.
- Early and meaningful collaboration is critical in determining the spatial ambitions and priorities and identifying the right developments, in the right place, contributing to decarbonisation and climate adaptation efforts.

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1. Place Planning and Climate Change

Introduction

Climate change has risen to the forefront of our place agenda. We are already experiencing increased rainfall events, warmer seasons and rising sea levels. This presents both challenges and opportunities for shaping places at all scales and geographies. Furthermore, the current Covid-19 pandemic has reinforced the need for resilient places, walkable neighbourhoods, high quality and accessible open space and facilities. Unmitigated climate change will continue to have a detrimental impact on the health and prosperity of our communities and the cost of inaction will be significant to both the public and private sectors. As the purpose of spatial planning is to manage the development and use of land in the long-term public interest, it plays a pivotal role in how we effectively respond to the climate crisis, through a whole place approach.

Architecture and Design Scotland has recently undertaken an investigation in to designing for a changing climate, where a whole place approach to the net zero carbon challenge was advocated. Through rethinking how we move about, how we live, how we support town centres and how we become more self-sufficient, we were able to consider different ways to address all scopes of carbon emissions, as well as climate adaptation.

The Planning (Scotland) Act 2019 has provided National Planning Framework 4 with an enhanced status as part of the statutory development plan. This will guide spatial development, align infrastructure investment, outline national planning policies, identify national developments and set out regional spatial priorities. The preparation of National Planning Framework 4 and the emerging regional spatial strategies and local development plans present a timely opportunity to scale up the whole place approach to climate change and help Scotland's planning authorities take a lead role in working with others and combating climate change. By giving 'climate' and 'place' the prominence it needs within planning, we help protect the liveability of our towns, cities, villages, rural communities and islands for current and future generations.



© Place Standard Engagement by Here + Now

“The need to shift to a new way of doing things was already pressing before COVID-19...the pandemic has not diminished the challenges we face – from climate change, housing need, town centres to health and socio-economic inequalities.”

Kevin Stewart MSP, June 2020

Purpose of the Commission

The Scottish Government's Planning and Architecture Division has commissioned Architecture and Design Scotland to explore place planning and climate change and provide insight to inform planning reform.

This commission directly follows on from the recent pilot project Architecture and Design Scotland completed, with support from the Scottish Government's Climate Change Division, which worked with four Local Authorities to collaboratively place plan for decarbonisation.

The main aim of this commission is to:

- Identify and set out key messages on place planning for decarbonisation for future development planning in Scotland, building on the pilot project and with a focus on national, regional and local levels of plan and policy making.

The commission has four overarching objectives which include:

- To reflect on the lessons learned during the pilot project.
- To identify key messages for the content of new style, place-based development plans.
- To consider what the findings mean for process of preparing development plans in the future.
- To highlight high level policy messages for National Planning Framework 4 - including national developments - to take into account.

The commission has been undertaken within an 8-week period and has primarily involved desktop research. As highlighted, the findings draw from the learning from the pilot project but in addition take learning from recent Architecture and Design Scotland activities related to skills development, design advice and collaborative working during the COVID-19 pandemic.

This report, alongside a visual presentation, are the main outputs of this commission. The core audience for these outputs include national policy makers and members of the Working Group on development planning regulations. We hope the findings will be useful and help to position planning, place and climate change at the heart of Scotland's development and investment decisions at national, regional and local levels.

2. Reflections on Pilot Project

8 Principles of Carbon Conscious Places

Following a year of active learning we identified eight principles for designing a carbon conscious place. The principles support a holistic approach to designing and adapting places to reduce, repurpose and absorb carbon. They are interconnected and are not intended to be used as a definitive list or set of solutions, instead they offer important concepts for the public, private and third community sectors to consider when planning, developing or activating places.

1. A Place-Led Approach

Understanding, appreciating, and working with existing assets, the surrounding landscape and the place identity. Using the right type of intervention, at the right stage, scale, and location

3. A Network of Small Distance Places

Connecting complete neighbourhoods to provide a network of places that support greater self-sufficiency and low carbon living. Enabling people to live, work and play without generating unnecessary carbon emissions.

5. A Place that Reuses, Repurposes and Considers Whole Life Costs

Retrofitting existing structures and utilising brownfield sites first, giving consideration to embodied carbon in place. Adding planting to existing hard infrastructure to support climate adaptation and carbon absorption. View structures as 'material banks' with components which are demountable, rebuildable, reusable and resaleable. Consider the cost of the entire lifecycle of a structure rather than only its initial capital costs.

7. A Place that Supports Sharing

Supporting the sharing of assets and services to enable lower carbon living and connect people to their neighbourhoods. From the micro to the macro this can include sharing tools, bikes, electric vehicles to accommodation and education facilities.

2. A Place of Small Distance

Creating complete and self-sufficient neighbourhoods with everyday/night services and facilities within a short walking or cycling distance (e.g. 20 minute place concept).

4. A Place Designed for and with Local People

Placing people's needs at the centre of decision-making, service provision and investment in our places and ensuring they are actively involved in key stages of the design process.

6. A Place with Whole and Circular Systems

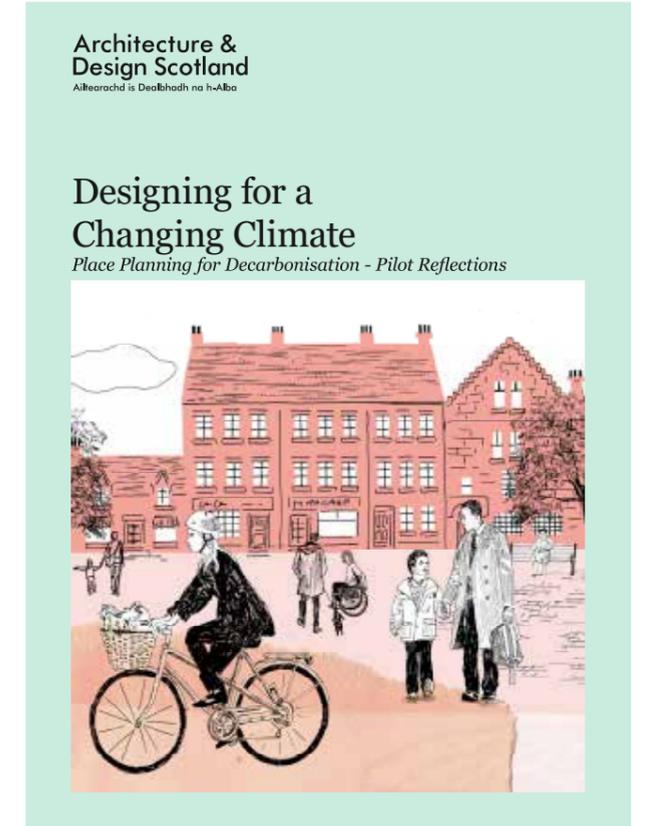
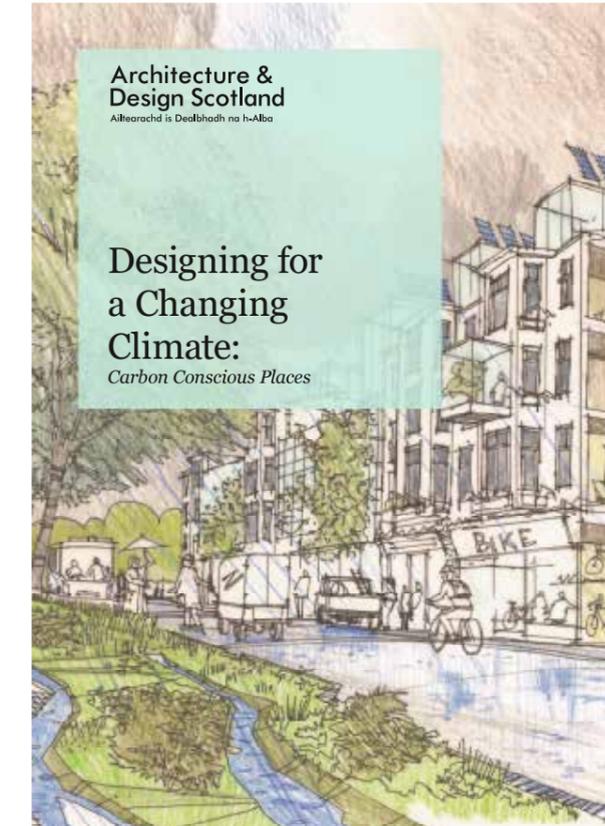
Enhancing, repairing and joining up the different systems which support a healthy, carbon conscious place. This includes local food, heat, energy, water, green, habitat, transport, waste, housing and social systems. Using the landscape as a productive resource. Ensuring the place planning and delivery process understands and supports a whole and circular systems approach.

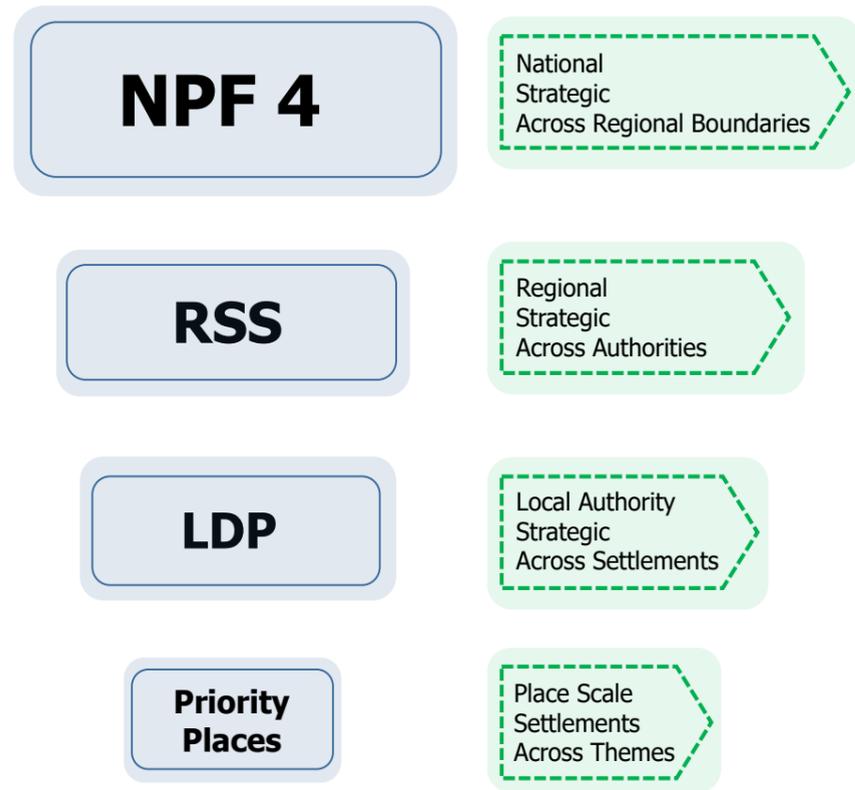
8. A Place Designed in Time

Ensuring the place planning and delivery process considers the dimension of time. This includes creating long term visions as well as using short-term approaches to test out interventions.

Climate change does not adhere to administrative boundaries, likewise administrative boundaries do not always adhere to natural boundaries. If we want to consider how we become more climate resilient and carbon conscious, we need to plan holistically. Integrated and strategic planning is the vehicle to join and scale things up and in turn create additional benefits.

We have taken the opportunity to reflect on our recent Place Planning for Decarbonisation reports and relevant precedents. To illustrate how the principles might translate to the development planning context, the following examples have been offered. The purpose of this section is to provide perspective to the principles and as several of the examples used could apply to a range of levels (from National to Priority Place), they should be read with this awareness.





1. A Place-Led Approach

National Scotland's natural resources are considerable and the wise use of non and renewable resources is fundamental to sustainable development and a greener Scotland. Mapping the existing country wide resources and the geographical opportunities to enhance our natural assets could inform a nation-wide planning strategy to enable Scotland's green network to significantly contribute to the balancing of our national carbon emissions.

Regional There is an opportunity to establish baseline data on existing and established assets across regions and current administrative boundaries through the indicative Regional Spatial Strategies (iRSS). Location of assets on a regional scale will allow for challenges and opportunities to be identified and for connections between them made. Partnership across regions could allow large emitter areas, such as significant industrial areas, to be balanced by regional natural assets.

LDP Identification of existing local assets and deficiencies across a local scale with an understanding of a place identity, will better ascertain how and if settlements have the capacity to work together as a collective, to support each other towards a just and low carbon society. Identification of those in greater need of support could determine locations of prioritised action.

Place Priorities The geography of Scotland is varied and dramatic, each place has varying needs and priorities. Identification of assets and resources at a settlement scale should identify the challenges and opportunities for communities from dense urban centres to rural outposts. Local Place Plans can empower communities to articulate their vision for their communities in 2050.

2. and 3. A Place of Small Distances and a Network of Small Distance Places

National When considering the viability and designation of new national developments, built-in reliances that will generate carbon emissions should be considered. For example, new settlements with no or limited connections to public transport links, interchange hubs or services that can be safely accessed on foot or by bike and connect with existing places, will create an automatic reliance on private vehicles. There is an opportunity with NFP to outline the need for a place-based approach to housing delivery at a local level that could support the creation of places of small distances.

Regional The creation of places of small distances will reduce unnecessary travel. However the connections in, out and through regions should prioritise sustainable mass public transportation, aligning with the readjustment of the transport hierarchy and shift reliances away from the current dominance of private fuel-based vehicle use.

LDP At a local level there is a need for self-sufficient places to reduce unnecessary carbon emissions. Plans should not only focus on outward connections to and with existing urban and industrial centres, but prioritise connections within places to support and enable increased active travel, freeing up road space for the emergency services and those impacted by mobility issues.

Place Priorities Creating complete and self-sufficient neighbourhoods that are linked through active travel and sustainable mass transport links should aid the eradication of travel poverty, exclusion and isolation, supporting the behaviour change that is required to move towards a just and low carbon society.

4. A Place Designed for and with Local People

National The open call for ideas for 'Scotland of 2050' has generated significant responses from organisations and individual members of the public. The urgency to tackle climate change is 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.

Regional Findings from existing and ongoing public engagement and participation in the NPF4 call for ideas process is contributing to the approach and production of the Indicative Regional Spatial Strategies. Highland Council's emerging iRSS is informed by the challenges and opportunities identified through stakeholder engagement and visually depicts the proposed projects that are anticipated to meet the needs of the regions inhabitants that are spread over a wide ranging geography.

LDP FW 2040 is a shared vision for the future of Fort William and Lochaber, the online story map is an evolving, visual record of the engagement with public agencies, those living, working and investing in the area, and the development, and delivery of the future vision. It provides a single point of reference for the LDP, place making strategies and the timelines for action.

Place Priorities The Strathard Community Life Plans are a comprehensive collection of the views of the community about the places that they live, work and play. The CLP's have enabled representatives from the communities to work closely with the Loch Lomond and Trossachs National Park in the development of the Strathard Land Use and Rural Development Framework, which in turn, will contribute to the future shaping of the National Park's Local Development Plan.

5. A Place that Reuses, Repurposes and Considers Whole Life Costs

National There is an opportunity to ensure the adaptation of existing infrastructure assets with the forthcoming decisions on the NPF 4 national developments to ensure existing infrastructure and assets are prioritised through the criteria for project identification. There is also an opportunity to assess which existing infrastructure and major adaptations may be redundant in 2030, 2040 and 2050 as we shift toward a low and no carbon society.

Regional Cross authority thinking on assets for reuse or adaptation to address the impacts of climate change could be a prioritised by iRSS. An example of this in action is the canal networks repurposing of an embodied carbon structure as an active travel, recreation and green corridor. A further co-benefit of its redevelopment in North Glasgow, is the Smart Canal which acts as a regional drainage system that responds to rainfall predications to alleviate flood risk.

LDP 80% of the buildings that will exist in 2050 have already been built (UKGBC). Campaigns such as RetroFirst, Architects Declare and Contractors Declare highlight the need and desire for our built environment to prioritise the reuse of existing assets. LDPs have the capacity to reflect those desires through planning policy and proposals, and to champion whole life cycle costs that incorporate the impact of embodied energy and carbon.

Place Priorities Existing and new assets are materials banks, receptacles of embodied carbon and energy. The construction, materiality and performance of our existing buildings were not designed for our current changing climate. The implementation of the Heat Networks (Scotland) Bill and the National Infrastructure Mission should ensure homes are adapted in a 'just' and healthy manner.

6. A Place with Whole and Circular Systems

National The identification of the national and local systems that we, as a society are currently reliant, and those anticipated by 2050 should inform national planning decisions. For example, climate change is and will continue to lead to increased rainfall, natural flood defenses and green infrastructure such as rain gardens, will slow and filter the water run off, reducing the risk of flooding. Increased green infrastructure will aid with the absorption of carbon and increase biodiversity and work towards ecological restoration.

Regional Easterhouse Green Links connects directly in to the Seven Loch Wetland Park, and that into the Glasgow Clyde Valley Green Network Partnership, and that into the Central Scotland Green Network. The network not only encompasses increased biodiversity, ecology and greening, but cross boundary and cross scale vacant and derelict land renewal, drainage infrastructure, habitat restoration, food growing and active travel links.

LDP The Covid-19 pandemic has highlighted the fragility of the systems that support our communities, but also their resilience and adaptive capabilities. A shift to prioritise localism and self-sufficiency within local development plans should anticipate a shift in our systems to increase our resilience to the increasing impacts of climate change.

Place Priorities The need for a place to address the impact of its collective consumption and waste will increase with time. A move from landfill to incineration has not closed the loop, but has impacted air quality and forever removed valuable material from our circular economy. Open and closed loop systems require further development at a place scale to ensure behaviour change around consumption and waste are further advanced at speed.

7. A Place that Supports Sharing

National The limitations of our existing public transport system is preventing people from prioritising low impact travel choices. A national network of multi-functional public transport nodes that enables citizens to travel cross country using simple joined up ticketing that connects with cycle hire scheme across our towns, cities and rural recreational destinations will encourage greater uptake and a shift in reliance away from liquid fuel based private car use.

Regional The decarbonisation of heat is essential to reach net-zero emissions. The Local Heat and Energy Efficiency Strategies (LHEES) are area-based plans but could be scaled up. A clear spatial framework of Heat Network Zones that reflects overall heat demand and patterns of use (and anticipates The Heat Networks Bill) at a regional level will be critical for a successful 'just' transition to a low carbon heat network and the eradication of fuel poverty.

LDP The relationship between physical assets, individual ownership and self and place identity is undergoing an evolution. Our preconceptions of ownership are changing, how would this translate within a Local Development Plan? In urban developments close to transport nodes parking requirements could be kept to a minimum. Carpool spaces could be provided, and spare parking capacity turned over to greenspace or growing space for residents.

Place Priorities Sharing networks can not only reduce our consumption and waste, but create social equity and increase community engagement. The Edinburgh Tool Library aims to become a cornerstone of society, extending their influence and reach beyond their sites in Leith and Portobello to the whole of Edinburgh. To support such initiatives, planning could reference building community needs and aspirations into collaborative briefing/delivery/stewardship/place plans.

8. A Place Designed in Time

National Scotland's emissions reduction targets are legally binding. NPF4 has the potential to impact our ability to achieve the 2030 target of 75% and set the bar for the subsequent round and a half which will take us 2045. A joined up approach, incorporating all government initiatives with spatial and climate change implications, will allow NPF4 to align with the Climate Change Plans intended outcomes and support the delivery of climate adaptive places.

Regional The emerging Indicative Regional Spatial Strategies (iRSS) identify the strategic opportunities and challenges at a regional level up to 2050. The timely submissions will help guide and inform the preparation and content of the NPF 4, highlight the regional strategic issues across Scotland and where regional joint working may be required to address areas of higher and lower carbon emissions, environmental impact and climate change risk.

LDP Place based short, medium, and long-term risks associated with climate change are publicly accessible through the work of the Climate Change Committee. There is an opportunity for our LDPs to align with those risks, to focus on long term planning, the strategies and content of local climate change adaptation frameworks to ensure our settlements adapt in a timely manner.

Place Priorities The Covid-19 pandemic has demonstrated that the purpose of our places and public spaces can shift dramatically in a short period of time, place-based priorities will change as the impacts of climate change are experienced. Flexibility in an approach and acknowledgement that meanwhile strategies or temporary measures can be used to influence longer term decision making could be effective at shifting behaviour change, such as the Spaces for People Programme from Transport Scotland and Sustrans.

3.Process

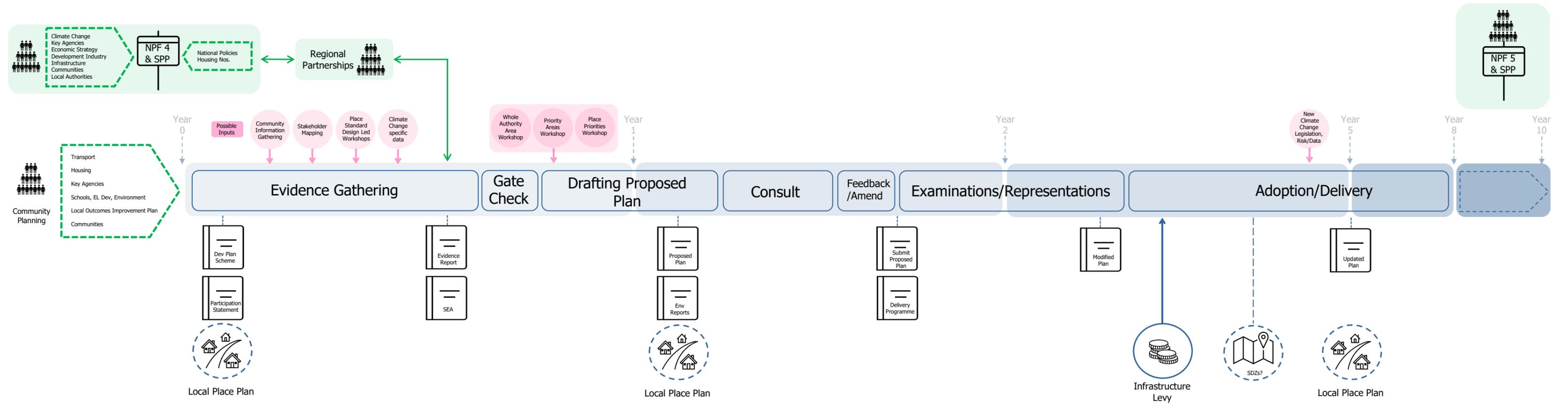
Introduction

The process of preparing a development plan requires significant resources, evidence gathering and collaboration. However, do this well and the benefits will be substantial. This ranges from helping achieve better place and climate outcomes to aligning corporate investment in a place and supporting the implementation of the Place Principle.

With local authorities under increasing pressure, it is important that the process of preparing the development plan remains creative and collaborative as well as efficient. This will require using different skills, knowledge, expertise and methods throughout the process and involve active collaboration with the private, third and community sectors. This section explores the elements of plan-making and sets out some key considerations to help position climate change and place as a driving component.

Process

The process of preparing a development plan involves a range of activities. The illustration shown has been prepared to provide an example of the potential process involving collaboration, engagement, evidence gathering and analysis.



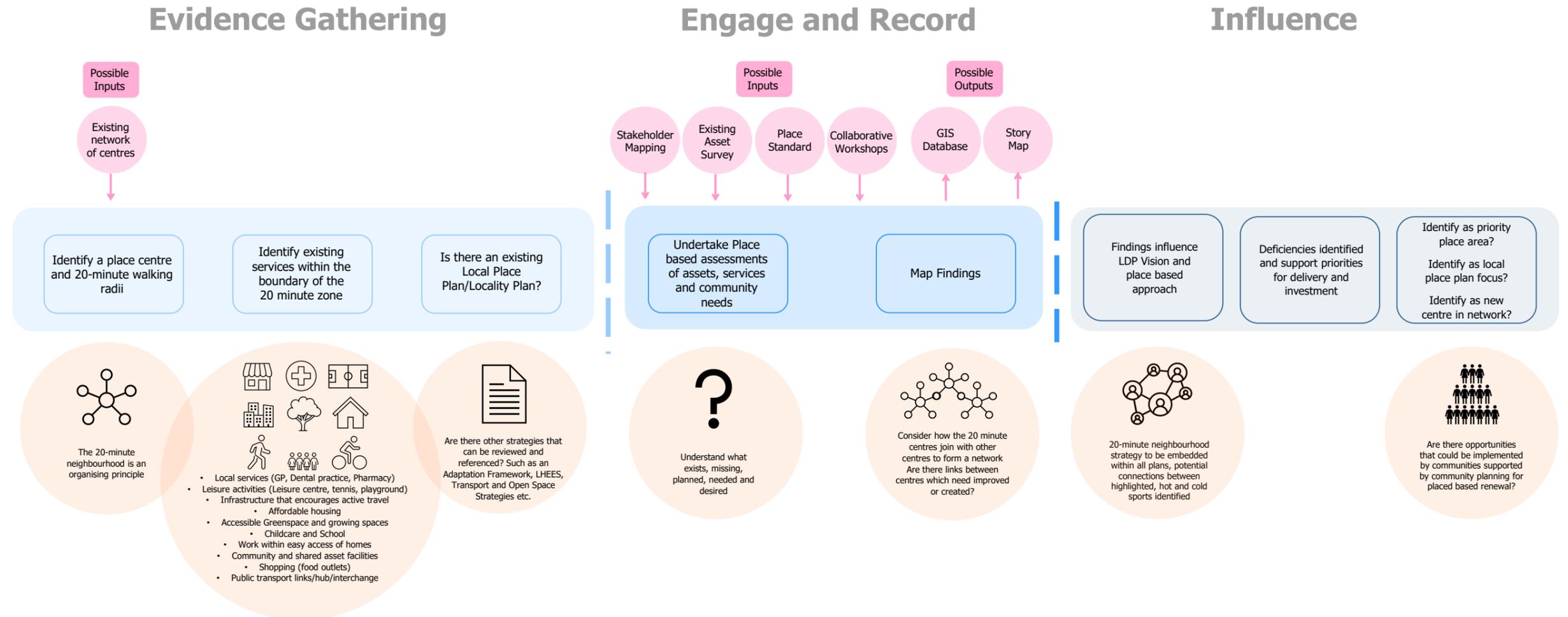
“The COVID-19 response has changed the way we all live, work, learn and shop...building on the experience, we will work with local government to take forward our ambitions for 20-minute neighbourhoods”

Protecting Scotland, Renewing Scotland: The Government’s Programme for Scotland 2020 - 2021

Implementation of a 20-Minute Neighbourhood

The ‘20-minute neighbourhood’ is a concept which has been promoted within the 2020 - 2021 Programme for Scotland. This concept supports the idea of living more locally to support lower carbon lifestyles, giving people the ability to access their daily needs within a 20-minute walk from home, with safe cycling and local transport connections nearby. Primarily, this is an organising principle that helps to shape how we plan and evolve places. However, it is also a tool to support more multi-purpose functions in a place, the reprogramming of existing assets and the strengthening of localism. Many of the 8 Carbon Conscious Places principles are encompassed by considering this concept. This ranges from considering what services could be shared in a place, what systems needs joined up to better connect people to their everyday needs, how existing assets could be reused to support living more locally and placing people’s needs at the heart of place planning. Through connecting up the network of 20-minute places, it creates a framework of sustainable places at a national and regional level.

To illustrate how the 20-minute neighbourhood concept might be considered within the preparation of the development plan, this example process diagram has been created. Whilst this concept should not be seen as a rigid rule that leads to whole scale reconfiguration, it is an effective means of driving investment decisions that support healthier, compact, carbon conscious places. It should help to reinforce the network of centres within a local authority area, including those in an urban and rural context. Section 5 of this report highlights how this concept could be applied to a rural context.



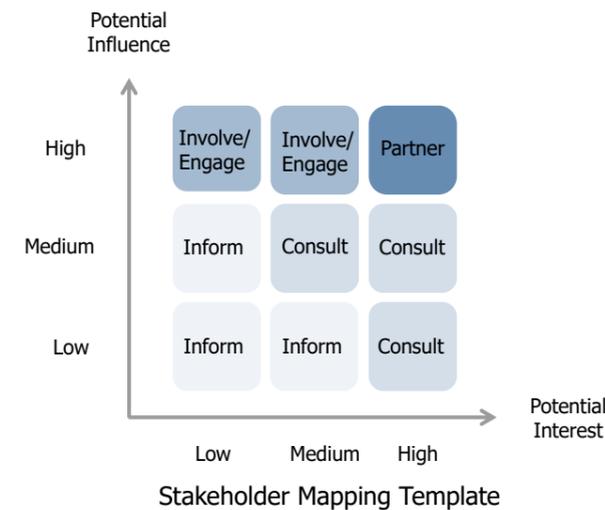
Collaboration

An essential element of a climate responsive place-based development plan is collaboration. As the Place Principle sets out, for a place-based approach to succeed, those with a key role need to work together to agree shared ambitions and align efforts so that investments work harder. There is great potential for planning to take a leading role in aligning all the key interests, with a role in supporting a net zero carbon and climate resilient future. Everyone has a part to play, but there is a vital leadership role for the public sector to work with other sectors. Strong place leadership sets the bar for quality, promotes collaboration and innovation and supports long term public interest.

An early action of preparing the plan will be to undertake stakeholder mapping to identify who needs to be involved, at what stage and in what role. Although the specific individuals might not be able to be identified at this point, understanding the remits and specialisms will help inform the approach.

With climate change taking a prominent place within the plan, there are likely to be some key stakeholders who will be required to be involved or partner with at an early stage. These might include officers with expertise in flooding and drainage, energy and carbon management, natural assets, vacant and derelict

land and properties, active travel and sustainable transport, community planning and council assets. In addition, there will be key agencies, groups, developers and private sector organisations who can feed into the collaboration. Integrating a whole place approach with the climate challenge into the plan will mean the diverse mix of expertise involved is key. This will help identify the suite of ways the area can be adapted to reduce, repurpose and absorb carbon and protect against the impacts of climate change, whilst delivering high quality places. Early and meaningful collaboration will also help determine the best locations for change (e.g. priority areas) and identify the right development, in the right place, contributing to decarbonisation and climate adaptation efforts.



Establishing Collaborative Aims

For collaboration to succeed, it is important to prioritise collective solutions over individual interests/sectors and the best way to do this is by looking at these interests together and the range of public goods that can be delivered. Working collectively in preparation of the plan will enable competing priorities to be identified and resolved and activities and investments aligned in the wider public interest.

Benefits of Workshops

Workshops are a good way of bringing people together to undertake this work. If workshops are not able to be hosted in person due to Covid-19 restrictions, they can still be carried out effectively through online platforms.

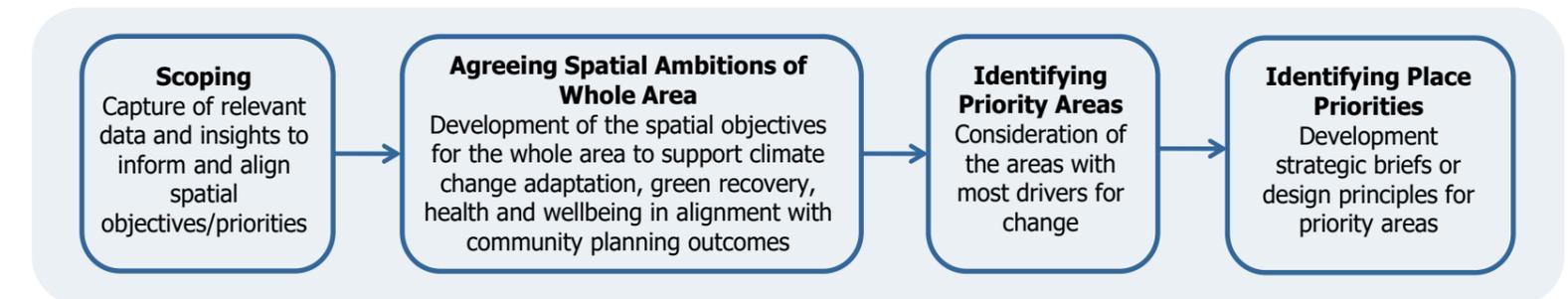
Workshop benefits include:

- Needs, challenges, priorities, evidence and insights to be captured to inform the plan.
- Alignment of corporate investments, activities, funding in the long-term public interest.
- Building of collective purpose, direction and action to take a place-based approach.
- Creation of shared ambitions and expectations to drive place quality through design and decision making to delivery.
- Collective consideration of place capacity and development benefits to inform spatial strategy.

Workshops at these different stages of the evidence gathering and plan development is an effective way to divide up the process and build up buy in to the process.

Agreeing the Way Forward

Establishing a clear and joint understanding of the spatial ambitions for the whole place before developing detailed policies or identifying priority areas for the delivery, offers the best foundation for a successful place-based approach. Using examples or stories of success from your local authority and beyond, on place-based approaches will help communicate to different participants.

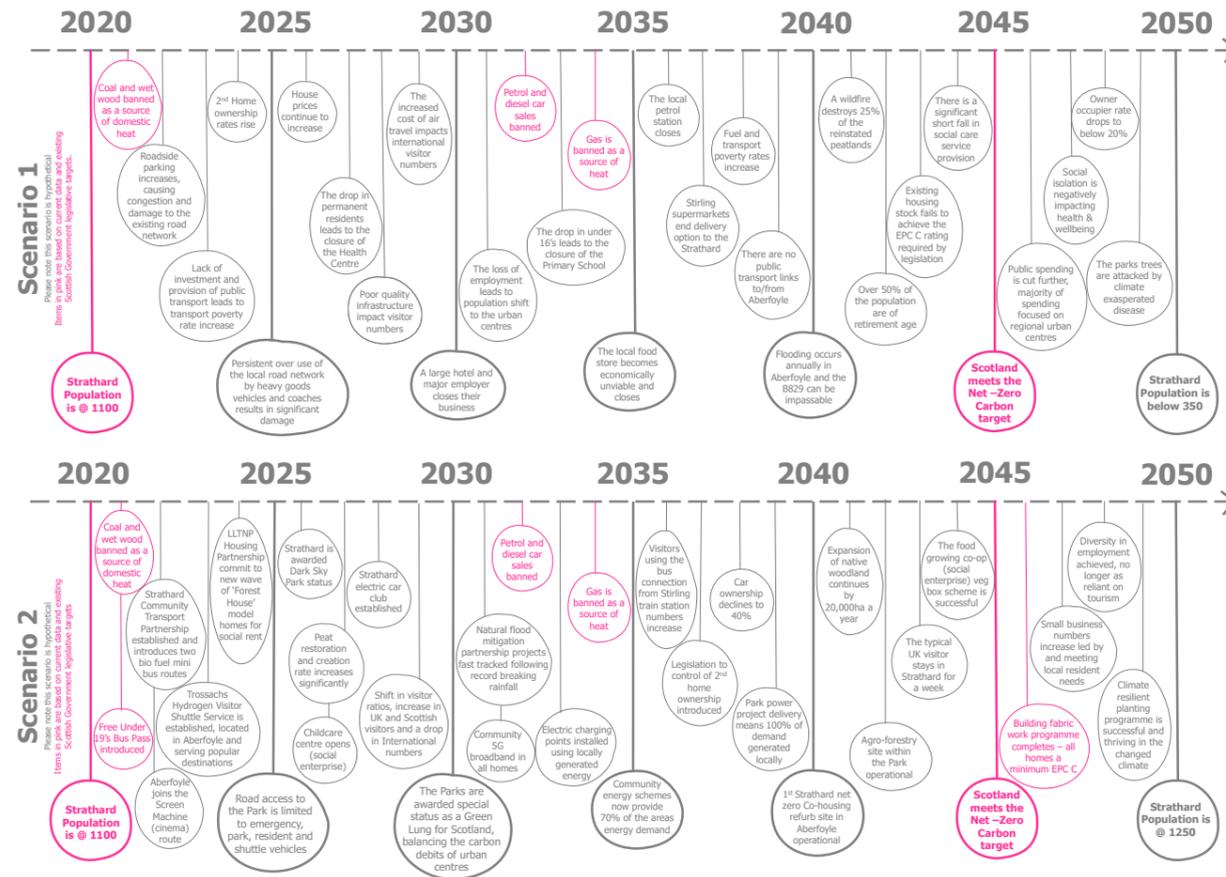


Scenario Planning Technique

As the full impact of climate change on our future is not certain, the use of scenario planning is a helpful technique to explore these challenges creatively. Scenario planning allows participants to look long-term and imagine an aspirational future, rather than accepting past or current trends. The method is not designed to arrive at a specific answer but instead used to conceive, explore, and evaluate a series of future conditions and the outcomes they produce. This helps to scope out a preferred and feasible course of action.

Scenario planning was used in the pilot project with the Strathard community. This involved two timelines to 2050 mapping out the impact of inaction and direct focus on climate change, and the consequences these would have on the liveability of the place.

Using scenarios to test out ideas at the spatial ambition and place priorities stages would be a powerful way to positioning climate change as a key, uniting issue but at the same time reflecting the delivery of NPF 4 objectives. There may even be some stakeholders who are complacent about the impact of climate change on their area, particularly if there has already been significant investment in key measures like river flood defences or a district heating network, as examples. However, the impact it will have on



Community Engagement

almost every aspect of our lives will continue to increase and therefore it is important to consider a range of conditions. The [‘UK Climate Change Risk Assessment 2017 Evidence Report – Summary for Scotland’](#) will help with identifying scenarios which are relevant to different areas

However here are some potential ideas for scenarios as examples:

- Urban heating – temperature rise of cities by 4 degrees
- Sea levels – rise in sea level by 4 metres
- Water shortages – 16-week drought

What impact will this have on the area?
 How might this be planned for?
 Different options?
 What would be the benefits delivered of the different options?
 What would be the consequence of not planning for this?

Community engagement should underpin the preparation of the Development Plan both at the evidence gathering stage and the consultation of the proposed plan. The Local Outcomes Improvement Plan and community planning will already form a strong basis for priorities of the plan.

When preparing for community involvement, thinking about how to engage a broad representation of interests and demographics in a place, is key. Consider how support to help overcome barriers to engagement might be offered. For good practice recommendations about working with communities the [National Standards for Community Engagement](#) have been produced by the Scottish Community Development Centre

There are also some useful resources to help introduce climate change aspects of place into the conversation about the plan. These include:

- [The Place Standard tool](#) - forms a useful tool in early community engagement and insight gathering. The tool is currently being updated a to integrate some climate change prompting questions. The tool can be undertaken in different conditions such as online or through specific workshops.
- Climate Conversations ‘How to’ Guide: This is a [practical guide](#), designed to help start, and widen, the conversation about climate change with a small group of people. It can be used to have a conversation about what our options are – locally and nationally in terms of reducing both the causes and the effects of a changing climate.

Example
 During Covid-19 restrictions, Glasgow City Council undertook an online Place Standard engagement for their South-Central Local Development Framework preparation. This formed the first stage of gathering place-based information. This formed the first stage of gathering place-based information from local stakeholders. The format was designed to encourage people to think about the physical elements of the area as well as the social aspects. The survey asked people to consider what was good Pre-Covid-19 and what could be improved after Covid-19. The responses helped identify the assets in each of the neighbourhoods, as well as where improvements are needed. 316 people from local communities and organisations responded to the survey. This provided a baseline on the qualities of place within each of the neighbourhoods.

[Other examples of Place Standard use](#)

- Carbon Literacy Guide Parts 1,2,3: This guide is split into sections and includes:

[Part 1](#) - A vision of what our communities will be like in a low carbon future;
[Part 2](#) - A brief introduction to climate change; and
[Part 3](#) - An overview of how our everyday actions contribute to climate change, and what we can do to reduce our impact.

- Design-led workshops and charrettes are other examples of methods to engage the community in the plan preparation.

Example

In preparing the current Local Development Plan for Loch Lomond and the Trossachs National Park Authority, consultation took place through a series of design led workshops/charrettes. This was focused on the four key settlement areas of Drymen and Balmaha; Arrochar and Tarbet; Tyndrum; and Aberfoyle. This led to the identification of 'placemaking priority' areas within the Local Development Plan.



Evidence Gathering

Broadly, the evidence gathering stage of preparing the plan is one of the most important. To help climate change and place take a prominent position within plans, using the latest data, analysing it and layering it in different ways, will be critical. Whilst there will be a range of different existing plans, strategies and datasets to draw on to help shape early thinking, here are some examples which are likely to help build up a picture of climate risks and opportunities to consider the eight principles of a Carbon Conscious Place.

- River Basin Management Plans
- Surface Water Management Plans
- Flood Risk and Risk Projections
- Local Heat and Energy Efficiency Plans
- Carbon Management Plan
- Adaptation Plans
- Locality Plan
- Open Space Strategy
- Vacant & Derelict Land Mapping
- British Geological Sub-Surface Conditions
- Transport Strategy
- Housing Projections
- Strategic Gousing Investment Plans
- Natural Asset Map
- Landscape character assessments
- Community Consultations

By layering up these types of information, the gaps in data or information will be identified and this will help inform the focus of the scoping workshop. Following this, the combination of data and information will help prepare for the collaborative workshops where the spatial ambition of the place, priority areas and place priorities are explored and agreed.

Using social media might be a different way to gather additional data.

Example

In Loch Lomond and the Trossachs Park Authority, officers used Instagram to explore different hashtags for the area to understand the most popular views visitors and residents were capturing. This helped inform their analysis on key views and vistas to protect and enhance.

Skills Development

As we enter new territory for development planning, there is a need to consider what skills might be most valuable. In a recent study undertaken by EKOS consultants on behalf of Skills Development Scotland and Partners in Planning in to 'Skills in Planning', 'principles of good design' and 'how planning fits with

other services and particularly its role in place-making' were identified as being two key areas for further training.

In addition, climate change was identified as an area where stakeholders felt they needed further support to deliver national priorities at a local level. Through the Architecture and Design Scotland pilot project, the need for skills to translate complex and strategic issues such as climate change and net zero carbon ambitions to a place level was also identified. Whilst planners cannot become experts in all aspects, upskilling in climate and design focus areas will have key benefits. Partners in Planning have collected some a useful [resources](#) which may be of assistance.

More broadly, the need to develop skills in collaboration and partnership development is important. This will enable the knowledge and skills of expertise to be drawn into the process at the right stage and for the right drivers. Currently Architecture and Design Scotland are developing content on skills, with particular reference to housing that will offer relevant tools and approaches to support the application of the place principle through the development plan process.

Summary

Overarching aspects to consider when preparing a development plan are summarised below:

Purpose

Consider why we need to take a place-based approach? What are the drivers for change?

Picture

Explore what will the future look and feel like if we take this approach?

Programme

How are we going to get there?

Part

What role will you and your team play to make the change a success?

Participation

Who will you involve along the way? Across different sectors? How will you engage and interact?

Precedents

What stories or examples of successes are relevant and will resonate with your audience?

Propositions

What questions will you ask to engage them?

4. Content

Introduction

Since the last cycle of development plans, climate change has risen to the forefront of international and national agendas. In April 2019, Scotland declared a climate emergency followed by a net zero carbon target by 2045. Many Councils have subsequently declared a climate emergency, with some setting an objective for their operations to be carbon neutral within the next 10 years. More recently, the Covid-19 pandemic has brought into sharp focus the importance of the quality of the environments we live in, the accessibility of local services and resilient communities. This new context offers an opportunity to position planning and the development plan at the centre of corporate decisions and investment in place, aligned to the Place Principle. However, it equally presents a responsibility to embed place and climate action into the culture and content of spatial planning. This section explores the style and scope of development plans, to better support a whole place approach to designing for a changing climate.

Development Plan Scope

Spatial Ambitions

The foundation of the development plan is established in the spatial objectives and ambitions for the whole

authority area. This is underpinned by considering the story of change and 'what kind of place do we want to be?' This needs to align with community planning and the priorities of the Local Outcomes Improvement Plan. When considering how to address climate change or support net zero carbon objectives, it is easy to quickly focus on technical solutions or sectoral measures which could help. However, as the Place Planning for Decarbonisation pilot work has shown, it is important to consider the whole place and wider outcomes that are trying to be achieved. The spatial objectives and priorities which underpin the development plan should of course be tailored to the specific place outcomes however it is likely the principles from the carbon conscious places will support the scoping out of the visioning and place priorities.

- A Place-Led Approach
- A Place of Small Distances
- A Network of Small Distance Places
- A Place Designed for and with Local People
- A Place that Reuses, Repurposes and Considers Whole Life Costs
- A Place with Whole and Circular Systems
- A Place that Supports Sharing
- A Place Designed in Time

This will support the development of the objectives which will draw from community planning and local, regional and national objectives, identify the settlement hierarchy, set out strategic priority areas and site-specific policies, key placemaking principles, strategic locations for delivering sustainable development and areas designated for growth or constraint. The spatial strategy for each development plan will be tailored to the local context.

Geographical Differences

Development plans should look to support a combination of measures to reduce, repurpose and absorb carbon and adapt to the impacts of climate change. The particular mix of measures in each authority will differ depending on the local opportunities and assets, however each local development plan should collectively thrive to balance the carbon emitted and absorbed. This will help set a framework for achieving a net zero carbon society and generates co-benefits such as more resilient neighbourhoods, strong local economies, cleaner air, and healthier environments for people and nature. Aspects which will align with the spatial priorities for the whole place.

Already the impacts of climate change are being felt by communities across Scotland however the nature and levels of these effects, differs from place to place. With a greater emphasis on place-based development planning, it is important to understanding some of these distinctions when considering the scope of plans.

Urban Areas

Urban areas in particular face mounting challenges with surface water drainage and related flooding. Whilst, the densification of towns and cities can greatly support concepts such as the 20-minute neighbourhood and sustainable transport orientated development, it is adding to the pressure on drainage systems that are already at capacity. Despite considerable capital investment, this will continue to be a challenge for urban places. Setting a strong framework to deliver increased green and blue infrastructure within the development plan will help to manage this challenge and also deliver wider place benefits – e.g. greener streets, increased habitat for nature, resilient infrastructure. Layering adaptation plans, surface water management plans and green network strategies with local place priorities will aid with the identification of the framework. By planning

for green and blue infrastructure in places to manage water (slowing, storing and cleaning) on the surface, it also helps towards the net zero carbon objectives. Simply, the less water that goes into the underground system, the less that needs processed, leading to carbon savings.

Similarly, inner urban areas and city centres will both exacerbate urban heating (and the urban heat island effect) and be impacted by rising temperatures. Surfaces covered by roads and buildings contribute to

higher air temperatures as they reduce evaporation, important for the surface cooling process. Increased temperatures in city and town centres will impact liveability and could prevent increased city and town centre living. A greater focus on planning for urban heating within the development plan will help manage this risk to urban areas. Through supporting the retrofitting and new developments with green infrastructure and living walls to help with urban cooling, this in turn will help with carbon absorption and reduction of energy consumption.

Rural Areas

Areas of rural Scotland provide a greater opportunity to scale up carbon absorption through significant tree planting, peatland and woodland restoration and coastal management of habitats such as kelp forests, salt marshes and seagrass beds. Whilst these are long term interventions to support net zero carbon targets, they will need to be planned for within this generation of development plans. Aligning with (indicative) Regional Spatial Strategies, the development plan should balance competing rural land demands and identify places and landscapes which can support strategic-scale carbon absorption.



Illustration by Richard Carmen

Recent events in Scotland have further highlighted the impact of climate change on our infrastructure. Flooding and landslides can cause major disruption to rail and road networks and this is particularly detrimental to rural and island communities, as it prevents the delivery of key services and provisions. Planning for river and coastal flooding within the development plan should focus on identifying opportunities for natural flood defences, flood protection areas and where required, the relocation of infrastructure, services and even parts of settlements.

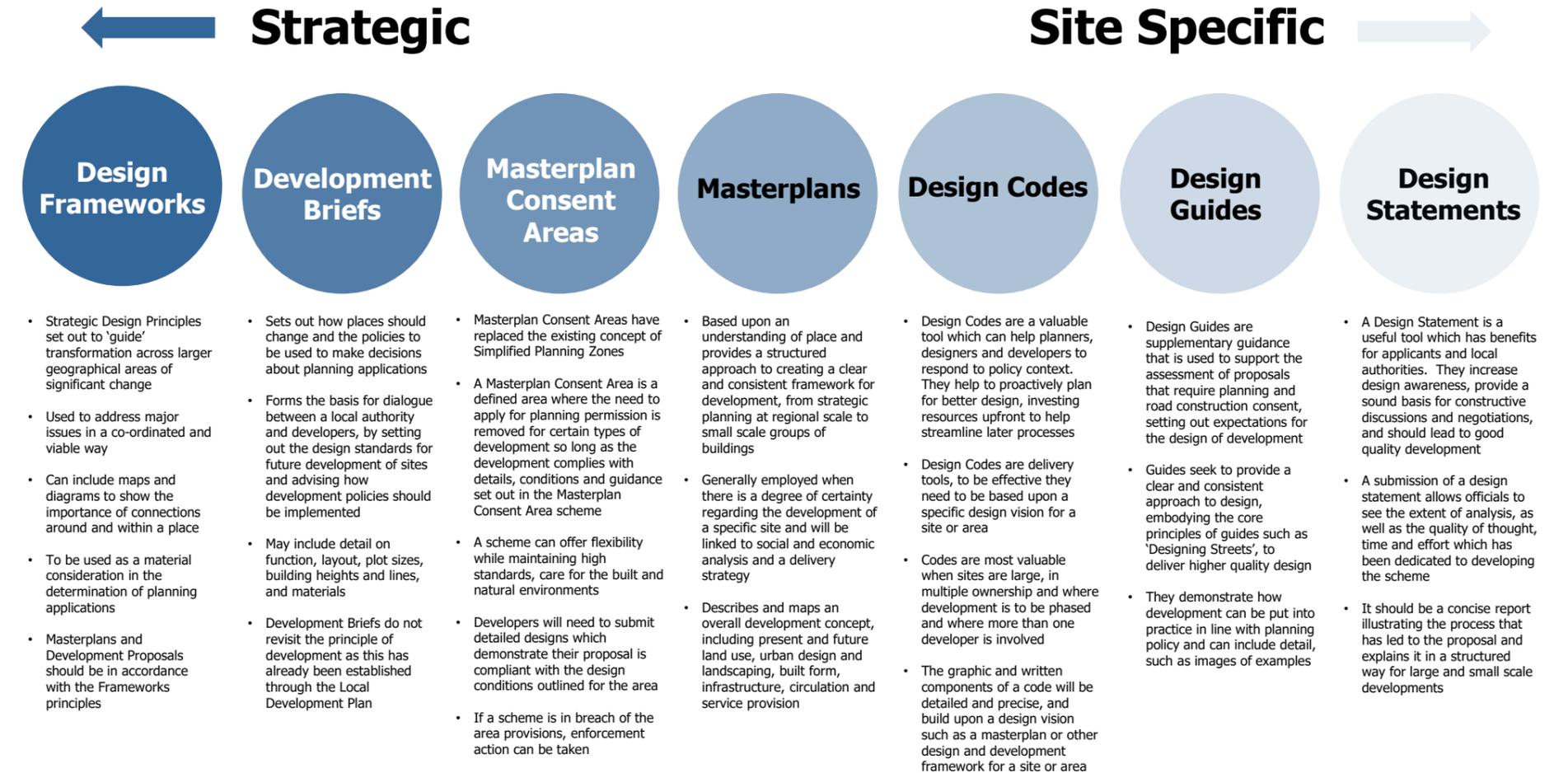
Increasing the population of our rural communities is being considered at a national planning level. Development plans covering rural areas will need to reflect how this will be implemented to ensure the quality of life of people is not harmed. Rural areas face mounting challenges in a 'carbon' context as fuel costs are likely to rise and sustainable transport links are often more fragmented. Applying the 20-minute neighbourhood concept to rural places, particularly those remote, will be difficult. However, taking the underpinning ideas of providing more services closer to where people live to prevent the unnecessary use of carbon, should be considered. This would mean that development plans identify a network of smaller settlements to target facilities and services and improve digital and sustainable connections between these, to support sustainable rural living.



Supporting Priority Area Planning

Taking a place-based approach provides an opportunity for local context to play a key factor in the development plan. The priority areas and place priorities for each, will have been developed through workshops as part of a collaborative approach and embedded into the plan. However, the development plan may need to identify further design tools to help manage the complexity of issues and opportunities such as changing climate, infrastructure investment or development growth. Design tools are used to help maintain the quality of development in and across places and provide a level of certainty for communities, investors and local authorities on the planned changes. There are a range of design tools which can be used depending on the scale of the focus.

The adjacent diagram provides more detailed information on each of these tools.



Development Plan Presentation

The presentation of a development plan should be the product of a collaborative process that articulates shared ambitions and priorities at a strategic whole place level through a clear spatial strategy, and at a local area level through collaborative briefs/frameworks for priority places. This new generation of development plans have the opportunity to engage a wide range of stakeholders, for different purposes and at different points. This means that successful presentation of the plan is critical. Plans will need to be engaging, accessible and tailored to the place context. Using conceptual mapping, graphics, illustrations and other ways, will assist in taking a place-based approach and articulating the story of change the plan is trying to support. A range of styles and methods are explored here to give ideas on the different options.

(c) London Borough of Tower Hamlets

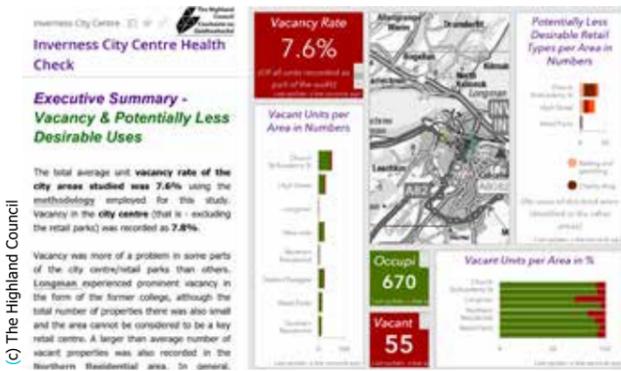


Place-Based Plan

[The Tower Hamlets Local Plan 2031](#) (Section 4) takes a place-based approach supporting the sustainable growth of the different areas in the borough. The plan illustrates the vision for each area, the key site allocations, and sets out the detailed strategic and design principles.

Story Map

Highland Council have used 'Storymap' as a way to provide a visual understanding of retail and other conditions within Inverness city centre based on a range of indicators such as the quality and availability of green space, retail unit vacancy, pavements and streets or ease of movement. This can be updated with latest data and therefore for a plan which is trying to keep pace with climate projections such as updates to flooding information, this tool could be very effective.



(c) The Highland Council

Illustrations

To help articulate the vision for carbon conscious places, illustrations were used showing what 2050 might look like if the key principles were implemented. This is an effective way to show the whole place approach to the changes that may be required and brought the vision to life.



Illustration by Richard Carmen

Personas

Setting people at the heart of our plans and places is really important, particularly when thinking about climate change and the need to facilitate everyday behaviour changes to live low carbon lives. Whilst this report did not focus on climate change, the Caring Places report articulated the story of change to town centres to support intergenerational living, through the lens of personas. By telling the story through the range of personas and highlighting their specific needs, the report was able to demonstrate the positive impact changes to the place would have on the quality of their lives. This helped communicate a powerful message to a wider audience. Personas are not a substitute for effective community engagement, but they can be a helpful tool for imagining needs of future communities or for use in briefing for new developments without existing residents.



Helen's story:
I love the outdoors and I'm definitely a people person. I really enjoy being outside and it's important to me that I can easily get to a place where I can disconnect from the hustle and bustle, breathe, walk without worrying about the traffic, and spend a bit of time with friends. The park is really easy to get to as it's just a short walk away from the town centre where I live with my husband Bill. It's also got a great bus service and other lovely walking routes, so it's really handy and my friends have no trouble meeting me here. My family stay close by when they come to visit me, so it's a good spot for us to meet up with them too.

The park has just been redeveloped so that it's a good place to come if you're living with dementia and if you need support from a carer. It has accessible loos, benches, a new café, more accessible walking routes and dementia friendly signage. There's plenty of space for people of all ages, with nice spaces to sit and meet friends. There's even a senior outdoor gym! I'm a retired teacher and sometimes I see groups of schoolchildren being taught outside here, which is lovely to see.

[The Graphical Communication in Strategic Development Plans - Tools and Techniques for Improvement](#) which was published in 2012 provides some useful further learning for the presentation of spatial plans.

Summary

Overarching aspects to consider in the content and presentation of a development plan are summarised below:

Spatial Ambition

Does the plan set out 'what kind of place do we want to be?'

Focus and Hierarchy

Does the plan communicate the scale, location and priorities of change?

The Story

Does the plan explain the rationale/the story of change?

Engaging

Do the visuals in the plan to makes the content come alive?

Place-based

Does the plan share the place priorities and design principles?

5. National Planning Framework 4

Introduction

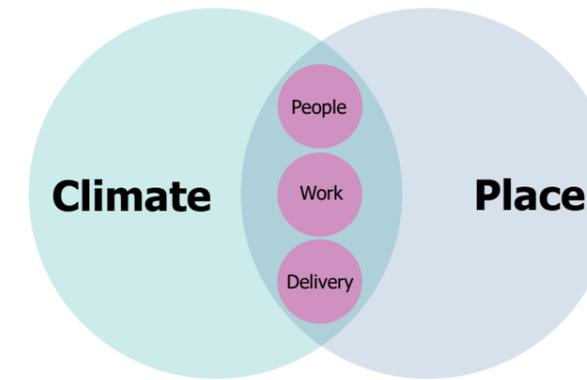
The opportunity to spatially express the Scotland we want, lies within National Planning Framework 4. This level of statutory planning provides a platform to strategically shape how we will live, how we will move about, how we will protect and manage our resources and how we will support our town centres. Shifting from the carbon intensive developments, services and modes of transport we are reliant on presently will need a whole place approach, on a national scale. In this section, the high-level considerations to help embed carbon conscious thinking into NPF 4, will be explored.

National Projects

Supporting the delivery of the ambition and objectives of NPF 4 will be the series of identified national developments. These aim to provide certainty upfront for communities, businesses and investors. The call for national developments received around 250 ideas. These proposals were required to align with the criteria of climate change, people, inclusive growth and place. The work undertaken through the Place Planning for Decarbonisation pilot, demonstrated the need for a combination of interventions to help reduce, repurpose and absorb carbon as well as support climate adaptation measures. The suite of national developments identified in NPF 4 should reflect this combination, leading to a more resilient approach to the net zero carbon challenge Scotland faces. The eight Carbon Conscious Places principles could form a useful lens to consider proposals for developments nationally recognised. This includes considering:

- Does the proposal reflect, appreciate and work with existing assets, the surrounding landscape and the place identity?
- Does the proposal support the creation of self-sufficient places (e.g. 20-minute neighbourhood concept)?
- Does the proposal provide connections (physical or services) to join up places, towns and regions?
- Is the proposal people-centred and have local people been actively involved in key stages of the design process?
- Does the proposal support 'reuse first' concept to buildings, land and infrastructure?
- Has the cost of the entire lifecycle of a proposal been considered?
- Can the materials in the proposal be reused in the future?
- Does the proposal support the enhancing, repairing or joining up the multiple systems (e.g. water, green, habitat, transport, food, heat, energy, waste, housing and social systems)?
- Does the proposal support the sharing of assets and services in places?
- Has the dimension of time been considered in the proposal? Will the proposal still align with the vision for Scotland in the next 10-30 years?

Positioning of Themes



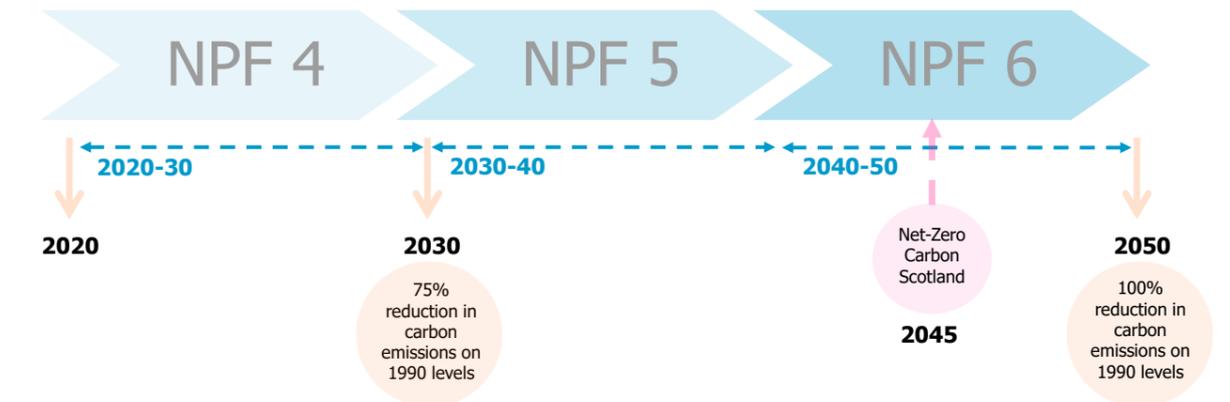
Currently in the preparation of NPF 4, five key themes have been identified. These comprise of climate change, people, work, place and delivery. These themes are interconnected and cross cutting, however it remains important to recognise that climate change and place could play an overarching role in presenting all the themes. The Place Planning for Decarbonisation pilot work demonstrated that by considering climate and place as core drivers for change, it provided an ability to unite a range of sectoral issues. In turn, supporting a whole place approach to planning. In the current Scottish Planning Policy (SPP), placemaking and sustainability sit as overarching principles. This then supports the filtration of these core components into development

plans at a local level. Prominence should be given to climate and place within the emerging NPF 4 (which will incorporate SPP), to ensure it is reflected within all levels of Scottish planning.

Alongside the positioning of climate change and place as overarching themes, NPF4 should take the opportunity to include a clear definition of, and commitment to, placemaking and design quality that is about fitness for purpose, sustainability, value for money and a source of utility and delight for the users. In addition, it is important NPF 4 is capable of communicating what is meant by a net zero carbon society and the climate risks Scotland will face over the period of the plan.

Dimension of Time

NPF 4 provides the scope to think about what Scotland will be in 2030, 2040, 2050 and how place can deliver the outcomes sought such as climate resilient, well-being, equality and fairness. In the lead up to 2045, there is likely to have been two full cycles of national planning framework. As set out in the objectives of the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, by 2030 (end of NPF 4 cycle) there needs to be a reduction in emissions to 75% and by 2040 (likely end of NPF 5) by 90%. This means the emerging national planning framework must set the right direction to meet these increasing targets and decisions over proposals could have a strong carbon 'lock in' effect, unless carbon conscious thinking forms a key factor now.



Strategic Ideas

The following section provides examples to explore the range of ideas which could offer strategic benefits to a whole place approach to climate change. The purpose of including specific projects in this section is to illustrate the idea in action and not a direct endorsement of them as potential national developments.

Metropolitan and River Catchment Scale Green and Blue Infrastructure

SEPA have reported that around 284,000 properties in Scotland are currently at medium risk of flooding and by the 2080s this could increase by over 100,000 due solely to the impacts of climate change. Adopting a metropolitan and river catchment scale approach to green and blue infrastructure will support addressing this issue.

The Gilcomston Burn runs through Foresterhill Campus, the site of Aberdeen's main hospital and the University of Aberdeen's Medical School. The campus includes extensive areas of impermeable surfacing that accelerate surface water run-off and contribute to significant downstream flooding in central Aberdeen.

The aims of the [NatureScot](#) backed campus-wide green infrastructure strategy are:

- to create a network of on-street and off-street public realm and green routes which connect into wider active travel routes and green corridors
- to create a series of 'destination' greenspaces, which will act as a focus for outdoor activity for patients, staff, visitors and the surrounding communities
- to create a water management system, integrated into the green routes and spaces to reduce current site run-off and to accommodate necessary attenuation associated with future planned development
- to create a connected green network across the campus that provides valuable habitat and increases the ecological value of the site.

Carbon Absorbing Landscapes (rural and urban contexts)

Urban trees can cool cities between 2°C and 8°C, when planted near buildings, trees can cut air conditioning use by 30% and according to the UN Urban Forestry Office, reduce heating use by a further 20–50%. One large tree can absorb 150kg of carbon dioxide a year, as well as filter airborne pollutants, including fine particulates.

Urban forestry also represents an opportunity to benefit a significant proportion of the Scottish population, providing accessible spaces for active travel, exercise, and other forms of recreation, promoting physical and mental health and well-being, improving social inclusion, helping to reduce health inequalities. Greening of building roofs, facades and the urban realm will reduce rainfall run-off intensity and flooding, contribute to the creation of a nationally connected green network, improving biodiversity and the ecological value of our urban areas.

Coastline Nature-Based Flood Protection

CREW report that approximately 20% of Scotland's population lives within 1km of the coast and about 70% within 10km. The risk of flooding caused by erosion, extreme weather events and sea level rise is increasing and will impact our buildings and infrastructure. 1 in 11 homes and 1 in 7 businesses are already at risk of flooding and around 2000 more properties a year will be at risk every year due to climate change.

Natural flood management and coastal adaptation strategies offer an alternative to hard engineered coastal protection. When well designed and delivered effectively, natural flood management measures can provide additional benefits for both people and nature including increased biodiversity and the creation of carbon sinks. Options include: [Managed Realignment](#), [Saltmarsh Restoration](#), [Sand Dune Restoration](#), [Shingle Restoration](#), [Recharge](#) and [Alleviation of Coastal Flood Risk](#)

Compact Settlement Development

The form of the built environment plays a critical role in the carbon intensity of our places and lifestyles. Sprawling neighbourhoods require more carbon intensive infrastructure to service and connect them and typically generate higher carbon emissions from transport. Dense and compact settlements which are supported by walkable neighbourhoods, mixed use developments and good amenities and transport links help support more carbon conscious lifestyles.

The [Meadowbank masterplan](#) in Edinburgh will create a dense, compact neighbourhood on a 5ha brownfield site next to the new sports centre. Around 600 new homes are proposed, along with everyday services and facilities on site. The building form ties in to the surrounding character of the area and the development takes a 'people priority approach' with active travel links and limited space for cars.

Decarbonised Local Heat and Energy Networks

Heating our properties makes up a significant part of our energy consumption and greenhouse gas emissions. Decarbonising heat and energy is essential to tackling climate change and will support a more resilient and carbon conscious place.

The [Glasgow City Innovation District](#) (GCID) is a vision for the city to create a '100% Renewable Climate Neutral, Climate Resilient' corridor. The GCID will integrate heat, power, transport, adaptation and well-being solutions that are driven by social inclusivity. This project will prioritise the use of natural resources and add climate adaptation solutions to existing and planned development, acting on current and predicted impacts of climate change. The project will incorporate the deployment of 'at scale' infrastructure such as: heat pumps in the River Clyde; city scale District Heating network planning and delivery; Smart Grids and systems that enable heat and power and transport flexibility for businesses and residents. This 'whole systems' approach to decarbonisation will be a first for Glasgow and for Scotland.

Sustainable Transport Infrastructure

Transport is still currently the largest contributor to Scottish emissions and the link between active transport choices and health and wellbeing is being increasingly prioritised nationally. The Sustainable Travel Hierarchy is to be embedded into transport infrastructure investment decision making. Walking, wheeling, cycling, public transport and shared transport options are to replace, where possible, our reliance on single occupancy private car use and to aid with the reduction of inequalities and the adaption of our infrastructure to the impacts of climate change.

Recent projects challenging our transport reliance's include: [Edinburgh City Centre Transformation](#), Glasgow's forthcoming Connectivity, City Centre Transformation and Liveable Neighbourhoods Plans, [Sustrans Places for People Programme](#) and [The Leven Project](#).

Strategic Food Growing Networks

Food systems contribute around a 3rd of global greenhouse gas emissions. Simultaneously, climate change threatens the ability of food systems to deliver good food for all. The creation of resilient and fair local supply chains to reduce Scotland's reliance on unsustainable imports is necessary. The COVID-19 pandemic has highlighted the importance of local food networks and community resilience.

[Sustainable Food Places](#) brings together pioneering food partnerships from towns, cities, boroughs, districts and counties across the UK to drive innovation and best practice on all aspects of healthy and sustainable food. [Nourish Scotland](#) believes that only a transformation of the whole food system will result in effective and sustainable solutions, they support grassroots community efforts and influence national policy and legislation and use each to inform the other. [Central Green Scotland Green Network Growing Food Together](#) fund to encourage community growing and promote healthy eating.

Communicating Jeopardy

Scotland has experienced the detrimental impacts of unmitigated climate change. Often felt most acutely by our vulnerable and deprived citizens. The cost of inaction will be significant to all sectors. There may be a need to articulate the jeopardy of not taking a whole place approach to climate change and short-termism. Climate change and place are likely to form the overarching theme of future national planning frameworks. If progress is limited within this framework to cut carbon emissions, offset, repurpose and adapt, during the next decades, places will face an even more challenging set of issues. National Planning Framework can set the tone of this potential risk, with an aim of filtering down into regional spatial strategies, development plans and local place plans.

Delivery

To create the basis for a more joined-up delivery at all scales of planning, there is a need to align the range of spatial strategies and policies currently developed outwith planning, collaboration amongst the people involved in preparing, funding, delivering and using developments and rethinking the range of processes which currently operate in isolation from each other.

The success of the Place Principle would be that any intervention, investment, plan or design work towards more than one of the priorities of the place, and not counter to any of them. When identifying national developments, NPF 4 should require that the Place Principle is demonstrated. This would likely involve the reinforcing or establishment of partnerships across different agencies, authorities and sectors.

Summary

Overarching aspects to consider when developing National Planning Framework 4 include:

- The suite of national developments identified should reflect the combination of reducing, repurposing and absorbing carbon interventions and climate adaptation measures.
- The carbon conscious place principles form a useful lens to consider proposals for developments nationally recognised.
- Climate change and place should remain positioned as overarching themes.
- NPF4 should set out a definition for placemaking and the meaning of net zero carbon society and climate risks to Scotland.
- The framework must set the right direction to meet these increasing reduction targets and identified proposals should consider the carbon 'lock in' effect.
- NPF 4 needs to articulate the jeopardy on places or proposals not taking a whole place approach to climate change or by taking too short-term a view.
- The Place Principle should be built into the delivery approach set out in NPF 4 and national developments should be required to demonstrate this in action.

6. Conclusion

One of the most important drivers for change of our time is undoubtedly the climate crisis. It impacts almost every aspect of our lives. As the scale of the challenge becomes more apparent, the different levels of spatial planning in Scotland are being recognised as powerful tools to support effective climate action. Over long periods, planning can set spatial ambitions for places. Periods long enough to make step changes in how we respond to carbon emissions and the impacts of climate change such as temperature and sea level rise. However, it also has a very current role in establishing a framework for decision making which is cognisant of the carbon consequence.

This report has been commissioned to explore climate change in relation to place planning and provide insight to inform planning reform. It directly follows on from the pilot project A&DS undertook, which considered a whole place approach to designing for a changing climate.

Key messages emerging from the commission are:

National Level

- Shifting Scotland's reliance on carbon intensive developments, services and modes of transport, will need a whole place approach on a national scale.
- The eight Carbon Conscious Places principles

identified in the pilot provide a useful means to consider national developments proposals.

- Climate change and place should remain positioned as overarching themes within NPF 4 and definition for placemaking, net zero carbon Scotland and climate risks should be outlined.
- NPF 4 must set the right direction to meet these increasing carbon reducing targets over the next 10-30 years and national projects should consider the carbon 'lock in' effect.
- NPF 4 needs to articulate the jeopardy on places or proposals not taking a whole place approach to climate change or by taking too short-term a view.
- The Place Principle should be built into the delivery approach set out in NPF 4 and national developments should be required to demonstrate this in action.

Local Level

- Climate change and carbon conscious thinking must be embedded into the culture and content of development plan-making.
- Development plans should support a combination of measures to reduce, repurpose and absorb carbon and adapt to the impacts of climate change. The particular mix of measures in each authority will differ depending on the local opportunities and assets.
- The foundation of the development plan is the

spatial objectives and priorities, exploring and supporting 'what kind of place do we want to be?'

This also needs to align with community planning and Local Outcomes Improvement Plans.

- Strong place leadership sets the bar for quality, promotes collaboration, innovation and supports long term public interest. There is a vital leadership role for the public sector.
- Early and meaningful collaboration is critical as it helps determine the spatial objectives and priorities, the best locations for change and identify the right development, in the right place, contributing to decarbonisation and climate adaptation efforts.
- The presentation of a development plan should be the product of a collaborative process that articulates shared ambitions and priorities at a strategic whole place level through a clear spatial strategy, and at a local area level through collaborative briefs/frameworks for priority places.
- It is important to start with a clear and collective understanding of the spatial objectives of a whole place before developing detailed matters for delivery. Without the bigger picture, the ambition of a place-based approach will founder.

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