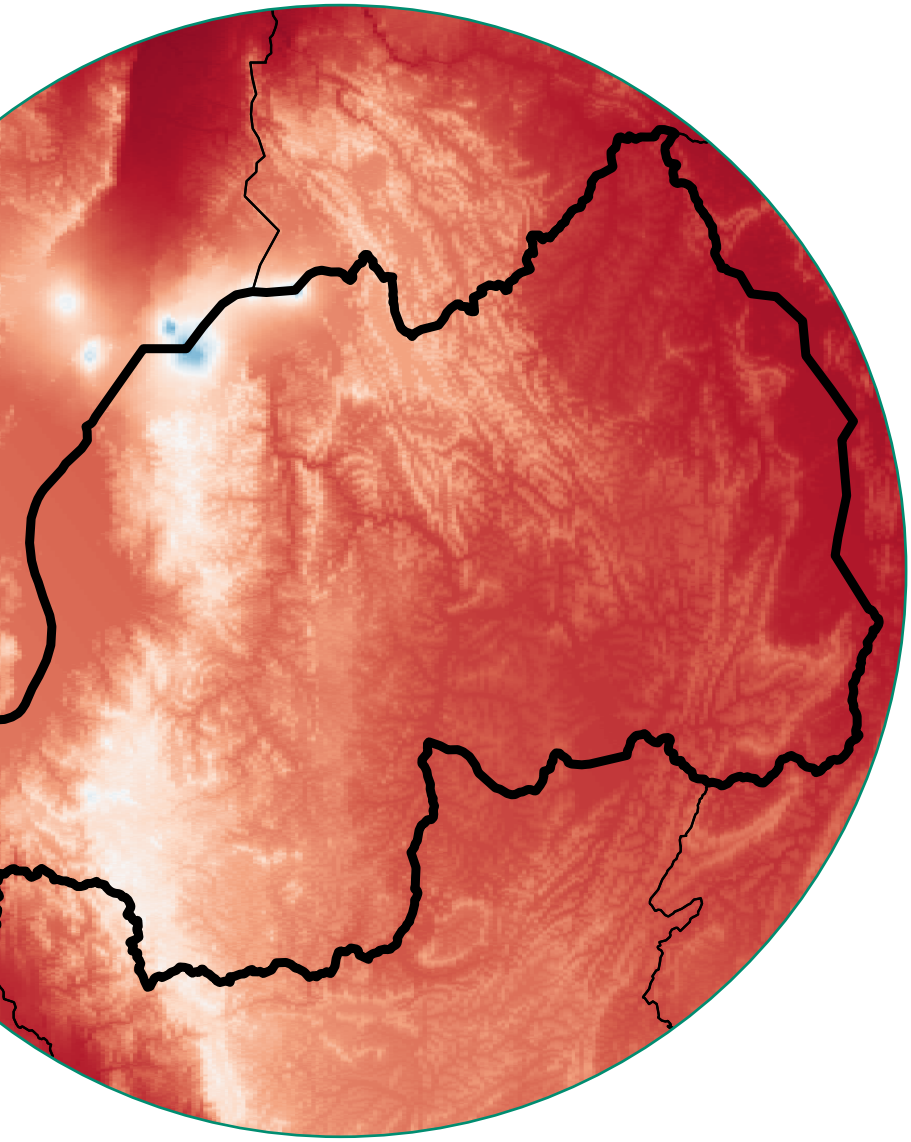

Annual Report 2026

Centre for Energy and the Environment









Introduction

About SWEEG

The South West Energy and Environment Group (SWEEG) is a collaborative research partnership between public sector organisations in the South West

The SWEEG partnership was formed in the 1970s and continues to research and share information on energy, emissions and environmental issues in the built environment.

The Centre for Energy and the Environment at the University of Exeter coordinates and carries out technical research on behalf of SWEEG members. Research completed by the Centre is disseminated among SWEEG partners, while work of wider interest may be published in technical and academic journals.

A list of publications produced for SWEEG over the past year can be found at the end of this report. More information about the Centre and SWEEG research is available on the University of Exeter website at www.exeter.ac.uk/cee.

Current SWEEG members

Cornwall Council
Devon and Cornwall Police
Devon County Council
East Devon District Council
Exeter City Council
Mid Devon District Council
Plymouth City Council
South Hams District Council
Teignbridge District Council
West Devon Borough Council
University of Exeter

Organisations wishing to enquire about SWEEG or commission work from the Centre should contact:

The Centre for Energy and the Environment
University of Exeter
Hope Hall
Prince of Wales Road
Exeter EX4 4PL

Tel: 01392 724159
Web: www.exeter.ac.uk/cee

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Front cover

In Rwanda, heatwave events are becoming more frequent and around 2.5 °C more intense due to climate change, increasing the risks to buildings, energy and cooling infrastructure, as well as critical vaccines and food storage facilities.

About the Centre

The Centre for Energy and the Environment has been working with public sector organisations and businesses for almost 50 years. Our research has a direct impact on environmental outcomes and policies.

The Centre for Energy and the Environment (the Centre) is a research group within the University of Exeter, and is uniquely placed to provide bespoke research which can help reduce carbon emissions and energy consumption.

Our expertise covers all aspects of the built environment including sustainable building design, efficiency in existing buildings, carbon reduction strategies, adaptation to climate change, renewable and community scale energy, thermal and daylight modelling, acoustic design, transport, waste and all related policy areas.

Research at the Centre ranges from three to five year Research Council programmes to short applied projects in both the public and private sectors. Staff from the Centre can deliver bespoke training programmes for continuing professional development or provide academic supervision for Knowledge Transfer Partnerships with industry.



The Centre for Energy and the Environment is based at Hope Hall on the University of Exeter's Streatham Campus.

Current Staff



Dan Lash Head of the Centre
Dan studied architecture and has a PhD in Building Science. He has well over 20 years of experience across a broad range of decarbonisation areas including buildings, transport, planning, policy, and footprinting.



Isabel Brown Research Assistant
Isabel's background is in climate change and has recently worked on assessing climate change risk and adaptation planning as well as offshore wind planning policy.



Andrew Rowson Research Fellow
Andrew is an Engineering Mathematician with experience in construction. He is involved in strategic energy modelling, technologies, planning and policies.



Ethan Feaver Research Assistant
Ethan is an environmental chemist with experience in pollution monitoring. His recent work has focused on territorial footprinting and climate modelling.

Territorial Footprinting





Local Authority Territorial Footprints

The Centre continues to support local authority Climate Emergency responses by providing annual updates to territorial carbon footprints and carbon descent progress reports.

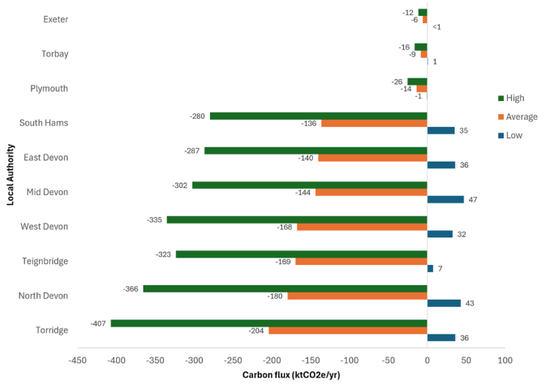
The Centre provides territorial footprints for Devon, Cornwall, district and unitary authorities. The analyses are derived from central government emissions datasets including transport and commercial energy use. Emissions from waste are determined using data from the National Atmospheric Emissions Inventory (NAEI) and South West Water which are based on individual disposal facilities rather than the waste arisings reported by government figures.

This year work on territorial footprinting has provided a basis for Plymouth's net zero route map, which identifies opportunities and creates milestones for emissions reduction across the city. Analysis suggests that the focus will be on domestic and non-domestic buildings, transport and energy.

The Centre also carried out a detailed analysis of carbon stores and fluxes from land in Devon, including estimates of emissions from animal husbandry on county owned farms. This report extended the Centre's previous work estimating land-based emissions and fluxes on the Devon County Council (DCC) estate to cover all land in Devon, Plymouth, and Torbay. The methodology used was updated to incorporate information on land management practices, emissions from livestock on county farms, and carbon stores and fluxes associated with road verges.

Carbon storage and fluxes across Devon vary considerably across different habitats, although improved grassland is the dominant store for soil organic carbon (SOC). Carbon in biomass is concentrated in woodland habitats, in particular broadleaved woodland, although this can be sensitive to different types of management. Carbon storage in upland habitat was substantial compared to its spatial extent, storing 4-6 MtC while covering only 2% of the land area. Overall, land quality is a critical determinant of carbon storage and sequestration potential.

Peatland restoration and the better management of improved grassland appear to present the greatest opportunities for reducing land-based emissions. Peatland becomes degraded through drainage for agriculture, and is the largest land-based emission source in Devon.



Soil carbon fluxes from non-peaty soils in $ktCO_2e/yr$ for Devon local authorities in low, average, and high land quality scenarios.

Important long-term carbon sinks such as woodlands must be maintained to fulfil their sequestration potential, and hedgerows in farmed landscapes were found to offer a scalable opportunity for increased sequestration.

Livestock emissions on county owned farms were estimated using the IPCC Tier 1 methodology, applying standard emission factors for enteric fermentation and emissions from the management and storage of manure. Livestock populations were derived from regional stocking densities and scaled across DCC farm areas. Dairy and beef cattle were estimated to account for over 90% of all land-based emissions with only marginal contributions from poultry and sheep.

While carbon sequestration in soils and habitats can be improved through effective management, emissions reduction from livestock remains the biggest challenge on county farms.

Emissions from the Disposal of Biogenic Waste

The Centre has provided detailed analysis of emissions in individual sectors including shipping, aviation, and waste management. Emissions from composting were reviewed on behalf of East Devon District Council.

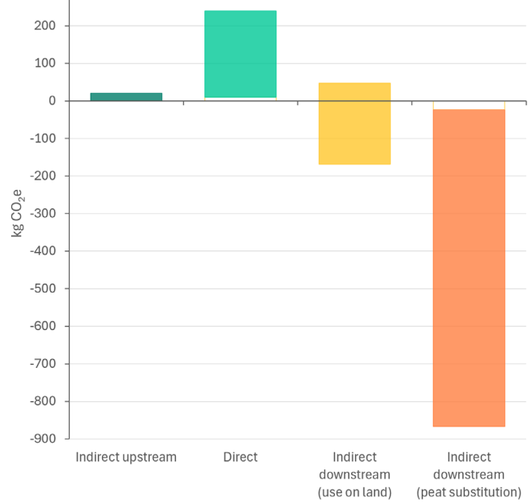
East Devon collected approximately 8,000 tonnes of garden waste in 2024/25, which was used to produce 6,000 tonnes of compost. The compost is certified to BSI PAS 100 and made freely available to local farmers, schools and community organisations. Prior to 2018 garden waste was collected alongside residual waste and sent to the Energy Recovery Facility in Exeter. The work was commissioned to help quantify the carbon implications of making the switch.

Organisations responsible for production, collection, transportation or disposal of waste are expected to follow the Waste Hierarchy which is embedded in UK waste regulations. Departing from the Hierarchy is permitted if alternative routes can demonstrate improvements to environmental, health or social impacts. Within the Hierarchy composting is classified as recycling which places it above energy recovery in most cases.

Government emissions factors are not suited to comparisons of alternative disposal routes for waste as they do not cover lifecycle emissions or those avoided from not using chemical fertilisers or peat. Instead, WRAP has developed Carbon Waste and Resources Metrics (CarbonWARM) which are derived using a lifecycle approach and exclude non-comparable variables allowing a better comparison between disposal routes.



EDDC garden waste is composted in an open windrow system where regular turning and temperature monitoring help to maintain the ideal conditions for decomposition of organic matter (image: enVar).



The range of emissions for each lifecycle phase for open windrow composting of one tonne of wet garden waste.

Emissions from composting occur as direct emissions from the biodegradation of organic material, as well as the fuel consumed from vehicles and machinery turning the compost. Indirect emissions can occur upstream of the composting process (e.g. from collection of waste), or downstream where the compost is applied to land as a soil amendment. Downstream emissions may arise from fuel use for spreading compost and from further decomposition, but can also displace emissions from synthetic fertilisers or the extraction of peat.

Carbon implications for agricultural compost which displaces fertilisers appear broadly neutral with savings possible if emissions during the production phase are minimised through best practice, including regular turning and temperature monitoring. While emissions savings from composting are not necessarily clear cut, there are many co-benefits such as improving soil structure and workability while adding nutrients and increasing biodiversity.

Organisational Footprinting

Assessing Energy and Carbon Impacts

The Centre produces organisational greenhouse gas inventories for Local Authorities and other partners which are updated annually. Further analysis can include detailed carbon descent planning including energy and solar potential.

This year the Centre has extended its methodology for calculating the carbon footprint of Devon and Cornwall Police and created a tool which will be rolled out across all police forces in England and Wales. This will standardise reporting of emissions across forces and support wider decarbonisation strategies.

East Devon District Council (EDDC) commissioned the Centre to create a calculator to assess the carbon and financial savings associated with transitioning street lighting and lighting in council owned buildings to LEDs. Two calculators were developed to review costs and impacts of upgrading interior and exterior light fixtures across multiple sites. Outputs include operational energy use, emissions and operating costs of existing lighting, and costs of upgrade scenarios across multiple sites. The calculator also compares outcomes for different projects to support decision making and the business case for capital upgrades.

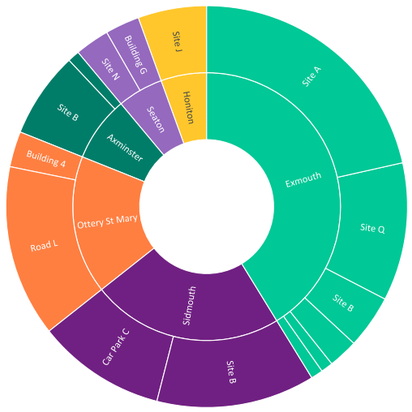
An assessment of rooftop solar for the East Devon Business centre was also conducted, comparing the performance of potential PV systems with and without battery storage. Factors such as cost, return on investment, self-consumption, battery utilisation and emissions savings were considered. Depending on authority priorities any of these, or a combination could be used to inform aid decision making.

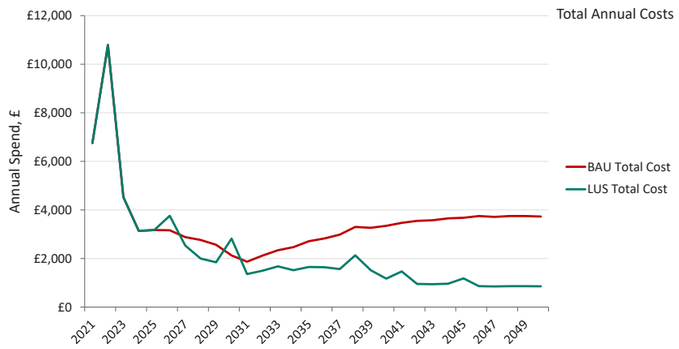


Solar systems with appropriately sized storage can generate additional savings in the long term but will incur higher initial costs. Simple payback was similar for systems with and without battery storage.

In the absence of half hourly data, energy use was estimated from monthly electricity consumption and non-domestic energy profiles from National Grid Energy Distribution (NGED). Hourly solar generation over the year was drawn from PVGIS and used to model self-consumption, exported electricity, and the utilisation of stored electricity.

Buildings that operate during the day tend to achieve high rates of self-consumption, and at the Business Centre provided simple payback within five years.





The lighting calculator can compare the relative merits of multiple projects and tracks the lighting use scenario (LUS) against a business-as-usual (BAU) scenario to provide upfront and operational costs over time.

Transport





Risks to Highways Assets from Climate Change

The Centre works on a range of projects relating to the transport sector, including embodied and operational emissions of roads, transport planning, haulage analysis, and adaptation.

The Centre has partnered with Devon County Council (DCC) in the DARe (Decarbonised, Adaptable and Climate-Resilient Transport) programme, funded by UK Research and Innovation (UKRI) and the Department for Transport (DFT). The project focused on how current and future weather and climate affect highways assets, and how evidence can be used to support better decisions on adaptation, resilience and long-term investment.

DCC manages the largest local authority highway network in England, comprising around 12,900 km of roads and over 3,500 bridges. These assets are essential in a rural county, providing everyday travel, supporting economic activity and access to services.

Historic weather observations and future climate projections relevant to infrastructure performance were analysed. Changes in temperature, rainfall and related indicators such as freeze–thaw cycles, heatwaves, surface temperature and seasonal precipitation influence key failure mechanisms in roads and bridges including pothole formation, asphalt deformation, flood-related disruption and scour damage from fast-flowing water around bridge foundations.

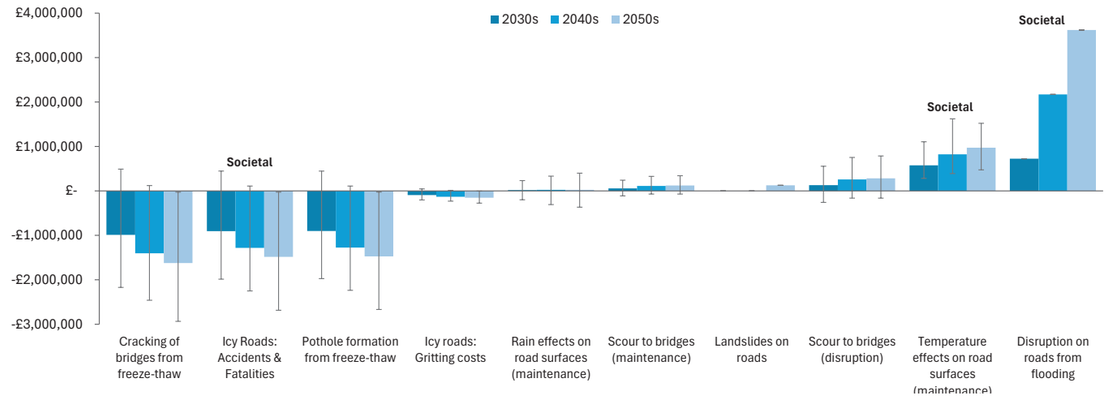
By linking climate analysis with detailed asset data the project supports a structured assessment of climate-related risks across the highways network.

Warmer winters are projected to reduce the number of freeze–thaw cycles across Devon leading to fewer potholes, reduced gritting activity and lower numbers of ice-related accidents. Reduced winter maintenance could also generate direct cost savings for DCC over the coming decades, alongside reductions in greenhouse gas emissions associated with gritting operations.

Hotter summers however could increase asphalt softening and deformation, increasing maintenance requirements for deteriorating road surfaces.

Increased rainfall is projected to raise the risk of road flooding, waterlogging of pavements and scour damage to bridges, increasing repair costs and disruption to journeys.

Overall results indicate that while elements of climate change may reduce a subset of costs for the highway authority, the benefits are likely to be outweighed by increased disruption and wider societal impacts, particularly those related to flooding.



The assessment showed that climate change is expected to alter the balance of risks affecting Devon's highways assets, with some risks reducing over time and others becoming more significant.

Organisational Sustainability





Sustainability Strategies

The Centre has created sustainability strategies, assessment tools and provided sustainability advice to partners including police forces in England and Wales, and for Devon County Council where impacts of their AI strategy have been scrutinised.

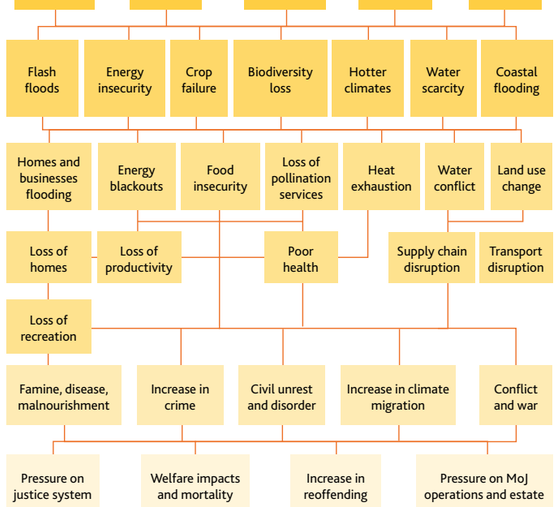
The Centre was commissioned to create a sustainability strategy for policing for the 43 forces across England and Wales. Sustainable development within policing means adopting practices that minimise environmental impact within the limits of public spending budgets while maintaining social justice and the ability to fulfil policing duties. The strategy aligns sustainability in policing with the Civil Contingencies Act 2004 which defines obligations and available powers during responses to emergencies. A monitoring tool was also created so that commissioners can assess progress in each of the forces.

The Civil Contingencies Act defines an emergency as an event or situation that threatens serious damage to human welfare or the environment, both of which are under threat from climate change. As part of the UK Local Resilience Forums the police have a duty, alongside other category one responders, to plan, prepare and communicate on emergencies.

The strategy was split into three pillars covering environmental, economic and social sustainability. The environmental pillar comprised building and estate decarbonisation, enhancing biodiversity and travel and fleet decarbonisation. The electrification of transport would see non-response vehicles transition first, followed by operational vehicles as the availability and performance of electric vehicles grows to match the requirements of response vehicles which must be able to react quickly, sustain high speeds and provide regional coverage.



London Metropolitan Police Peugeot 2008 electric response vehicle at a fast charging point (image: BetterFleet).



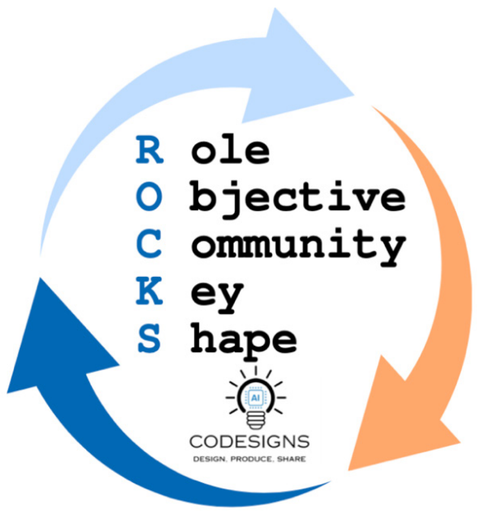
Cascading risks in the criminal justice system from the Ministry of Justice Climate Change Adaptation Strategy

The social pillar focussed on civil contingency and resilient communities, encouraging forces to integrate adaptation solutions into operational processes. Under 'public service and community safety', forces are urged to extend climate change risk assessments and adaptation plans to include new offences such as environmental destruction or 'ecocide', manage increases in climate-related protests, consider how extreme weather events could precipitate organised crime activities, and managing citizen safety under increased global climate migration.

Economic sustainability embeds circular economy principles, adapting procurement practices and the use of technology. Technology has an important role to play in UK government proposals for police reform with opportunities to modernise and reduce administrative burdens through collaboration, data sharing and intelligence, and reinvesting savings into frontline services.

Many of the aims and procedures in the sustainability strategy have efficiency implications, streamlining workflows and making better use of resources, but the government drive to modernise will also encourage increasing use of generative AI to speed up delivery of services and reduce staff workload. However, the use of AI also drives demand for datacentres and infrastructure which are energy intensive and can put stress on water resources which are often required for cooling.

Responsible use of AI can reduce the computational resource overheard and a system of prompts can be effective in guiding users towards a desired output when using generative AI. Known as ROCKS, the method developed by UNESCO encourages users to define AI prompts more clearly by focussing on the Role, Objective, Community (intended audience), Key (tone of writing) and the Shape of the output.



ROCKS method for effective prompt making developed for UNESCO Education for Sustainable Development.

This framework was previously used in a project for Devon County Council (DCC) which investigated the environmental impacts of generative AI in the workplace to inform their AI strategy. While AI tools used by council staff process data in UK data centres, there will be impacts on national electricity networks, water security and carbon emissions, that may not be reflected within the DCC organisational footprint.

AI models are trained on enormous, multi-faceted datasets which require substantial computational power and energy. Data centres globally are thought to account for around 1.5% of electricity consumption, with the UK responsible for approximately 4% of this demand. With UK data centre energy use expected to quadruple by 2030, low-carbon generation, grid capacity and infrastructure will need to keep pace if progress towards decarbonisation is to be maintained.

Within DCC, estimates of energy use associated with current AI tools is modest but not negligible. If all 5,000 staff used generative AI at moderate levels, for example generating ten medium-sized requests per person per working day, annual electricity consumption could be the equivalent of 3% of current consumption in the corporate estate (excluding street lighting). As AI becomes more embedded in everyday systems the impacts will become more material.

Cooling can account for 30-40% of energy used in data centres and can also consume large volumes of water, much of which may be lost through evaporation. Other cooling technologies may include closed loop systems which are more sustainable but the anticipated growth of the sector presents an additional risk of water shortages. While DCC use of AI will consume relatively small quantities of water, the cumulative effect and increased likelihood of heat waves could exacerbate local water stress.

The UK Government has a ten-year plan to make Britain a global AI superpower and recognises the role that AI can play in improving sustainability. However requirements for reporting are limited and transparency among AI providers is lacking which makes monitoring difficult. Earlier this year the Environmental Audit Committee launched an inquiry into the sustainability of UK datacentres and will report on the energy water, carbon and resource impacts from the accelerated adoption of AI.

Adaptation





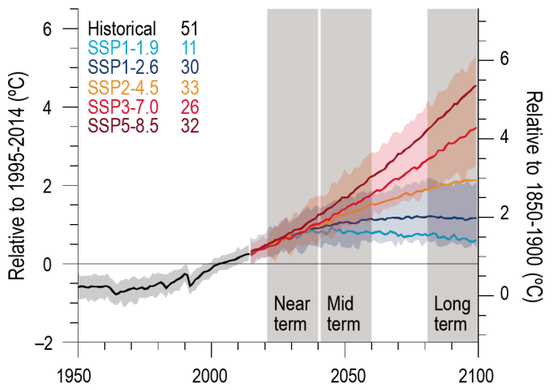
Climate Change Adaptation and Risk Assessment

The Centre has continued its work for Devon, Cornwall and the Isles of Scilly to develop monitoring indicators for adaptation progress in the region and has developed a framework to assess the risks of climate change within the University.

The centre has developed a set of 28 indicators to reflect the readiness of communities, infrastructure, businesses and the natural environment to adapt to climate change risks. Indicators will track progress against the Devon, Cornwall and the Isles of Scilly (DCIoS) adaptation plan.

Areas of Devon and Cornwall have recorded up to 40 days of consecutive rain over the winter and seen multiple heat waves through May to August which have broken long standing temperature records. The consequences of climate change have been apparent throughout 2026 and have highlighted the importance of adaptation strategies.

The Centre has also undertaken a climate change risk assessment for the University of Exeter, aligned with the national climate change risk assessment (CCRA4) which assesses climate hazards under a global warming level of 2 °C. In the near term climate scenarios known as Shared Socioeconomic Pathways (SSPs) do not diverge from each other significantly and are centred on a global mean surface temperature of +2 °C in 2050. The SSP1-2.6 is most closely aligned with the Paris agreement limiting warming to 2 °C by the end of the century.



IPCC projected global mean surface temperature change across SSPs compared to recent historic temperatures and pre-industrial temperatures.

CCRA4 assesses hazards under Global Warming Levels (GWL) where climate change is shown relative to average global warming over a given baseline (typically the pre-industrial period 1850-1900). GWL4 could be experienced by 2100 under current policy but this is beyond the timeframe where the University can develop meaningful plans, so the risk assessment focussed on projections under GWL2.

Hazards assessed across Exeter and Cornwall campuses include increases in average and seasonal maximum temperatures, rises in the duration of heatwaves and increased likelihood of heat stress, falls in summer precipitation and the frequency of fire danger. Increased winter precipitation and river and surface water flooding were also included.



Met Office 'very high' fire danger days are projected to reach up to 38 in Exeter and 11 in Cornwall under GWL2. With no universal definition of a wildfire, there is no uniform approach to tracking between fire services.

The centre evaluated climate hazards across 14 receptors organised by campus, infrastructure, university functions and operations. Work on an Adaptation Risk Register has begun with a long list of 135 risks including wellbeing and productivity impacts from overheating, contamination from flood damage to wastewater systems, supply chain disruption from extreme weather and changes in the growing season. Identification of risks is the first step, subsequent quantification will enable adaptation measures to be prioritised.

Future Cooling Requirements in Rwanda

The Centre assessed the future impacts of climate change across Rwanda as part of the Clean Cooling Network, a global research initiative aimed at implementing cooling infrastructure in developing economies.

The Centre joined a research partnership that includes London South Bank University and the University of Birmingham on a project funded through the United Nations Environment Programme (UNEP). The Centre was tasked with understanding the impact of future climate conditions on the demand for, and sizing of, cooling infrastructure in developing countries. The project focuses specifically on developing 'cold chains', networks of climate-resilient cooled storage for food and vaccines. Such provision is expected to improve the economic potential of agricultural goods and the provision of medical supplies to rural communities.

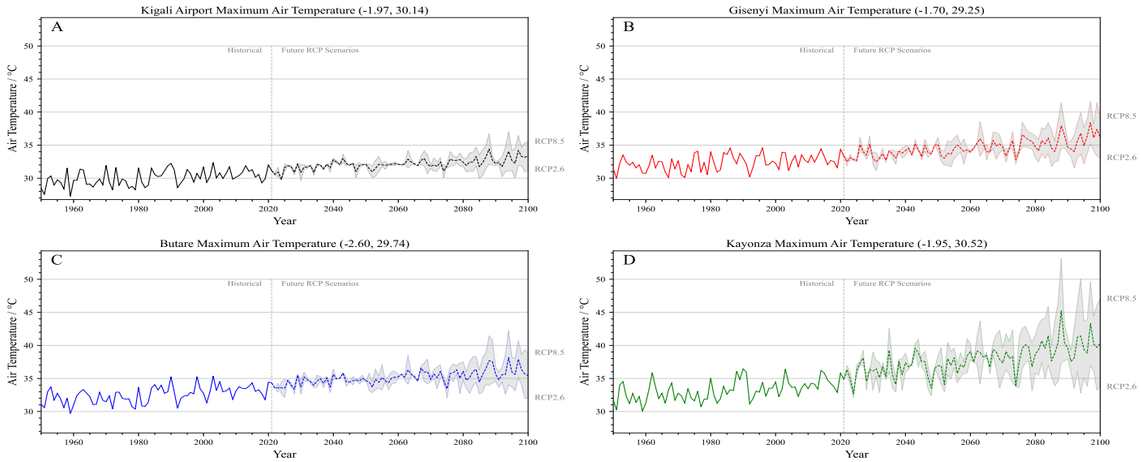
Local weather observations and climate models were combined with global projections of temperature, rainfall and solar radiation under two scenarios: the optimistic RCP2.6 and the pessimistic RCP8.5. The frequency and severity of extreme climate events including heat waves was determined, highlighting years with particularly extreme conditions. This lead to the development of weather files which can be used to model building performance at the design stage to ensure resilience to climate change.

Initial estimates show that Rwanda will experience higher average temperatures, increasing by 1.6°C by 2060. Extreme heat events will become more frequent and severe, increasing by around 2°C by 2050.

Kayonza in the east is drier and will experience disproportionately greater increases in temperatures and more year-to-year variability than other regions. Climate impacts are driven and exacerbated by lower vegetation cover.

Many buildings in Rwanda have metal roofs, which readily absorb solar radiation. The heating effect combined with rising air temperatures could see temperatures in buildings exceed 60°C. Rainfall events are also expected to become more intense, increasing the risk of flash floods and landslides which will disrupt the storage and delivery of vaccines.

Climate change will increase the demand for cooling systems and electricity. Rising temperatures will also reduce the efficiency of cooling systems and the performance of solar panels, placing additional pressure on Rwanda's electricity infrastructure.



Annual maximum air temperatures are expected to rise across Rwanda, with regions such as Kayonza in the east disproportionately impacted. The most pessimistic scenarios see maximum temperature rise by 5 °C by 2060.



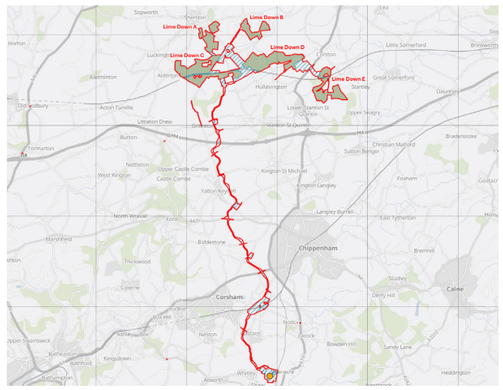


Planning for Nationally Significant Infrastructure

The Centre works with Local Authorities to produce evidence and guidance to support the development and examination of local plan documents. This involves technical analysis, reports and summaries for a variety of audiences.

The Centre has provided technical support to Wiltshire Council to inform their response to a 500 MW solar farm near Hullavington. As a Nationally Significant Infrastructure Project (NSIP) the council will make representations but the final decision sits with the Secretary of State (SoS). The Centre audited calculations put forward by the developer on the whole life carbon impact of the project and identified shortfalls in the methodology, particularly in relation to embodied carbon, which likely underestimates emissions.

The examination was completed in October 2026, receiving 5,000 representations from local organisations and members of the community. A report with recommendations will be sent to the SoS in January 2027.



Plans for Lime Down Solar Park include five PV sites and a 22 km connection corridor to the Melksham substation.

Another project relating to NSIPs looked to understand the opportunities for people to participate in offshore wind decision making. The research was commissioned by the Marine Management Organisation (MMO), who are responsible for regulating and licensing offshore wind farms in English and Northern Irish waters, and was conducted by the Centre alongside other Exeter academics. Most offshore wind projects have capacities in excess of 100 MW and are considered as NSIPs and undergo an extensive examination process with consent ultimately determined by the SoS.

A comprehensive review of documentation and legislation was used to determine when and how individuals are able to participate in offshore wind decisions. This was followed by an examination of how developers and other actors implement legislation in practice for offshore wind projects. Documentation is extensive and included case studies, NSIP and local planning documents, consultation materials, examination reports and written representations. NSIPs in particular are examined across multiple stages including post-consent, judicial review and the implementation of community benefit funds. These sources were collated in a systematic review of participation experiences.

NSIP planning typically considers all of the infrastructure associated with an offshore wind project, and therefore bridges the land-sea divide. However, the evidence shows that decisions made at the pre-concept stage including the siting of offshore turbines, provide limited opportunities for participants to provide input that might influence outcomes.

Much of the responsibility for public consultation sits with developer and takes place at the pre-application stage. Statutory requirements on engagement are limited at this stage, although non- statutory guidance is provided. The developer therefore has some licence to decide which groups are engaged, and the methods and materials used in the engagement. The extent of participation and nature of the process could therefore determine the degree to which representations might carry influence.

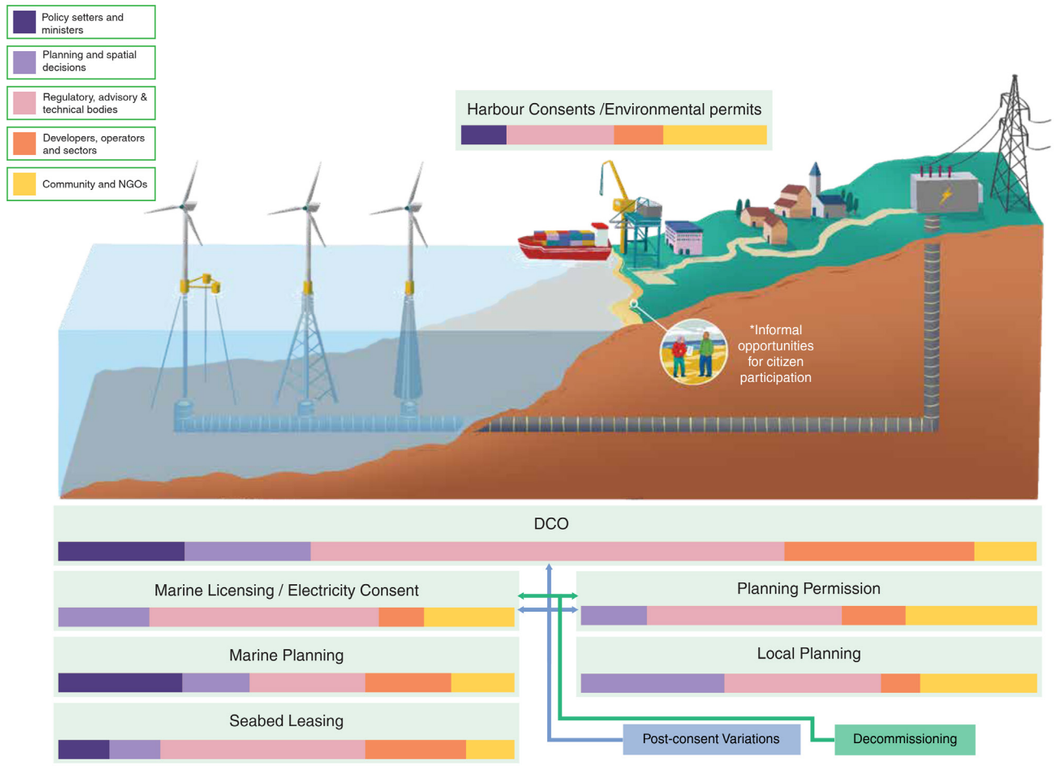
Case studies of developer-led participation can appear thorough, utilising different methods of engagement and targeting hard to reach groups, but the systematic review showed a distinct lack of trust in the process. Communities and civil society groups felt that the evidence presented to them was selective or manipulated, and that opportunities to participate were not fair or offered equally. Contributions sometimes appeared to be ignored or omitted and the honesty of developers' submissions was questioned. Similar concerns carried through to the examination process as participants questioned the completeness and accuracy of evidence presented, prompting calls for independent reviews of evidence. Further distrust arises where decision making appears to value expert opinion over local knowledge.

The examination process imposes strict bounds on what evidence or project elements are open to question. Participants reported that opportunities to debate fundamental aspects of projects, such as the siting of infrastructure were often constrained before being presented for consultation and examination did not allow discussion of alternative sites. Ultimately many respondents felt like they were acting as an audience to the process rather than participants in it.

The areas where external groups were most able to exert influence were related to mitigation (and occasionally) compensation. Concerns persisted however over objections that might be withdrawn, or where prominent voices appeared to be silenced.

Once granted, development consent, can still be challenged through a judicial review. However, the process is costly to pursue and challenges must be limited to the lawfulness of the decision process, rather than the decision itself.

In summary, affected communities often feel the least heard in decisions over NSIPs, despite having the largest stake in the responsible development and integrity of their local area. Such concerns could become heightened as recent NSIP reforms reduce the requirements for statutory consultation.



Stakeholder groups that are clearly defined in legislation, regulation, or guidance, for example through named bodies, organisations, or sectors, can be understood as receiving stronger formal recognition within the consent process than groups that are weakly defined, such as 'local communities'.

Carbon Targets and Offsets

Insetting Residual Emissions

The Centre has worked with SWEEG partners to consider the most suitable ways of mitigating residual emissions, those that remain once all other viable carbon reduction measures have been implemented.

Previous work by the Centre has defined insetting as emissions reductions within an organisation's value chain or within the local area. With some exclusions, the University has set science-based targets (SBTs) that include all Scope 3 categories that are over 5% of the Scope 3 emissions total.

The Centre has since conducted a high-level technical review of Bought Goods and Services (BGS), supplier engagement, and insetting opportunities for the University. Priority areas, data gaps, supplier data requirements, and carbon-accounting considerations have been identified which will inform the business case for wider supplier engagement, as well as programme design considerations for others within the University sustainability team.

The SBTi has published a new Corporate Net-Zero Standard which allows for an implementation hierarchy, although 'activity-level' actions are preferred in most cases. For BGS this requires direct engagement with suppliers. For shared systems such as electricity grids 'activity-pool' level actions are introduced but are unlikely to be relevant for reducing Scope 3 emissions. Where direct activity-level actions are not possible 'sector-level' actions can be undertaken using market instruments (certificates), but must meet strict criteria around matching and regulation to meet SBT standards.

A voluntary Ongoing Emissions Responsibility (OER) framework was also reviewed, updating previous SBTi guidance considered 'beyond value chain mitigation'. OER allows companies to offset residual emissions using 'verified mitigation outcomes' or 'other climate actions'. OER cannot be used towards Scope 1, 2, and 3 emissions targets; it only demonstrates voluntary additional contributions. OER emissions reductions would be considered as outside of the value chain but could be prioritised in the local area, promoting local or civic action.

An investigation of local insetting potential identified local renewable energy, and a range of other mitigation projects. Each project was appraised to establish the potential contribution to the University greenhouse gas emissions targets. SBT targets must be met with activities that target emission sources in the physical inventory so local insetting is considered out of scope. A possible exception is renewable energy projects which may contribute towards University Scope 2 emissions.

Where projects cannot contribute to directly to the SBT target or reduce residual emissions, they may still contribute towards civic agreements and provide wider benefits, provided that emissions savings are not attributed or netted off the SBT target.

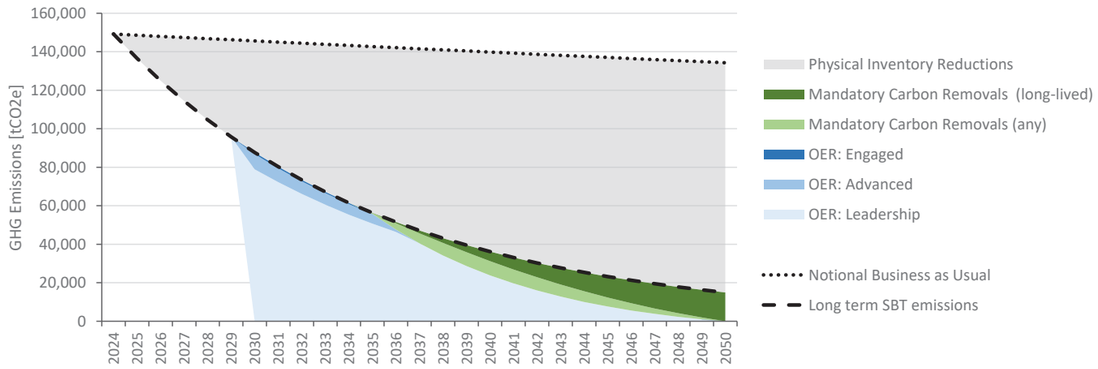
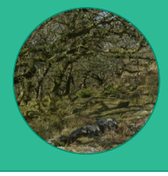


Illustration of decarbonisation pathway to net-zero in 2050 under the new Corporate Net Zero Standard V2.0

Publications





List of Publications

Documents produced by the Centre this year.

Internal Documents

Number	Title	Author(s)
1099	Dorset Police Estates Decarbonisation Plan	E Feaver
1101	Exeter City Council's Organisational Carbon Footprint 2024/25	D Lash, E Feaver
1102	Estimating land-based carbon storage and greenhouse gas fluxes in Devon, Plymouth, and Torbay	I Brown
1103	Exeter's Greenhouse Gas Emissions 2023 (Headline)	E Feaver
1104	Carbon Footprint Methodology for National Police Reporting	D Lash
1105	Exeter's Greenhouse Gas Reporting 2023	E Feaver
1106	Planning Guidance Covering New Local Plan Policies CC2 and GP1 - Operational and Embodied Carbon	D Lash
1107	Greenhouse Gas Inventory for Cornwall and the Isles of Scilly, 2023	E Feaver
1108	Environmental Impacts of Generative AI Use at Devon County Council	I Brown
1109	Mid Devon District Council's Organisational Carbon Footprint 2025/26	D Lash
1110	Briefing Note to Support University of Exeter's Supplier Engagement and Insetting	D Lash
1111	Climate change risk assessment for the University of Exeter	I Brown and D Lash
1112	Exeter City Council's Organisational Carbon Footprint 2025/26	E Feaver and D Lash
1113	East Devon District Council's Organisational Carbon Footprint 2025/26	E Feaver and D Lash

Scientists' Reports

Number	Title	Author(s)
150	Demonstrating the Value of Considering Residence and Adaptation in Devon's Highways Assets	D Lash, M Eames and P Kripakaran

Software Documents

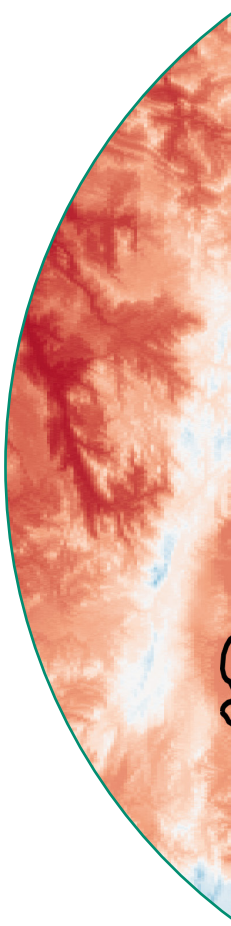
Number	Title	Author(s)
45	Biodiversity Database Technical Documentation	R Rubia Rankin

Briefing Papers

Number	Title	Author(s)
112	Emissions associated with composting garden waste in East Devon	I Brown, AT Rowson

Research documents

Number	Title	Author(s)
1	A systematic review of the research evidence base on participation in aspects of marine management in England: Main report	P Buchan,M Egedusevic, I Brown, C Udeozor and J West
2	Marine Participation Review: Procedural review	P Buchan, C Udeozor, I Brown, M Egedusevic, J West and B Dickenson Bampton
3	Marine Participation Review: Implementation review	P Buchan, C Udeozor, I Brown and J West
4	Marine Participation Review: Technical annex	P Buchan, I Brown,C Udeozor, M Egedusevic and J West
5	How do people experience taking part in offshore wind decision-making in England? A Qualitative Systematic Review	P Buchan, I Brown and M Egedusevic
6	Rwandan cold chains: Monitoring and Evaluation	M Eames and E Feaver
7	Rwandan cold chains: Cold chain design temperatures	M Eames and E Feaver
8	Rwandan cold chains: Risks of climate change	M Eames and E Feaver



Centre for Energy and the Environment

University of Exeter
Hope Hall
Prince of Wales Road
Exeter EX4 4PL

Tel: 01392 724159
www.exeter.ac.uk/cee

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