

Net Zero Leadership and Low Carbon Construction: Workshop Programme 2023

Strategic Territory Partnering Board (STPB) and
Built Environment Smarter Transformation (BE-ST)

May 2023 to December 2023



SCOTTISH
FUTURES
TRUST

BE-ST
Built
Environment
—
Smarter
Transformation

SCHOOL OF
INNOVATION
AND TECHNOLOGY
**THE GLASGOW
SCHOOL OF ART**

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Executive Summary

In 2023, the Strategic Territory Partnering Board (STPB) and Built Environment Smarter Transformation (BE-ST) established a partnership to develop a collaborative sector-wide Net Zero Programme. The programme's ambitions have been to share and understand emerging best practice approaches to net zero leadership and the delivery of low carbon construction solutions for new build and retrofit projects across the Hub North territory.

The School of Innovation and Technology (SIT) from the Glasgow School of Art (GSA) were commissioned to facilitate a co-design process that brought together Hub North, Scottish Futures Trust (SFT), Local Authorities, blue light services and NHS estates from across the region, along with delivery partners and solution experts.

This collaborative process involved five large-scale creative events running two workshop streams, Net Zero Leadership and Low Carbon Construction, from May to December 2023. The workshops supported cross-sector and territory-wide participation within the development of the Net Zero Programme. The outputs from this workshop series are intended to create the basis for long term collaboration and action, maximising opportunities for successful implementation and creating real value across the region.

Initial ambitions and challenges for meeting net zero across the region provided a starting point for the workshop series. The STPB, Hub North and BE-ST identified a need to better understand the funding landscape and opportunities to target alternative funding using high quality business cases and proposals for joined-up working. Those who participated in the workshop programme have developed four key areas for strategic priority – energy, housing, land, and skills – however, there is recognition that a wider agenda is required to address all needs of the Net Zero Transformation.

There has also been recognition that insufficient internal funding requires new shared and innovative ways of working across the territory; that collaboration between private and public sector partners is needed to enable effective strategies, commissioning and delivery at scale and pace; and that appropriate skills and capacity is required regionally to drive the Net Zero Programme forward.

Next Steps

Within this challenging delivery context, where funding is a key constraint, this programme has established a collaborative approach and foundation for action. To this end, the following activities are being developed:

1. Existing programmes of work

Such as LHEES, LEIP3 and Scottish Fire & Rescue Service Community Resilience Hub programme where co-ordination and collaboration across the territory will add value.

2. External funding support opportunities

Such as HACT retrofit credit model, UKRI opportunities and liaison with Scottish & UK Government to understand funding support.

3. Developing new models of delivery

Such as place-based approaches, housing propositions that create new finance and delivery models, and a strategic approach to council tax reform to fund infrastructure.

4. Secure long term funding

For sustainable net zero delivery.

Future Development

This programme has also played a significant role in informing the development of a Territory Net Zero Partnership. This aligns directly with strategic work that has been developed by The Scottish Cities Alliance, SOLACE and COSLA, which recommends that regional net zero partnership models are essential to deliver the Scottish Government Climate Change Act.



SUCCESS

LISTEN
TALK
CHANGE

COMMON
PURPOSE

FOR
THE
PEOPLE
+ PARTNERS
PRIVATE
YOUTH

YOUTH

URBAN
ISUE

PERMISSION
FAIL

SCALE OF
SITES
OF LOCALITY
IS KEY
MORE
DISPERSED
ACROSS
TOWN

RE-USE OF CURRENT
BUILDINGS

DATA
PEOPLES
+ CHANGES
LINK TO 20MIN

WHAT IS STOP
WORKING TOGETHER EFFECT
ALIGNMENT

ROUTE THE
TO DEL
ARE THE

A Programme for Net Zero Transformation across the Northern Territory

Workshop Series Outcomes

The Leadership and Low Carbon workshops ran in parallel over the 6 sessions, coming together at strategic points to co-create and share knowledge. During co-creation, territory wide stakeholders and hub North delivery partners agreed upon four key areas where they could maximise collaborative working to support a net zero transformation:

- 1. Land & Nature:** Supporting climate change adaptation and biodiversity
- 2. Energy:** Delivering clean, affordable and efficient energy
- 3. Housing:** Increasing affordable, energy efficient homes and public sector buildings
- 4. Skills & Infrastructure:** Developing regional Net Zero skills and embedding them within supply chains

These key areas are presented on the following pages as a set of territory wide shared outcomes and solution areas.

Areas were then considered in detail, building on the progress that is already being made across the Northern Territory in relation to the Built Environment and the level of ambition to work collaboratively on increasing these successes. Each key area has been broken down into the following subsections:

- **Sector-wide Ambitions & Solutions:**

The shared aims and objectives of the territory wide workshop participants;

- **Existing Case Studies:**

Collaborative and Net Zero best practice development examples from across the region;

- **Potential Impact & Indicators:**

The types of impact that is expected through the development proposed, including potential metrics for monitoring;

- **Collaborative Development Proposals:**

Key pieces of work that would enable development in this area through cross-sector collaboration.



Land & Nature: Supporting climate change adaptation & biodiversity

SECTOR-WIDE AMBITIONS & SOLUTION AREAS

1. Making the right decisions about how to use natural resources across the region

Developing strategies for natural capital investment that delivers community benefits across the region

Working with local authorities to repair natural infrastructure

2. Supporting active engagement in decision making about net zero assets

Promoting policy around net zero local decision-making, e.g. participatory budgeting, public engagement and community ownership of net zero assets

Embedding land and nature within local development plans and consultation to inform planning

3. Creating tools and frameworks to enable this locally and regionally

Ensuring relevant policies and guidance are clearly published and easy to understand

Aligning targets and embedding climate change adaption into all net zero and mitigation work

EXISTING CASE STUDY

Travel Lodge Fort William *Circular Economy; Low Carbon*

Extension to Travelodge Fort William to deliver low operational energy and support improved biodiversity

POTENTIAL IMPACT & INDICATORS

Improved biodiversity

NESBReC Records

Improved training & skills in land management, biodiversity & adaptation

LCLIP Impacts

Co-benefits: health & wellbeing, greenspaces, regional growth

Reporting Improvements

More people wanting to live these

Improved adaptation & resilience capability

Reduced flooding events

COLLABORATIVE DEVELOPMENT PROPOSALS

Proposal Title	A Dedicated Project Management Office (PMO) for Net Zero	Mutual Regional Approaches	Co-ordinated cross-Hub approach	Biodiversity Portal & Toolkit
Challenge & Intended Impact	A 'one-stop-shop' PMO would provide a 'resourcing ecosystem', increase collaboration, save time and money at an organisational level.	Those who make policy and governance decisions across the region require more knowledge of the sector to make better informed decisions.	Multiple consultation asks could be shared and coordinated across the HUB partners to reduce tasks and strengthen responses e.g. water and wastewater and drainage consultation.	Trying to enhance, restore and protect biodiversity as part of the Net Zero journey towards embedded mitigation and adaptation strategies.
Solution / Outputs & how this contributes to delivering Net Zero	A PMO for Net Zero would support the sector to leverage local networks and regional leadership and management, for example towards finding solutions and guides on LEIP 3. It was proposed that a funded lead authority or HUB could lead the development of a territory-wide PMO and use this as a collective approach to funding via a "Territory Unitary Authority Fund".	Increase visibility of the program of work with CEO, Boards and council leaders. Outputs could include conferences on specific topics or a joint board for strategic decisions.	A HUB lead policy persons or funded lead authority, perhaps the PMO model, could support the delivery of this, which would provide a strong response and better, more inclusive policy/strategy through shared learning.	The creation of biodiversity portal as a toolkit that would support whole costing and maintenance of biodiversity enhancement projects, quantification and production of developer's reports. This could also be used to more strategically collaborate across the region towards linking projects and connecting nature corridors.
Innovation – What makes this approach/ outcome different from business as usual?	Local Authorities have an opportunity to collaborate on real and practical work through access to a single fund.	Business as Usual for local government but not usual at multi-Local Authority level. This solution would provide more democratic links and accountability across the region and support community engagement.	Co-production of guidance to reflect the real-world impacts in the territory. This solution puts collaboration principles into practice. This would support the development of non central belt policies, with a focus on policy and strategy for the northern territory by the people who work and live there.	This solution may provide joined up sharing, simplification of information and speed up progress towards Net Zero transformation. There would be an opportunity for the private sector to invest in tools and development subsidising to enable free use by the public sector. The private sector could use the toolkit to engage in planning and environmental impact assessment. For communities, this would help to evidence environmental health and wellbeing (clean air, nature exposure, community space, loneliness, education and skills). There could be multiple uses for schools, colleges and universities to provide more awareness, better collaborations with community, public and private sectors or the development of a planning app for evidencing purposes.
Collaboration – What added value is there in doing this together?	By sharing resources, local authorities would get access to more opportunities at greater pace with less stress and individual risk and less disruption to the system.	Strength of cross lead authority programme (non-political) that allows Scottish government to support. A lead Local Authority may be required to establish conference and support governance	This solution may mitigate the need for each Local Authority to work individually (8x Officer time minimum) per consultation and instead offers 1 or 2x the officer time. A policy and consultation lead may be required to facilitate cost split across the Local Authority partners.	This solution may bring resources together, increase confidence in outcomes while saving time and money through a more standardised approach to measuring and reporting. It was proposed that a collaborative team involving Adaptation Scotland, Nature Scot, Sustainable Scotland Network, Climate Intelligence Service, and NesBrec would be ideal to provide access to data, information, sources, and wider stakeholders.

Energy: Delivering clean, affordable & efficient energy

SECTOR-WIDE AMBITIONS & SOLUTION AREAS

1. Co-ordinating green energy opportunities across the territory

Supporting testing of green energy infrastructure across the region

Shared research into reliability, full impact & whole life energy costs

Joining up territory-wide local heat and energy models

2. Using new energy models to deliver mutual benefits regionally

Using joined up working to support local supply chain capacity building

Identify learning opportunities to maximise skills development

Ensuring local energy models deliver community benefit

3. Linking planning system with new energy schemes

Embedding local solutions within planning processes

Connecting new housing developments with local energy schemes

Improving public buildings, e.g. schools

PROJECT CASE STUDIES

District Heat Hub, Caithness *Low Carbon; Affordable*

Local carbon district heating scheme using woodchip and biomass to reduce carbon and cost.

Energy Transition Zone, Aberdeen *Low Carbon*

Green energy cluster at the South Harbour. Working in partnership with communities, supporting local supply chain & skills growth

IMPACT / SUCCESS METRICS

Increased areas to be developed

Sufficient grid capacity

Demand for scheme

Education and private bodies to develop local skills

Common forum for all parties to influence policy

DNO & meter output data - metering of demand & generation

Local skills and awareness

Reducing operation & maintenance cost

Outcomes & outputs from collaboration

COLLABORATIVE DEVELOPMENT PROPOSALS

Proposal Title	Local Energy Hubs	Regional Energy Wealth Fund	Interconnected Local LHEES Plans
Challenge & Intended Impact	There is a limited electricity network currently for both export and use of electricity. There is an opportunity to Improve collective intelligence around energy. Net Zero is moving heating and transport to electric solutions, which will increase issues of a constrained grid.	In response to energy pricing models, and a lack of local generation tariffs, participants were conscious of the profits received by large companies. A fair distribution of energy pricing was recognised as a need to meet levelling up strategies.	All local authorities appear to be taking separate approaches to develop Local Heat and Energy Efficiency Strategies (LHEES). This increases the resourcing required to implement and misses out on valuable knowledge exchange opportunities.
Solution / Outputs & how this contributes to delivering Net Zero	Having locally produced energy used and stored in energy "hubs". Hubs could be interconnected to support one another according to demand. This solution would increase community resilience without requiring such large reinforcement of grid infrastructure.	Maximising benefits of renewable energy and improving lives through clean energy generation. A Regional Energy Wealth Fund was viewed as a potential solution to secure regional economic benefit from the growing green energy and natural capital sector. This was also viewed as an opportunity to increase local net zero 'green' employment.	Authorities have strategies but not delivery plans that allow for regional integration and there is a lack of knowledge and skills locally to manage LHEES development. By creating a coordinated pipeline of net zero LHEES plans and projects, shared learnings, funds and technology can be utilised. This could help fast track knowledge and skills locally on all forms of renewable energy.
Innovation – What makes this approach/ outcome different from business as usual?	The currently majority of energy produced is exported from local areas and does little to increase resilience. This proposal provides local resilience while reducing the strain on the national grid through community energy cost benefit, increased reliability, and reducing the likelihood of power cuts. There may be a greater opportunity for financial reward for areas producing energy and storage.	It was proposed that this solution learn from the oil and gas model that benefited Shetland through its community wealth fund, in which a percentage income was generated for community purposes from the sale of the natural capital produce. While this could create fairer energy pricing and fuel poverty reduction, it could also improve overall energy efficiency through reinvesting income into retrofitting and housing projects.	This approach could allow for the region to define itself as a "centre of excellence" within LHEES and support local skills development and job creation. A shared fund or financing approach could be developed to support connected working. This would improve the lives of communities through: acceleration of net zero projects; improved health improved; reduced cost of living; reduced fuel poverty; warmer homes.
Collaboration – What added value is there in doing this together?	Collaboration would be required to agree where hubs are located and to gather data on local energy use with future use projections. Potential impact includes improved data and collective knowledge and a general de-risking of Local Authority investment through a regional approach.	The regional benefit may be applied at scale if this involved collaboration between public and private sectors and regional education. It was suggested that the energy regulator, local authorities, government, private sector (SSE), and planners would need to be involved in the set-up of this approach.	Collaboration across local authorities to a shared regional approach would have significant benefit: shared resources and knowledge; reduced costs; development of best practice case studies and business cases; a pipeline to grow local skilled supply chains. The programme would need to be managed to reduce competition in order to benefit public sector value for money. This could make use of public and private R&D funds.

Housing: Increasing affordable, energy efficient buildings & homes

SECTOR-WIDE AMBITIONS & SOLUTION AREAS

1. Develop a collective approach to delivering affordable and efficient housing

Commissioning a collective approach to surveying common archetypes

Develop more MMC facilities across region

Supporting consistent maintenance of listed buildings

2. Create a gold standard model for affordable and net zero social housing

Creating a range of housing delivery models that improve outcomes and achieve revenue savings

Developing a range of housing types with planning and building warrant approval built-in

3. Align strategies and tools with policy and planning

Develop consistent briefing information in line with policy

Develop a tool that models potential interventions to improve energy efficiency and net zero targets

PROJECT CASE STUDIES

NHS Orkney *Low Carbon*

Decarbonisation through smaller and remote buildings, fabric upgrades and renewable energy

Bilbohall Development, Elgin *Affordable; Low Carbon; Active Travel*

Creating active travel routes into affordable housing development, e.g. cycling and walking infrastructure

Ferry Road Residential Development, Edinburgh *Low Carbon; Circular Economy*

Biodiversity spaces and infrastructure within new housing, e.g. green roofs, wetlands, natural drainage and heat pumps

IMPACT / SUCCESS METRICS

Unlocking land supply
Reducing cost of refurb/reuse
Reduce deficit in labour market
Reduce professional skills gap
More skills in MMC and retrofit / qualification rates
Increased affordable, efficient housing numbers
PAS 2035 affordability
Reduced tenancy costs / fuel poverty
Vacancy reduction

COLLABORATIVE DEVELOPMENT PROPOSALS

Proposal Title	Delivering Còsagach	Future Proofing the Workforce
Challenge & Intended Impact	More knowledge is needed to understand how to deliver a programme of increased housing energy efficiency through new build and retrofit over an extended period to 2045. There is a need to identify the potential barriers to delivery and what is required to address this regionally and nationally.	There is a gap in regional workforce to support the development and delivery of energy efficient homes at scale. A future pipeline of innovation needs would allow for more strategic funding and targeting of green skills development.
Solution / Outputs & how this contributes to delivering Net Zero	To develop a dedicated regional plan to invest in the housing development industry from feasibility to implementation on the ground. this would deliver substantial quantities of energy efficient new build and retrofitted homes that meet passiv haus standard. This would involve: identifying homes that are no longer fit for purpose or economic to invest in; and increasing the number of people with the necessary skills to undertake efficient home building.	Alongside a national/regional programme for efficient and affordable home building, training and education should be targeted to support delivery. This would involve new marketing that focuses on lifestyle and purpose to attract new entrants. Support and training could be developed with government and SFT, consultants, contractors etc. through a joined up, collaborative approach.
Innovation – What makes this approach/ outcome different from business as usual?	Collaborative thinking across local authorities and supply chains is required to understand long term delivery needs, the full extent of the issue and identify key timelines for delivery. This approach could define and share best practice while identifying standardised technical solutions to aid scalability. Communities would benefit through: more homes; better insulation; cheaper bills; better health and places; efficiencies of scale; standardised building standards.	This would improve consistency of skills and workforces regionally, would be more resource efficient, cost effective and high impact. A place-based approach would be taken towards identifying hot-spots for skills gaps in local housing and retrofit programmes. Local schools and education facilities could then be used to develop and deliver skills and training for local people.
Collaboration – What added value is there in doing this together?	This approach would require government coordination using existing information submitted to local authorities and revised by organisations such as Homes from Scotland. Information and planning should be found in a single digital location; GIS-based and being updated annually.	This would require a collective approach through collaboration between industry, LAs, and education systems. Industry would therefore inform education and training needs strategically, perhaps through a National Construction Skills Programme.

Skills & Infrastructure: Developing regional Net Zero skills & embedding them within supply chains

SECTOR-WIDE AMBITIONS & SOLUTION AREAS

1. Engaging private & public sector to invest in long-term regional net zero training

Engage with public and private sector to develop long-term training strategy to the region

Work with education bodies directly to train for design, use & maintenance of NZ systems

2. Embedding new skills & local employment opportunities within project pipelines

Improve carbon literacy across the sector & region

Develop mechanisms to ensure projects understand what NZ targets and skills they need to deliver, e.g. via green passports

Co-ordinate opportunities with skills development needs

3. Building local supply chains by co-ordinating net zero skills with demand

Understanding what capacity/ capability exists within local suppliers

Work with local supply chains to create demand, invest in new capabilities & market this appropriately

PROJECT CASE STUDY

Energy Transition Skills Hub, Aberdeen ***Low Carbon; Skills***

Set to open 2024 at NESCol. A Net Zero skills hub to equip workforce of the future and attract investment and employment opportunities

IMPACT / SUCCESS METRICS

Increase in qualified workforce locally

Increase in routes to qualification

Housing supply to support needs of workers across the region

Long-term picture of funding landscape informing skills development

Number of local projects

Number of available courses locally / regionally

Number of local people in net zero employment

Number of modern apprenticeships

COLLABORATIVE DEVELOPMENT PROPOSALS

Proposal Title	Supporting existing workforce to enter net zero sector	Supporting existing workforce to enter net zero sector	Supporting the next generation workforce to enter net zero industries
Challenge & Intended Impact	Targeted skills development requires a visible pipeline of work to support alignment. While local people need to know what opportunities are up-coming to support their business and skills development in targeted and sustainable ways to match supply and demand.	Local organisations are small or medium scale and are often unable to bid on new large-scale tenders, which reduces their ability to be involved in net zero contracts. Local people who previously worked in oil and gas are losing employment and becoming available for new opportunities.	Many net zero jobs require people to have an addition 'base' qualification, e.g. plumbing/roofing and then undertake net zero/ sustainability training on top of this, which adds too much time onto the process and reduces their ability to make income/meet demand quickly. Net zero training is not well established and current exists as a 'tag on' to existing industries/trades. Young people are not being told about new net zero opportunities or the scale of this sector locally, so opportunities for skills development/ new careers are being missed.
Solution / Outputs & how this contributes to delivering Net Zero	This solution proposed to support areas to establish their own place-based pipelines of work and identify the skills that they need. Then these local pipelines could be aggregated with an interconnected (interoperable) layer to these pipelines to connect skills needs and training / contracting opportunities at scale across the region. This would need to show a live map of skills needs.	Working with oil and gas sector to create skills development routes into new green energy/tech jobs. this would involve: setting up a gradual pathway into net zero jobs; supporting SMEs in Scotland to take up local maintenance contracts for new net zero technologies, e.g. heat pumps etc. since these are at the appropriate scale for SMEs and create continuous work flows. A 'train the trainer' model could be adopted to improve efficiency and provide better coverage across rural and island locations. More net zero workforce in the region could drive investment and support local benefits.	A targetted approach to create direct Net Zero jobs training would involve school engagement and pathways mapping, targeted comms for young people to support their career trajectories into net zero industries through appropriate skills routes. This would involve creating new trade routes for young people; getting into schools to raise awareness; mapping the skills needed by industry and connecting them to course developments. Overall this could contribute to development of net zero specific/core courses across educational bodies, e.g 'net zero training for LEIP3 programme.'
Innovation – What makes this approach/ outcome different from BAU?	This would provide a visibility of shared needs and outputs and costs towards agreeing shared commitments and an overall joined up approach. This could match supply and demand locally at scale (regionally and long-term). Communities would benefit through: best use of limited resources; local services and amenities better managed; more targeted skills development for emerging opportunities in local areas; creating clear prospects for young people in areas by understanding what work is upcoming and how to 'grow' into it or establish new businesses and roles.	Additional training could be provided to make the most of transferable skills from adjacent industries. This involves targetted re-training in new skill sets with focus on new technology and new training development styles to maximise existing workforce and skills. This would make education accessible for those looking to re-train or improve employment opportunities. It may also attract new people to the area when appropriate (potential housing/infrastructure needs to accommodate this).	This would involve greater awareness and understanding and could create new common qualification standards (RICS, RIBA) and other net zero recognised qualifications. Research is required to benchmark progress and understand what innovations currently exist across the country, Europe, and globally. A focus would need to be placed on demystifying the sector to answer questions such as: 'What actually is net zero? How do we make this tangible and clearer to people by outlining the jobs/work to be done – can we go beyond net zero? What should our real ambition be?' Other approaches could include: making sure employment benefit is sustained throughout projects; and using skills KPIs to track progress.
Collaboration – What added value is there in doing this together?	This would require joined up thinking and parallel work packages to share benefit and risk management. This way of working could become business as usual, but it requires a neutral lead e.g. Hub North or other. This could also build upon place-based net zero visibility work already being undertaken in Western Isles.	This would involve collaboration with oil and gas industries to learn about current skills and redirection programmes. Collaboration with North East Scotland College and UHI may be required. Local suppliers could be grouped to deliver targeted training sessions through shared teams and resources. SFT, BE-ST and NESCol's new Net Zero Skills Hub in Aberdeen (set for 2024 opening) could be utilised.	Collaboration between education and industry would be required, alongside a targetted comms programme to market new opportunities strategically. Engagement with DYW Scotland (Developing the Young Workforce) could support this.

Approach & Methods

Co-design

The School of Innovation and Technology (SIT) at the Glasgow School of Art (GSA) are experts in exploring complex systemic issues and co-designing collaborative solutions with diverse stakeholders. SIT utilises participatory and co-design methods – including experience and system mapping, co-design activities and tools, storyboarding and experience prototyping – to meaningfully involve people in understanding the current challenge and collectively exploring future innovations, not just responding to immediate needs. The approach enables ‘genuine’ participation, including groups not usually involved in innovation and change, involving them right through the design process, eliciting and visualising professional and lived experience to empower and support creativity and collective decision-making.

Through this collaborative design approach, the team facilitated open and deliberative discussion between diverse construction stakeholders through a series of iterative workshops to explore and inform the Net Zero Programme for the region. Creative engagement allowed participants to contribute to shared future visioning and strategic prioritisation. As a result, attendees were able to think openly about alternative models of working in response to key challenge areas.

Workshop Methods

The design of the workshop series focused upon:

- Creating forums for co-design activities that remove barriers to communication, neutralise traditional hierarchies and provide a level-playing field;
- Developing materials that everyone (regardless of their ‘design’ skill) could engage with and use to provide their own experiences, needs and ideas;
- ‘Bringing-into-being’, by iteratively prototyping, testing and refining innovations. As such, the process framed and created the ‘spaces’ for collaborative engagement, bringing together participants’ experience to reimagine and co-design implementable solutions (Teal and French 2020).

Each workshop followed on from the previous in an iterative and generative way, with the design researchers from SIT consolidating findings and the end of each and translating these into materials for the next. Both the Leadership and the Low Carbon Construction workshop groups contained stakeholder representation from Local Authorities, Blue Light Services and NHS with the addition of supply chain partner representation including architects, planners and engineering consultants on the Low Carbon programme. Specific engagement methods were developed for both stakeholder groups to support inclusive participation and to translate knowledge acquired from both into tangible opportunities to tackle shared innovation challenges.

Event 5:
Proposal Development
&
Financial Collaboration



Event 4:
Measuring Success
&
Programme Definition



Event 3:
People & Place



Hold & Check-in:
Reflecting on Collaboration



Event 1:
Challenge
Mapping



Event 2:
Collaboration

Workshop Overview & Timeline

Four of the five events involved two parallel streams of activities, running together with strategic cross-over points: one for public bodies representing Net Zero Leadership, such as Local Authorities, NHS, Police and Fire Services; and another for supply chain stakeholders who represented Low Carbon Construction.

This ensured that each group of participants were able to deeply explore the challenges and opportunities relating to their sectors, while sharing their challenges and needs for collaborative innovation. Intermittently, the two groups convened to share their insights and attend programmed talks from funders and external experts. The final workshop in December brought both groups together to collaborate on developing the components of the Net Zero Programme and to create a set of collaborative project proposals to strategically target regional funding.



Workshop 1

Challenge Mapping

Attendees and specialists:
19 x Net Zero Leadership
24 x Low Carbon Construction

Represented:
30 x Different organisations, including
9 x Public bodies



Workshop 2

Collaboration

Attendees and specialists:
20 x Net Zero Leadership
25 x Low Carbon Construction

Represented:
24 x Different organisations,
including
7 x Public bodies



Workshop 3

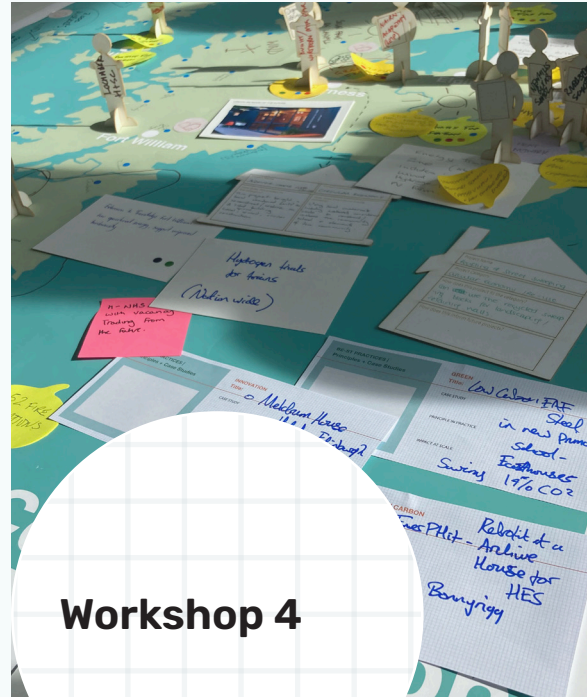
People & Place

Attendees and specialists:

20 x Net Zero Leadership
23 x Low Carbon Construction

Represented:

24 x Different organisations,
including
9 x Public bodies



Workshop 4

Measuring Success & Programme Definition

Attendees and specialists:

16 x Net Zero Leadership
23 x Low Carbon Construction

Represented:

20 x Different organisations, including
8 x Public bodies



Workshop 5

Proposal Development & Financial Collaboration

Attendees and specialists:

29 x Net Zero Leadership and Low Carbon
Construction together

Represented:

17 x Different organisations, including
6 x Public bodies

Workshop 1 - Challenge Mapping

Summary & Process

In preparation for the first workshop, participants from the Net Zero Leadership and Low Carbon Construction programme contributed to a set of challenge statements: key issues that they experience in their working practices and areas that they would like to focus on addressing together through the Net Zero Collaborative Programme.

These challenge statements were analysed and used to identify three cross-cutting themes and accompanying questions. These were shared to participants before the session to stimulate reflections on their own experiences and aspirations, and to set the scene for collaboratively prioritising areas to address throughout the programme.

The first workshop invited the Net Zero Leadership (NZL) group to translate the challenges into opportunities for innovation and then consider how they relate to the wider funding landscape.

Facilitated discussions were used to discuss priorities, capacity, capabilities and resources. Two speakers were invited to support the NZL through this process:

- **David McIntosh, Associate Director Scottish Futures Trust (SFT)**, focusing on Scotland's City and Growth Deals, green funding and finance, what is currently available and what the future looks like in this area.
- **Neil Whitney, UK Government**, will look at the conversation on funding from a UK government perspective and what is available for Scotland.

The Low Carbon Construction (LCC) group were also supported to discuss the challenges as innovation opportunities, but this time through capturing priority projects and their successes. This supported the LCC group to identify best practice case studies from across the territory. They were joined by speakers who introduced Caithness as a case study and others who discussed a joined-up approach to Learning Estate Investment Programme (LEIP) infrastructure delivery:

- **Steven Anderson from SFT Learning Estate** on the LEIP 3 funding conditions.
- **Matt Stevenson from Ecosystems** to respond to the conditions from a delivery/ solutions perspective.

[Net Zero Leadership Challenges]

Cross-sectoral collaboration/co-operation Social Equity & Accessibility

Clients and Government are working to different Net Zero targets, both in respect of time and definition. What capability and capacity is really required within each Local Authority to ensure regional based targets are met by working with communities, public, private and third sector?

Awareness / Centralised Routemap Capital Budgets & Government Guidance

Future funding streams must be used to incentivise existing businesses to pivot their offerings to enable delivery. We do not fully understand how our estate performs and the actions we need to take to achieve net zero.

We lack guidance from the Government on the mechanisms for offsetting and how these processes will be audited to ensure the veracity of information.

Cost of Longtermism Adaptation vs. Mitigation Social Equity & Accessibility

Getting the funding to tackle net zero elements at scale. Mostly grants must be spent by 31st March so delivery timescales become a challenge.

How do we ensure that climate change adaptation and the biodiversity crisis does not get left behind with a net zero focus mainly on mitigation?

(Infra)structural Barriers

Being on the periphery how can we link dependence on alternative energy sources to Net Zero targets? Many rural areas have a housing crisis. Are there efficiencies or opportunities to taking a regional approach to 'off site / modular' construction to address Housing Challenges in rural or island locations?

[Low Carbon Challenges]

Resource Allocation & Interdependencies

Many rural areas have a housing crisis. Are there efficiencies or opportunities to taking a regional approach to 'off site / modular' construction

Given the reliance upon multiple modes of transportation and travel logistics during the construction phase, is it realistic to achieve low carbon construction in remote island locations?

Achievable Retro-fitting Modular & Holistic Approach

There is lots of information on carbon savings when installed and in use but little on recycled materials used for construction/ make up of items. Where does the technical knowledge lie?

There is now a plethora of new technical guidance around achievement of NZC. Documents have been published by SG, NHS Scotland, Construction Leadership Council etc., How do Participants in hub and wider public sector bodies steer their way through this?

Time v. money v. resource v. expertise Retro-fitting

We are rolling out new technology and build systems to drive towards net zero carbon – how do we support our supply chain in adopting these?

Challenges over eventual building operation and maintenance of new types of technologies means that we revert to conventional systems that are understood and do not require additional training, cost or information for staff to operate and maintain.

Interdependencies Regional Material & Historical Value

How is accurate and fair benchmarking achieved when comparing remote/rural versus urban construction locations? Are there elements that can be flexibly applied, how versatile could the approach be with Scottish materials?

There is lots of information on carbon savings when installed and in use but little on recycled materials used for construction/ make up of items.

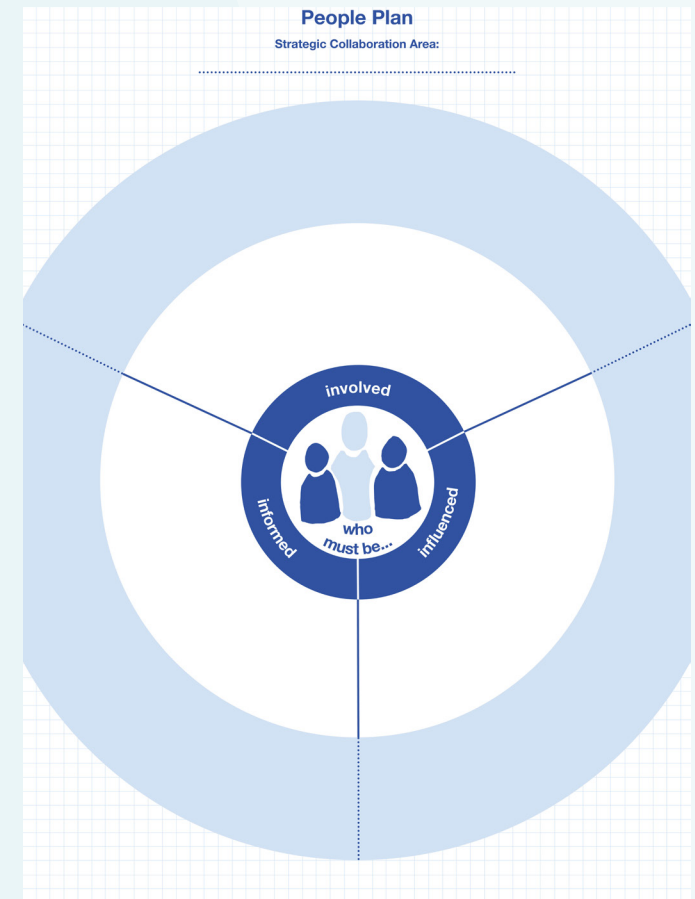
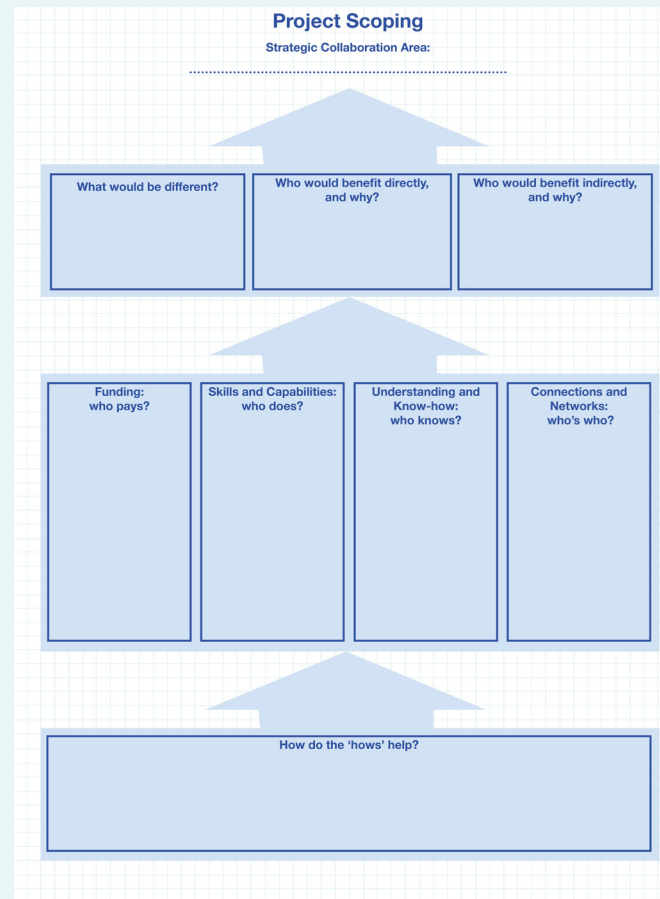
Workshop 2 - Collaboration

Summary & Process

Workshop 2 invited participants to translate the key challenges, explored within workshop 1, into innovation opportunities and visions for collaborative cross-sector working. In groups, participants developed each challenge area through two frameworks: 'Project Scoping' and 'People Planning'. This enabled them to define potential projects as areas for development and also consider the expertise and resourcing required to undertake such work in the future.

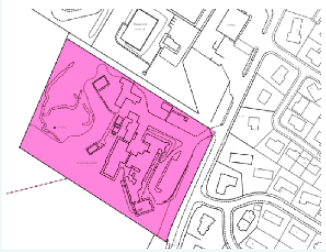
With the Net Zero Leadership team focused on systemic and structural issues, the Low Carbon Construction team used a set of regional case studies to support their proposals. These case studies represented ongoing construction development work that required collaborative and net zero transformation approaches.

Researchers from GSA analysed and synthesised the outputs from both workshops into a set of vision statements that related to emerging themes for transformation (outlined on the following page). The STPB led a series of reflective one-to-one conversations with participants from the workshops to validate and develop the findings.



Workshop frameworks that were used to guide discussions towards building future Net Zero projects and consider the stakeholders who would both benefit and be required for collaboration within delivery.

Dunbar Hospital Site Plan, Thurso



Noss Site Plan, Wick



1. Healthcare Example: NHS Highland Caithness Community Hub and Care Villages

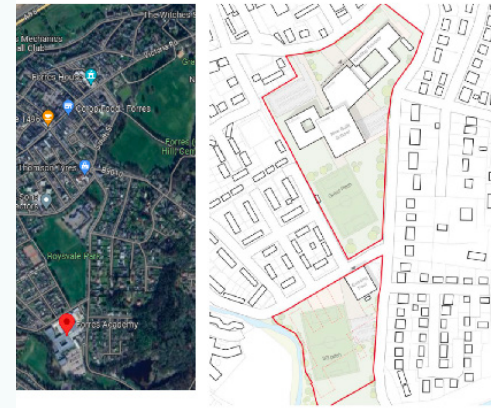
hNSL has been appointed by NHS Highland to develop design for the two new Community Hub and Care Villages at Wick and Thurso, recognising that part of the solution may be the re-use of appropriate existing 19th century, 1960's and 2010's buildings on the Thurso site. The proposed Noss site at Wick is a greenfield site.

2. Social Housing Example: NHS Highland Key Worker Housing

There have been recent initial discussions between NHSH and hNSL to explore the opportunity for providing key worker housing in the Lochaber area.

There is a wider need for accommodation for 'doctors in training' and nursing staff across the NHS Highland territory and therefore consideration is being given to MMC as a potential solution. As this would likely be funded by NHSH and or The Highland Council, the solutions will need to meet SG requirements for NZC.

Proposed Layout



3. Education Example: Forres Academy

Forres has recently been assessed as overall Condition D - life-expired and/or at serious risk of imminent failure. Although the conditions of the current facilities at Forres could be improved with a significant refurbishment programme, the long-term value for money opportunities offered by new build with shared hub facilities has also to be considered. There is also a need to consider the changing nature of teaching and drivers for digitally enabled education and low carbon school buildings, additional support needs and early learning and childcare when considering investment in the future of the learning estate.



4. Blue Light Example: Rural Scottish Fire & Rescue Service Station Replacement

SFRS aims to transform the legacy estate to one which is modern, collaborative, service led and net zero.

NZL Vision Statements

Drawn from the outputs from the first two sessions on Challenges and Collaboration, the following describes the Vision Statements that set out ambitions for collaborative cross-sector Net Zero Transformation.

These visions were created by the Net Zero Leadership team and represent emerging themes for innovation priority.

Housing

Affordable housing is important, but affordable and aspirational living is fundamental. Net Zero Leadership has transformed how we think about liveability and how we experience place in Scotland.

Drawing from the 20-minute neighbourhood planning guidance, we strengthened our partnerships with utility companies, third sector organisations, housing officers, heads of planning, regional development agencies, materials manufacturers, academic institutions, and significantly, local communities of place.

In addition to effectively leveraging different types of investment and sharing knowledge to address housing challenges across the region, we focused on understanding real needs and utilising diverse capabilities. We also engaged with a broader network of private businesses and community councils to enhance the reach of this work, and raised awareness of the need for sustainable housing through a media campaign.

The new approaches we have developed are helping us to collectively share risks and accelerating our speed of delivery, whilst achieving more with less resource and freeing up finance for other projects.

Crucially, this work has made a difference to reducing fuel poverty and progressing towards a just transition for people living and working across the region, as well as helping us to meet our national net zero targets.

Skills

We have contributed to repositioning construction roles as a desirable and respected profession, creating market demand and embedding a sustainable workforce equipped to deliver net zero outcomes.

Education has been central to our approach, both formally and informally. We targeted gaps in primary, secondary, further, and higher education in Scotland and integrated this work holistically with the STEM agenda. We have collaborated with Education Scotland, Skills Development Scotland, and TechFest organisers to develop a range of public engagement strategies that have contributed to building public trust in net zero technology.

We partnered with The Scottish Government to identify the most appropriate funding match aligned to net zero strategy, and linked with local industry and suppliers.

We have the backing of a group of politicians locally and nationally, and have fed our recommendations into a cross-party review.

We now have the capacity to expand these approaches, and have generated a skills development model to implement at scale across the region and at a national level.

Sustainable Energy Production

Working with energy suppliers, engineering council bodies, planning authorities, nature protection groups, and communities and organisations as core energy users, we have developed a smarter grid adapted to new energy demands.

Gaining knowledge of the complexities of the SGN pilot and international precedents and garnering necessary technical, commercial, and legal expertise, we have taken a strategic approach to energy production.

This has led to greater trust and less uncertainty from the public sector and energy suppliers, and reduced bills and enhanced understandings of energy production for energy users.

We have widened public awareness and buy-in by sharing positive community experiences through our social media strategy.

We have produced best practice examples to enable MPs and MSPs to influence national policy and strategy, increasing the attractiveness of investment in green energy and leading to stronger energy resilience in Scotland and the UK.

Land Use & Localism

Taking a territory-wide approach to creating net zero roadmaps, we recognised the need for land use to be given more weight in regional planning.

With a focus on nurturing community assets at both local and regional scales, we developed a partnership with a diverse cross-sectoral network including Zero Waste Scotland, Climate Ready Aberdeenshire, utility providers, SEPA, Scottish Water, forestry, fishing, and other public and third sector organisations working in the circular economy, and were supported by data scientists to identify new land use opportunities to meet net zero targets. People and communities were key partners in this work, and we connected with community councils as representative organisations to support engagement, participation, and local decision making.

As land use can be overlooked terms of attracting funding, we identified an opportunity to leverage funds via SFT and enterprise companies. In addition to improving sharing and transparency within the region and contributing to the rationalisation of the estate, this approach enabled us to garner longer-term sustainable funding.

We have disseminated our work to landowners across the region to enhance buy-in and collaboration. This has informed a series of recommendations aligned to the Circular Economy Act, based around how we collectively value and care for biodiversity.

LCC Vision Statements

These visions were created by the Low Carbon Construction team and represent their visions for the transformation of the case study projects outlined on page 22.

Forres Academy: More than just a school – a place where people want to come

The new Forres Academy is a Skills Centre of Excellence which embodies the learner journey from early years to the Future Workforce. A zero carbon campus where communities of young people, local residents, life long learners, local employers, and commercial organisations come to collaborate.

It's a location to participate in the spine of Education, developing future skills for the world class industries rooted in the region. This includes a focus on Low Carbon Energy, Low Carbon Construction, Future Food Systems (Agriculture) and Distributed (Rural) Digital Health and Wellbeing. Small businesses, larger industries and local government have concessions on campus to deliver services, but also to participate in developing the future workforce.

Leisure facilities and community spaces provide distributed and preventative healthcare which has taken pressure from acute services throughout the region. Both in-person and virtual consultations are available, in non- healthcare settings. Our gym, pool, sports, health suites and nutrition labs are used in collaboration with NHS Scotland for mental health, physio, diabetes and dementia services, but also providing training through the junior and senior phases of school, with Further and Higher Education opportunities being delivered on site by College and University partners.

Our Energy Hub gives access for local businesses and communities to access alternative energy sources. Our Energy partners include national offshore wind schemes, Hydrogen, Community Wind Farms and Heat Systems.

Home to the BE-ST regional hub, skills for sustainable construction and timber management are delivered throughout the curriculum and into professional network through the school, in collaboration.

Lochaber NHS Housing: Vacancy Trading Future Visioning

Key workers can experience the joy of Highland living with short stays at our outstanding Zero Carbon housing.

Working in collaboration with local accommodation providers, our housing forms part of an ecosystem which benefits both visitors and locals.

This intervention has been developed through the creation of a new funding model and secondment and student placement schemes, in collaboration with the higher education sector in Scotland, the local supply chain, and the Scottish Funding Council's Skill Finder.

When our NHS provision is under occupied it can be accessed by local hotel and registered private holiday lets. The opposite is also true.

This has created integration with local communities and provides high quality accommodation for both key workers and tourists, while preventing under occupation of holiday lets which has significant impact on Highland locations.

In addition to attracting new residents to the region, our zero carbon housing has led to new lifestyles for NHS staff and contributing to a more equal work / life balance and improved mental health and wellbeing outcomes. In turn, the local NHS board has reported a notable reduction in staff illness and shortages.

Multi-use Fire Station: A Distillery Visitors Centre and Community Hub Collaboration

A mixed use community / commercial hub has been developed in response to the context. Co-funded by the whisky industry, a new island fire station is co-located with a visitor centre to maximise building use.

Easily accessible for retained fire-fighters, the station allows for storage of equipment and different vehicle types (drones and small rapid response units).

In collaboration with Scottish Fire and Rescue and the whisky industry we worked closely with Calmac and Visit Scotland to align transport and travel infrastructure to this intervention. We also worked with community councils and the third sector to create an inclusive community engagement strategy to understand local needs, ideas, aspirations, and assets, and to involve local people in co-designing the station as an inclusive community hub.

Centrally located, the station has diverse facilities including bookable hotdesks for distributed or self-employed workers and students, a postal delivery point, charging points for electric vehicles, and a community garden and beehive, alongside the commercially run visitors centre. The station has also hosted a range of intergenerational and skills transfer activities

The commercial opportunities afforded by the station have had a positive impact on local economy. The breadth of and access to service provision and the active involvement of communities from the offset of the development process has also helped reduce levels of social isolation and loneliness amongst local communities.

Underpinned by low carbon approaches and materials and an ethos of care for people and planet, this intervention has effectively embedded approaches to supporting sustainable living into the community.

Caithness Health and Social Care: A Hospital Spa Future Visioning

The Hospital Spa is a health promotion and illness prevention network of facilities centred around two wellbeing spaces in Wick and Thurso.

We explored a range of funding opportunities including private finance, decommissioning funds, and community energy loans.

Working with the NHS Health Board as the core client and supported by the local SME supply chain, we took a holistic approach to public sector collaboration that involved key decision makers in local and central government, schools, service designers, health psychologists, and planners. Local residents were pivotal to the success of the hospital spa, and we worked with community development trusts to enhance community engagement.

In addition to enhancing local regeneration and placemaking in both locations, the cohesive nature of this intervention has made a demonstrable impact to the health and wellbeing of NHS staff.

This tangible exemplar of health and social care integration has challenged assumptions around the need for care, and in doing so, has opened up an inclusive, equitable opportunity for use by the entire community.

As a flexible and adaptable community facility centred around shared amenities, the hospital spa has provided affordable housing choices for workers, and has alleviated issues of fuel poverty faced by local residents.

The hospital spa has a positive impact on local biodiversity and climate adaption, and has provided a case study to strengthen community awareness-raising and environmental learning. This has been the focus of much positive media coverage and promotion, highlighting sustainable development best practice in the area, and linking this to NC 500 as the energy coast.

Workshop 3 - People & Place

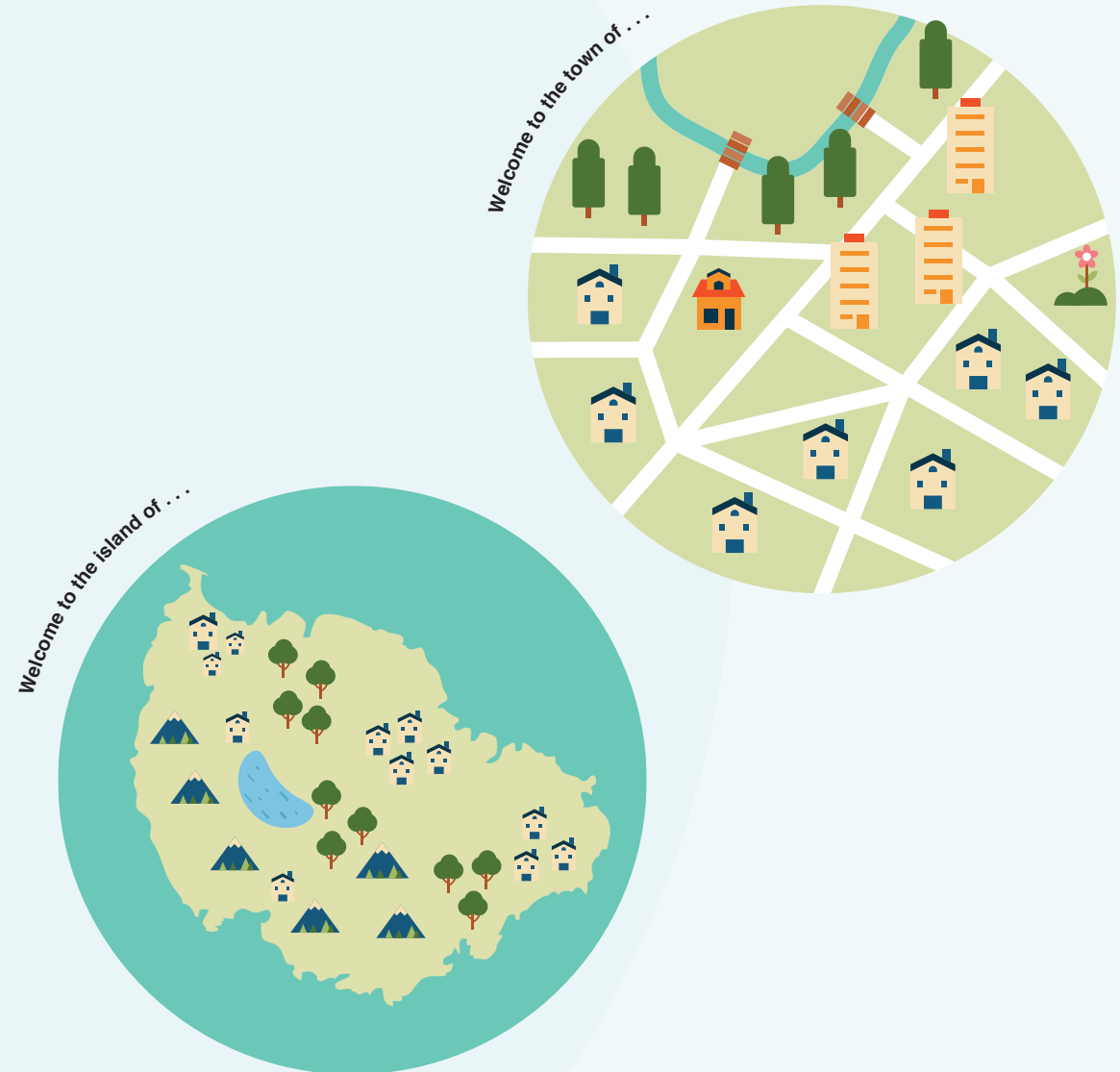
Summary & Process

Workshop 3 asked participants to review the consolidated 'visions' from the previous workshop and consider the resources required to enable them through a place-based lens.

The Net Zero Leadership team analysed each of the four themed visions - Housing, Skills, Sustainable Energy, and Land Use - and discussed the infrastructure required to allow these visions to thrive in different geographies. By considering the needs of remote/rural and city/town, the team were able to identify which elements of their transformation plans required a general or nuanced approach.

The Low Carbon Construction team returned to their project case study visions and identified best practice collaborative and Net Zero examples from the region to draw upon. This allowed them to review the enablers required to foster best practice.

Both teams were brought together mid-way through the workshop to attend a talk from Rufus Grantham from Living Places. His work set out a financial development model for scaling retrofitting at a neighbourhood and town-level. Both teams also shared their developments and identified shared enablers of change.



Affordable housing is important, but affordable and aspirational living is fundamental. Net Zero Leadership has transformed how we think about housing and how we experience place in Scotland.

Drawing from the 20+ years neighbourhood planning guidance, we have strengthened our partnerships with utility companies, third sector organisations, housing officers, heads of planning, regional development agencies, materials manufacturers, academic institutions, and significantly local communities of place.

In addition to effectively leveraging different types of investment and sharing knowledge to address housing challenges across the region, we've also engaged with a broader network of private businesses and community councils to enhance the reach of our project, and raised awareness of the need for sustainable housing through a media campaign.

The new approaches we are developing are helping us to collectively share risks and speeding up our speed of delivery, whilst achieving more with less resource and freeing up finance for other projects.

Crucially, this work has made a real difference to reducing fuel poverty and progressing towards a just transition for people living and working across the region, as well as helping us to meet our national net zero targets.

Sustainable Community Living Outcomes

Legacy



Projects & Prog

Petrofit & New

Co-ordinated Investment Plan

Root in Policy Framework LDP

Small, Medium, Large lotting

Knowledge & Assets

Awareness

Dev & Invest → coalesce

People & Partnerships

The known network

Gaps within the network

Barriers

Capacity

Skills

Economy

Geography

Transport

Climate

Compliance Regulatory?

Data??

(Internet Public)

Lack of Econ of Scale / Opportunity Cost & Cost

Community Opportunity / ROI

Exp

Fourth Market

UNDERSTANDING THE WHOLE ISSUE AND CONSEQUENCES OF INDIVIDUAL PLACES

→ Formal legal agreements among partners. [make, public, third sectors]

Have a development framework in place

Identifies potential projects

Issues

Develop shared ready projects to take advantage of funding opportunity

→ vital to bring the local community with you holistic vision / address local priorities

→ Need to state as a long term vision that people can agree to.

all

Need decision makers in the room

Government recognition of the issues - need to adapt central policy

Grid Connectivity - Buy in from National Grid

Addressing lack of economies of scale

Lack of skilled people

Affordable Housing (Keyworker housing required)

Need to accelerate delivery - takes too long

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Need to accelerate delivery - takes too long

Workshop 4 - Measuring Success and Programme Definition

Summary & Process

GSA researchers analysed and synthesised the content from the previous workshop into a set of collaborative proposal for regional cross-sector working. A set of enablers, such as new tools or capabilities, were also identified as potential 'unblockers' to the barriers that were currently hindering development activities.

In Workshop 4, the Net Zero Leadership team evaluated and prioritised the collaborative proposals using a framework that assessed readiness for change alongside potential impact within each of the four core vision themes.

The Low Carbon Construction team continued to evaluate best practice case studies from across the region; this time with a focus on the diverse teams, expertise and conditions required to facilitate collaboration within each example.

Both teams came together to review their work and begin to create a combined transformation plan.

The STPB conducted focus group sessions with funding experts following this workshop to explore opportunities to finance the emerging proposals from participants.

Collaborative Proposition	LAND	[impact] What impact will this have on...	[metrics] How will we know/what should we measure?
	ENERGY		
	SKILLS		
[readiness] What stakeholders, capabilities and assets do we already have to achieve this?	HOUSING		
	GENERAL		

An evaluation framework that was used by participants to review new proposals for collaborative working practices and prioritise change based on readiness and potential impact.



Workshop 5 - Proposal Development and Financial Collaboration

Summary & Process

Outputs from Workshop 4 were consolidated into four 'components' of a Net Zero Transformation plan for the region. Each 'component' represented the original themes, developed into solution areas, aims and objectives, supported by best practice project case studies and potential impact metrics.

In workshop 5, both NZL and LCC teams worked together in groups to review the components and map them out as strategic action plans. They each created a set of action cards that expressed the steps required to meet their objectives, which were mapped onto a roadmapping framework. Key enablers were added to unblock barriers along the way, such as new data sharing systems.

Finally, each group translated priority areas within their action plans into collaborative project proposals using a standard funding proposal template. These can be seen within the initial deliverables on pages X to X.

SKILLS & INFRASTRUCTURE

Developing regional Net Zero skills & embedding them within supply chains

SOLUTION AREAS

1. Engaging private & public sector to invest in long-term regional net zero training

Engage with public and private sector to develop long-term training strategy to the region

Work with education bodies directly to train for design, use & maintenance of NZ systems

2. Embedding new skills & local employment opportunities within project pipelines

Improve carbon literacy across the sector & region

Develop mechanisms to ensure projects understand what NZ targets and skills they need to deliver, e.g. via green passports

Co-ordinate opportunities with skills development needs

3. Building local supply chains by co-ordinating net zero skills with demand

Understanding what capacity/capability exists within local suppliers

Work with local supply chains to create demand, invest in new capabilities & market this appropriately

PROJECT CASE STUDY

Energy Transition Skills Hub, Aberdeen
Low Carbon, Skills

Set to open 2024 at NESCOL. A Net Zero skills hub to equip workforce of the future and attract investment and employment opportunities

IMPACT / SUCCESS METRICS

Increase in qualified workforce locally

Increase in routes to qualification

Housing supply to support needs of workers across the region

Long-term picture of funding mechanisms informing skills development

Number of local projects

Number of available courses locally / regionally

Number of local people in net zero employment

Number of modern apprenticeships

WHO / WHAT MIGHT SUPPORT THIS

Education authorities

BE-ST / HUB

UHI

SE / HIE

Whole life knowledge

Buildings as assets to explore via pilots etc.

Strategic place-based comms to support new entrants and purpose-driven interest

Consolidation of individual programmes

Greater mapping of skills requirements

Joined up across sectors including academic

Securing an education pathway to vocational or professional employment

Identifying barriers to people entering renewable energy

Pipeline of work to give confidence to the market

Shared research and data about demographic changes, performance metrics, environmental impact etc.

Pulled supply contracts to understand market scope

Joint private/public commitment

ENERGY

Delivering clean, affordable & efficient energy

SOLUTION AREAS

1. Co-ordinating green energy opportunities across the territory

Supporting testing of green energy infrastructure across the region

Shared research into reliability, full impact & whole life energy costs

Joining up territory-wide local heat and energy models

2. Using new energy models to deliver mutual benefits regionally

Using joined up working to support local supply chain capacity building

Identify learning opportunities to maximize skills development

Ensuring local energy models deliver community benefit

3. Linking planning system with new energy schemes

Embedding local solutions within planning processes

Connecting new housing developments with local energy schemes

Improving public buildings, e.g. schools

PROJECT CASE STUDIES

District Heat Hub, Caithness
Low Carbon, Affordable

Local carbon district heating scheme using woodchip and biomass to reduce carbon and cost.

Energy Transition Zone, Aberdeen
Low Carbon

Green energy cluster at the South Harbour. Working in partnership with communities, supporting local supply chain & skills growth

IMPACT / SUCCESS METRICS

Increased areas to be developed

Sufficient grid capacity

Demand for scheme

Education and private bodies to develop local skills

Common forum for all parties to influence policy

DNO & meter output data - modelling of demand & generation

Local skills and awareness

Reducing operation & maintenance cost

Outcomes & outputs from collaboration

WHO / WHAT MIGHT SUPPORT THIS

Local Authorities & other public bodies

National Gov

Private partners

Energy companies

Community Energy Trusts

Net Zero Islands

Onshore wind

Offshore wind in development

Wave and tidal development

Whole life energy cost and impact model

Existing district heating schemes

Hydrogen production & generators

Use historic north sea assets for a just transition

Grid access & interconnection

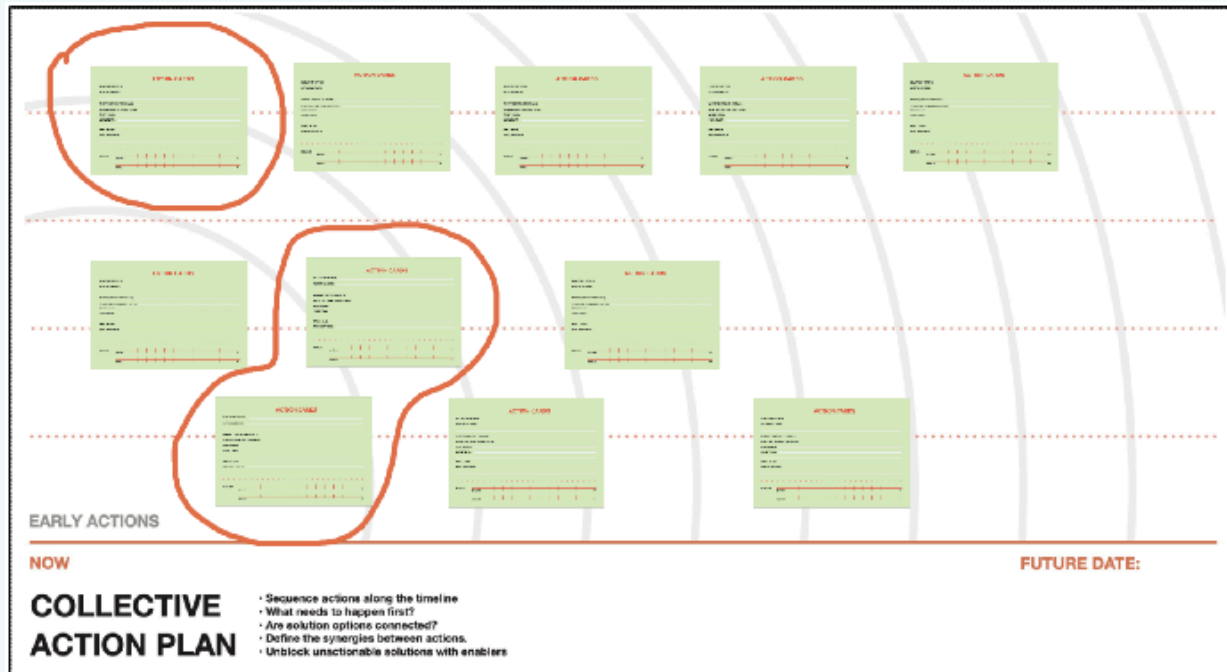
All party buy in to collaboration

Shared research and data about demographic changes, performance metrics, environmental impact etc.

Portfolio of common tools and governance instruments e.g. evaluation, data capture, prioritisation mechanisms

Two examples of component posters that were used to summarise the outputs of all previous workshops into a set of development areas within the wider Net Zero Transformation Plan.

31



The action planning framework that was used by each participant group to map the stages of their transformation plan 'component'.



One of the four teams developing project proposals from their co-created action plan.

Limitations & Wider Challenges

Prioritisation of focal themes and defined workstreams was particularly challenging due to inherent interdependencies and contingencies characterising net zero. Land and nature, housing, skills and infrastructure, energy, and the people and communities that they encompass, were recognised as central interrelated components of future delivery that must be considered in tandem to advance transformation in the region.

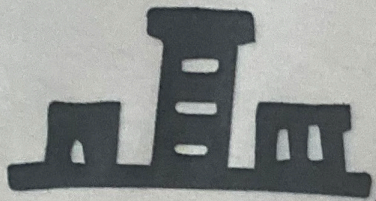
Participants discussed their experiences of creating routemaps within their own Local Authority areas, and the political and pragmatic challenges involved in aligning and combining these as an overarching delivery plan. In addition to highlighting the limited resource and capacity to lead on writing funding bids, participants reflected on levels of promotion and awareness of funding to finance the work.

At the same time, national positioning on net zero and the extent to which this is foregrounded within the current Programme for Government was critiqued as impacting on the sector's capacity for collective action.

This disconnect between the Scottish Government's ambitious targets and the resource required to implement change at a local level was framed as a core barrier to delivery. As part of the systemic change required to enable net zero delivery, participants articulated the need for parallel rules and protocols such as Building Regulations to be adapted to respond to unintended consequences and impacts.

Evoking key insights from Session 3 on Place, these discussions informed participants' considerations of the relationship between domestic heating and local development plans and the level of financial investment required to transfer LHEES to remote and rural areas. This led participants to underline the crucial need to define and measure the impact of net zero intervention upon fuel poverty and its effects, for example, and delineate the financial ask from broader returns on investment.

Crucially, this work has made a real difference to reducing fuel poverty and progressing towards a just transition for people living and working across the region, as well as helping us to meet our national net zero targets.



LISTEN
TALK
CHANGE

SUCCESS!

COMMON
PURPOSE
FOR
THE
PEOPLE
+
COMMUNITY

LISTEN

TALK

URBAN
SUE

NO PERMISSION
TO FAIL

PROS
+ PROS

- SCALE OF
SITES
BY LOCALITY
IS KEY

- MORE
DISPERSED
ACROSS
TOWN

- RE-USE OF CURRENT
BUILDINGS

KNOWLEDGE
+ ASSET
PROCESSES
- SITE
SELECTION

- GET LOCAL
"COMMON
OF PEOPLE
INVOLVED

- DATA ON
PEOPLES
+ CHANGES
LINK TO 2

WHAT IS

- WORKING TOGETHER
ALIGNMENT OF

Evaluation

At the end of the workshop series, a group of participants representing attendance from both Net Zero Leadership and Low Carbon Construction were invited to attend evaluation interviews. These conversations captured their reflections about the impact and outcomes of the workshop process.

Building cross sector collaboration

Throughout the workshop series, participants viewed the building of new connections as the primary outcome, both towards establishing collaboration and understanding wider perspectives:

“Just making connections with people that you wouldn’t normally.”

“These kinds of things can be a therapy session as well.”

From some Local Authority representatives, there was recognition that the journey towards net zero can feel overwhelming, particularly when faced with a lack of public funding for innovation. However meeting with others facing the same scale of work appeared to increase the potential for new solutions and approaches. While it was acknowledged that the workshop series was the first step in taking a collective approach, some believed that the right foundations were being laid:

“We found the right conversations to put that framework in place.”

“Coming together, and getting that collective view; it has helped to come and articulate the problems that we have”.

There was however a desire for more formal structures of collaboration beyond the workshop series, particularly to enable the sharing of risk and responsibility. Many responded well to the proposal of a PMO that could be used to manage and share data to support this collective approach:

“The importance of not blaming one person or the other and taking collective responsibility for it.”

Increasing the scale of change

Small-scale and incremental progress was shared throughout the workshops, which was celebrated by participants who resonated with ‘on-the-ground’ experiences. However some believed that the framework for collaboration must now lead to larger-scale change:

“It’s the big stuff, and there always seems to be a reason why we’re not doing it. So I think we’ve unravelled that and we’ve explored it within these workshops, and we’ve looked at it in great detail... The challenge is to focus on what the priorities are and how we take it forward and deliver outcomes.”

A gap in national government representation was noted and some participants believed that the next step in seeking support for large-scale collaborative working was to present shared outcomes to the Scottish Government. The limitations of governance timelines was however referenced as a limitation to progress through this route: **“election cycles and one-year budget cycles. We have to break that,**

otherwise, we’re not going to make the progress we want to do with delivering net zero.”

It was also suggested that a wider and more detailed definition of net zero is needed to create large-scale thinking. This would require more mature methods of carbon budgeting that account for ecosystem impacts and focus on resilience and adaptiveness as outcomes, beyond simply reducing carbon emissions.

The limitations of resourcing requirements

While it was noted that the workshop series activated new networks and the sharing of approaches, the limitation of resourcing and funding opportunities was viewed as a consistent barrier to progress. Particularly for small organisations and local authorities, the time required to apply for funding to support net zero transformation was viewed as unrealistic: **“... and if you’re not successful, you just wasted lots of resources.”**

Due to the challenges of securing funding opportunities at a local level, place-based competition and governance structures were also understood to limit collaborative approaches. This was however, a challenge that some participants believed could begin to be addressed through the workshop series, which started to establish a wider culture of trust and sharing across places and organisations.

Developers
arent willing
to understand
needs
→
control
around
private
sector

CONFLICT
JUST
TRANSITION OF
OFFSHORE TO
ONSHORE
ENERGY
= TENSIONS IN
HOUSING + SERVICES

UNDERSTANDING
OF
PROCUREMENT
MODELS?
(CONFLICTS?)

SKILLS
CONFLICT
BETWEEN
SECTORS
e.g. ENERGY
BUILDING
AGRICULTURE

SUSTAINABLE
ENERGY
- SYNERGY WITH
HOUSING PROJECTS
+ PROGRAMMES

Conflicts
Budget
Alignment
of
Organisations
Idea BUDGETS

Conflicts
Differing
Governance
Local - National
Priorities .

SYNERGY
SKILLS
JOBS - PEOPLE
= NEED
FOR
HOUSING

LONG TERM
PLAN
ALIGNED FOR
ALL ASPECTS.

in
competition
to buy for
Land (housing)
controlled by
private
finance

SYNERGY
LAND USE
+
HOUSING
RIGHT TYPE
" PLACE

Next Steps & Future Development

The core objective of this programme was to create a collaborative foundation on which to build territory wide opportunity.

A key constraint for government and public sector partners involved in any next steps within this programme is resourcing. Initially, enabling funding is needed to create new approaches, build upon existing strategies and translate these into a pipeline of co-ordinated, cohesive and collaborative investable projects. At the present, sources of funding are being investigated but have not been secured.

In the meantime, the activities outlined on the following page will be progressed across the territory:

Existing Programmes of Work

1. Support the completion of Local Authority Local Heat and Energy Strategies (LHEES) and the co-ordination and collaboration of LHEES delivery plans.
2. Support the co-ordination and collaboration of a territory wide Local Authority LHEES.
3. Work with the Scottish Government Heat and Buildings Unit to support a programme of heat network feasibilities across the territory.
4. Work with the Scottish Government and UK Government Economy directorates to explore how funding can be secured to support economic place-making.
5. Learning Estate Investment Programme Phase 3 whereby funded projects maximise net zero and place based outcomes.
6. Scottish Fire and Rescue Service Community Resilience Hub programme where the business case is constructed on the basis of net zero and place-based outcomes.
7. Engage support of strategic partners who are funded to support net zero activity e.g. Robert Gordons University, James Hutton Institute etc.

External Funding Support Opportunities

1. Continue to develop the north funding tracker synthesising this with online funding tools with a more active promotion of funding opportunities.
2. Support the development of key strategic activities e.g. Local Area Energy Plans (LAEP) to prioritise net zero investment with funding support from SSEN.
3. Engage and understand resource and funding support from Scottish Government, UK Government and non-governmental departments.
4. Maximise existing openly available funding routes such as Housing Association Community Trust (HACT) retrofit credit model and use the credits to part fund future activity through a Programme Management Office (PMO).
5. Work with research partners and bid for funding through organisations such as UKRI and other appropriate entities to establish a Net Zero Programme Management Office.

Develop New Models of Delivery

1. Develop economic place-based approaches in locations where there is significant private sector investment to leverage community infrastructure, housing, energy supply, training and skills, and community wealth building outcomes.
2. Develop housing proposition that create new finance options and new housing delivery models.
3. Establish community wealth building funds from private investment e.g. renewables to benefit wider community infrastructure needs.
4. Develop strategic approaches to council tax reform to fund infrastructure investment.
5. Commercialise the public sector land holding and improve revenue streams and covert these into capital for infrastructure investment.
6. Engage and understand areas of best practice and how this learning can be shared across the partnership and translated into action across the territory e.g. Argyll Countryside Trust etc.
7. Build upon the HACT model to grow the value of the credits and scale this into the north territory.

Secure Long term funding

Once long term funding is secured, longer term activities can be planned and set out to maximise outcomes and continue to improve lives across the territory.



Project Name
Aldouie Castle Gate

How does this project fit the category?
The project is a...

Energy to
Zone
industrial

Future Development: Territory Net Zero Partnership

The outputs from the Net Zero Leadership and Low Carbon Construction Workshop Programme have informed the development of a wider ***Territory Net Zero Partnership***, which is endorsed by the public sector. The workshop programme has acted as a catalyst for action that will form the foundations of this Partnership.

This aligns and builds upon strategic work that has been developed by the Scottish Cities Alliance, SOLACE and COSLA, which recommends that regional net zero partnership models are essential to deliver the Scottish Government's Climate Change Act.

It should be noted that this model is under development and will take a phased approach in response to funding opportunities. This goes beyond the scope of the programme of work discussed in this report, which has informed the wider Partnership through establishing shared ambitions and a collaborative approach. Full implementation of the Territory Net Zero Partnership will require significant commitment from public sector partners.

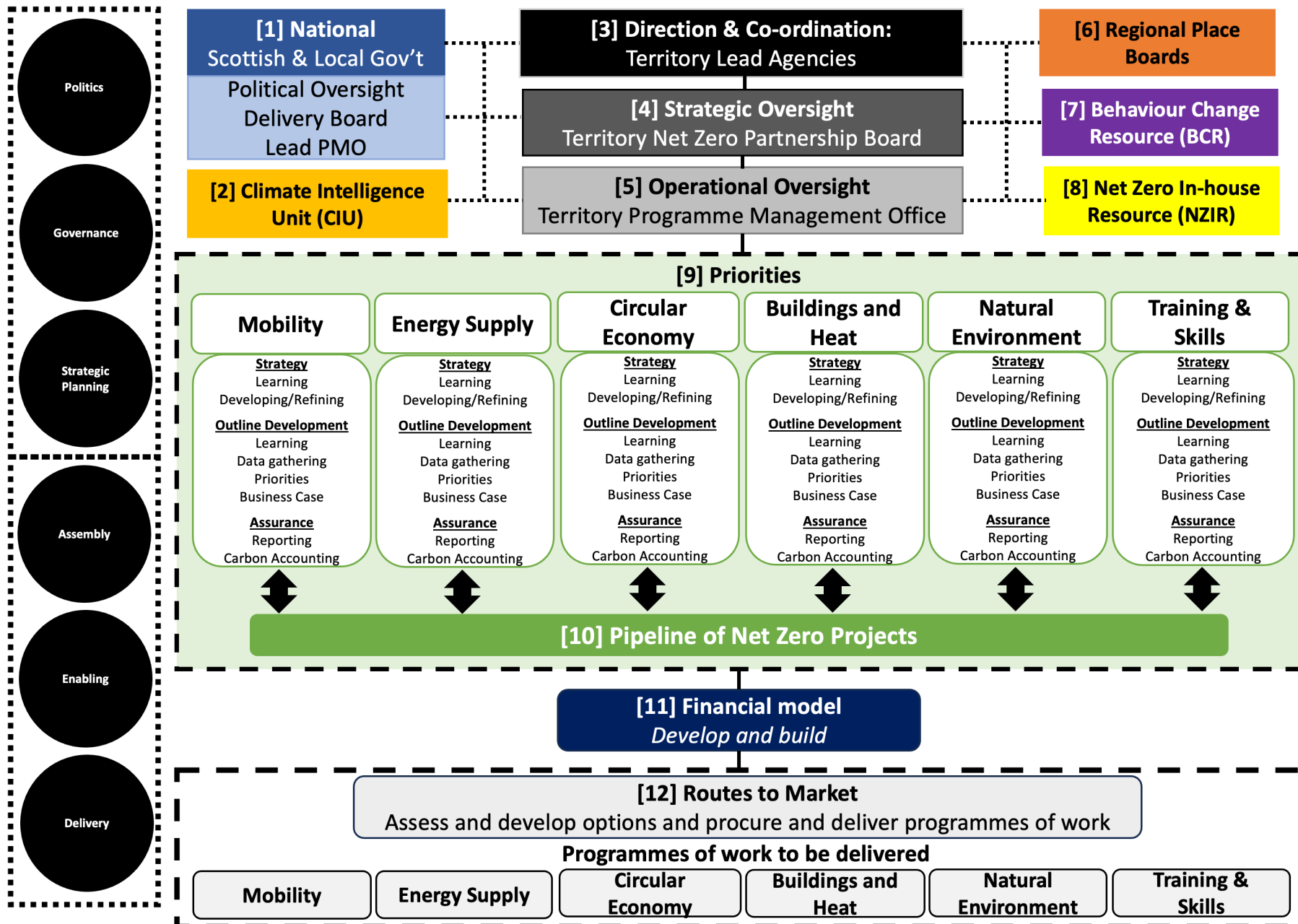
The following diagram outlines the strategic goals and key activities that are being progressed to develop the Partnership.

Reference list for Territory Net Zero Partnership model on the following page

1. Policy and direction by Ministers, SG dept's, COSLA and SOLACE connecting and supporting regional partnerships and driving Net Zero.
2. National Centre of Excellence providing support and expertise on carbon accounting, regional planning, strategy, implementation, training and skills.
3. Sponsorship from Senior Leadership Teams from public sector*.
4. Strategic board establishing vision, goals and objectives – comprising public sector partners, SG, Utility Companies, SFT, ZWS, BE-ST etc.
5. PMO comprising public and private sector resources delivering goals and objectives of the board. Overseeing delivery & performance.
6. Regional Place Boards comprising public and private sector partners taking forward local and regional place plans.
7. Specialist team to promote and support models for community and private sector engagement on climate change.
8. Individual Authority resources brought together into a single virtual team.
9. Workstreams led by public sector officers, with support from NZIR, BCR and CIU. Augmented with capacity and capability from private sector. Intent is to take forward a common, consistent approach to strategy and delivery.
10. Aggregated and investable pipeline of work.
11. Layering all funding into a mixed model utilising grants, low interest loans, institutional finance, private sector innovative finance, SNIB, UKIB and direct funding sources including the creation of legal framework.
12. Developing a delivery strategy, assessing existing routes e.g. hub and frameworks. And developing new routes to market e.g. Resco and new partnerships.

Territory Net Zero Partnership

Proposed future model currently under development



*LA's are lead agencies with participation/commitment from Enterprise Agencies, Health Boards, RSL's, FE, Blue Light & 3rd Sector etc

