



# NET ZERO AND SUSTAINABILITY FRAMEWORK FOR ACTION



We will support Scotland’s colleges and universities as global leaders in accelerating the climate emergency response and Scotland’s just transition. This should lead to reduced emissions, system change, and long-term climate resilience.

EXECUTIVE SUMMARY

This Framework for Action (“the Framework”) represents mainstreaming of net zero in SFC building on our progress so far. It establishes a long-term plan demonstrating our full commitment to responding to the climate emergency and reflecting improved corporate accountability and collective responsibility. The agency and urgency of our response is increasing in line with the escalating climate crisis. The Framework spotlights net zero leadership and delivery by colleges and universities and their future ambitions and plans. It reflects the importance of the relationship between SFC’s net zero actions and those of the tertiary education sector (“the sector”). It provides a shared vision of our evolving role and actions needed around which SFC staff and our stakeholders can coalesce.

The Framework supports the Scottish Government’s national climate and economic plans<sup>1</sup>, implementation of the SFC Review of Coherent Provision and Sustainability<sup>2</sup>, and our Strategic Plan. It sets out those actions SFC will take in the next few years and provides a pathway to a long-term response. Key priorities embedded in the Framework for Action include gearing our funding towards net zero and climate positive outcomes, and net zero accountability for the funding we provide. Success would be evident in a permanent shift of SFC’s culture towards climate positive outcomes and playing our full part in assisting institutions to realise net zero plans.

1 Plans include the Scottish Government’s National Strategy for Economic Transformation, the Climate Change Plan, the Just Transition Planning Framework and the Climate Emergency Skills Action Plan (CESAP). Specific links to each document are referenced later.

2 The SFC Review makes several recommendations for system change including, “Galvanise current and future leaders across tertiary education, skills provision and research to work together to effect system change, building from our existing strengths, to tackle knotty long-term challenges and opportunities, and to develop the system for the future” and “Build capacity and a more systematic approach to the way we collectively plan coherent tertiary education and skills provision and investment, so that it responds better to current and future needs of pupils, students, employers and broader economic and social drivers, while holding in balance the policy imperatives of promoting fair access and equalities, and the journey to a net zero carbon future.”

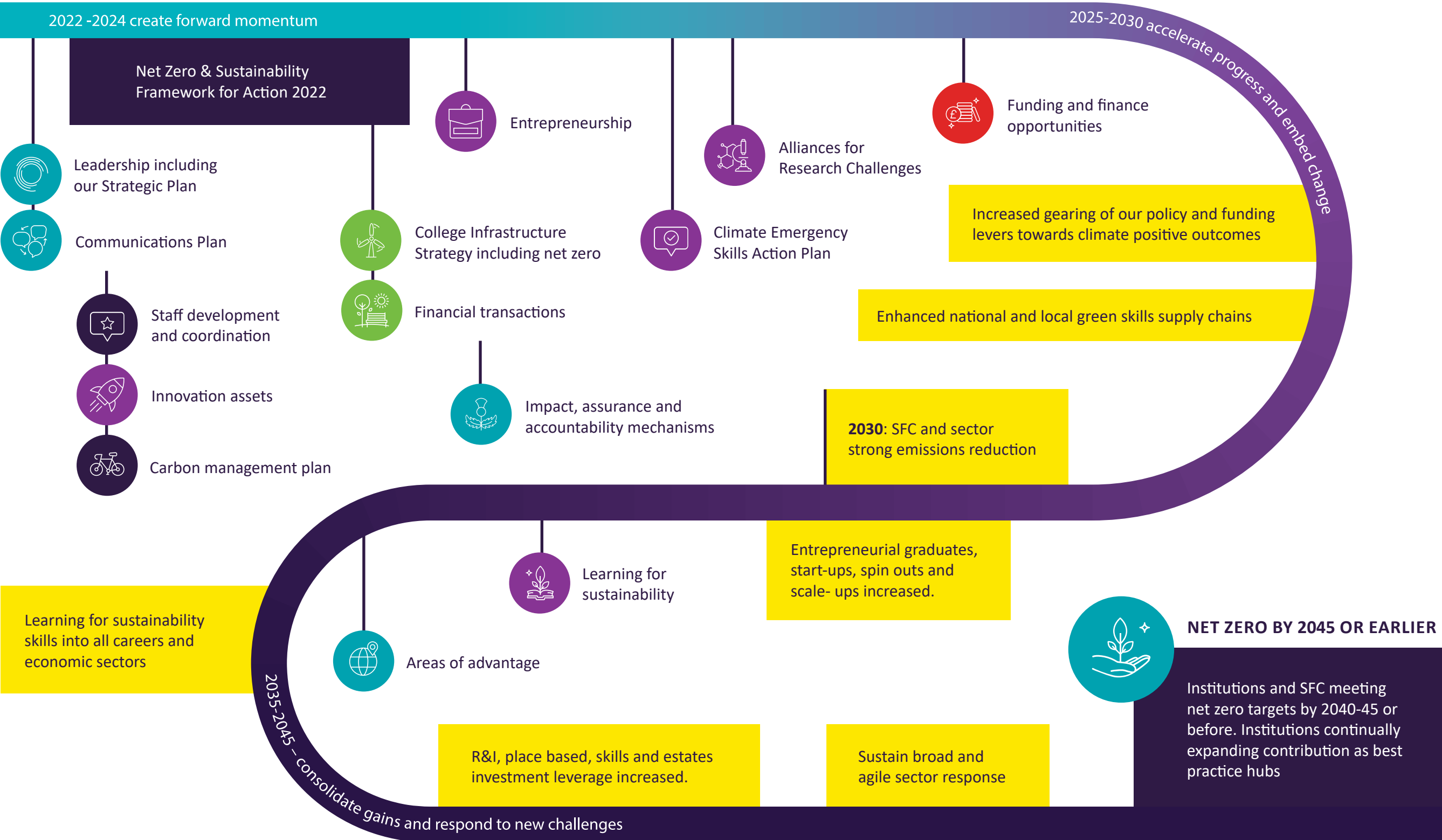
- Delivery of the Framework includes the following key outcomes:
- The just transition including community health, wealth, and opportunity.
  - Green growth including reskilling, upskilling and skills alignment.
  - Place-based net zero transformation including infrastructure and education.

OVERVIEW OF ACTION POINTS




# ACTION POINTS AND MILESTONES: THE ROUTE TO DELIVERING THE FRAMEWORK

Our Framework will be taken forward as a series of action points including projected interim milestones in yellow. We will assess progress and review action points regularly.




DETAILED LIST OF ACTION POINTS


1. DRIVING CORPORATE ACCOUNTABILITY




**1. NET ZERO BY 2045 OR EARLIER**  
Reach net zero Greenhouse gas emissions by 2045 or earlier in line with our duties under statutory climate targets and become a leading public body in the climate response.




**2. LEADERSHIP INCLUDING OUR STRATEGIC PLAN**  
Increase leadership, governance and mainstreaming of our climate response including staff engagement and fully embedding environmental sustainability in our SFC Strategic Plan 2022-2027.



**3. COMMUNICATIONS PLAN**  
Update our communications plan strengthening our climate emergency, sustainability, and net zero response.



**4.IMPACT, ASSURANCE AND ACCOUNTABILITY MECHANISMS**  
Embed measures under our impact framework and associated accountability and quality assurance mechanisms to strengthen the sector’s climate emergency response.



**5. AREAS OF ADVANTAGE**  
Develop areas of Scottish net zero and sustainability advantage e.g., renewable energy including net zero approaches, sustainable transport, natural capital, and the blue-green economy and continuously adapt our focus to emerging areas.

2: INNOVATION, EDUCATION, RESEARCH AND ENTREPRENEURSHIP



**6. INNOVATION ASSETS**  
Focus Scotland’s knowledge exchange and innovation assets on green growth and the just transition.



**7. ENTREPRENEURSHIP**  
Take forward post-16 education measures under the Logan review (STER) including net zero entrepreneurship skills.



**8. ALLIANCES FOR RESEARCH CHALLENGES**  
Support Alliances for Research Challenges including foregrounding net zero and sustainability challenges.



**9. CLIMATE EMERGENCY SKILLS ACTION PLAN**  
Deliver SFC’s actions under the Climate Emergency Skills Action Plan (CESAP) and work with other delivery partners on co-owned actions. Deliver SFC net zero skills initiatives and funds supporting upskilling, reskilling, quality assurance, skills alignment, and tertiary pathfinders.



**10. LEARNING FOR SUSTAINABILITY**  
Encourage institutions to consider their plans on the availability of sustainability learning and access.



PHOTO: UNIVERSITY OF DUNDEE

3: FUNDING & FINANCE



**11. FUNDING AND FINANCE OPPORTUNITIES**  
Embed net zero finance approaches through our funding. Investigate alternative capital funding models and approaches capable of meeting the wide-ranging investment needs of our institutions in pursuing net zero ambitions and plans.

4: ESTATES



**12. COLLEGE INFRASTRUCTURE STRATEGY INCLUDING NET ZERO**  
Develop a greener, more digital estate through the College Infrastructure Strategy. Revise SFC’s capital investment policy to prioritise net zero.



**13. FINANCIAL TRANSACTIONS**  
Encourage the sector to engage in collaborative net zero place-making through SFC universities’ Financial Transactions and other decarbonisation programmes.

5: SFC CARBON REDUCTION



**14. STAFF DEVELOPMENT AND COORDINATION**  
Increase internal coordination and delivery of our climate emergency response including staff training and development.



**15. CARBON MANAGEMENT PLAN**  
Continuously strengthen our annual statutory carbon reporting and carbon management plan in line with Scottish Government Guidance.





# CLIMATE EMERGENCY RESPONSE

## INTRODUCTION

The world is on course to exceed two degrees of global warming with a median scenario of 3.2 degrees by 2100<sup>3</sup>. The social, environmental, and economic impacts of two degrees warming will be far worse than at 1.5 degrees. We are storing up extensive financial, human and ecosystem costs and impacts unless we take urgent action including cutting emissions at pace and preparing society for change.

Governments and others are cutting emissions and securing climate opportunities<sup>4</sup>. Scotland's Green Investment portfolio illustrates several opportunities that are supported by our tertiary education and research excellence. Alignment of the tertiary education and research sector with net zero objectives is significantly enhancing the pace and quality of the transition. (See Strategic Fit pages 18-19 and Annex C for the policy context.)

<sup>3</sup> [Sixth Assessment Report](#)

<sup>4</sup> [The UK Government references 78 per cent economic growth in 1990-2019 at the same time as 44 per cent emissions cuts.](#)



The diagram below illustrates Scotland’s national climate crisis and emergency response within the current global climate crisis and emergency response.



## SFC’S CURRENT CLIMATE EMERGENCY RESPONSE

SFC’s role is integral to delivery of the Scottish Government’s net zero priorities and those of Scotland’s colleges<sup>5</sup>, universities<sup>6</sup> (the sector) and its staff and students. Latest surveys show that 88% of students want their place of study to incorporate and promote sustainable development<sup>7</sup>. Previous and current SFC support demonstrates our commitment to net zero. This includes net zero transformation enabling support such as our sponsorship of the alliance for sustainability leadership in Education ([EAUC Scotland](#)), and the [Energy Skills Partnership](#) (See Annexes A&B).

Our [outcome agreements](#) with colleges and universities provide key incentivising context for institutions’ climate emergency responses. This includes whole organisational responses. We are looking ahead to new impact framework and associated accountability and quality assurance mechanisms (see pages 19-22 for SFC’s evolving response.) Some SFC funding streams currently have a specific focus on net zero e.g., [Financial Transactions](#). Others support net zero or green growth as thematic priorities e.g., our knowledge exchange and innovation funding.

Our underpinning core funding in a range of areas spanning teaching, skills, research and innovation and infrastructure enables institutions’ specific net zero strengths to develop. Institutions often deploy these strengths in interrelated programmes of teaching and research and as part of their distinctive net zero profiles. (See Annex B.)

The sector also drives and collaborates in key net zero fields, increasing national critical mass. A specific current highlight and priority for collaboration by institutions is evident through actions they are taking

<sup>5</sup> [Colleges are integrating greater learning for sustainability in all taught areas. They are cutting emissions and embedding the climate response throughout their organisations.](#)

<sup>6</sup> [At least eight universities are incorporating learning for sustainability across their courses. Universities are cutting emissions and embedding the climate response throughout their organisations.](#)

<sup>7</sup> 88 per cent of 6000 surveyed students say they agree their place of study should actively incorporate and promote sustainable development - [SOS UK Sustainability Skills Survey](#).



PHOTO: NEWBATTLE ABBEY COLLEGE



in support of the [Climate Emergency Skills Action Plan](#) particularly in support of the energy transition. SFC is a public sector delivery partner for CESAP. (See pages 14-16 on the sector's response).

An overview of the current SFC and sector response is provided in the diagram below.

**Graphic: SFC and the Scottish tertiary education sector climate emergency response.**

SFC core funding for research and innovation maintains broad and deep capability in fields needed in national net zero challenges including science, mathematics, data and economics, social sciences, humanities and the arts.

Net zero is supported through SFC core funding contributions., and under specific funds as a priority theme. SFC funding leverages other public and private sector net zero funding.

Total FHE sector GHG emissions in 2020-2021 were 321,591 tCO<sub>2</sub>e. SFC operational emissions in 2020-2021 were 53.6 tCO<sub>2</sub>e.

SFC working with Government, the sector, delivery bodies, and key public sector partners supports the just transition, green growth and net zero place based transformation. This is delivering key priorities under our Strategic Framework 2019-2022 as it in turn delivers against the NPF, our Review, CESAP and SG Climate Change Plan 2020.

SFC core funding for university and college estates' decarbonisation supports national and local net zero place based transformation, resilience and infrastructure plans.

SFC board, committees, senior management, and staff committees lead and support our net zero accountability. Sector accountability and leadership is galvanised through net zero plans, strategies, leaders (Green Gowns awards) collaboration and funding.

SFC core teaching funding and delivery of the Young Person's Guarantee, NTTF, FWDF, CESAP and green skills support as well as support for young researchers and entrepreneurs sustains and attracts academic and business talent to benefit in and shape the just transition.

## THE SECTOR'S LONG TERM CLIMATE EMERGENCY RESPONSE

The sector provides a huge range of solutions towards Scotland's just transition, green growth and net zero place-making across the country. Through the advancement of knowledge, learning and research it plays a key role in addressing how we live sustainably on our planet. A sustainable education sector in Scotland represents us as an inclusive, prosperous and sustainable nation, attracting international expertise and student talent, contributing to our cultural and economic growth whilst safeguarding our sustainability ambitions.

The sector's response is dynamic, providing key expertise central to navigating climate risks, shaping climate resilience, and creating opportunities:

- Infrastructure (including estates), technology demonstration and innovation
- Talent including talent attraction, development, and entrepreneurship
- Skills including a work force with skills fully aligned to deliver net zero transformation in every sector
- Research and innovation (including mobilising expertise and knowledge exchange for business and policy makers on key challenges)
- Economic and social renewal including national net zero growth opportunities and creating new green economic markets at a local and national level
- Net zero place-making including community wealth building and engagement
- Partnership working in those cities, regions and locations institutions are anchored in.

Our institutions connect as globally excellent hubs in networks of global excellence. This includes key fields needed for long term climate resilience. (See Annex E for glossary.) Some examples of areas that will be increasingly

important include hydrogen, natural capital, the oceans, carbon capture utilisation and storage and others. SFC has highlighted [Scotland's strengths in climate and natural resource-related research](#) as part of research supporting realisation of the Sustainable Development Goals.

The sector's ability to provide foresight and to respond to the complexities of climate change with holistic solutions at scale is vital. Government and business will continue to draw upon this capability in the evolving climate crisis including challenges we cannot envisage now. The sector's [breadth and depth](#) must be protected, sustained, and enhanced.

## THE SECTOR'S DECARBONISATION JOURNEY

The sector's scientific and management expertise is key in meeting its own decarbonisation challenges including emissions that are harder to tackle. This expertise is also supporting other sectors with similar challenges. The latest [reports on emissions data in the sector](#) set out current progress.

We endorse the recent [Scottish University and College Sectors Supply Chain Climate & Ecological Emergency Strategy - 2022 to 2030](#) designed by Advanced Procurement for Universities and Colleges (APUC) to support a greener and more sustainable approach to procurement adopted by the entire Scottish sector. The potential for this to create positive supply chain change around concepts of value that fully "price in" the environmental cost of decisions should not be underestimated.

Recent work by Jisc (the digital services provider for the UK higher and further education sector) highlights how it will [reduce emissions](#) and [encourage institutions to work through suppliers](#) to reduce digital emissions.

All organisations face the challenge of reducing the last portion of hard-to-reduce emissions in order to reach net zero targets. In terms of residual emissions in net zero strategies, the [UK universities COP26 briefing](#) and the [carbon coalition](#) supported by EAUC advise institutions on the possible use of offsetting in net zero strategies as a last resort once all available



emissions reductions have been made. Universities are also interested in ideas such as inseting or concluding pre-purchase agreements in [Direct Air Capture initiatives](#).

Decarbonisation of heat is critical to achieving net zero but is challenging, not least due to the reliance on local and national action to decarbonise the supply. We support the sector's net zero estates strategies through our Financial Transactions programme for universities and the [College Infrastructure Strategy](#).

The College Infrastructure Strategy underpins estates as part of the Scottish Government's wider Infrastructure Investment Plan. Its strategic principles include enabling the decarbonisation and digitalisation agendas. This provides blended learning and emissions reductions opportunities as part of calibrating the learning offers of individual institutions.

Travel emissions on campuses also feature in the forward plans of institutions to reduce emissions. Emissions from international students are being considered with good practice examples at Edinburgh and St Andrews Universities.

## THE SECTOR AS EXEMPLAR IN THE CURRENT CLIMATE EMERGENCY RESPONSE

As discussed in the previous sections on the sector's long-term response and its decarbonisation journey, the sector makes key contributions in a range of ways including research and innovation, education and skills, and estates and local partnership working. Taking each of these in turn and providing a current snapshot, Scotland's colleges and universities are already mobilising research and innovation in support of current national challenges from heat decarbonisation to sustainable transport, the circular economy to sustainable chemicals and materials, and enabling digital technologies to sustainable agriculture, aquaculture and protecting natural resources. We are [supporting ARCs](#) (alliances for research challenges.) There is also a strongly aligned skills agenda with these national net zero challenges. (See Annexes A&B.)

SFC is already funding greater net zero skills alignment in response to national challenges including under the Climate Emergency Skills Action Plan (CESAP), the [National Transition Training Fund](#), the [FWDF](#) and the [University Upskilling Fund](#). Our two tertiary regional pathfinders each contain a sustainability or net zero thread. Skills alignment supports the [National Strategy for Economic Transformation](#) focus on new market opportunities. (See Annexes A&B).

Institutions also act as key civic anchors and assets. For example, [North Ayrshire Council's Community Wealth Building Strategy](#) specifically mentions local further and higher education institutions as anchor institutions supporting the local economy. In cities including Edinburgh, Aberdeen and Glasgow institutions are providing key expertise in city climate adaptation plans. In several locations institutions are seeking to become or are already connected in local district heating or other local energy networks as key users of clean energy.

Institutions' contributions as civic anchors extend from their physical infrastructure to the ways in which they assist and apply their learning and research to create local community and business solutions.



PHOTO: PERTH COLLEGE UHI



# OUR FRAMEWORK FOR ACTION

## STRATEGIC FIT

The Scottish Government has set ambitious net zero targets in the [Climate Change \(Scotland\) Act 2009](#), and the [Climate Change \(Emissions Reduction Targets\) \(Scotland\) Act 2019](#). These are for net zero greenhouse gas emissions by 2045. The interim target of 75% by 2030 reflects the climate emergency decade. Actions under our Framework reflect these targets.

We understand the increasing emphasis for action by public bodies. We also remain fully aware of a closing window for climate action and increasing natural resource constraints. All these factors mean that an urgent response is necessary. (See Framework for Action action points and route map on pages 4-8.)

Delivery of the Framework includes the following outcomes in Scotland:

- The just transition including community health, wealth, and opportunity.
- Green growth including reskilling, upskilling and skills alignment.
- Place-based net zero transformation including infrastructure and education.

The [Scottish Government's Just Transition Framework](#) states that the just transition is both the outcome of a fairer, greener future for all and the process, in partnership with those impacted by the transition. As a key national funder of post 16 education, learning and research, SFC has a vital role to play in this process and outcome. The latest [Just Transition Commission report](#) highlights social infrastructure including education. Scottish institutions have been successful in the first Just Transition Fund funding round<sup>8</sup>.

Net zero is also a priority under current Scottish Government education reforms<sup>9</sup>. We are reflecting net zero and sustainability under our Strategic Plan 2022-27 in relation to learning and teaching, research and innovation, infrastructure and SFC as an organisation. Our priority focus is in building a responsive, coherent and sustainable post-16 education and research system.

Our investments assist the sector to realise benefits for people that meet both the Scottish Government's key just transition and NSET aims (see Table 1.)

<sup>8</sup> [Year one projects - Just Transition Fund: year one projects](#)

<sup>9</sup> [Post school education, research and skills development ecosystem - purpose and principles: scope and approach](#)



Table 1 - Scottish Government strategic priorities for the green recovery and the just transition	
National Just Transition Outcomes	National Strategy for Economic Transformation
Citizens, communities and place	
Jobs, skills and education	
Fair distribution of costs and benefits	Entrepreneurial People and Culture
Business and Economy	Productive Businesses and Regions
Adaptation and resilience	New Market Opportunities
Environmental protection and restoration	Skilled Workforce
Decarbonisation and efficiencies	A Fairer and more Equal Society
Further equality and human rights implementation and preventing new inequalities from arising	

SFC is also a key delivery body under the [Scottish Government’s Climate Emergency Skills Action Plan](#) working in close partnership with Skills Development Scotland and the Scottish Government. CESAP focuses on new jobs relating to net zero and sustainability, jobs affected by the transition with the need for enhanced skills, and existing jobs that will be needed in greater numbers. Green jobs opportunities are available to those already in the labour market as well as new and future entrants. There is a substantial reskilling and upskilling agenda for the existing workforce and the need to mainstream new learning. At the same time there are additional constraints in the labour market and there is a degree of churn e.g., demographics and the pandemic (career leavers, changers and new entrants), Brexit (workforce shortages) or a shortage of those with the right skills to fill specific vacancies.

CESAP is being implemented through several subgroups focused on specific skills supply chains including Energy Transition, Low Carbon Transport, Decarbonising Domestic Heat (Energy Efficiency), High Value Manufacturing, Land-based skills, skills for the Circular economy and Education. Skills alignment and mapping of transition pathways is an area that is constantly evolving as the climate response evolves.

SFC’s role is to continue to support coherent provision, skills and qualification planning and alignment with institutions, employers and partners.

This includes our support for the Energy Skills Partnership.

SFC’S EVOLVING ROLE IN THE CLIMATE EMERGENCY

The Scottish Government’s [guidance for public bodies](#) is clear – public bodies must demonstrate how spending plans align with statutory climate targets. [Audit Scotland’s report](#) also highlights this. It states that, “Budgets and spend should align with climate change ambitions. This will require public bodies to review existing capital and revenue spend. Public bodies will also need to ensure all future funding and investment decisions are based on their contribution to climate change ambitions and an inclusive, net-zero carbon economy. Funding should be prioritised against climate outcomes.”

Net zero needs to be considered within everything we do. Our wider role in supporting the sector to lead and accelerate the climate response is the most important part of SFC’s climate response. Our influence and policy levers including the developing Assurance and Accountability Framework can help to drive and support a high level of ambition in the sector. The choices we make as a national funder must

recognise sector leadership and facilitate action and responsiveness in the wider tertiary education and research system. We will learn, best practice share, and evolve our response with other key public and private sector actors with existing expertise and shared challenges.

The Framework highlights the priority actions we will take in the short, medium and long term to incentivise the sector to reach its full potential. Going forward, our investments in research and innovation (R&I), education and skills, entrepreneurship and estates are vital for delivering net zero related benefits in these areas. Our influence extends from our initial investments in institutions through those interactions they have with businesses and policy makers, other external partners and local communities. This includes best value for public funding that balances value for money and net zero considerations, aiming to create multiple benefits at the time of the investment and during its lifespan and investing for the long term. It includes considering the potential for our stakeholders to leverage further external net zero funding and finance where we frame and deploy our investments wisely. It includes supporting institutions in realising their full potential in supporting the just transition.

We will be reviewing all engagement with the sector including funding guidance and partnerships to ensure that all SFC levers fully incentivise net zero. Key accountability and funding levers need to embed net zero as a default approach, as the new normal, moving away from older business as usual approaches.

An important result of SFC net zero change should be to fully equip graduates and others with the skills, tools, and competences they need in the just transition. This includes supporting talent potential, change makers, and behaviour change. Delivery of net zero objectives runs through delivery of SFC strategic objectives on learning and research including attainment, excellence, innovation, life chances and career opportunities. It can create several other benefits e.g., improved mental and physical health, active travel and sustainable neighbourhoods.

Building on current progress outlined in the Graphic on page 13 – SFC and the tertiary education sector’s climate response, which we commit to maintaining, we further commit to evolve our role as shown in the diagram below.



PHOTO: UNIVERSITY OF GLASGOW



Graphic: SFC and the Scottish tertiary education sector climate emergency response.



AIMS AND THEMES

The three key aims of our Framework are to:

- Set out a clear, long-term pathway towards net zero, enabling a strong response by SFC, the sector and partners
- Ensure that our institutions realise their full potential in supporting Scotland's net zero just transition, and
- Reduce greenhouse gas (GHG) emissions in SFC operations and service delivery to achieve the goal of net zero by 2045 or earlier.

The five core themes under which we will organise our net zero actions are:

-  **1. Driving corporate accountability**
-  **2. Innovation, education, research and entrepreneurship**
-  **3. Funding & finance**
-  **4. Estates**
-  **5. SFC carbon reduction**

A full list of action points under the Framework for Action and the high-level route map to 2045 can be found on pages 4-8.



PHOTO: UNIVERSITY OF EDINBURGH



# DELIVERING THE FRAMEWORK

## IMPLEMENTATION

Our approach to delivering the Framework is outlined on pages 5 and 6. The route to delivery shown there sets out those key actions we will take in the next 2-4 years, on the way to 2030, and beyond. These should enhance long-term climate action by SFC and close the gap to net zero.

Our engagement with the sector and governments will be vital in delivering the Framework. We will harness the expertise of our board and committees in driving forward our net zero focus. Our engagement with the sector on net zero and sustainability goes far beyond engagement directly related to this Framework. It is woven through everyday engagement at all levels and functions of SFC. We will reflect the sector's needs and those of Government in using all the levers at our disposal to facilitate our net zero response.

SFC leadership and directorates are committed to operationalising net zero including delivering this Framework. The Net Zero and Sustainability Strategy & Delivery Group (NZ&SS&DG) is responsible for delivery of the Framework<sup>10</sup>. The Environmental & Sustainability Champions Group<sup>11</sup> is implementing our organisational carbon management plan. As we implement the Framework, we will increase joint working across directorates within SFC, in reflection of the kind of holistic thinking that the net zero response demands including e.g., the links between institutions, their student bodies, other partners, and institutions' contribution to net zero place-based development.

As we pick up the pace on driving net zero through our operations and activities, we will increase our alignment with the expected standards for public bodies. In launching the Framework, we will initiate five work streams outlined in table 2 below, immediately.

<sup>10</sup> The Net Zero & Sustainability Strategy and Delivery Group is SFC's cross cutting policy group supporting and implementing our overall net zero strategy (across all our service delivery and our operations.)

<sup>11</sup> The Environmental & Sustainability Champions Group is an informal network of staff members who support SFC in achieving our environmental targets and goals.



Table 2 - Work streams to be commenced immediately, in order of priority impact		
Work stream	Theme and Action Points	Timeline
Embedding SFC net zero leadership and accountability	Themes 1 and 5 APs 1-5 and 14-15.	Completed by December 2023.
Delivering carbon literacy training to all SFC staff.	Themes 2 and 5 APs 2 and 14.	Delivered by March 2023.
Mainstreaming ESG funding principles and criteria through SFC funding and reporting	All Themes APs 1, 2, 4-6, 7 -13, 15.	Phase 1 (principles) completed by March 2024 or earlier. Phase 2 (criteria) by December 2025.
Enhancing resources available for college decarbonisation	Theme 3 APs 11 & 12	Initiated by March 2023.
Strengthening SFC procurement	Theme 5 AP15.	Completed by March 2023.

COLLABORATION

Partnership working is vital to coordinate and align activity, especially in times of increasing public financial constraint – we must intensify collaboration.

It will be important to ensure wise use of public investment where public funding leverages other policies and funding. For example, the sector is attracting funding from several [Scottish Government low carbon funds](#) such as Place-Based Investment Capital Grants, the Low Carbon Infrastructure Transition Programme, as well as [UKRI net zero research funding](#), and local investment by both the UK and Scottish Governments through city deals. There is also interest from the sector in the Scottish Government’s Just Transition Fund and its Emerging Energy Technologies Fund. The Scottish Government’s investment in under-22 free bus passes is a great example of investment that not only meets active travel aims but is enabling access to learning across the country by younger learners.

We will work with key stakeholders and delivery partners including Skills Development Scotland, the [Scottish Futures Trust](#), the EAUC, [SAUDE \(Association of University Directors of Estates\)](#), [SUFDG \(Scottish Universities Finance Directors Group\)](#), the sector’s boards and courts, academic experts, the [Colleges Development Network](#), the Energy Skills Partnership, [Universities Scotland](#), the [Sustainable Scotland Network](#), the [Quality Assurance Agency for Higher Education \(QAA\)](#), the [Joint Information Systems Committee \(JISC\)](#), [Zero Waste Scotland](#), [Adaptation Scotland](#), industry and industry bodies, and the enterprise agencies<sup>12</sup>.

12 [Scottish Enterprise](#); [Highlands and Islands Enterprise](#); [South of Scotland Enterprise](#).

MONITORING AND REPORTING PROGRESS WITH THE FRAMEWORK

We will have succeeded in delivering the Framework before 2045 if:

- SFC and the sector have mainstreamed a climate-positive culture which is fully reflected in our strategic aims and activities.
- Sector net zero and sustainability ambitions are realised or exceeded including investments, influence, and creating new market opportunities.
- Net zero targets are achieved including a just transition, co-benefits, and institutions’ financial sustainability.

We will provide annual progress reports to our board and senior leadership group. We will refresh the Framework every three to four years as our high-level long-term route map to net zero, including in the context of Scotland’s evolving national Climate Change Plan. Carbon management plan updating and carbon reporting take place on an annual cycle.

We will constantly challenge ourselves to go further in driving down emissions, adapting to climate impacts, and setting up SFC and the sector for climate-proofed success.



PHOTO: SCOTLAND’S RURAL COLLEGE



## ANNEX A: ILLUSTRATIVE CASE STUDIES OF THE SECTOR AND SFC'S NET ZERO CONTRIBUTION

Examples of the sector's leading work in creating climate opportunities, including SFC support, are set out below. These cover our support for key enabling networks for the sector's transition. They also cover the ways that the sector is supporting the national transition in key areas such as green skills, green manufacturing or sustainable construction. Several of the examples illustrate key expertise hubs that are benefitting key local and national aspects of the transition including local Councils and the Scottish Government. All examples cover key aspects of SFC's and the sector's climate emergency response including:

- Enabling activity towards net zero whole-system transformation
- Net zero tertiary education and skills
- Net zero entrepreneurship, knowledge, research and innovation
- Net zero place-based transformation including estates.

### CASE STUDIES ILLUSTRATING SFC SUPPORT



**EAUC SCOTLAND** receives core funding from SFC to support the sector in decarbonising in support of national targets with practical advice and guidance. This includes the right data, skills and knowledge to promote leadership and enable the sector's response. It also includes the role of staff and students in leading net zero transformation and decarbonisation within and beyond the sector including collaboration. EAUC supports topic networks including education for sustainable development, community engagement, student leaders, construction, energy, travel, carbon reporting and more.



**BUILT ENVIRONMENT – SMARTER TRANSFORMATION** (formerly Construction Scotland Innovation Centre) is one of the innovation centres supported by SFC for over a decade. BE-ST is a national fulcrum for the zero-carbon built environment, including a sustainable buildings innovation factory. BE-ST delivers heating retrofit skills under the National Transition Training Fund administered by SFC. BE-ST supports projects that could generate £1.4bn of revenue and £18.7m savings. An example of a BE-ST project is the [Edinburgh Home Demonstrator](#) with the City of Edinburgh Council including sustainable procurement, local supply chains and affordable warmth.

PHOTO: UNIVERSITY OF ST. ANDREWS



**THE ENERGY SKILLS PARTNERSHIP** has received long term core funding from SFC. It has supported Scotland's colleges in establishing several training networks. These contribute a steady flow of skills supporting green technology deployment in key fields. Skills training networks are supported by Scottish Government and agencies and cover wind, oil and gas, hydrogen, advanced manufacturing, marine and maritime, transport, construction, energy efficiency and micro generation. Funding supports new curricula, career pathways for learners and training to industry and staff within colleges. The networks can flex around emerging skills needs creating a responsive green skills system now and in the future.



**THE NATIONAL MANUFACTURING INSTITUTE FOR SCOTLAND (NMIS)** sustained by SFC and other investment is our national innovation and skills centre for advanced manufacturing. It supports net zero and circular economy outcomes. NMIS receives SFC funding towards an industry doctorate programme, retraining under the National Transition Training Fund, and £2.1m under SFC's Financial Transactions funding. The latter delivers an 800kW solar array with battery storage, 13 Electric Vehicle charging points and e-bike charging facilities onsite. NMIS is part of a local district heating network attracting Low Carbon Infrastructure Technology Programme funding from the [Scottish Government to Renfrewshire Council](#). One NMIS project partly supported by National Transition Training Funding administered by SFC is sustainable manufacturing business hub support in Orkney.



ANNEX B: OVERVIEW OF THE LEADING WORK OF INSTITUTIONS AND SFC IN CREATING AND ENHANCING CLIMATE OPPORTUNITIES

<div></div> <div>STRATEGIC ENABLING ACTIVITY</div>	
SFC ENABLING ACTIVITY	SECTOR'S RESPONSE
<p>In 2021 the focus of our <u>outcome agreements</u> was on COP26. In 2022 we continue to highlight transformational leadership, whole institutional change and intra-institutional and wider collaboration.</p> <p>Our investments in <u>EAUC Scotland</u>, the <u>green gowns awards</u>, <u>sponsoring the Building Back Better award this year</u> and <u>Fuel Change</u> galvanise climate leadership in institutions.</p> <p>Our support for JISC (institutional digital infrastructure) supports strategic ICT efficiencies and blended learning.</p>	<p>COP 26: The sector issued <u>key briefing papers</u> and participated in the <u>UK innovation showcase</u> at the University of Strathclyde.</p> <p>The City of Glasgow College hosted events and activities in the COP26 Green Zone through the summit, on campus and online.</p> <p>EAUC: Provide <u>real time advice and support</u> on decarbonisation and environmental sustainability to institutions. (See Annex A.)</p> <p>JISC: Improve academic ICT by <u>reducing its climate impact</u>.</p> <p>APUC: Sector-wide <u>sustainable procurement strategy</u>.</p>

<div></div> <div>TERTIARY EDUCATION AND SKILLS</div>	
SFC ENABLING ACTIVITY	SECTOR'S RESPONSE
<p>Our investments in skills and learning including <u>CESAP</u>, the <u>Energy Skills Partnership</u>, the <u>Flexible Workforce Development Fund</u>, the <u>National Transition Training Fund</u>, regional tertiary pathfinders and Graduate Apprenticeships support young people, upskilling and reskilling, and green supply chains in key challenge areas e.g., green heat.</p> <p>Our broad ranging investments contribute a high bandwidth and steady flow of climate-prepared talent to meet the evolving needs of the economy, from broad meta skills developed by graduates to graduates and postgraduates with specialist environmental and net zero skills and micro credentials for those already in work.</p> <p>Our <u>College Innovation Fund</u> is assisting colleges such as <u>Borders College</u> to pivot to green skills opportunities.</p>	<p>Energy Skills Partnership: Our core funding for the ESP enables workforce transition through college training networks in support of ScotWind, EVs and other net zero training. (See Annex A.)</p> <p>Reskilling and upskilling: Aberdeen University allocated almost 400 green skills online course places in 2021-2022 through SFC Upskilling and NTTF funds. Demand for course places outstripped supply.</p> <p>Skills partnership working: RGU, the University of Aberdeen and NESCol are working under the National Energy Skills Accelerator. NESA has won <u>£1 million</u> under the Just Transition Fund. The North East benefits in an SFC regional tertiary skills pathfinder.</p> <p>Graduate skills: Universities are evolving meta skills for all graduates in all disciplines, to ensure that <u>sustainability</u> is a core element by reviewing curricula, graduate attributes, or course narratives.</p> <p>Learning for sustainability: University of St Andrews: students complete an online environmental sustainability module.</p> <p>EAUC and LfSS module for all <u>college staff sustainability training</u>.</p>





ENTREPRENEURSHIP, KNOWLEDGE, RESEARCH AND INNOVATION

SFC ENABLING ACTIVITY	SECTOR'S RESPONSE
<p>We recently consulted on our <a href="#">Knowledge Exchange and Innovation measures</a> including the <a href="#">Entrepreneurial Campus</a> and <a href="#">Alliances for Research Challenges (ARCs)</a>.</p> <p>Our support for over a decade for the <a href="#">research pools</a>, and our ongoing <a href="#">core investments in research</a> provide the expertise needed to create new breakthroughs, sustain applied research and support our innovation assets.</p> <p>Our support for core research strengths is critical in national <a href="#">pathfinding</a> and <a href="#">global learning</a> on net zero including policy and societal challenges from <a href="#">food security and rural futures</a> to <a href="#">hydrogen and transport</a>, <a href="#">industrial decarbonisation</a>, appropriate <a href="#">offsetting</a>, <a href="#">advanced manufacturing</a> and the <a href="#">circular economy</a>, the <a href="#">blue economy</a> including <a href="#">blue carbon</a>.</p> <p>We support research contributing to realisation of the Sustainable Development Goals including delivery of the <a href="#">Global Challenges Research Fund</a>. Citation impact for Scotland's research on SDG 13 (climate) is higher than that of key global comparator nations.</p> <p>We support an academic culture that values entrepreneurialism including the <a href="#">Converge Challenge</a>.</p> <p>Our long standing support for <a href="#">Interface</a>, <a href="#">innovation vouchers</a>, the <a href="#">Innovation Centres</a> and our <a href="#">University Innovation Fund</a> assist business collaboration with the publicly funded knowledge base, meeting decarbonisation and sustainability challenges in <a href="#">several areas</a>, including <a href="#">sustainable construction</a> and <a href="#">sustainable chemicals</a>.</p>	<p>ARCs: We are developing <a href="#">several net zero/sustainability ARCs</a>.</p> <p>Research: Heriot-Watt university has spun out a company creating recycled bricks, the K-briq made from 90 per cent recycled construction waste.</p> <p>Research: SRUC research is playing a major role in <a href="#">global cuts to methane emissions</a> vertical farming and food security, natural capital and biodiversity, and other areas.</p> <p>R&amp;I: Hydrogen R&amp;I by key academic groups, the Energy Technology Partnership, the Scottish Research Partnership in Engineering, and the Net Zero Technology Centre sustained by SFC funding are supporting hydrogen use at scale.</p> <p>Converge Challenge: Our support together with industry, led to a University of Edinburgh AI enabled waste-sorting bin.</p> <p><a href="#">IBioIC</a>: The industrial biotechnology innovation centre supports new sustainable bio-based processes, materials and products. Revive Eco supported by IBioIC, extracts chemicals from waste coffee grounds for reuse in other industries. IBioIC is vital to the green and blue economy, zero waste and the circular economy.</p> <p><a href="#">Sustainable Aquaculture Innovation Centre</a>: AquaGen Scotland with the University of Stirling and others identified salmon biomarkers for natural resistance to bacterial infection, enabling selective breeding, reducing pollutants in the environment.</p> <p>Interface: Sunamp, a company developing world-leading thermal storage technologies began with an Innovation Voucher in partnership with the University of Edinburgh. Sunamp customers can save up to 50% in energy costs.</p>



NET ZERO PLACE-BASED TRANSFORMATION

SFC ENABLING ACTIVITY	SECTOR'S RESPONSE
<p>Strategic enabling and cluster building nationally and regionally - SFC investments in a number of areas including capital investment in estates, R&amp;I and skills funding supports institutions in their local partnership working on net zero. Often institutions contribute two or three of these strengths within specific local partnership initiatives. Institutions in one part of the country may also be collaborating with local councils or others elsewhere.</p> <p>SFC is a key partner building added value into net zero city deals, including our support towards <a href="#">skills</a>, education and R&amp;I aspects. We and the institutions are actively working on place-based net zero transformation with Governments, UKRI, the Enterprise agencies, Local Authorities, the Scottish Futures Trust and others.</p> <p>Our net zero and sustainability investments in university estates through our £32.8m <a href="#">Financial Transactions programme</a> in FY 2021-22 and <a href="#">college estates capital funding</a> support decarbonisation, adaptation and resilience.</p> <p>Institutions including their physical estates are key anchors, community enablers and demonstration hubs in cities and regions wider net zero transformation. This includes green skills, sustainable energy schemes, food and travel initiatives and community <a href="#">benefits</a> such as West Lothian College's horticulture students' contribution to a local foodbank. Such contributions deliver the just transition in skills but also other community cobenefits, in this case e.g., mitigating the cost-of-living crisis.</p>	<p>R&amp;I, skills and place: Built Environment for Transformation and National Manufacturing Institute Scotland. (See Annex A.)</p> <p>University of Edinburgh deploys green finance expertise under the <a href="#">Scottish Government's Green Heat Finance Taskforce</a>.</p> <p>Edinburgh Climate Change Institute: is supporting the 2030 City of Edinburgh Council Climate Strategy. SFC funded a <a href="#">study</a>.</p> <p>Tayside city deal: Our investment supports the Dundee &amp; Angus College-led MSIP (Michelin Scotland Innovation Parc) Skills Academy (including Abertay, Dundee and St Andrews universities). Our hydrogen research funding supports the green transport cluster.</p> <p>The Borderlands Inclusive Growth Deal: includes contributions by Borders college, Glasgow University's Crichton Campus, and Barony college part of Scotland's Rural College (SRUC). The SRUC supports the Dairy Innovation Centre in Dumfries decarbonizing dairy production systems (attracting UK Research &amp; Innovation "Strength in Places" funding.) The South of Scotland benefits from an SFC regional skills pathfinder under our implementation of the CESAP.</p> <p>Climate Neutral Innovation District in Glasgow supported by the University of Strathclyde includes renewable heat, transport and resilience. Our £30m investment in Strathclyde's Learning and Teaching Centre improves teaching facilities, and the district heating connection. The university participates with the University of Glasgow in <a href="#">Climate Ready Clyde</a>. GCU, Strathclyde and Glasgow universities participate in <a href="#">Sustainable Glasgow</a>.</p> <p>Fife College, an exemplar under the <a href="#">SG's net zero public sector buildings standards</a> could be replicated by the public sector.</p> <p>NESCol are connected in a <a href="#">local district heating network</a>.</p>



## ANNEX C: STRATEGIC POLICY CONTEXT

Climate change and the policy response to it is a complex and vast area, encompassing every part of our lives, spanning the environment, society, institutions and the economy. Our Framework responds to several key policy frameworks:

- [The UN Sustainable Development Goals](#);
- [The Scottish Government's National Performance Framework](#);
- [The Scottish Government's Climate Change Plan Update 2020](#) and the accompanying [Climate Emergency Skills Action Plan](#);
- [The UK Government's Net Zero Strategy: Build Back Greener](#);
- [The UK Climate Commission Climate Action Roadmap for FE Colleges](#);
- The Scottish Government's Programme for Government 2021-2022 and recent Spending Reviews<sup>13</sup>;
- [The Scottish Government's Just Transition Planning Framework](#);
- [The Scottish Government's National Strategy for Economic Transformation](#);
- [The Scottish Government's Heat in Buildings Strategy](#);
- [The Scottish Government's Infrastructure Investment Plan](#);
- [The Scottish Government's Climate Change Adaptation Programme](#);
- [Audit Scotland's Addressing Climate Change in Scotland \(public bodies\)](#);
- [HM Treasury's Final Net Zero Review 2021](#) and [Green Book 2022](#);
- [Public Sector Leadership on the Global Climate Emergency](#);
- [Purpose and Principles for Post school education, research & skills](#).

## SCOTTISH FUNDING COUNCIL STRATEGIC PLAN 2022-2027

We are reflecting net zero and sustainability across priorities under our Strategic Plan 2022-27 relating to learning and teaching, research and innovation, estates and SFC as an organisation. Our priority focus is in building a responsive, coherent, and sustainable post-16 education and research system. The next page provides a mapping of our Strategic Plan 2022-2027 and Net Zero & Sustainability Framework for Action objectives.

<sup>13</sup> [Investing in Scotland's Future: resource spending review framework](#); [Investing for jobs: Capital Spending Review 2021-2022 to 2025-2026](#); [Resource Spending Review](#).

## ANNEX D: MAPPING THE FRAMEWORK TO OUR STRATEGIC PLAN OBJECTIVES

### OBJECTIVE 3 - BUILDING A RESPONSIVE, COHERENT, SUSTAINABLE SYSTEM

**Priority 3.1** - We will ensure institutions respond effectively to the climate emergency, embedding climate action and the just transition to net zero in our forward strategies, accountability frameworks and investments; and expecting colleges and universities to use their expertise and activities to deliver a prosperous, low-carbon future.



### SFC STRATEGIC PLAN 2022-2027

One of the **themes** that underpins our work (related to several of the other themes e.g. place based and fair work themes) is, **"RESPONDING TO THE CLIMATE EMERGENCY"**.

The full text reads that this, *"involves taking collective responsibility to address the ambitious target to reduce carbon emissions and deliver a just transition to net-zero by 2045. Alongside our own organisational contribution, we will support the bodies we fund to drive change through student education, research and innovation for a greener Scotland, scientific advice to inform policy, and through estates strategies."*





### OBJECTIVE 1 - ENABLING PEOPLE TO LEARN AND FLOURISH

To invest in education that is accessible to learners from all backgrounds and throughout life; gives them a high-quality learning experience and supports them to succeed in their studies; provides opportunities to participate; and equips them to flourish in employment, further study and fulfilling lives.



### OBJECTIVE 2 – GENERATING NEW IDEAS AND DIFFUSING KNOWLEDGE

To invest in excellent research and innovation that advances current knowledge; attracts and nurtures talent and entrepreneurship; mobilises collaboration and additional investment; enhances our international reputation; and delivers economic transformation and societal value.



### OBJECTIVE 3 – BUILDING A RESPONSIVE, COHERENT, SUSTAINABLE SYSTEM

To create the conditions for a responsive, coherent system of tertiary education and skills, research and innovation that transforms social and economic prosperity and wellbeing, and environmental sustainability, at national and regional levels and through place-based investment; secures international attractiveness and influence; and supports institutions to thrive individually and together.



### OBJECTIVE 4 – MAKING SFC AN EXCELLENT ORGANISATION

To be an excellent public body that delivers impact through leadership, partnership, insight and wise investment.

## NET ZERO & SUSTAINABILITY FFA

● **AP 1.** Net zero by 2045 or earlier

● **AP 2.** Leadership including Strategic Plan

● **AP 3.** Communications Plan

● **AP 4.** Impact framework and associated accountability and quality assurance frameworks

● **AP 5.** Areas of advantage

● **AP 6.** Innovation assets

● **AP 7:** Entrepreneurship

● **AP 8.** Alliances for Research Challenges

● **AP 9.** Climate Emergency Skills Action Plan

● **AP 10.** Learning for Sustainability

● **AP 11.** Funding and finance opportunities

● **AP 12.** College Infrastructure Strategy

● **AP 13.** Financial transactions for net zero place making

● **AP 14.** Staff development and coordination

● **AP 15.** Carbon management plan

## ANNEX E: GLOSSARY OF CLIMATE CHANGE RELATED TERMS

**Adaptation (or resilience)** is taking action to prepare for and adjust to both the current effects of climate change and the predicted increasing impacts in the future. (See also “mitigation” below.)

**Carbon removal/sequestration** – the process by which through either natural or industrial means carbon is removed from the atmosphere and can be stored safely. (See also “offsetting” below.)

**Co-benefits** describes the positive effects that a policy or action aimed at climate mitigation or adaptation might have on other objectives. Co-impacts of climate actions and policies which have positive effects on non-climate related objectives are termed co-benefits.

**(Environmental) sustainability** describes the responsibility of interacting with the planet to maintain natural resources and avoid jeopardising the ability for future generations to meet their needs.

**Environmental Social Governance investment** describes a set of investment principles or an investment Framework that fully integrates these three aspects within decision-making. Investors are concerned with financial returns and real-world positive impact that protects the value of their investment, reduces e.g., environmental risk and promotes social and environmental benefit. It is also known as responsible or impact investing.

**Greenhouse gas (GHG)/greenhouse gas emissions** are any gases in the atmosphere which absorb heat and keep the planet’s atmosphere warmer than it otherwise would be. GHGs encompass the six gases covered by the UNFCCC: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF<sub>6</sub>). (See also “mitigation” below.)

**Green (economic) recovery/growth** is a widely adopted name for environmental, regulatory, fiscal, and economic reforms to recover prosperity after the Covid-19 pandemic.

**Just transition means ensuring fairness** is integral to securing support for the scale and pace of societal and economic net zero transition required, including leaving no-one behind, nor creating disproportionate financial or inequalities burdens in the net zero transition.



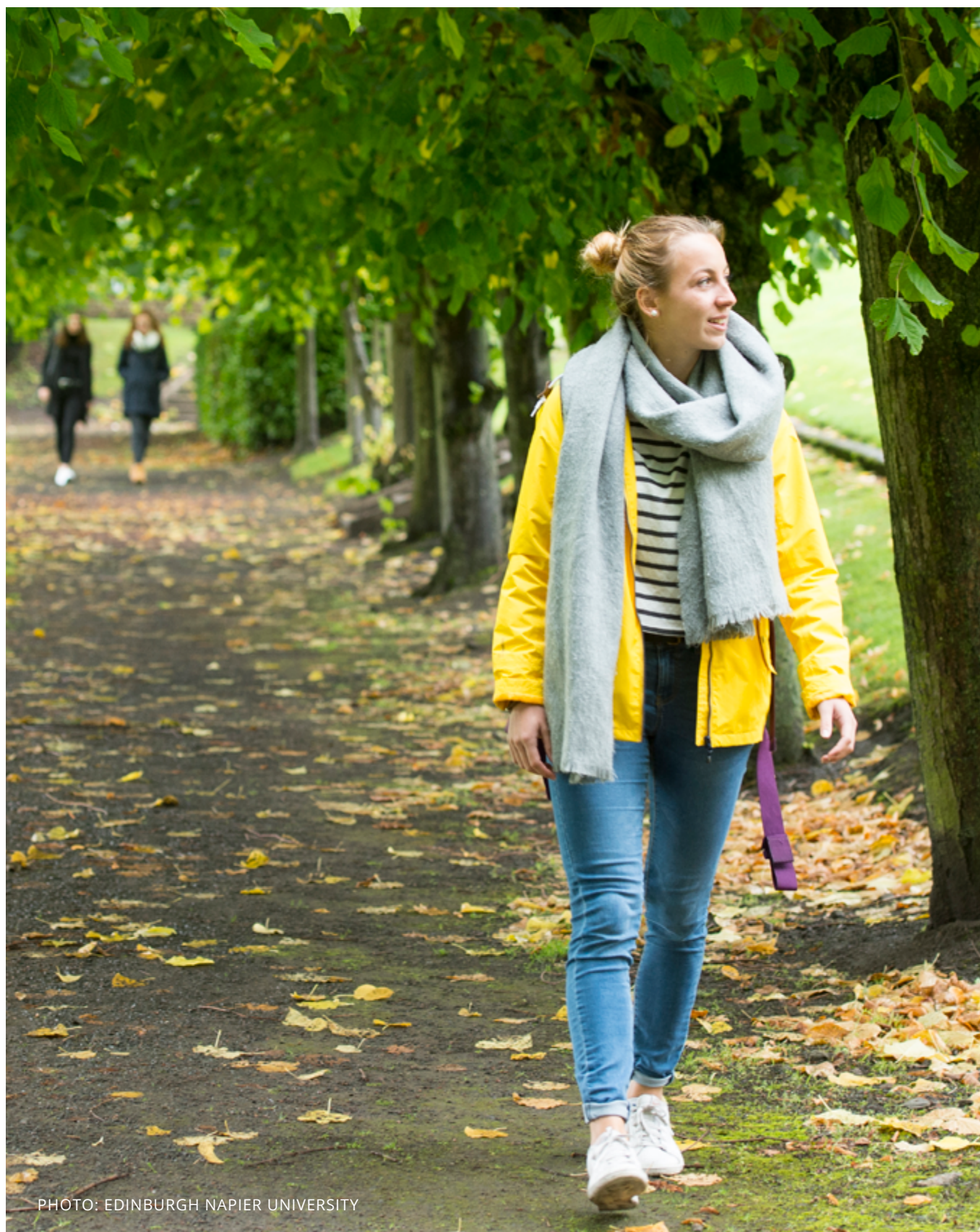


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**Mitigation** describes efforts to reduce or prevent emissions of greenhouse gases. It can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behaviour.

**Net zero (emissions)** is when the GHG emissions released into the atmosphere by an organisation or country are balanced by removals over a specified period (e.g., by mitigation, or carbon removal/sequestration). (See “Science Based Targets” below)

**Offsetting** refers to activity offsite usually attained through natural or industrial sequestration to store or sequester GHG emissions in order to compensate for GHG emissions produced by an organisation. **Insetting** refers to the same process onsite.

**Place-based net zero transformation/development/planning** – planning using place-based principles promotes a shared understanding of place, and the need to take a more collaborative approach to a place’s services and assets to achieve better outcomes for people and communities.

**Safe planetary boundaries (and doughnut economics)** refer to recognised concepts of nine planetary resource boundaries, which if protected, humanity can continue to be sustained by, but, if depleted, put societal foundations at risk.

**Science based targets** refer to net zero pathways and targets that prioritise emissions reductions in line with the 1.5 degrees Paris Agreement and deprioritise offsetting.

**Scope 1 emissions** are emissions from operations that are owned or controlled by an organisation. Scope groups are defined in the latest Scottish Government Guidance.

**Scope 2 emissions** are those generated through purchased electricity, steam, heating or cooling consumed by an organisation.

**Scope 3 emissions** are all indirect emissions (not included in scope 2) that occur in the value chain of an organisation, including both upstream and downstream emissions.

**Sustainable Development Goals** are United Nations approved set of 17 global development goals to end poverty and other deprivations with improving health and education, reducing inequality and spurring economic growth – all while tackling climate change and preserving our oceans and forests. They were adopted by the United Nations in 2015 with a goal to reach them by 2030.

**Upstream/downstream emissions:** Upstream scope 3 emissions apply to suppliers of an organisation and include commuting and procurement. Downstream scope 3 emissions apply to investments and customers.



COVER PHOTOS:  
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FIFE COLLEGE



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