



NCG

NCG CLIMATE ACTION STRATEGY



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FOREWORD



This strategy sets out NCG's renewed commitment to tackling the climate emergency through decisive action on decarbonisation. Our goal is clear: transform our campuses into smart, safe, sustainable learning spaces while creating real benefits for learners and communities.

Decarbonisation is not only an environmental imperative, it is an opportunity to work in partnership to support local priorities, drive green investment, and open new pathways to employment. By embedding climate-conscious decision making in leadership, curriculum, operations, and partnerships, we will reduce negative impacts on the environment. At the same time, we will equip students with the skills needed for the jobs of the future.

Our colleges are anchor institutions, leading by example, working with partners to unlock potential, creating a fairer, greener and healthier future for all. Together, as one NCG, we can turn climate action into opportunity for our learners and the communities our colleges serve.

Liz Bromley (NCG Chief Executive Officer)

PURPOSE OF THE STRATEGY

The strategy informs coordinated actions forming the basis of work in leadership, operations, curriculum and partnerships until 2030. The strategy builds on previous actions: NCG's previous achievements have been recognised, with Specialist Status in Education for Sustainable Development, for work on embedding sustainability into initial teacher training and apprenticeships. Improvements to campuses, which have increased efficiency and comfort of learning spaces and sustainable procurement; working with partners and our supply chain to minimise collective environmental impact. This strategy ensures that colleges' local priorities and ambitions are guided by a clear and structured framework of climate action. At the heart of the strategy are our learners, enhancing their employability by gaining experience that will enable them to thrive in a rapidly changing world and contribute to the future health and wellbeing of their communities.



EXECUTIVE SUMMARY AND CONTEXT

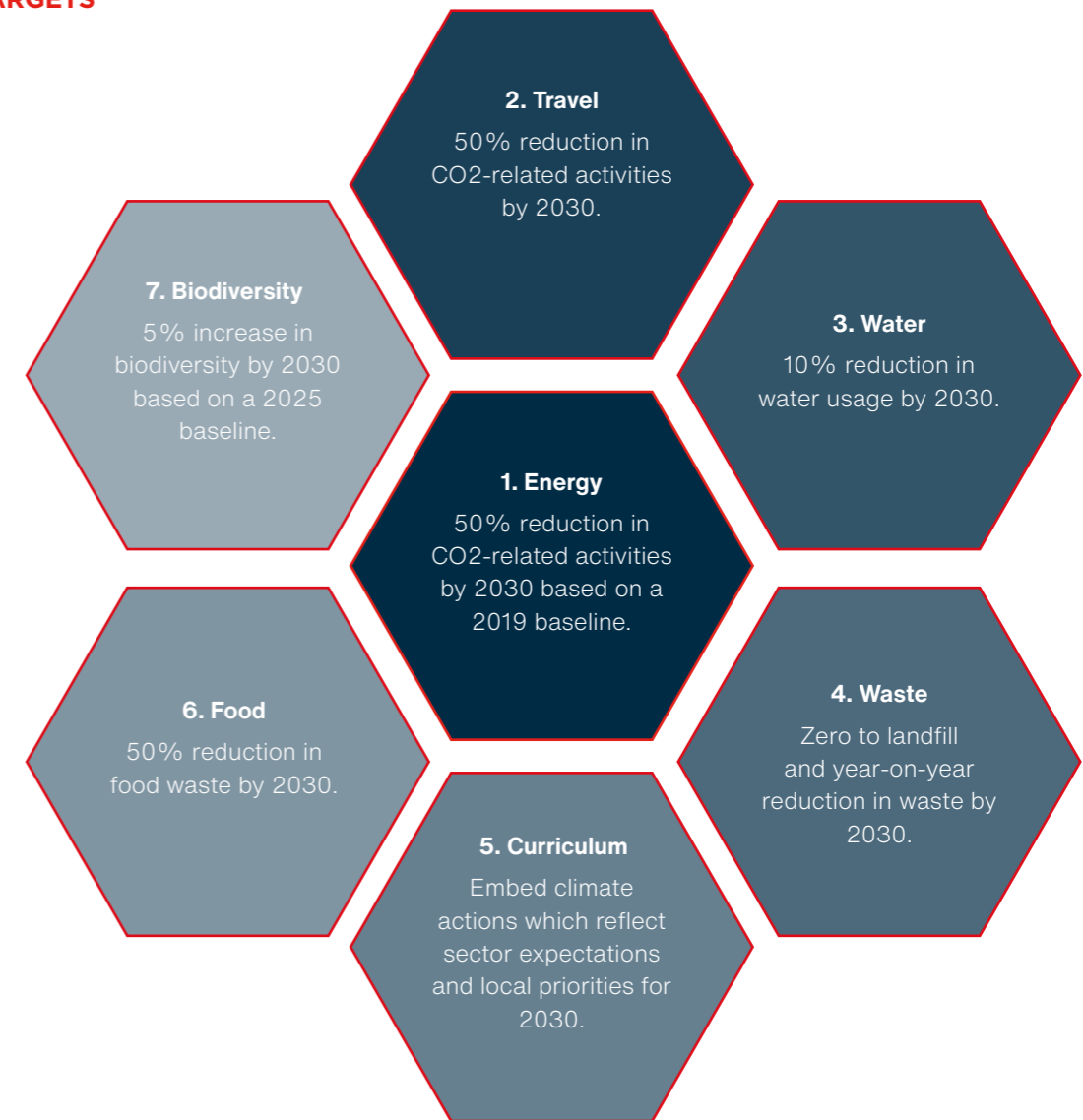
EXECUTIVE SUMMARY

NCG commits to achieving a 50% reduction in emissions from all sources (Scope 1, Scope 2 and significant Scope 3 emissions) by 2030 aligned to UK public sector decarbonisation aims and the Science-Based Targets initiative. This strategy reflects this ambitious goal by embedding sustainability across leadership and governance, curriculum, estates and operations, travel, food and biodiversity, data and reporting, and partnerships.

CONTEXT AND ALIGNMENT

Sustainability focus has shifted from 'what is sustainable' to action-oriented climate response, emphasising a reduction in supply chain emissions through sustainable procurement and addressing climate risks by building resilience. The UK government has a legally binding target to become Net Zero by 2050 and sets interim public sector building emissions reductions 50% by 2032 and 75% by 2037 working from a 2017 baseline. NCG's baseline and targets now reflect this context.

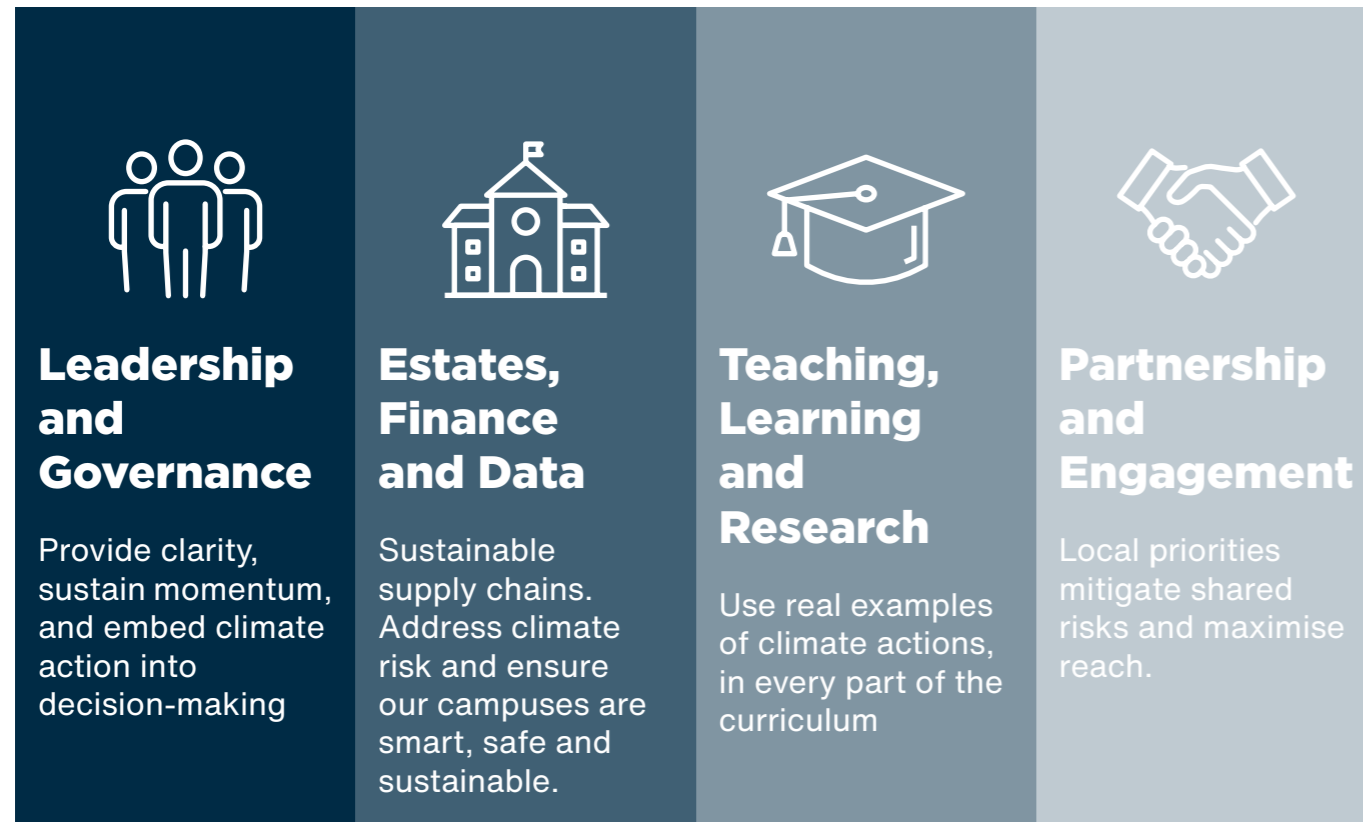
NCG TARGETS



STRATEGIC OBJECTIVES

Sustainability is changing. There has been a shift from talking about what is sustainable, towards what actions are needed in communities, workplaces and the UK to limit climate change and operate in a changed climate. NCG's sustainability strategy is also changing to reflect more current thinking around climate action.

There are four distinct areas of climate action which align with areas of work in NCG



Leadership and Governance: College and NCG leaders set the priorities for teaching staff, colleagues in non-teaching roles and learners. Leadership is needed to ensure that our organisation addresses climate risk and that learners can benefit from emerging opportunities in low carbon sectors. Actions include target setting, governance arrangements, oversight and culture change.

Estates, Finance and Data: Reduce emissions from our campuses and our supply chain and ensure we have safe, climate-resilient college estates through smart, data-driven solutions. Actions include measuring emissions, decarbonisation of the college's estates and sustainable procurement.

Teaching, Learning and Research: Equip students and staff with the knowledge and skills to play an active role in climate action in the communities where the colleges operate, this will lead to greater opportunities for skilled, well paid and rewarding employment.

Partnerships and Engagement: Maximise the role of our colleges as anchor institutions within local communities, work with employers and policymakers to address specific, local green skills need and use our reach to act as examples of what a sustainable, smart, and future-proof workplace can look like.

WHAT THE STRATEGY MEANS FOR OUR COLLEGES

Ownership: Annual Sustainability Plans held within colleges: Each college will set their own priorities chosen from NCG's strategy for each academic year.

Integration: Smart Safe Sustainable. Smart Technology has the potential to improve both safety and efficiency.

Climate Risk: Develop resilience strategies for extreme weather and environmental hazards unique to local communities.

Enhanced partnerships: Decentralise and share collaboration work between NCG colleges councils, employers, and sustainability organisations.

Opportunities for Learners: Learning about relevant climate action in curriculum areas. Opportunities for employability and citizenship: Climate action provides tasks that AI can't replicate; big, messy problems that require collaboration and choosing between competing priorities. Workplace adaptations are directly related to meeting skills needs and the participation and development aspects of the new Ofsted framework. In a similar way relevant climate actions can naturally be incorporated to the employability and community aspects of the NCG Guarantee.

NCG Learners were consulted during the drafting of this strategy and made several valued recommendations such as improved careers guidance, awareness of climate risk and how eventual cost savings could be invested in initiatives that benefit them, such as help with travel to college and improvements to campuses.





CLIMATE AND BIODIVERSITY ACTIONS

	Leadership and Governance	Estates, Finance and Data	Teaching, Learning and Research	Partnerships and Engagement
EXPECTED	Gather college views on sustainability	Upskill measuring emissions	Deliver steps to sustainability training to staff and students	Publish targets and related strategies
	Establish a sustainability reporting structure	Measure college carbon footprint using existing data	Engage teaching and learning community with ESD	Join communities of practice, and network groups
	Set net zero target	Provide sustainable food options and assess packaging requirements of procured goods	Include sustainability in NCG Guarantee	
ESTABLISHED	Incorporate net zero ambitions in strategic plan and establish budget	Improvements to the estate leading to smart, safe and sustainable campuses	Participate in Global Goals Teach In	Apply for funding to improve energy emissions
	Develop climate adaptation/climate risk management approach	Develop sustainable procurement policy and strategy	Create an ESD baseline and action plan	Join or establish climate action network with local council
	Incorporate sustainability into governance arrangements	Modify estates strategy in-line with net zero target	Ensure relevant staff have access to CPD, supporting them to incorporate sustainability into their professional practice	Work with local community/council/businesses to improve local biodiversity
	Implement travel policy to reduce emissions from commuting and limit air travel	Share carbon footprint data collection approach as model to other colleges	Conduct biodiversity survey of estate	
EXCEPTIONAL	Embed climate responsibility into all staff development	Set and implement targets to reduce waste on campus by 50-75%	Establish ESD Partnerships	Develop and implement plan to measure and report all Scope 1, 2 and significant Scope 3 emissions
	Use reach and influence to facilitate a just transition away from fossil fuels.	Develop and implement biodiversity- positive approaches to estates management	Measure your ESD outcomes in impacts	Apply for Green Gown (UK Wide) or AoC Beacon award (England only)
	Ensure the environmental impacts of NCG's generative AI use are fully considered	Implement renewable energy on a part/all of the estate		

The actions are categorised as expected, established and exceptional. Expected are common measures currently being actioned across the FE and HE sector. Established are examples of actions in institutions with a more established culture of sustainability. Exceptional actions are about sharing learning with partners, extending reach, celebrating good practices and operations that are close to zero carbon. It is not a timeline; actions can be worked on concurrently and in any order. Colleges can prioritise actions based on local needs.

CARBON REDUCTION PATHWAYS

CARBON REDUCTION PATHWAYS - REVISED STRATEGY VS BUSINESS AS USUAL

Scope 1 and 2 emissions arise from our built estate. These emissions are most directly within NCG's control. Addressing these emissions is a key part of our Net Zero strategy, and we are actively implementing measures to reduce the carbon footprint of our buildings.

In 2022, NCG commissioned a Heat Decarbonisation Plan (HDP), providing a structured roadmap to transition our estate away from fossil fuel heating towards low-carbon, energy-efficient alternatives. This plan has already led to the implementation of several key actions, including:

- Energy efficiency upgrades, such as LED lighting installations and smart energy management systems.

- Transitioning heating systems to lower-carbon alternatives where feasible.
- Renewable electricity procurement, ensuring all electricity used across the estate is from renewable sources.
- Improving building insulation and controls to reduce energy waste.
- A comparison of emissions trajectories is detailed below, showing Business-as-Usual vs. Revised Carbon Projections.

EMISSIONS

FIG 3.1 BUSINESS AS USUAL

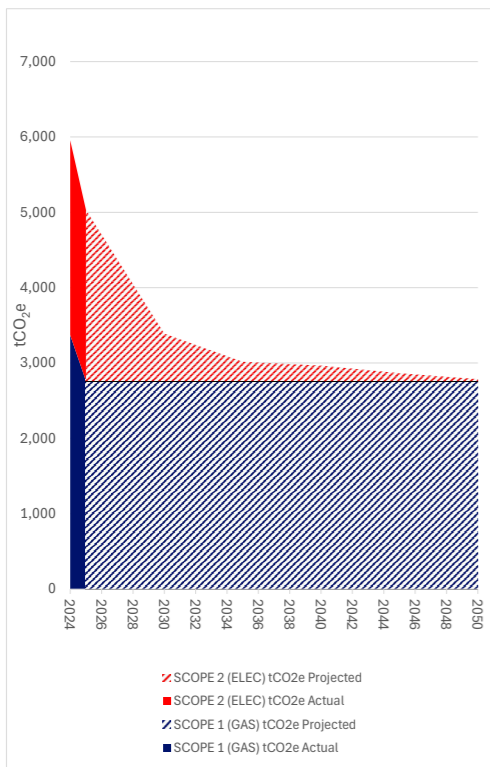
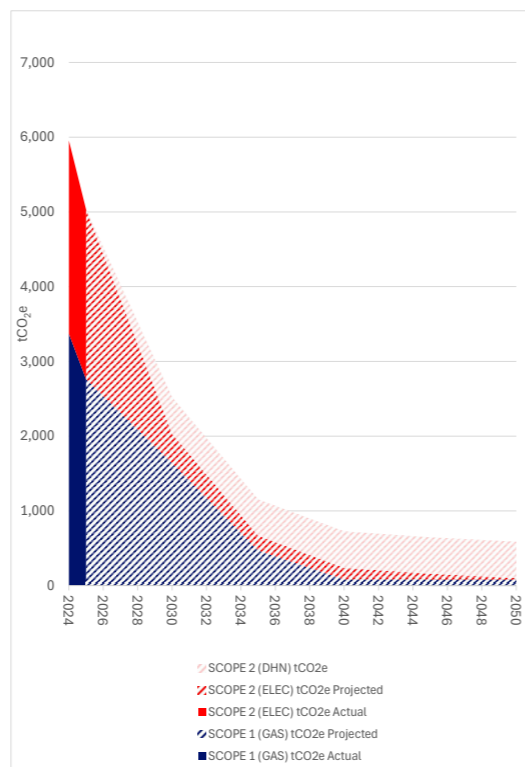


FIG 3.2 NCG REVISED PATHWAY



TARGETS AND REPORTING

SCIENCE-BASED TARGETS

The Science-Based Targets initiative (SBTi) is the globally recognised framework for aligning corporate and institutional sustainability targets with climate science. SBTi ensures that Net Zero goals are:

- Based on climate science – Targets must align with limiting global warming to 1.5°C.
- Transparent and measurable – Regular emissions reporting and verified reductions.
- Focused on absolute reduction, not just offsets – Prioritising energy efficiency and renewable adoption over carbon credits.

The central target of 50% reduction in CO₂-related activities by 2030 based on a 2019 baseline meets the SBTi criteria.

EMISSIONS REPORTING

Greenhouse gas (GHG) emissions are classified into three scopes to better track and manage an organisation's environmental impact:

- **Scope 1 (Direct Emissions):** These come from sources owned or controlled by an organisation, such as gas combustion, company vehicles, and refrigerant leaks.
- **Scope 2 (Indirect Energy Emissions):** These result from purchased electricity, steam, or heat, meaning emissions occur at the point of energy generation rather than directly at the organisation.
- **Scope 3 (Indirect Value Chain Emissions):** These include emissions outside of direct control, such as supply chain activities, business travel, commuting, and waste disposal. Scope 3 often represents the largest portion of an organisation's carbon footprint but is also the most challenging to measure.

Accurate emissions reporting is crucial for setting effective carbon reduction strategies, regulatory compliance, and enhancing sustainability efforts. Improved accuracy will enable a better understanding of our total impact, allow us to accurately measure progress against Net Zero targets, and drive meaningful change.



CARBON EMISSIONS



SCIENCE-BASED TARGETS

NCG is responsible for emitting a total of 35,912 tonnes of CO₂ or equivalent gases into the atmosphere.

- **Scope 1:** 4,171 tCO₂e (10.5%) Mainly from the gas we burn.
- **Scope 2:** 6,905 tCO₂e (17.2%) These are the emissions from procured electricity.
- **Scope 3:** 24,837 tCO₂e (69.2%) These include emissions due to;
 - Subcontracting
 - Purchased goods
 - External service providers
 - Business travel

The figure of 24,837 tCO₂e Scope 3 emissions is high but is in line with industry benchmarks. It is expected that procurement emissions account for between 70-90% for a post-16 education sector institution's total footprint. NCG's represents 69.2% of total emissions.

NCG's actual Scope 3 emissions are likely to be relatively high in the reporting year due to a recent IT infrastructure investment, the replacement of desktop computers and display screens accounting for 8,465 tCO₂e which is the largest single source of procurement emissions. In a year where capital expenditure is lower, the largest source for NCG will typically be due to subcontracting.

Procurement emissions were calculated using a spend-based model. This is a tool that uses conversion factors to estimate the emissions caused by the purchase of goods and services. A spend based approach to Scope 3 is seen as the first step in measuring emissions. Further actions are needed to improve the accuracy of Scope 3 measurement, including:

- Large suppliers to be asked for accurate data around their own emissions.
- Tenders include questions about sustainability.
- End-of-life product disposal and waste beyond current tracking capabilities.

LOOKING FORWARD

Fig.3.1 shows the business as usual projection. It reflects emissions without intervention and represents what would happen, should we continue to operate without significant change to energy efficiency, heating systems, or renewable energy adoption.

- The solid areas are actual recorded emissions and the hatched sections on the graph show projected emissions through to 2050.
- Scope 1 Gas emissions remain relatively constant, reflecting the continued reliance on fossil fuel heating.
- Scope 2 Electricity emissions (red section) gradually decrease over time due to expected grid decarbonisation (the UK's national energy transition towards renewable electricity).
- Overall emissions decline slowly, but without significant intervention, NCG would still have substantial residual emissions beyond 2035.

The NCG revised pathway graph (Fig 3.2) shows a carbon reduction strategy, incorporating energy efficiency improvements, renewable energy adoption, and heat decarbonisation:

- Substantial reductions in Scope 1 (Gas) emissions as heating systems are progressively electrified or replaced with low-carbon alternatives.
- Scope 2 (Electricity) emissions drop significantly as we implement interventions, including LED lighting, smart energy management, and renewable technology and the UK's electricity grid transitions to more renewable sources.
- Scope 2 District Heat Network emissions (DHN) appear as a light red section, reflecting the expected transition to lower-carbon purchased heat.

By 2035, only minimal residual emissions remain, aligning with NCG's Net Zero target.

Without action, NCG's emissions would remain significant past 2035. With intervention, emissions sharply decline, demonstrating the impact of strategic carbon reduction efforts. Net Zero is achievable by 2035 through a combination of energy efficiency, heating decarbonisation, and renewable energy adoption.

These projections will continue to be monitored and updated to reflect real-world progress and evolving carbon reduction opportunities.

COSTS

PROJECTED OPERATIONAL AND CAPITAL COSTS OF DECARBONISATION

In addition to modelling operational carbon, it is essential to assess costs, both operational and capital expenditure, in order to evaluate the feasibility and financial implications of achieving our target. Alongside the carbon projections, an operational cost forecast has been developed, as illustrated below.

OPERATIONAL COSTS

It is important to acknowledge the inherent difficulty of forecasting long-term energy prices due to the volatile nature of the energy market. This volatility is shaped by factors such as global fuel supply and demand, geopolitical developments and policy measures.

The modelled scenario aligns closely with UK government strategy and long-term climate goals, particularly the legally binding commitment to reach Net Zero emissions by 2050. This scenario reflects the policy direction

outlined in the Heat and Buildings Strategy, which seeks to decarbonise heat through widespread electrification and the gradual removal of new fossil fuel heating systems. Projections lie between two models of future pricing. A Green Book Estimate (GrB) which forecasts energy costs using HM Treasury appraisal rules including inflation assumptions.

This sees energy costs remaining lower in 2050 than some estimates. By 2050, the Revised Projection forecasts a £1.2m reduction per year in operational costs compared to business as usual.

It is possible to calculate higher savings, if a projection is used that predicts a higher cost of energy by 2050. Heat Decarbonisation Energy Network rate (HDEN), is a future projected energy rate for gas, electricity, and district heat, factoring in increased grid investment costs for high demand of UK generated low carbon electricity, minimal gas usage and carbon pricing.

THE COST OF NET ZERO - OPERATIONAL

FIG 4.1 BUSINESS AS USUAL

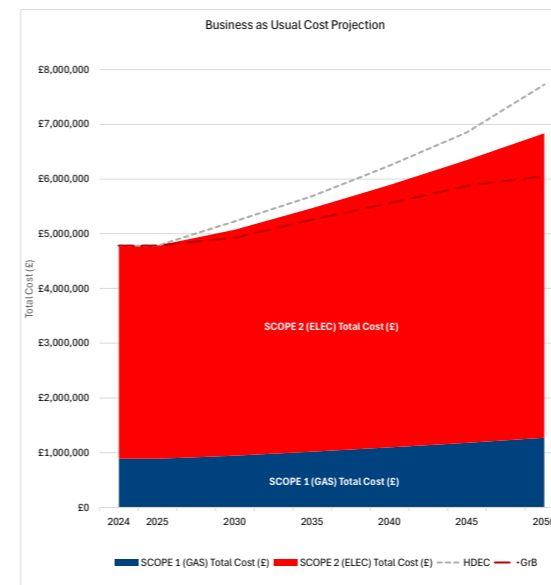
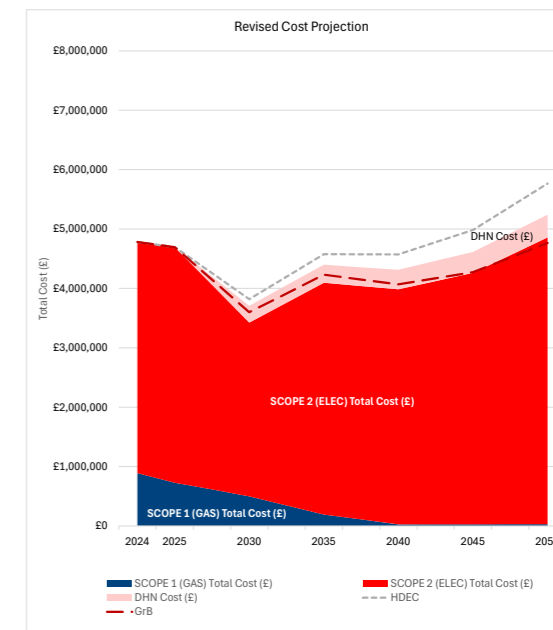
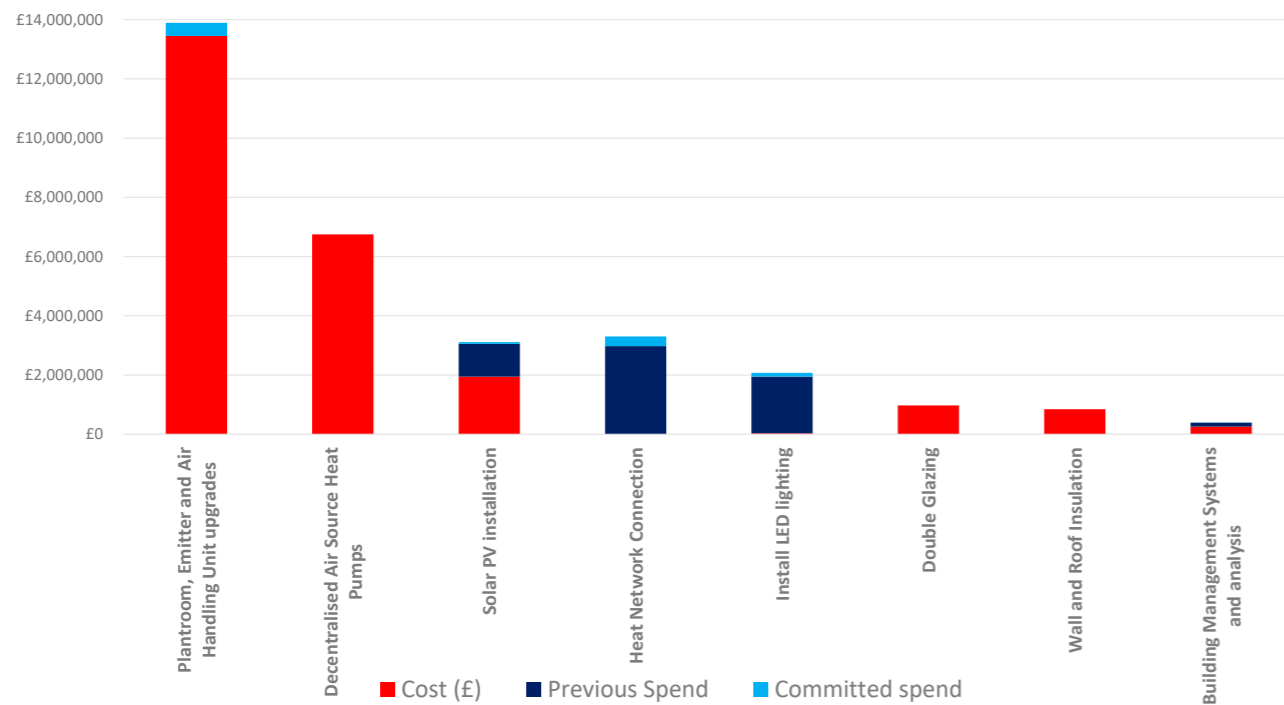


FIG 4.2 NCG REVISED PATHWAY



CAPITAL COSTS



OPERATIONAL SAVINGS VS CAPITAL COSTS

The estimated capital investment required to realise an estimated £1.2M reduction in operational costs is significant, with all of the fabric upgrades and heat decarbonisation measures in figure 5.1 totalling £31M. The payback period for that investment is 25-30 years, however not all of this is additional spend with £7.6M covered by previous and committed spend.

There are funding opportunities, the Public Sector Decarbonisation Scheme is now in phase 4 and will run until 2028. Funding has changed in devolved areas. In places with trailblazer combined authorities Greater Manchester (West Lancs is just outside) and West Midlands (Kidderminster is just outside)

It is expected that after 2028 all colleges and public bodies will receive funding directly through devolved deals instead of applying nationally via Salix Finance.

Each of NCG's colleges has an estates masterplan which is accompanied by an investment strategy, which will incorporate climate resilience and decarbonisation. When buildings are refurbished, fabric upgrades that will increase efficiency should be considered. When plant reaches end of life, that decarbonisation should be planned, rather than a like for like replacement.

FURTHER INFORMATION

1. Examples of Progress to Date. NCG follows a structured sustainability pathway that aligns with sector-wide best practices, ensuring continuous improvement from Emerging to Established and ultimately becoming a Leading institution in sustainability. Significant work has been undertaken since the original Strategy in 2020, which is summarised in NCG's Progress timeline 2025
2. NCG Climate Action Dashboard 2026-2030 Key milestones for achieving Net Zero and embedding sustainability across governance, curriculum, and estates are underpinned by a detailed Action Plan including all tasks, actions and owners.
3. Monitoring and Reporting To ensure an effective strategy, clear Key Performance Indicators (KPIs) have been set across governance, energy efficiency, travel, curriculum, waste management, food sustainability, and biodiversity. They will track progress towards Net Zero and ensure that objectives are measurable, achievable, and aligned with science. A detailed tracker and reporting and governance arrangements have been developed to support this.
4. Implications and Strategic Links. The actions outlined in the strategy have implications for learners, finances, and reputation. There are legal implications in reporting and target setting.

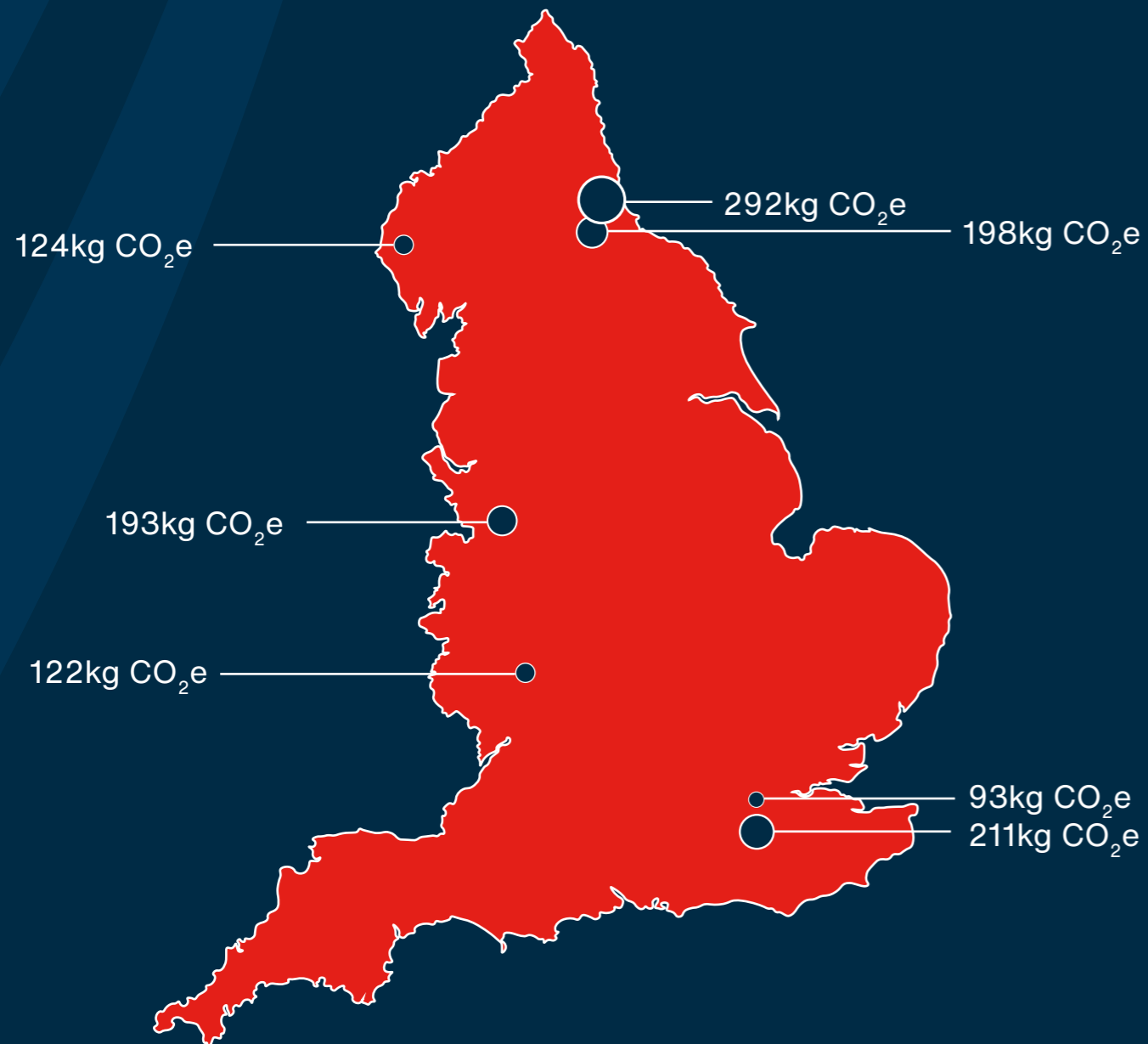
The above content is available on NCG Climate Action SharePoint and as Appendices to this strategy document.

Climate Action SharePoint: livetestnclcollac.sharepoint.com/sites/NCGClimateAction



ABOUT NCG

NCG is one of the UK's largest and most inclusive further and higher education groups, comprising Carlisle College, West Lancashire College, Kidderminster College, Lewisham College, Southwark College Newcastle College, Newcastle Sixth Form College and NCG Higher Education Centres. Together, we provide high quality vocational, technical, and academic education pathways that equip learners with the skills, knowledge, and confidence to thrive in a rapidly changing world. Our growing higher education offer, delivered through specialist centres and industry focused degrees reflect our commitment to widening participation and supporting regional economic growth.



The map shows normalised emissions on a per-student basis, to allow comparison between NCG colleges

Carlisle College is focused on providing learners and employers in Carlisle with the skills needed to provide opportunities in a future proof Cumbria.

West Lancashire College is an anchor institution rooted in the community, offering a wide range of vocational qualifications and adult courses.

Kidderminster College is a friendly and ambitious college delivering specialist technical and vocational courses, with a recently opened Green Technology Centre, supporting skills development across the West Midlands.

Lewisham College is one of London's largest further education colleges, offering an extensive range of work focused courses within a diverse and supportive community.

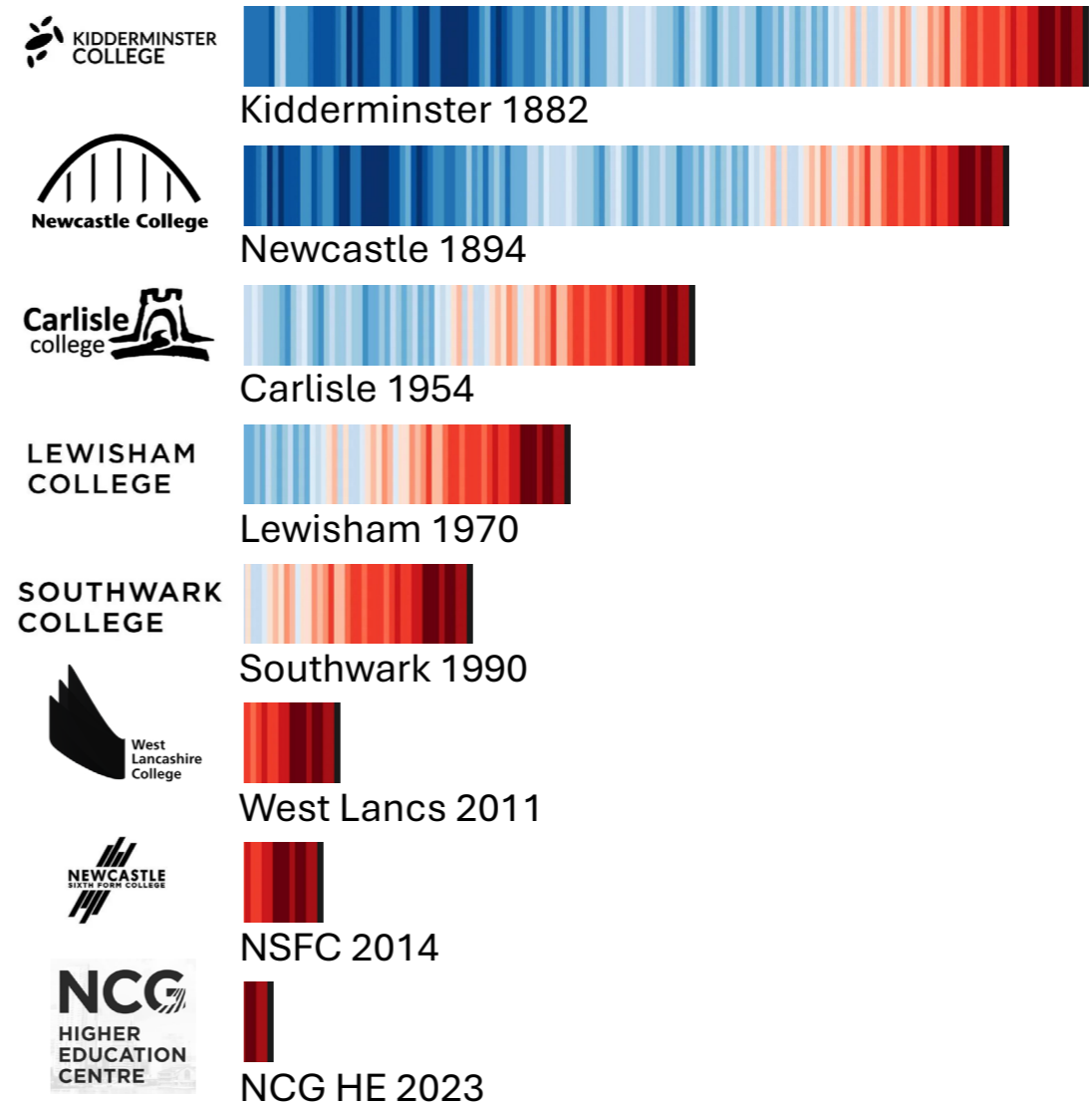
Southwark College provides a forward-looking learning environment, offering a range of courses and strong employability support from an accessible, central, SE1 campus.

Newcastle College is the largest FE provider in the North East, offering extensive vocational programmes designed to develop real world skills and industry readiness.

Newcastle Sixth Form College is the North East's dedicated A Level centre, offering over 25 subjects and strong progression routes into higher education.

NCG's Higher Education Centres offer flexible, career focused programmes shaped by employer needs, combining academic study with applied learning to support progression into work or further study.

GLOBAL TEMPERATURE SINCE THE FOUNDATION OF NCG COLLEGES AND HE PROVISION



Climate Stripes graphic created by Professor Ed Hawkins, National Centre for Atmospheric Science (NCAS), University of Reading. Data sources: Berkeley Earth, ERA5-Land, NOAA, UK Met Office, MeteoSwiss, DWD, SMHI, UoR & ZAMG

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Ryan Crawford – Newcastle College Student

Jireme Stacy Egere – Lewisham College Student

Dominique Ellis – Newcastle College Student

Pavel Fenyes – Lewisham College Student

Florence Friggens – Newcastle College

Aislinn Hammah – Lewisham College

Abraham Hanif – Lewisham College Student

Richard Holden – NCG Catering

Senumi Jayawadena – Lewisham College Student

Sean Jobling – Tribe Solutions

Joe Jobling – Newcastle College Student

Tony Lewin – NCG

Cat Lewis – Kidderminster College

Karl Lowthian – NCG

Scott Mulholland – NCG

Claire MacLean – NCG

Keiran McIntosh – Lewisham College

Fariz Rahim – NCG Accounts

Claire Reed – Southwark College

Emily Ryan – NCG Procurement

Joseph Salem – Newcastle College Student

Lisa Sproats – NCG

Dan Sugden – Newcastle College Student

Daniel Venner – NCG Accounts

Kate Williams and GTC colleagues – Kidderminster College

Serena Jade Williams – Lewisham College Student

“Students should be made aware of the green job opportunities available and that they could create sustainable self-employment for themselves.”

Jireme Stacy Egere - Lewisham College Student

“Leadership in this area is vital. Showing students how powerful the topic of climate change is and how they can react positively by taking climate action.”

Pavel Fenyes – Lewisham College Student

“Improving biodiversity on campus is a great thing to do, we could be involved and it just makes students feel better being in nature for a while.”

Joseph Salem - Newcastle College Student