

Executive

Agenda
Item:

A.1

Meeting Date: 12th October 2020
 Portfolio: Environment and Transport
 Key Decision: Yes
 Within Policy and Budget Framework: Yes
 Public / Private: Public
 Title: Local Environment (Climate Change) Strategy
 Report of: Jane Meek, Corporate Director of Economic Development
 Report Number: PC 25/20

Purpose / Summary:

The purpose of this report is to progress the adoption of the Local Environment (Climate Change) Strategy.

Recommendations:

- Executive are requested to recommend that Council adopt this strategy as the evolution of Agenda 21.
- Executive are requested to recommend that Council amends the net zero target date from 2030 to 2037, in line with the Carbon Baseline for Cumbria recommendation adopted by the Zero Carbon Cumbria Partnership.

Tracking

Scrutiny:	Health & Wellbeing Scrutiny Panel (20 February 2020) Economic Growth Scrutiny Panel (27 February 2020)
Executive	12 October 2020
Council	3 November 2020

1. BACKGROUND

1.1 Introduction

This draft Local Environment (Climate Change) Strategy draws together the work undertaken by Members, Officers and Partners since the Council's resolution in March 2019.

This strategy has been developed from the Council's own data and information, with additional evidence from Cumbrian authorities who are also progressing strategies and action plans.

Public consultation has been completed and the feedback is presented in this report.

1.2 Member Advisory Group

The Member Advisory Group (MAG) is a cross-party, informal group that will provide elected Member input to the Local Environment (Climate Change) Strategy. Its role is as follows:

- To input to and steer a vision and set of objectives
- To receive and have input to a consultation document and plan
- To receive good practice examples to inform the work
- To consider options for the delivery of key actions
- To be advised of progress against agreed deadlines
- To promote the work being undertaken to all Members

The ultimate objective is to ensure that, subject to legal constraints, all strategic decisions, budgets, approaches to planning decisions, and, in so far as the Council can influence, arrangements with partners, are in line with a shift to zero carbon.

The membership of the group is to be drawn from all Council Members. The meetings will be chaired by Cllr Christian, Portfolio Holder for Environment and Transport.

The MAG met in August to discuss the consultation and again in September to begin work on their forward plan, the first focus being Climate Change and St Cuthbert's Garden Village.

1.3 Countywide action planning and target

The draft strategy makes reference to achieving net zero 'at the earliest possible date', with the legally binding national target being the year 2050. The Council adopted a target of 2030 in March 2019.

The Cumbria Chief Executives Group (CCEG) met in August to finalise the Cumbria Baseline Report and consider the recommendations for targets. The baseline report presents a number of options for reaching a Net Zero Carbon Cumbria. A range of target dates are set out from 2030 to 2045. The report recommends 2037 as both ambitious (and in keeping with the Paris Agreement) but also realistic taking in to account Cumbria's unique culture and geography.

The report also states that achieving Net Zero Carbon Cumbria by 2037 is the most feasible target and one that works with requirements laid down by the Intergovernmental Panel on Climate Change (IPCC) for "limiting warming to 1.5 degrees or below" to curb current global warming trends. The 2037 target includes:

- Energy only CO₂ emissions from the production methodology

- Greenhouse gas emissions from food and other goods consumed by residents and visitors
- Greenhouse gas emissions from visitor travel to and from Cumbria (excluding international visitor travel)
- Land Use, Land Use Change and Forestry (LULUCF) that will absorb and store carbon.

It was agreed that CCEG group would accept the target date for Cumbria, aiming to become carbon neutral by 2037.

Feedback from the consultation on target setting is inconclusive, with the majority of consultees choosing options other than the current Council target of 2030.

1.4 Zero Carbon Cumbria Partnership

The countywide Climate Change Partnership has been renamed the 'Zero Carbon Cumbria Partnership' (ZCCP) in line with the successful £2.5 million of The National Lottery funding.

At the meeting on 15th September the ZCCP agreed to the target of net zero by 2037, recommended by the Chief Executive of the Lake District National Park and Director of Public Health.

The award to the Zero Carbon Cumbria Partnership will fund a five-year programme of action aiming to make Cumbria the first carbon-neutral county in the UK, in a way that benefits communities and is led by them.

An ambitious programme will begin in January 2021 led by the Zero Carbon Cumbria Partnership, which spans the public, private and third sectors, including community groups, councils, the NHS, police, national parks, businesses and the farming community, among others.

The programme will also build strong working relationships among a wide range of organisations across the county, raising their ambition to tackle climate change and sharing learning and resources.

The voice of local people will be at the heart of the programme. People from all walks of life will be able to influence and drive climate action through citizens' juries and other projects, with community groups steering the programme. Young people, whose futures will be particularly affected by the climate crisis, will be able to take advantage of a leadership programme to help them make their voices heard, enhancing their skills and giving them access to people in positions of influence.

2. PROPOSALS

This is a new strategy and is therefore not listed in the Council's Policy and Budgetary Framework (Article 4). There is a reference to Agenda 21 on Policy and Budgetary Framework, this pre-dates the Climate Change Act 2008. Agenda 21 was developed out of the 1992 Earth Summit in Rio and is no longer referred to as an ongoing initiative. Executive are requested, following the consultation, to ask Council to update the 'Agenda 21' item on the Policy Framework to 'Climate Change Strategy'.

The Council adopted the Joint Public Health Strategy in June 2019, this strategy included the commitment to become a "carbon neutral" County and to mitigate the likely impact of existing climate change, this new strategy is delivering against this commitment.

Executive are requested to recommend that Council adopt this strategy as the evolution of Agenda 21.

Executive are requested to recommend that Council amends the net zero target date from 2030 to 2037, in line with the Carbon Baseline for Cumbria recommendation adopted by the Zero Carbon Cumbria Partnership.

3. RISKS

There are a number of risks associated with this strategy:

- That the Council reputation will be damaged if it does not translate the resolution made in March 2019 into a working strategy and action plan.
- That the absence of a strategy may prevent the Council from accessing external funding that would mitigate and/or adapt to Climate Change.
- That the action plan may be too ambitious for the Council to deliver on its own and require additional capacity and resources.
- That the action plan may not deliver the 'net-zero' within the 2030 timescale as currently expected.
- That expectations on assessing impacts and carbon footprinting may delay the taking of key decisions, which in turn could lead to the Council incurring additional costs or suffering a loss of income.

4. CONSULTATION

The draft strategy has been informed by correspondence with and awareness raising activity undertaken by CAFS and Sustainable Carlisle, this has included Carbon Literacy Training delivered in partnership with Carlisle College.

The draft strategy was presented to Health & Wellbeing Scrutiny Panel on 20th February and Economic Growth Scrutiny Panel on 27th February.

The public consultation on the strategy took place from 28th August through to the 18th September. A consultation document, setting out the background, context and key questions accompanied the draft. In addition the Cumbria Baseline Report was included on the website to inform respondents on the latest research and recommendations on target setting.

The Public Health emergency brought about by Covid-19 Pandemic meant that we have had to rethink all our public consultation, moving away from face to face to a more digital and online platforms.

In total 1 written response, 14 email responses and 68 survey responses were received, with some consultees choosing to provide both an email response as well as a survey return. The anonymised responses are presented in Appendix A. The responses have been summarised under the key themes and objectives from the draft strategy.

Summary of responses by objective

Objective 1:

Reducing emissions from the City Council estate and operations.

- Leading by example & becoming net zero on own emissions
- Climate change at the heart of every decision
- Carbon impact monitoring

- Plant based menu at all meetings/events
- Banning fossil fuels (including bonfires)

Objective 2:

Reducing energy consumption and emissions from homes and businesses in Carlisle and tackling fuel poverty, by promoting energy efficiency measures, sustainable construction, renewable energy sources and behaviour change.

- Energy Efficiency of new developments
- Council tax discounts on eco-friendly houses
- Rigorous enforcement of climate rules
- Climate change at the heart of every decision
- Sustainable housing
- Build to Passivhaus standards
- Solar Panels
- That the council enforces highest building standards possible

Objective 3:

Reducing emissions from transport by promoting sustainable transport, reducing car travel and traffic congestion and encouraging behaviour change.

- Reducing emissions from transport through public transport and active travel
- Cycling/walking infrastructure
- Policies and parking pricing depending on Electric Vehicles /Non-EV
- Divest from fossil fuels
- Facilities that enable transition to low carbon- EV charging points, more bins
- Reduce the need for vehicle-based transport systems
- Better school transport (partnership working)

Objective 4:

Reducing consumption of resources, increasing recycling and reducing waste.

- Increasing access to recycling small electrics and food waste
- Recycling of more materials and informing public on the recycling process
- Reducing litter
- Community Reuse Shop
- Grow vegetables and fruit in community gardens and allotments, work with Sustainable Carlisle to produce meals for care homes and schools.

Objective 5:

Supporting Council services, residents and businesses to adapt to the impacts of Climate Change.

- Keep focus on delivering quality service
- Explore permanent engagement structures
- Citizens assembly
- Participatory budgeting
- Partnership working
- Flood prevention
- Biodiversity
- Combining efforts of wildlife/environmental organisations
- Promoting local initiatives
- Educating public
- Providing unbiased information for local corporate response to climate change
- Climate change at the heart of every decision
- Build community resilience

- Funding- innovative solutions & renewable energy
- Easily accessible information, affordable, flexible and non-judgemental
- Trees.
- Air Quality and the ability of shrubs/hedges/trees etc. to remove air pollution should be included
- Encouragement of citizen behaviour change and reducing personal carbon footprint.
- Incentivise and reward good behaviour
- Regular updates and evidence improvements

As a result of all the feedback amendments and additions are proposed for the draft strategy. These are presented in Appendix B. A designed version of the strategy, with the amendments highlighted, will be prepared in time for the Council meeting.

It is understood that the strategy and action plan are working documents, developing alongside the Zero Carbon Cumbria Partnership and national policy. It is anticipated that key actions will also involve a degree of consultation, as they are developed into deliverable projects. This consultation work will be targeted to the specific audiences and stakeholders relevant to the projects developed.

An annual report on the strategy will be made available to Health & Wellbeing Scrutiny Panel for inclusion in their work programme.

5. CONCLUSION AND REASONS FOR RECOMMENDATIONS

Through a combination of elected, representative leadership and officer work it is possible to coordinate a comprehensive programme of decision-making and activity at all tiers of government to tackle the challenge of climate change.

The Executive are asked to note that the target of 2030 is extremely challenging, given the evidence presented in the Cumbria Baseline Report. The report recommends a target of 2037 which is both ambitious and stretching. This change in target will align the Council with the new Zero Carbon Cumbria Partnership and its 5 year funding.

The completion of the consultation and partnership progress on a net zero target enables the following recommendations:

- Executive are requested to recommend that Council adopt this strategy as the evolution of Agenda 21.
- Executive are requested to recommend that Council amends the net zero target date from 2030 to 2037, in line with the Carbon Baseline for Cumbria recommendation adopted by the Zero Carbon Cumbria Partnership.

6. CONTRIBUTION TO THE CARLISLE PLAN PRIORITIES

Clarity on a set of Climate Change objectives and actions will support the implementation of the Joint Public Health Strategy.

Climate Change adaptation and mitigation must be pursued to help to improve the health, wellbeing and economic prosperity of the people of Carlisle.

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Appendices attached to report:

A: Feedback on draft strategy

B: Proposed amendments to draft strategy

C: Strategy (Amended version to be prepared for Council)

Note: in compliance with section 100d of the Local Government Act 1972 the report has been prepared in part from the following papers:

- **Cumbria Baseline Report (A report by Small World Consulting Ltd)**

CORPORATE IMPLICATIONS:

LEGAL - As the Report states, Article 4 of the Council's Constitution reserves 'Agenda 21' to full Council. Whilst no longer an 'ongoing initiative', Agenda 21 is a topic area which has evolved to become known as 'Climate Change Strategy'. Given Council's decision that it views the matter (sustainability) as so important it wished to reserve it to full Council, it is sensible that the Climate Change policy be viewed as the evolution of Agenda 21. Accordingly, it is planned that it will follow the Council's Budget and Policy Framework procedure. As stated in the report, it is timely for the Council to update the terminology from Agenda 21 to whatever it believes best captures the updated policy.

FINANCE – The Council's commitment to becoming carbon neutral and the delivery of the objectives of the Climate Change Policy will involve financial implications on the Council's Medium Term Financial Plan; both positive and negative in terms of decreased or increased costs. These implications will need to be carefully considered when implementing any policy changes and will need to be included and considered as part of the annual budget setting processes.

EQUALITY – None

INFORMATION GOVERNANCE – There are no information governance implications with this report.

Appendix A: Survey, written and email responses

Survey consultation responses

How concerned are you about Climate Change?

Extremely concerned	34	50.75%
Very concerned	11	16.42%
Somewhat concerned	8	11.94%
Not so concerned	8	11.94%
Not at all concerned	6	8.96%
Don't know	0	0.00%
Total	67	

What role do you see Carlisle City Council playing?

"Organise a Citizens Assembly on climate change

Set high targets and work towards them in an ambitious strategy

Involve statutory partners, community organisations, businesses and voluntary sector in the delivery of the strategy "

Working with partners to support and contribute to a net zero target for the city by 2030

Important. Needs to set an example. Lead from the front and not wait to be told what to do by central government.

Each person / business must do their part. the council should be setting a city / county wide example.

Too little on the emergency, is been done. They have to lead by example. Free public transport into city centres, stop digging up green havens of biodiversity, reuse land vacated by other use. Source resources locally. Build all new properties with solar, or no permission granted.

None

It can drive several changes in behaviour through policies

they need to part of a cohesive national strategy

Carlisle City Council has a very important role to play. We need to change how we do things so all our activities are net-zero. By acting swiftly and decisively, the council can address its own emissions and be a role-model for individuals, businesses and organisations in the local area. It can help facilitate the transitions that we all need to make.

Taking Leadership in Urgent action to implement widespread changes across all sectors - homes, businesses, workplaces, transport, proper recycling & elimination of non-recyclable plastic use.

Leading by example on tackling carbon footprint - using and encouraging use of renewable energy, installing EV charging, making the city more 'green'.

Limited but meaningful

At the moment I see no clear directives that the Council are taking this seriously. I would like Carlisle to be a leading light facilitating the changes that need to happen.

Cutting down on local emissions. Creating cycleways. Encouraging outdoor gyms. Council tax discount for well insulated houses. Park and ride schemes to get into town centre.

Charge a tariff on excess plastic recycling (though this could lead to an increase in fly-tipping). Transparency in what actually happens to all the waste gathered from kerb-side recycling. Where does it go? What does it get turned into? Does it stay in the UK or is it transported across the world to countries which are less fussy?

A big role in influencing change.

Vital strategic and funding enabler

Promoting local initiatives that promote positive change on a smaller scale such as using more environmentally friendly vehicles.

A key role. Local democracy is a key to public acceptance, and the council has a huge role to play both in terms of emissions from its own estate, but also in building local awareness and action.

Hopefully not much

CCC need to encourage the government to move towards electric vehicles & more cycle lanes made, but not just lines on pavements.

Local authority acting as a prominent partner in helping lead a county-wide reduction in emissions, aiming for net zero carbon Cumbria, contributing to improvements in housing and transport, creation of sustainable green jobs, etc.

Put forward ideas of more Green vehicle initiatives as they greatly demonstrated in key locations of the city. Min motors Electric Scooter government funds to save money rather than riding old pedal bikes.

Increasing public transport to reduce cars on road. Better school transportation especially.

Increase recycling

Coordination, example of good practice, measurement of progress, communication (a 2 way thing) to active participants from businesses and organisations to the public.

An integral role in engaging with and educating the public. A leading role in creating new green, clean, sustainable projects and jobs.

Very little

Setting an example to other regions through responsible sustainable development, engaging with businesses to generate a community that is working together to tackle the problem.

Rigorous enforcement of climate policies and hold companies to account for not meeting obligations or "green washing".

a minor leading role, but if it means increasing council tax you will quickly lose support pivotal, sends important message to our young people particularly that we are taking responsibility.

They must act on their commitment to their declaration of a climate emergency, commit to a low carbon economy and call for a people's assembly to make recommendations and they must ACT on them

Running it's services efficiently and changing when it can

None in climate change. Pollution maybe, but city council can't change the climate.

None.

I don't think this is the role of local government

taking an active lead, not necessarily with tick box low impact "trendy " issues, but large steps such as the complete banning of all fossil fuel burning, including bonfires

This is a chance to take a pivotal and inspirational role to make a real change, lead by example, an opportunity that must not be wasted

Leading on a local corporate response to climate change and providing unbiased information and choices on what this means locally.

"Implementing the guidelines and supporting the infrastructure required for a carbon neutral future. Green transport routes, charge points. Implementing penalty/reward schemes - eg. 2 tiered parking prices based on Electric/non electric vehicles.

Continual messaging\marketing of strategies the public can take to assist with green programs. Clear Green targets and continual performance measurement."

Developing a strategy that encompasses everything that they do and provide - local procurement, public transport infrastructure, cycle lanes, recycling, re-using, electric vehicles. What is bought/paid for should not impact on the climate wherever possible. Stop overdevelopment of green spaces

Becoming as energy efficient as possible and keeping council tax down.

"Sensible planning decisions - no building on flood plains, allowance of flood plains to be just that - fields that are managed to flood.

Establishing And maintaining nature reserves and green spaces for locals to use and Enjoy.

Education of local people - involvement in local events, pop up shops to educate public on strategy plans and key points.

Engagement of Local voluntary groups to meet action points and make sustainable change - with a focus on youth groups."

Not much

Allow residents to make informed choices that suit them i.e. not banning multi fuel stoves etc. Provide grants to improve energy efficiency or EV purchase.

Doing their part - encouraging carbon neutral /low activities and policies

"A strong approach to reducing the City's carbon footprint. Supporting local businesses to reduce their own footprint.

More access to recycling. Food recycling isn't offered, nor is small electricals."

Giving active support to all methods of reducing carbon emissions

Currently none! But i would rather see them both leading by example in every aspect of their own practices and become a major driver of public education and cultural change

"Divest from fossil fuels and invest in renewable energy projects.

Switch street lighting to well-designed and well directed LED lights

Retrofit council-owned properties – deep retrofit of all council-owned social housing, schools and other council properties to Energy Performance Certificate c or higher. This should include fitting eco-heating and developing heat networks where appropriate.

Ensure rapid transition of own fleet electric vehicles – the Energy Savings Trust can work with the council to undertake a 'grey fleet' review and support this transition. The grey fleet is vehicles that are required to be used by council staff but not owned by the council.

Help energy companies target fuel poor or vulnerable households with energy efficiency measures – the Government has produced guidance to allow local authorities to identify the fuel poor or vulnerable houses to energy companies. The energy companies then insulate these as part of their legal ECO obligations.

Subsidising electric bikes for the local community "

Very little hopefully

Its global. Talk to China then come back with a progressive question. We are 100000 they are 1.3 billion

Start by spending council money on bins on public roads instead of this rubbish hugely important - not just in tackling the council's own footprint but equally helping others to reduce theirs. Equally important is engaging with the city's other community networks - churches, community and sports groups, schools etc. But the council needs to have something tangible to offer so first set about deciding what's achievable and work from there. Leading by example, providing facilities e.g recycling, electric charging points, providing information and signposting to other agencies. applying for funding to enable residents to upgrade home insulation etc.

Extremely active. Measures like increased access for public transport across the district should be fast tracked. Car share programmes, EV fleets etc should be utilised to cut down on the transport section of the UK's carbon emission pie chart.

Recycling.

Strong policies and action. Circular economy thinking. Ambitious targets. Climate change at the heart of every decision.

Setting benchmarks, leading by example

Encouraging people to make more environmentally conscious choices by promoting education and implementing viable alternatives to current bad practice

Make itself carbon neutral as an example

Very little

What role do you see other local organisations playing?

Genuine engagement and partnership in the delivery of the strategy

Agreeing to a target and a vision and ensuring that our actions are integrated with our response to the wider UN SDGs

Important. Supporting Carlisle City Councils. Also setting an example.

Policy changes that can steer local partners and companies. trail innovative projects and seek grant funding to allow growth of climate friendly and renewable work/ resources.

Groups are drawing attention to the plight; biodiversity is key and essential to preserve. All organisations to have a sustainable policies.

Very little

In collaboration with the council others organisations can assist in promotion and assisting change

similar to those of CCC

Everyone needs to play a part. This includes local organisations. Leadership from Carlisle City Council is essential though. Working with other organisations is vital but Carlisle City Council needs to lead the way on addressing climate change.

Sharing expertise and initiatives, helping implement action.

Again, leading by example but supporting others to follow suit.

Varied

There has to be a concerted strategies where local organisations are encouraged to change to a carbon neutral or carbon regenerating system.

We all need to work together to effect change in attitudes and change in lifestyle.

Mass participation

Working together to help ensure positive change is maintained between authorities and communicating with one another to share ideas.

Local schools are key. Getting children involved gets parents involved.

other than nationally only implementation of national policy

Housebuilding on green spaces must stop as this has created more traffic. In the west of Carlisle, parks and fields have been built on. Shops should only supply paper bags.

Similar to above, acting in partnership with local authorities, business, tourism etc. to achieve realistic sustainability goals for Cumbria, as part of local delivery of UK national climate change commitments

Reinforcement - Assisting - holding questions and answers sessions if appropriate

Environment agency - need to help flooding by allowing drenching of rivers

Being part of the overall plan. County Council more of a coordinating role and showing partners where they fit in the grand scheme. Smaller organisations playing to their strengths within the whole.

A vital role in partnership with the council and residents in devising ways to meet targets and spreading information on the importance of tackling the climate crisis.

other than national legislation none.

Working with the council to form a network of stakeholders that can advise on key issues and help enforce a shared vision.

mainly advisory unless the government helps

everyone needs to join in and take responsibility, everything needs to be 'joined up'.

Specialist scientific expertise must advise the people's assembly and the council

They need to make their own organisations as efficient as possible.

None.

None. Weather is cyclical.

Again, I think this is more of a larger strategical decision. It should be set by central government. I do not believe there is the skills or expertise in local government to ascertain their role or co- ordinate local organisations to make any significant change from what I have seen in other areas of their organisation.

This is a chance to involve the whole community, so everyone feels engaged in doing something positive to help, in whichever way they can

Focused responses linked to and overall strategy

Supporting Councils in the above with financial partnerships.

stakeholders and partners and individuals have all to be accountable builders should be building houses with PV panels of ground source heat pumps, and all houses should have electrical charging points.

None

Wildlife trusts, Eden rivers trust, and other environmental organisations working together to make sustainable change in the countryside around Carlisle and in the town. Taking part in locale events to educate local residents.

Not much

unsure at this stage.

working in partnership with themselves and the local council to achieve this

A commitment to reducing carbon footprint.

The same.

There are already many local organisations working on this issue, from awareness raising to practical solutions. The council should be seen to be actively seeking dialogue with these organisations and using their collective strengths and reach to drive solutions to this threat. Working with Cumbria Action for Sustainability and Friends of the Earth to support the Council's climate change strategy.

If they have any sense none

Local environment. Concentrate on the dog mess.

I honestly don't care

Equally important - this is a collective project where everyone on the same side.

Following the Council's example e.g fleet management. Other public bodies need to work with the Council to deliver the aims

Local organisations must be fully integrated into any plan. Local food producers, repair cafes, independent retail stores require support to cement them into the public's behaviour.

Recycling, keeping things more local

Work closely together. Shared targets and goals. Strong actions that deliver real change.

Following the lead of the council - supporting smaller groups and individuals.

Same as 3

Very little - we are small fry compared to India, China, America etc

What role do you see the public playing?

Firstly through their membership of a climate assembly and secondly through permanent engagement structures

By this I imagine you mean citizens - we all need to change our consumption and behaviours to ensure we all contribute to the change that meets our shared vision

Supporting Carlisle City Council and others. Doing the right thing for the climate.

supporting the council and partners with the lowering of use for non-renewable resources and minimise waste.

The public need to be encouraged to preserve commodities, recycling, reusing and rethinking what we all do, we have to accept what we have and protect it well. Grow some of own foods.

Re cycling

Public need to be guided and will not accept change until they are convinced that it will make them better or the same.

We need to take responsibility for our own actions and support those from government including International, national and local

Everyone needs to play a part in this. Changes will be required and the public need to be involved in the process. In my opinion, public involvement needs to go beyond these consultation processes and would be better done with a citizen's assembly.

We need far more consumer pressure to challenge companies & businesses as they have far more control to change the way things are done, to make the environment the top priority it deserves and needs..

Encouraging behavioural change amongst each other to take up environmental activities, such as installing solar on their houses or buying an electric car.

Urging authorities on

The more the public are involved the more likely we will be able to make the necessary changes.

Making it a personal priority to

Important to keep this issue in the forefront of people's minds through talks, marches, through changes in legislation. Through changes in the way we live our lives.

Small changes that are sustainable, and encouraging others

Making smaller changes to promote a healthier local environment. Less vehicles on the roads and more walking or cycling.

Net zero requires far reaching changes in all aspects of peoples' lives: what they eat, how they travel, how they heat their homes. Public involvement is key. Citizens assemblies are a useful way of engaging and legitimising actions.

aside from the nutters that block ambulances not much

People need to walk and cycle more, but this can be unpleasant as there is too much traffic and not enough cycle lanes.

Lots of grassroots community initiatives aiming for bottom-up societal change, meeting in the middle with top-down governmental shift to a green new normal

Conducting questionnaires spreading wonderful ideas therefore suggested around.

Recycling/use public transportation

Being better informed and engaged. Involved in citizen forums that they feel confident are being listened to. Taking actions.

Essential. The public must be on board if there is to be any chance of success. Citizens Assemblies / Juries can play a huge part in this as well as give the Council clear directions on what is required.

Other than the ghastly extinction rebellion lobby I think the public will have common sense not to go overboard

Working with the council to form a network of stakeholders that can advise on key issues and help enforce a shared vision.

varied, it would be a start just keeping our own city clean and tidy. It's all about respecting where you live

vital, the energy to comply, help and be sustainable is must be harnessed and encouraged.

A people's assembly Through sortition like a jury service

We all have to do our bit.

None. Recycling more & reducing pollution but these are not climate change.

Cleaner cars to lower pollution but that's got nothing to do with climate change. Neither has recycling, which is a good thing.

I suggest that is up to national government who get voted in on a mandate

Everyone needs to see this as urgent, to do their bit, from not throwing away their plastic face masks to real, sustainable changes in lifestyle

Tabling initiatives, focused responses to climate change initiatives or participating with initiatives which may benefit climate change, locally.

Becoming more involved and aware of how their own decisions impact on the green targets.

Public voice should be heard, and consultation should be advertised more widely, with an explanation in plain English as to why their voice at this point in time (the beginning) is so important

None

"Voluntary groups meeting action points.

Taking responsibility for local areas.

Improvement if local green spaces"

A bit

"The public will generally react well to supporting a worthwhile cause, but only if it doesn't damage them financially or lower quality of life.

The public would probably love to buy electric vehicles etc but costs are astronomical at present."

"doing their bit" whenever possible in walking or cycling instead of taking the car all the time. recycling, and installing energy efficient alternatives in their homes.

Continued recycling.

Everyone moving toward being carbon free with use of cars and type of heating

Every member of the catchment should be educated and enabled to play their own individual part in arresting anthropocentric climate change. They should also collectively be holding the Council to account where they do not do everything in their power to combat this issue.

Using more 'green' transport including electric bikes and vehicles. Recycling more

Only the climate change zealots will be bothered.

We do our bit. We turn lights off. Perhaps if the council did the same at night when rooms not in use.

None until they have bins

As above - but residents need guidance - a common aim and ways to monitor and measure positive results out of actions taken. Start with energy efficiency supported by grants available especially for heating

Taking up the facilities e.g. recycling more, taking advantage of energy generation schemes and improving home insulation etc. Taking up cycling and walking or using public transport rather than always relying on cars

The public will do what is most convenient. If it's cheaper and easier to get a bus to work, they will. If repair cafes are publicised and regular, they'll use them. A huge number of respondents to the Cumbria Climate Survey said that they would definitely use public transport more if it was a feasible option for people in Cumbria.

Recycling, using energy responsibly.

Engaged, educated, actively involved.

Following the lead, holding the Council to account

Making changes to their lifestyle to live in a more environmentally conscious way

Same as 3

Very little

Are there any additional objectives and actions that will improve this strategy?

Higher targets to achieve net zero

Make greater efforts to engage with citizens and consider more active participation in designing the actions required to meet net zero by 2030

educate and reward public that progress to 0 carbon and also support new ideas and consultation from public and local businesses.

Build back better.

More re cycling centres

Policies on domestic energy and electric cars would help

clear objectives delivered by precise, clear and consistent communication

The council needs to change the language that it uses. The council declared a climate EMERGENCY, but the wording used in the strategy lacks this sense of urgency. The council needs to act creatively and swiftly. Activities that are reducing greenhouse gas emissions need to expand. Addressing climate change needs to be part of everyone's job description - including councillors, council officers and council directors.

Far more education and publicity/advertisement to generate a change in culture towards environmentally damaging aspects of lifestyles, i.e. for them to become socially unacceptable, like smoking.

Need to make renewable energy consumption more of a priority, and perhaps include some carbon sequestering or offsetting to get to net zero faster.

Connecting up the council with local organisation and raising awareness that all our actions are interconnected is fundamental

Make it easier for the public to make positive change by increasing incentives to walk or cycle and work with authorities to provide suitable walkways and cycle paths and maintain existing ones.

"Fundamentally it is lacking in detail. There is no assessment of the current levels of carbon emissions and their sources, and no quantified plan for how that might reduce in future.

1.2 does not refer to any standards. This would be much better if it referenced Enerphit, or at least a BREAM standard. The council could catalyse change by insisting that all estate buildings were brought as close to Enerphit standard as possible, which would reduce emissions substantially, and also catalyse development of the local skills base.

There is no mention of diet or catering. The council should adopt a meat-free catering policy in all council events, switching diet is the single biggest step most people can do to reduce their emissions.

The council should adopt a no-fly policy, and an entirely electric vehicle fleet, as has been done in Manchester.

The council should set a target for staff having undergone carbon literacy training, with all senior councillors and managers trained within 2 years.

Similarly with all the "2" targets, there is a lack of detail, no reference to any building regulation standards for domestic properties, which will lead to continued poor quality houses being constructed, making subsequent carbon reductions much more difficult and costly.

Section 4 goals, there is no mention of diet encouraging people to eat less meat and dairy.

"

create power from incineration of waste, get rid of landfill

Greater road tax if people have more than 1 car in their household.

Ultimately grassroots action can only achieve so much, and to deliver the necessary scale and pace of change will need top-down vision and leadership akin to a 'war footing'; pandemic response has demonstrated that the majority of the UK population are willing to work together to overcome a common threat, this sense of purpose needs to be translated onto environmental responses.

Role of Schools and local media to have a dedicated point of interest on regular basis. They own version of BBC news -round

As above, better public transport. School transport is so unusable lots of parents drive children

A concerted effort to reach all members of the community with educational information. The implementation of many small scale activities from letting hedgerows grow to fighting litter, plastic and air pollution to help us all orientate ourselves on the right path to tackle the increasingly difficult issues we will have to face.

stop listening and kowtowing to the appalling green lobby. Have the courage to say no to them.

Vision and assurance are going to be key.

concerned about how many 'long term' objectives there are. They need to be dealt with in a more timely fashion, long term is a bit of a cop out phrase.

Introduce the Sortition foundation learning program for public decision making

There's no real indication of costs.

Sort out the traffic lights which have got worse at Caldewgate, this increases pollution.

I don't think a strategy is required- a complete waste of money for such a potential small margin of gain it is completely irresponsible for local government to contemplate work in this area when they can't even schedule grass cutting or weed killing.

Loads! Make it easy to do the right thing, give incentives and rewards. Recycle plastic bottles, involve community service orders to help with sorting rubbish and cleaning rivers, Park and Ride scheme to take cars out of city, fill in the gaps in cycle provision and expand, create green spaces where buildings are disused and derelict, restore beautiful historic quarter, convert empty shops and offices into homes, increase social housing, no more new houses without insulation and solar panels, no more building on flood plains, wildlife corridors, lots of tree planting, double council tax on second homes to increase rental availability, training and opportunities for unemployed, and help to employers, roof gardens, living walls, controls on movements and numbers of cats and dogs, to help wildlife, help for our rivers, to increase numbers of fish, e.g salmon, use of wool and straw for insulation, investment in fairly traded goods, ban on black plastic containers, products with palm oil, bring forward phasing out of petrol and diesel cars, make buses available to everyone in Cumbria, wherever they live, at least 2 a day, improve the train service, agree the Waverly Viaduct project, continue the Waverly train line to Carlisle, many many more!

the emphasis should be on how climate change may affect local lives and livelihoods as something which appears to be a global issue can appear to be "someone else's problem" "Accelerate the implementation of clear cycle lanes and segregation of pedestrians, cyclists and cars. Link the cycle lanes together. e.g the road from Dalston to the bypass (Carlisle road) is very busy with fast vehicles and is a deterrent to cyclists wanting to cycle to Carlisle. Review of bus prices. It is cheaper for 2 people to get a taxi from Dalston to Carlisle than it is to get the bus. That does not make sense in a green economy."

Plain English, short and easy to understand. Not everyone knows what a strategy is!

None

Take more action

unsure at this stage.

There is no mention of organic food. Organic farming would help cut greenhouse emissions. not as far as i know

The Council should be actively using its power to create positive change and actively resist being over ruled by higher authorities that reflect badly on the City, and the County. They should be actively resisting projects such as the new coal mine, and filthy low tech incinerators, both of which will exacerbate carbon emissions being created in the City / County.

Shredding it will improve the recycling rate

There is no problem

Spend money on bins

resource efficiency may not be seen as a carbon target, but it really is - look to ways of developing a city-wide circular economy model including recycling but with a preference for reuse and repair. People really enjoy this.

Communication and making opportunities to get involved to show what can be achieved.

Possibly building on the Give a Day to the City event to occur quarterly rather than annually

No

Make Carlisle an example of strong leadership and change. Blue green corridors, cycling infrastructure, holistic approach to clean energy, massive tree planting programme, education for all schools on climate change, forest schools, businesses focusing on decarbonisation of their activities.

Improving public transport options and promoting local produce

Do not dictate to the public

No

Is it clear whether the actions in the action plan (p10-14) are best delivered locally, Cumbria-wide and/or nationally?

Locally with reference and co-ordination with regional and national plans

This doesn't matter because none of the actions will work without greater citizen participation in designing the response

You need to action locally. If you don't then it suggests Carlisle City Council are not taking Climate Change seriously and could appear to be a political box ticking exercise.

all above. yes

Cumbria

No

actions need to be local but in line with national strategy's

"Action is needed at all levels. The council should do what it can to work with Cumbria County Council and national government so actions can be coordinated, but the magnitude of the crisis that we face means that the council should not wait for Cumbria-wide and/or national agreement before acting locally.

Some of the goals do not seem clear or ambitious enough. For example, goal 1.1 refers to ""reduce energy and fuel consumption"". Reducing energy, yes, but what is being referred to by ""fuel consumption"" - is that fossil fuels? If so we really need to stop using them altogether. Reducing fuel consumption does not adequately describe the challenge that we face. Goal 1.2 says ""Take opportunities ... as they arise"". I understand the goal, but it is not proactive enough. What if the opportunities do not arise? We still need to act.

"

Not entirely.

Yes

No

nationally

Not completely - worth more clearly emphasising the areas where CCC has high influence (e.g. own operations and estates) v. influencing wider change (e.g. local business, general public etc. in Carlisle and Cumbria) v. actions which are completely beyond local influence and rely in central government leadership

To be precise they are more than vaguely detailed, and we'll informed

Unsure what document this refers too

Many actions need to be nationwide but I think the local actions and their success/failure needs to be measured and publicised so the locals can take responsibility for these.

More needs said to explain that the crisis we face is worldwide. We must be able to understand how our local actions are related to a county-wide, national, and international level. This is about more than our local weather. This is affecting populations across the globe already in the shape of floods, droughts, wildfires, melting ice caps, rising oceans etc. We need to explain better how our responsibilities in reducing greenhouse gases affects us now as well as the next generation.

nationally, why as a council would you think this is thing other than crippling to your local economy

Yes, and I believe the efforts to have an accountable department are excellent.

it is fairly clear but needs to be more specific and detailed. I wonder how many people are responding or even know of this initiative. I came across it by accident. It needs to be advertised and broadcast regularly on all local news etc.

There has to be a holistic and Integrated approach

Obviously, the bit about local issues are best delivered locally. Council's own vehicles and infrastructure, and planning changes.

City wide.

nationally

Not that sure, let's start locally, then spread nationally.

Cross all three - some need to be local objectives, others need to be owned nationally i.e. building regulations

i don't know about the action plan

No

I would rather the council walked away from this silly idea. If the county council or the government are silly enough to do this, then more fool them

Really!

It has to be all three - and involvement with the private as well as public sectors is crucial.

Yes, although many of the actions are interlinked and need to be carried out locally and nationally for the best results

Yes

It is unclear

Would a separation of local, Cumbria-wide and/or national actions make the strategy clearer?

No

There is a need to focus on local actions be more demanding of the actions and resources needed

No. Just get in with it and cease obfuscating. Too many 'work with' statements that could appear to be spin and make it look good - thus phrase is now overused and thus has been watered down by too many 'work with' resulting in failure/inaction being the other party. Get on with it.

we are also international efforts.

Yes

No

For greatest success strategy needs to be consistent with an overall message recognising the need for actions. there will be issues relevant to locality

I'm not sure that it would. There needs to be co-ordination, but everyone needs to be working towards net-zero. The urgency is such that we should not wait for someone else to act.

Yes

Maybe, but the strategy is necessarily all three as it requires alignment from all three. It might be helpful to lay out clear commitments from given authorities/organisations once more work has been finalised.

No

Yes, it should separate local and national, and make it clear where a key barrier exists nationally.

no

Yes

In reality they will be much more suited to local assets additionally importantly best implement on short term basis. To more optimistic and not profoundly disappoint local citizens.

As explained above you need both I think.

No. A local strategy must be clear but also seen as part of the overall effort to tackle the climate crisis.

not doing it would be clearest measure of all

I think it might make it easier for some members of the community to be clearer about what they can get involved in at a local level.

I don't know!

There will be local issues that will be better understood locally but national and international action must be taken

Wouldn't really make much difference for those not playing a part in putting into practice.

No.

A national strategy. This is not the role of local government. You are there to provide frontline services to enhance our local community not play petty politics with the Green party for no material gain to residents.

Standards for new buildings, housing would be best done nationally perhaps, but local planning permission can help, transport can be tackled locally to a large extent, including cycling and walking provision, recycling initiatives can be tackled locally, and sustainable development, local community groups sand projects, a lot of things can be done quite cheaply with a bit of imagination.

Think a chart would help

No

Yes

You are a district council while not put your effort in being a good one for your residents, not cowering to the green lobby.

National wide policy. Carlisle is tiny.

No.

there is always the case for local ownership of solutions, but the message has to be inclusive - there isn't much point in separating actions out because anything presented as national will likely not motivate people to do anything about it

Not really as many of the actions are interlinked and need to be carried out locally and nationally

No

Yes

Which parts of the strategy and actions (Draft Strategy page 10 -14) do you think will really help to tackle Climate Change the most?

N/a

Need to engage citizens more dynamically and consider the strategy to be a fluid document

"The ones that deal with property, domestic and commercial, to reduce energy use and create less emissions.

Also electric car usage increase actions.

And recycling better - reduce, reuse and recycle."

business grants and support that will allow a larger group to work off the same level of standard and share good work progress and learn from prior tasks.

Reducing individual transportation of people, by using a good integrated system, to move people about. Good house building regulations to lower carbon footprint.

None

I do not think that one thing can be identified it is about a a spectrum of actions that deliver across the board.

It is all important - perhaps Objective 2 so that the council does everything it can to improve insulation and energy efficiency, and planning policies that do everything within its power to require the highest standards possible. My concern is whether the council is really committed to it? The council's actions suggest it is not. As examples, why is the council going ahead with a garden village largely developed around a ring road when vehicles are a major part of the emissions we need to reduce? Why is the council spending lots of money on the Sands centre when

flooding is likely to increase with climate change? Why is the council encouraging car use with free after three car parking when we need to reduce car use? Why is the council looking to build a car park at the pools site? The council needs to stop and ask itself why to have these things gone ahead in the light of the climate crisis? The answers might help show what needs to change and then a strategy can be established to make that change happen. All the climate change policies in the document are not going to help very much unless there is an understanding about the urgency of the crisis and a commitment to the key objective that we MUST stop using fossil fuels.

Actions 2.6 and 2.7, and 3.1 - 3.5

Council and domestic building standards.

locally not many needs to be nationally driven policy

"Areas beyond CCC own operations and estates - more difficult but more significant.

Given the total carbon footprint of building and heating homes, a step change improvement in UK building codes will have a very significant impact; again this requires national change, although it is understood that in some cases it may already be possible for local authorities to require a higher minimum standard on local building developments?"

Objective number Four. Reducing consumption of resources and increasing recycling and de-composting. This be so the first hurdle that can be in affect accordingly be done straight away.

Had a look at all documents and can't seem to find the draft strategy!

This is impossible to guess as I don't have the relative effects of each. I know transport and heating housing are significant so mitigation of the effects of greenhouses gases from these would be good. The public, businesses and organisations need clear information to know where to best put their efforts.

It is hard to say. There is a lot of talk on intentions but not enough on hard plans. For example 'support residents to improve energy efficiency of their property' is very different from investing in a partnered company to retrofit houses and put in insulation. 'Promote', and 'support' sustainable construction is very different from stopping ongoing wasteful construction and ensuring all future construction is of high PassivHaus standards. Otherwise we are just banking problems that we will have to resolve at a future date. The whole strategy suffers from this 'good intentions vs hard plans'.

all are equally garbage when introduced at local district level

"Objectives 3,4 & 5 are excellent aspirations.

1.4-1.6

2.3-2.5 & 2.8

3.1 & 3.2

4.1, 4.2, 4.4-4.7

5.1&5.3

"

They are all important, but it really needs to be urgent and genuine, not just a token gesture

Mustn't rely on carbon capture as businesses institutions and corporations must minimise their carbon footprint by as many means as necessary

Some of the actions seem like tick boxing and buzz words, not really having anything to do with improving efficiency.

None of it. E.g, sustainable construction is not going to have an effect on climate change.

May I ask how much of tax payers money has been wasted on this already?

Flood prevention and tree planting, small scale, local food production, expansion of allotments, etc, housing restoration, provision, conversion, reuse, cutting down on all forms of waste, expansion of electric charging points, conversion of vehicles.

The strategy is unavailable for download - how on earth do you expect people to comment!!!!!!!!!!!!!! Then you wonder why people don't comment or want to be involved ?

Mainly the ones that have been listed for the Long term. The council needs to recognise that action on these matters is urgent due to the lag in the environment in exhibiting the full effect of emissions and the equally in reductions. It also needs to recognise that current emissions are already too high and that therefore long term goals need to be centred on negative emissions (compared to current). A target of net zero in a generations time is too little, and probably to late.

Please abandon this policy.

. Nuclear power. The way forward in Cumbria. Please talk to the pro nuclear MPs in Cumbria to help with climate change

None

As above - energy consumption and transport are the key drivers but not the only solutions and many savings in some areas like waste or services can also have benefits elsewhere

3.1 since traffic generates a lot of greenhouse gases. 2.4 and 2.5 as getting these right will have an ongoing significant affect while retrofitting properties is far more difficult

Objective 4 - reducing resources

"Sustainable housing Renewable energy"

Do you think we should follow production or consumption accounting?

Both have relevance

Do both.

Production is to ltd for proper results

If I had to choose one, then it would be consumption accounting but perhaps we need to do both. As an example of why I think production accounting may encourage problems: consider whether cups should be washed and reused, or whether disposable cups should be purchased and thrown out. In production accounting, the emissions from production and disposal of the cups are not considered so single-use cups are preferable to putting a cup in the dish washer and reusing them. Overall, reusing cups minimises greenhouse gases, but production accounting encourages the "exporting" of carbon emissions. We cannot afford to behave like that. We all need to consider the total impact of our actions. It also seems unclear to me that carbon offsetting actions are acceptable in a "production" model - how can you account for emissions reductions elsewhere arising from your actions but not account for the emissions increases elsewhere that your actions might cause? It appears logically inconsistent to me.

I think 'Consumption' is also important, but 'Production' should be addressed first.

Consumption too difficult, but can still be addressed without quantifying
no, no, no. too geeky

While consumption accounting may be more complex, ultimately it is more meaningful. Currently it is relatively easy to claim that national UK emissions have been reducing, even though this may be largely due to a lot of previously domestic manufacturing now outsourced to Asia etc.

To be more accurate if they is any such terminology of having and juggling both depending on our housing market in this city. This can be thoroughly look at. I strongly believe

Although I bet this is much more difficult to measure

We should follow both and I don't understand why that was not an option above.

Neither

more holistic

consumption is also important, but producers must downshift first

We would by tying the city in knots trying to trace every aspect. Better to focus on what can be achieved.

It all sounds like hot air (pardon the pun). Emperor's new clothes. You can't shut economy down, covid19 has proven that devastation.

Nationally- This is not the role of local government

Your residents couldn't care less about this.

Invest in bins

IT should not be just scopes 1 & 2 Scope 3 is likely to motivate consumers to do more

Some of the focus needs to be on production s that is easier to control

Considering this new information what would make the best target for this strategy?

Answer Choices	Responses	
Net-zero Council and Carlisle district by 2030	32.43%	12
Net-zero Council and Carlisle district by 2050	16.22%	6
A new target to be determined from the Cumbria Carbon Baseline Report	8.11%	3
A short, medium and long term target subject to annual review	21.62%	8
Other (please specify)	21.62%	8
Answered		37

Other (please specify)

It should focus on all of Carlisle and district activities - not just council activities Do now. Don't wait for 2030 or 2050. If you wait for 2030 or 2050 you are not being serious and open yourselves up to 'box ticking exercise'

Really, net zero, crazy. Most of us won't be alive.

Such a target should be set nationally where there is the expertise to measure this.

How does the council intend to measure this? I see little point measuring this in isolation in every council if it is measured nationally too. I genuinely think the council needs to think about what its function actually is, what it wants to achieve and how it will demonstrate to the tax payers that it is delivering these objectives. If we wanted a Green council, we would have voted Green.

Net zero by 2030 with a short medium and long term targets with an annual review

Ignore it
Spend money on bins to help our environment
I don't think net zero is realistic at all

Email and written consultation responses

We also would like to draw your attention to this map which indicates how Carlisle might be affected by rises in sea level if global temperatures rise above 2 degree

<https://choices.climatecentral.org/#12/40.7116/-74.0010?compare=temperatures&carbon-end-yr=2100&scenario-a=warming-4&scenario-b=warming-2>

1. How concerned are you about Climate Change?

All members of the Carlisle Climate Coalition are very concerned about climate change and its impact on the lives and livelihoods of the people and environment of Carlisle as well as on some of the poorest people around the world. It is no longer a looming threat far into the future. It is very much a present emergency and, in the last year alone wildfires in Australia and the United States, droughts in Southern Africa, cyclones in Asia and melting permafrost in the Arctic as well as rising greenhouse gas emissions levels in the atmosphere have reminded us of the scale of the crisis. Meanwhile we have had to get used to regular extreme weather and major flooding events in Cumbria and other parts of the UK in recent years.

There is no doubt that the earth's climate is already changing, and that we all need to act now by applying local and global strategies and engaging all available political and economic resources to address this crisis. We refer you to the vast amounts of scientific evidence and volumes of evidence currently available. These include the October 2018 [IPCC Special Report on Climate Change](#) and, the [UN Biodiversity Global Outlook report](#) published in September 2020, to name a few.

The Climate Crisis is already impacting the lives of millions of people around the world, contributing to poverty, instability, war, disease and a corresponding increase in the number of refugees and displaced people. It threatens the lives of future generations crossing all continents, cultures and income levels, with the most vulnerable people in the world on the front line. Locally, issues such as flooding and extreme weather events, including droughts, are of immediate concern.

2. What role do you see Carlisle City Council playing?

We would like Carlisle City Council to provide strong community leadership in educating both its own members and the public in the truth of the climate crisis and in the actions required to challenge it. The council has a central role in both leading by example in the services it delivers and by bringing people together to implement the changes required in rebuilding to a greener, more sustainable city and district post COVID-19.

3. What role do you see other local organisations playing?

Local organisations, such as members of the Carlisle Climate Coalition, must be seen as equal partners and brought into the decision making process as soon as possible with genuine engagement in place at all levels.

4. What role do you see the public playing?

The role of the public is absolutely crucial in understanding and addressing climate change. Immediate action must be taken to set up an appropriately funded Citizens Assembly or Jury for Carlisle and efforts made to learn from others already operating including the UK government's own [Climate Assembly UK](#) which has recently published its findings.

We also support Participatory Budgeting as a tool for community engagement and other creative mechanism that can allow members of Carlisle's community to feed into ongoing council decision making in relation to climate change and other key issues.

5. Are there any additional objectives and actions that will improve this strategy?

There must be a vision of how a new kind of local economy can work that builds community wealth and keeps it in the community.

There must be a clearer local plan that describes such a vision and how the city should look and recognises when council decisions are or aren't beneficial to that vision.

The Council has an important role in partnership with the community in clarifying roles.

The strategy requires local, Cumbria-wide and national action to succeed.

A re-setting of the local economy is going to be required to reduce carbon emissions and meet the needs of a sustainable society. This should be covered in all its aspects in the strategy's objectives. In particular, in this large rural area, there is the potential for increasing the natural capture of carbon, as emphasised in the Cumbria Carbon Baseline Report. However, this needs to be set within a comprehensive assessment of land use across the district, including the scope for energy, food and raw materials production, all within the constraints of biodiversity targets to address the intensifying threat to the living natural world. The Council as a local planning authority has a vital responsibility in this.

The benefits of a shift to zero carbon on public health as well as the local environment need to be outlined.

More needs to be added in terms of objectives around food production, tourism and other key local industries.

6. Is it clear whether the actions in the action plan (p10-14) are best delivered locally, Cumbria-wide and/or nationally?

There is a bit of a shortage of concrete actions in the plan which is more about admirable intentions. As the climate crisis is a worldwide problem, coordinated action is required at

all levels. The city level actions need to be explained better. There are local authorities across the country implementing actions and we suggest the council investigate these. Organisations such as [Climate Emergency UK](#) can assist with linking to these councils.

7. Would a separation of local, Cumbria-wide and/or national actions make the strategy clearer?

Clarity on actions that need to be taken is required at all levels but there needs to be co-ordination on all aspects of this strategy with other Cumbrian districts and with Cumbria County Council where possible.

There are clear [UK wide targets on greenhouse gas emissions](#) which need to be used as a minimum guideline for setting local targets. The UK wide date is 2050 which needs to be brought forward to reflect the seriousness of the climate emergency, see question 10. below, but Carlisle should work in line with national as well as regional authorities on setting and achieving its own targets where possible.

8. Which parts of the strategy and actions (Draft Strategy page 10 -14) do you think will really help to tackle Climate Change the most?

We cannot judge this because there are no SMART targets to work towards.

We have real concern that phrase such as 'tackle congestion' and reduce travel times are code for building more roads rather than introducing real measures to reduce traffic. The true reduction of traffic and retrofitting and insulation projects would have a great impact on reducing CO2.

We also believe that the objective on waste management must look at those who produce industrial waste and those that pass on plastic and packaging waste. They must be held to account and the responsibility not dumped on individuals.

9. Do you think we should follow production or consumption accounting?

Production/Consumption/Don't know/Additional comments:

We believe both should be used.

We are not sure why this question is in such a public consultation as it is so nuanced and requires much more expert input. It is not a binary.

The Council's motion and resolution, March 2019, set the following two targets to be achieved by 2030:

(1) Make the Council's activities Net-zero carbon by 2030.

(2) Support and work with all other relevant agencies towards making the Carlisle district Net-zero carbon within the same timescale.

Since then UK Government has set a legally binding target of net-zero by 2050.

10. Considering this new information what would make the best target for this strategy?

Net-zero Council and Carlisle district by 2030/Net-zero Council and Carlisle district by 2050/A new target to be determined from the Cumbria Carbon Baseline Report/A short, medium and long term target subject to annual review/Other (please specify)

We believe action must be taken as soon as possible so would propose the council works towards a target of 2030 to reflect the seriousness of the climate crisis. The baseline report, when translated into action, should offer the best target but we must recognise that targets themselves can slow us down by suggesting we have more time than we have.

11. What is your reasoning behind your answer to question 10?

The recognition of the urgency of the problem and the lack of current momentum.

12. Should there be more focus on carbon capture and storage through Council land assets?

If this refers to more tree planting, protection of wetlands and bogs etc then the answer is yes. If it refers to imagined technologies not yet available or widely tested, then a resounding no.

13. Should there be more focus on carbon capture, storage and future usage?

Again this question needs to be clearer as to what it means by carbon capture and storage. It feels rather disingenuous as it stands. We support the rapid expansion of natural carbon capture such as tree planting but not distraction from unproven technologies.

14. Do you have any other comments you wish to make about the draft strategy?

The strategy needs more concrete actions that, once implementation begins, will be helpful in engaging, informing and educating the wider community. We recommend that the council adopt Friends of the Earth's 33 actions local authorities can take on climate change as many other councils are doing.

How are you going to know the actions will achieve net zero?

How will you resource it?

15. How do you think the City Council can best engage and work with residents to implement this strategy?

By immediately taking steps to setting up a Citizens Assembly/Jury and inviting local sustainability organisations into the next stage of this process to help bring all these comments and ideas together. This would help encourage transparency, confidence and trust as well as develop a stronger plan for Carlisle.

1. How concerned are you about Climate Change?

Extremely concerned (and have been for several years).

2. What role do you see Carlisle City Council playing?

The City Council has a key role both influencing its constituents and higher authorities. It needs to lead by example and persuade people of the seriousness of climate change (though it may well be too late).

3. What role do you see other local organisations playing?

Other local organisations can "do their bit", whether by example or persuading their members of the critical nature of actions.

4. What role do you see the public playing?

The public need to be informed of the very real threat to existing life and take responsibility seriously as to the effect on future generations.

5. Are there any additional objectives and actions that will improve this strategy?

Education in its widest sense is key to enable people to understand that the situation is serious and government failure to meet their agreed objectives requires them to exercise their franchise wisely.

6. Is it clear whether the actions in the action plan (p10-14) are best delivered locally, Cumbria-wide and/or nationally?

Broadly yes.

7. Would a separation of local, Cumbria-wide and/or national actions make the strategy clearer?

Probably yes in that people need to see what can be done locally that affects them within a county wide and national strategy.

8. Which parts of the strategy and actions (Draft Strategy page 10 -14) do you think will really help to tackle Climate Change the most?

All of them as much depends for example on how individuals respond but overall it is government action that can/should make a difference.

9. In measuring the Council's carbon footprint we plan to look at emissions from our activities, this is called production accounting, but there is an alternative called consumption accounting, below are two definitions. Production **accounting only considers day-by-day emissions from**

sources such as buildings and vehicles.

Consumption accounting includes emissions generated in the place where goods and services are produced.

**For a more detailed explanation see:
[Our methodology](#)**

Do you think we should follow production or consumption accounting?

- ☐ Production
- ☐ Consumption
- ☐ Don't know

No view.

10. The Council's motion and resolution, March 2019, set the following two targets to be achieved by 2030:

- (1) Make the Council's activities Net-zero carbon by 2030.
- (2) Support and work with all other relevant agencies towards making the Carlisle district Net-zero carbon within the same timescale.

Since then UK Government has set a legally binding target of net-zero by 2050.

Considering this new information what would make the best target for this strategy?

- ☐ Net-zero Council and Carlisle district by 2030
- ☐ Net-zero Council and Carlisle district by 2050
- ☐ A new target to be determined from the [Cumbria Carbon Baseline Report](#)
- ☐ A short, medium and long term target subject to annual review
- ☐ Other (please specify)

Net zero by 2030.

11. What is your reasoning behind your answer to question 10?

Because otherwise it will be too late. Governments have effectively done very little despite the evidence of global warming/climate change over 30 years ago!

12. Should there be more focus on carbon capture and storage through Council land assets?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Other (please specify)

Yes if it is achievable.

13. Should there be more focus on carbon capture, storage and future usage?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Other (please specify)

Yes if possible.

14. Do you have any other comments you wish to make about the draft strategy?

A valiant attempt but it needs commitment from all.

15. How do you think the City Council can best engage and work with residents to implement this strategy?

Difficult (given that 50% are below average) but perhaps a flyer with council tax bills listing the devastating effects of climate change so far and the need to act. Also I guess via Facebook, Twitter, You Tube etc to get at the younger demographic. Perhaps getting young people to act as a focus to interact with those who do not see climate change as an issue.

1. How concerned are you about Climate Change?

Could not be more concerned. There is a scientific consensus that human activity is already causing the climate to change and that large further changes may happen suddenly. The global economy is structured in a way that is continuing to cause this to happen despite global agreements over the last 30 years to reverse this trend. In 2020 greenhouse gas emissions and average temperatures are continuing to rise and weather is becoming more extreme. The continuing transformation of land use for human purposes along with industrial pollution is causing the extinction of species at unprecedented rates in human history. This threatens the collapse of the biosphere on which human civilisation and ultimately human life depends. All of these issues together are creating an existential threat to humanity. Nothing is more important.

2. What role do you see Carlisle City Council playing?

The emergency requires an urgent, co-ordinated response. The City Council has a critical role to play:

- by using its powers and resources to educate and support all levels of society, including individuals, local organisations and businesses and lead in organising the local response.
- by working with communities in new ways to help them make their contribution and build their resilience in the face of this challenge.
- by developing the Council's responsibilities in land use, economic and housing planning, as well as regulation and waste collection.
- by contributing to the transformation of existing transport infrastructure and services, and of the pattern of land use to reduce the need for personal vehicle-based transport systems.

- by working out the detail of its wider role in collaboration with other agencies through the Zero Carbon Cumbria Partnership to address the huge challenges outlined in the Cumbria Carbon Baseline Report.
- by managing its resources, its buildings, its land assets and its finance, to maximise its own direct contribution to the emergency.

3. What role do you see other local organisations playing?

The emergency requires the Council to work with all other organisations at all levels and in all sectors to ensure that contributions are co-ordinated and maximised. Everyone has a part to play in addressing this emergency.

At the community level there is enormous potential for personal contributions reducing emissions and creating initiatives to build local resilience. The Council must encourage and support existing and new community groups and projects to develop community-level plans. There are many examples of this already in place in the district related to food, energy, waste, transport and biodiversity. The COVID emergency has shown there is community capacity to deliver more. New mechanisms of engagement are required, and the Council has a key role to play in supporting and enabling these.

4. What role do you see the public playing?

The public have a critical role to play. Without public support, the emergency cannot be tackled effectively, hence the need for action by community leaders in the Council to take the initiative to encourage, enable and support action on the ground, both that which currently exists and other actions that emerge.

A key component of public participation is the formation of a Citizens Assembly or Jury, to provide a public base for action. The actions required are so far-reaching that well-informed, citizen-based approval will be vital to overcome the difficulty of taking political initiatives, and to ensure that as the crisis develops there is a public base to create the best chance of an orderly response. There are an increasing number of national and international examples of such a mechanism working effectively.

5. Are there any additional objectives and actions that will improve this strategy?

While the objectives and actions in the draft strategy are all helpful to some degree, their scope is limited, and the proposed pace of implementation is too slow. Some are not compatible with other actions that the Council is pursuing, mainly through the result of a conventional growth strategy that needs to be re-thought in the context of this emergency.

The following identified actions in the strategy are particularly important:

1.6 Energy Masterplan. The localisation of energy production, transmission, exchange and end use is emerging as a key ingredient in delivering the changes needed to achieve net zero carbon. A plan to support this transition is required and the Council should play a strong role in ensuring that happens and that the necessary local mechanisms are established. This should include the development of community-scale energy generation linked to local consumption to improve the resilience of energy supply.

2.7 Energy efficiency. Link this to local job creation, including the setting up of community-owned/co-operative organisations to provide universal building insulation.

3.1 Transport. It will be necessary to ensure that Action 3.1 is fully co-ordinated to ensure that tackling congestion and reducing journey times does not lead to more travel, including more travel by vehicles, especially private vehicles. The opportunity needs to be taken, presented by the rise of online shopping and, in the light of COVID, the likely long term

adoption of a significant degree of working from home, to reallocate road capacity and reduce pollution. Coherence is key. For example, it is not clear how this objective will be helped by: promoting a new, very large “Garden Village” on green field land, 3 miles from the City Centre; promoting air travel through Carlisle airport; or providing plentiful, cheap city centre car parking. All this needs to be taken into account in the context of the enormous demands for change indicated in the Cumbria Carbon Baseline Report.

Buildings – additional objective. The opportunities presented by the societal changes referred to under 3.1 above should also be taken to relocate housing and public services to more accessible locations, making the best use of existing infrastructure, making buildings thermally efficient, using locally sourced materials, improving the housing stock, and creating local jobs, including through practical and financial support for community owned and co-operative organisations.

Food – additional objective. Current reliance on what will become an increasingly fragile global food supply industry demands a major intervention to increase locally produced food, marketed for local consumption. This should be included in a review of local land use. The collection of food waste at various stages in the food cycle should also be comprehensively addressed, including for redistribution (affordable food) and repurposing (waste management).

Land Use - additional objective. The Cumbria Carbon Baseline Report identifies Land Use, Land Use Change and Forestry (LULUCF) having to produce a very large contribution to net emissions reductions if net zero emissions are to be reached. To address this, the district's vast rural area with its agricultural and forestry economy requires an objective of its own. The Council should instigate or become involved in a rigorous assessment of the potential of this area to contribute to emissions reductions. Actions arising from this assessment must ensure the restoration of biodiversity, cover the designation and management of tree covered land, deliver a wide range of sustainable food production for local consumption, use ambient or renewable sources of energy to generate power for local use, and mitigate flood risk. The plan should also set out how to make the transition from the area's current use of land.

6. Is it clear whether the actions in the action plan are best delivered locally, Cumbria-wide and/or nationally?

A full assessment of the broad range of actions required needs to be identified first. Many of the actions listed can be led locally. Some will be better co-ordinated across a wider area. This should be resolved through a forum such as the Zero Carbon Cumbria Partnership.

Many of the stated actions relate to supporting..., advising... and promoting... These actions are important, but the Council also needs to play a strong role in the delivery of change. It is most important that the Council clarifies its own role on the full range of issues raised in the Cumbria Carbon Baseline Report and prepares suitable objectives to meet the challenges, identifying its own actions and ensuring that all joint actions are agreed in the best interests of this district.

7. Would a separation of local, Cumbria-wide and/or national actions make the strategy clearer?

The separation of these actions should be determined through dialogue with county partners. Through this process, the Council should be clear about what it wants to see achieved and agree with partners the best delivery level.

8. Which parts of the strategy and actions do you think will really help to tackle climate change the most?

What will really help are bold and radical measures to make the scale of change required. The Cumbria Carbon Baseline Report gives an indication of the huge scale of this task, which suggests that a bold and active approach to the challenge will be required. It must start immediately on local measures under its control and those which it can initiate at a local level, and immediately begin the process of addressing the issues raised at question 5.

9. Do you think we should follow production or consumption accounting?

Both of these are highly relevant to fully capture the contribution which the area can make to carbon reductions. There may be some difficulty with measurement in some cases, but the widest possible accounting method should be employed.

10. In the light of the Council's 2019 climate emergency resolution (Council activities net zero by 2030; Carlisle district net-zero by 2030) and the government's legally binding net-zero by 2050, what would make the best target for this strategy?

All required actions should be fully functioning by 2023. The completion of individual targets will depend upon the action and upon agreements on joint working before a full set of delivery dates can be achieved. But 2030 should be the absolute deadline for full completion of the district's contribution to the requirements indicated in the Cumbria Carbon Baseline Report. Resources must be found and work should start immediately. The timescales in the strategy do not currently match this.

11. What is your reasoning behind your answer to question 10?

See answer to question 10.

12. Should there be more focus on carbon capture and storage through local land assets?

If this is a reference to unproven technological solutions, then no focus should be given to them. Proper treatment of the land can contribute directly to carbon reduction and this should be planned as suggested in the answer in question 5 regarding the need for an additional objective related to Land Use.

13. Should there be more focus on carbon capture, storage and future usage?

It is not clear what this question means. See answer to question 12.

14. Do you have any comments you wish to make about the draft strategy?

The language and scope needs to be bolder. There are no easy solutions to the crisis and the strategy needs to recognise that. The actions need to match the challenge. The Council needs to be honest, recognise the difficulties and emphasise its intention to involve the community in playing its part in doing all that can be done. This should be by far the top priority for the Council and resources must be made available.

15. How do you think the Council can best engage and work with residents to implement this strategy?

It should establish a strong Citizens Assembly/Jury to underpin public understanding and participation in decision making by the Council, and put in place new and effective ways of engaging with individual communities to ensure their full participation in the delivery of the strategy.

Question 1. How concerned are you about Climate Change?

Extremely concerned. The climate crisis is the single greatest threat we face, and yet creates an opportunity for transformative action that builds back better after coronavirus, and brings a wealth of benefits.

"By the time I'm 24 I don't know what the temperature of my home will be, by the time I'm 27 I don't know whether I'll be fighting to my food and water. By the time I'm 30 I don't know whether I'm going to have somewhere to live, or how much of the earth is going to be covered in water. All of this makes me so sad, and so angry."

-13 year old Cumbrian youth climate activist

We are in a unique moment in history. The public mood on climate change has shifted dramatically in the last few years. People have woken up to the fact that we face a climate emergency, that the early impacts are here and that in Cumbria we are on the front line and particularly vulnerable to its effects. We can expect increased flooding in winter, water shortages in summer, sea level rise, extreme weather events disrupting everyday life, impacts on human and livestock health, landscape changes, increased risk of wildfires, crop failures and more.

Public concerns about climate change have hit a record high, with 85% of British adults saying they are concerned about climate change (Ipsos MORI, August 2019).. We also know how much people care about the climate emergency from a Cumbria Climate Attitudes Survey we ran in autumn 2019 to which 1035 people responded. Over 75% of them said they were very concerned about climate change, 90% that Britain is already feeling the effects of it, and 80% that action against climate change needs to happen more quickly than current government targets of net zero carbon by 2050. Respondents also confirmed they would like to change their behaviour by eating a low carbon diet (80% want to buy food from local producers), by reducing what they buy and repairing goods where they can, by saving energy at home, buying from a green energy supplier and installing renewable electricity (if affordable), by cycling and walking more and lift sharing, and by influencing others through signing petitions and sharing information on social media.

Urgent action is needed now. Reports from the UN Intergovernmental Panel of Climate Change (IPCC) could not be clearer. Global emissions and temperatures continue to rise. Even a 2 degrees rise would mean huge areas of the planet become uninhabitable, millions of climate refugees, 95% of coral reefs lost, a dramatic increase in extreme weather events across the globe including in Cumbria. We are already at 1 degree warmer than preindustrial levels.

If we continue as now, our future is bleak but it is not too late to turn this round. The IPCC told us in October 2018 that we have 12 years left to act if we wish to keep within safe levels of warming. Some of the infrastructure needed – offshore wind, for example, will take us 8 years to build at the scale we need. So it is very clear that we have to start now and we all have a part to play, as citizens and as leaders to do everything we can within our realms of

influence. City by city, county by county, country by country, we must and can decarbonise without delay.

Some people will say that achieving net zero carbon is not technically possible. That's not true.

It is entirely feasible with existing proven technology and multiple reports give a clear pathway for that. It requires transformational changes in land use, energy, diets, agriculture, food, industry all of which are possible and bring a wealth of wider benefits. In Cumbria, we would see a county with improved quality of life, with thousands of good low carbon jobs created to produce and deploy renewable energy at scale, to provide warmer homes and integrated, accessible public transport, increased waste recycling and low carbon manufacturing processes.

Based on the overwhelming scientific evidence, the next ten years is absolutely critical to achieving net zero carbon. We urge Carlisle Council to provide the strong and visionary leadership needed to ensure a tenable future for today's children.

Question 2. What role do you see Carlisle City Council playing?

- **COMMUNICATE:** Acknowledge the scale and urgency of the climate crisis and communicate this to public, partners, staff, members and stakeholders. Be open and transparent about targets, progress, challenges and the benefits for people, communities and businesses from taking action.
- **LEAD AND DELIVER:** Lead the shift to net zero carbon, develop joint initiatives and embed zero carbon across all areas of the organisation. Build a robust plan of action which will achieve zero carbon across the district. Resource it appropriately. Actively make decisions which align to this goal. Self-scrutinise and make difficult decisions with zero carbon central to all you do. Lead by example. Deliver.
- **ENABLE:** Support partners, communities and stakeholders to act. Attract low carbon funds into the area.
- **EDUCATE:** Educate others about the urgency and scale of the challenge and the available solutions
- **INFLUENCE:** Motivate and mobilise partners to take their own action
- **COLLABORATE:** Share learning and best practice and be open and willing to learn from others with more expertise in some areas.
- **REVIEW:** Contribute to ongoing carbon impact monitoring

Question 3. What role do you see other local organisations playing?

Community Sustainability Groups have an important role to play – to inspire and engage residents and organisations to understand the challenge and make the changes needed to reduce carbon, but also prepare for the impacts. These groups need to be given meaningful relationships and genuine partnerships with the gatekeepers of carbon emissions, including the City Council. They need to be supported and funded so that they can deliver localised face to face communication.

Businesses and other organisations must also take action to measure, monitor and reduce their own direct and indirect carbon emissions, choose green suppliers, reduce waste and adopt low carbon technologies. Savings can be made by businesses from many of these actions. Organisations can also help their staff understand climate change and take action to reduce personal emissions.

Question 4. What role do you see the public playing?

We know from our own Cumbria Climate Attitudes Survey that people are frightened and want to make changes to their lives to help tackle climate change. Whilst some people can make lifestyle changes with limited guidance, others need support to enable them to for example take up active travel, retrain for new low carbon jobs, reduce home energy use. Policies which promote or depend on behaviour change need to be backed up with publicly accessible information and resources, paid staff on the ground and funding for implementation

Question 5. Are there any additional objectives and actions that will improve this strategy?

Vision

Overall we feel that, at the highest level, this strategy lacks a positive vision of a low carbon future, setting out the wealth of co-benefits of a shift to zero carbon, and the improvements to quality of life that this would bring. The tone of the document needs lifting, with an injection of passion, energy, drive and leadership.

Objectives

At the level of objectives, our main feedback is that these are loose, not SMART, and therefore leave no way to track progress.

We feel that there is too much focus on production emissions and not enough on wider consumption emissions. The 5 objectives themselves are sound, but form only part of the picture of emission reductions required. They only go part of the way towards a zero carbon Carlisle. We think objectives are additionally needed on:

- Agriculture/ rural/ land use
- Food and low carbon diets, not just food waste
- Business and industry
- Tourism

Actions

- There is a need for actions assigned to each of the additional objectives above
- The actions need to be SMART – none of them could be reported clearly against as they stand – they are not in any way quantified or measurable.
- The timescales need to be defined – it is not clear what short, medium and long mean
- The impact needs to be quantified – it is impossible to assess the impact they will have towards the overall goal of zero carbon – the document needs a golden thread.
- We would recommend that the council uses the Ashden Co-benefits Toolkit (<https://ashden.org/climate-action-co-benefits-toolkit/#2>) to investigate further actions, and implement the quick-win actions in Friends of the Earth's '33 Actions Local Authorities Can Take': <https://policy.friendsoftheearth.uk/insight/33-actions-local-authorities-can-take-climate-change>
- 'Sustainable Housing' and 'Improved energy efficiency' need to be clearly defined, as you have done with non-domestic properties. All new build should be at least Code 6/ Passivhaus.

Specifically, we think small changes as follows are needed, but our substantive comments are above:

1.2 Reference benefit of home working to staff reduce travel and reduce the size of the estate

3.2 Just “making provision for” pedestrians and cyclists and ensuring new developments are served by public transport is inadequate and needs to be strengthened e.g including the prioritising of pedestrian/cycling/public transport over vehicles in new developments.

3.4 Mention exploring benefits of broader smart cities opportunities in relation encouraging low carbon transport, e.g real time public transport info, smart ticketing etc.

4.7 Reuse is only mentioned in relation to voluntary and community groups. What about working with businesses to develop circular business models and support local networks for reuse / repair etc.

The strategy requires local, Cumbria-wide and national action to succeed.

Question 6. Is it clear whether the actions in the action plan (p10-14) are best delivered locally, Cumbria-wide and/or nationally?

In general scope 1 and 2 may be more local and scope 3 and district will be wider, but for all of the above, the need to share best practise, learning and working collaboratively mean that in reality, very few actions will be delivered in isolation on a local level.

Question 7. Would a separation of local, Cumbria-wide and/or national actions make the strategy clearer?

No, as there is a risk that countywide or national actions would then be seen as someone else’s responsibility. But a column showing countywide or national links would be very helpful. For example, in the case of monitoring and evaluation a link could be made to tying into the countywide framework. And lobbying demands could be linked to national action needed.

Question 8. Which parts of the strategy and actions (Draft Strategy page 10 -14) do you think will really help to tackle Climate Change the most?

We are unable to answer this question because none of the actions are SMART so we cannot therefore even loosely quantify and compare their various impacts.

It should not be a case of choosing one objective over another. We urge Carlisle City Council to map its objectives across all areas of consumption emissions, set clear end targets and interim targets and begin to quantify the impacts of the various actions proposed.

The baseline report gives a clear picture of emissions in the county, and each district, and this shows where the greatest emission reductions can be made. This should be the starting point for identifying carbon emission reductions.

Question 9. Do you think we should follow production or consumption accounting?

Both. Consumption emissions can dwarf production. We must take responsibility for the emissions from the things we buy, the clothes we wear, the food we eat. Consumption foot-printing is the best method for gaining a truthful picture of our impact, and the only way to really prioritise actions in order to have greatest impact. Consumption methodology aligns with the countywide Zero Carbon Cumbria Partnership, and the budget and staff resource available through the Lottery Climate Action Fund for establishing a clear methodology and shared reporting framework to evaluate impact of work at a county level.

The Council’s motion and resolution, March 2019, set the following two targets to be achieved by 2030:

(1) Make the Council’s activities Net-zero carbon by 2030.

(2) Support and work with all other relevant agencies towards making the Carlisle district Net-zero carbon within the same timescale.
Since then UK Government has set a legally binding target of net-zero by 2050.

Question 10. Considering this new information what would make the best target for this strategy?

- Net-zero Council by 2030 or sooner, net zero Carlisle district by 2037 or sooner.
- Immediate plan of action for next 5 years and clear interim target for each sector

Question 11. What is your reasoning behind your answer to question 10?

Rapid action, ambition and leadership are essential. Cumulative emissions make up our carbon budget – the slower we start, the more emissions there are and therefore the smaller the remaining budget, and the harder this will get. We need to make dramatic, transformative savings in a very short timescale.

Question 12. Should there be more focus on carbon capture and storage through Council land assets?

Yes, if this refers to natural land management and capturing carbon through tree planting, peat restoration, local food growing to replace imports and other land use management changes that improve carbon offsetting. But it is essential to realise that it takes time for trees to grow to the point that they absorb significant amounts of carbon, so this needs to happen as well as transformative emission reductions, not instead of. No, if this refers to CCS technology which is as yet unproven at scale and will not be available in time. This would be a distraction from the real action needed.

Question 14. Do you have any other comments you wish to make about the draft strategy?

- We do not believe that the objectives and actions set out in this plan will achieve a Zero Carbon Carlisle at the pace needed.
- The strategy needs to align to the Cumbria baseline report and set out objectives and actions which align with the interim targets in there, across all of the sectors referenced.
- The strategy needs timescales, and resources assigned, and clear quantifiable impacts.
- Accountability for achieving the outcomes needs to be clearly identified.

Question 15. How do you think the City Council can best engage and work with residents to implement this strategy?

- Easily accessible information, affordable, flexible, non-judgemental.
- A strategy and policy that's about making people's daily lives better for their health and well-being, their bank balances, their life choices, their employment opportunities, their children's education and life opportunities.
- Genuine engagement and public influence through Citizens Assemblies and Juries.
- Carbon Literacy Training available for every citizen
- Clear, engaging communication central to the council website and comms, showing clear benefits for people
- Case studies that relate to real lives
- Regular events and information days with communities leading

- Resource engagement fully and provide funding for local residents' groups to take action
- Peer learning such as open home events and community visits
- Funding and other support made available to help people change lifestyles

I have responded by email as I found it difficult to re-arrange all my comments into the Online Survey Question Set and I wished to send in several documents for you to consider.

So I have followed the Consultation Link on the www.carlisle.gov.uk home page and read through the documents and webpages. There are also some comments on other Carlisle City Council document where appropriate to Climate Change.

I note the name has now changed from Climate Emergency to Climate Change. So a question - "How seriously is Carlisle City Council taking a Climate Emergency". Is the name change the first part of a watering down process?

It is now good to see that there is a web page devoted to Climate Emergency/Climate Change. This page needs to remain prominent after the Consultation response period has concluded so you should have a link on the home [page](#) as to engage everyone, person and businesses, in Carlisle.

The Strategy document published has a lot of emphasis on items wholly within Carlisle City Council control, e.g. vehicles owned/leased and buildings owned/leased, etc. Carlisle City Council needs to do a lot more in influencing or mandating on others to "Do The Right Thing", e.g. through the planning application process by setting suitable expectations and mandating.

This email has specific comments below on at least the following subjects/topics:

- Carlisle City Council Climate Change website page
- PassivHaus
- Solar Panels
- Electric Car Charging Points
- Air Quality, Air Pollution and Shrubs/Hedges/Trees
- Publicity and Public documents re do it now
- The Strategy documents published in February 2020 and for this consultation
- Solar Panel Grants
- A Carbon Baseline for Cumbria by Small World Consulting

Comments on "Action we've already taken to tackle climate change"

<https://www.carlisle.gov.uk/Council/Council-and-Democracy/Climate-Change>

The good part is that you have declared a Climate Change and produced various documents.

"We are part of the successful Zero Carbon Cumbria Partnership...". I argue this cannot be marked as successful as the entire process has only just begun. It should only be marked as successful when you have implemented all that you bid for, which will be several years away. But it is a good start. I do not recall hearing about Zero Carbon Cumbria Partnership

so maybe you should have a another publicity statement and issue to BBC Radio Cumbria, BBC News, ITV Border News, and the local newspapers. Just publishing it "on our website" is limiting publicity. If you are serious about Climate Change you have to PUSH it out to the public and not wait to the public to see it on the website.

Carlisle Railway Station. You seem to be claiming some Climate Change credit to the Carlisle Railway Station proposals. I have reviewed and responded to the Carlisle Railway Station consultation and nowhere was there anything about Climate Change within the proposals. However, if you improve the station to make it more attractive to use and thus reduce car use then I suppose that is more sustainable but that did not seem to be the objective. However, the bus station remains away from the station! Having a new bus station at the station would have encouraged more public transport use and thus a greater beneficial impact on Climate Change - a big opportunity missed.

Sands Centre - you missed a good Climate Change publicity benefit here - the roof will be full of solar panels and improved energy efficiency etc as part of the rebuilt/expansion.

PassivHaus

The energy efficiency of new properties should be maximised so the energy consumption is significantly reduced and this means construction to Passiv Haus, or equivalent, standard which can be up to 80% more energy efficient than the current building regulations.

We have a new build Story Homes property (Carlisle City Council planning application) built in 2011/2012 and moved in at the end of March 2012. Whilst the property has many energy efficiency features and is more energy efficient than a new build from 2000 or 1990 or earlier, it is nowhere near as energy efficient as a property meeting the Passiv Haus standard or equivalent. Note - Passiv Haus has been around since about 1990s (https://en.wikipedia.org/wiki/Passive_house). Also new builds conforming to the Passiv Haus standard or equivalent have been the mainstay of Grand Designs.

We have gas central heating. In the summer months, our gas bill is around £10-£20 per month and during the winter months our gas bill is around £50-£70 on a cost effective tariff. I estimate we could save £250 per year on our gas bill if the property had been built to Passiv Haus standard which would be equivalent to 1652kg of CO2 per annum. For a 666 property development, such as the proposed Story Homes Crindledyke estate part 2 the savings could be £166,500 per annum and 1,108,402 kg of CO2 per annum.

Therefore, if Carlisle City Council is serious about a Climate Emergency, then all new builds and major extensions should conform to Passiv Haus (or equivalent) standard **NOW**.

I note that Carlisle City Council have a Local Plan 2016-2030. In reading the draft, "Carlisle District Local Plan Preferred Options Stage 2" by the Director of Economic Development, Report Number Ed 13/14, for meeting date 4th March 2014 (available on the Carlisle City Council web-site) there are references to building to Passiv Haus standard:

- Page 136, Policy 25 House Extension
- Page 183, Policy 39 Development, Energy Conservation and Efficiency

yet somehow these references have disappeared in the final version of the document. Hugely disappointing.

So Carlisle City Council could have been permitting planning applications to Passiv Haus standard in 2014 (or thereabouts)!

Note - Hadrian Homes have build Passiv Haus homes at Aglionby and The Hawthorns, Dumfries.

Carlisle City Council - Custom Build

Document - Custom Build - Carlisle City Council and LABC
file ref <http://www.custombuild.org.uk/labc/custombuild/carlisle/carlislec2018/>
web pages: <https://www.carlisle.gov.uk/Residents/Planning-Building-Control/Self-Build>

Pages 35-38 Energy Efficiency.

This document, which carries a Carlisle City Council Reference, has a section about Energy Efficiency which starts "How can I reduce the future costs of running my home". There is one paragraph (page 37, right hand column) which mentions PassivHaus and then refers the reader to www.passivhaus.org.uk.

One paragraph for PassivHaus is NOT consistent with declaring a Climate Emergency.

This section requires to be rewritten using Passiv Haus standards as the basis of "How can I reduce the future costs of running my home".

Now it is probably the case that many self builders will be targeting a PassivHaus standard and thus building properties that are more energy efficient than the current building regulations. However the PassivHaus standard should be the target for all house building. The television programme Grand Designs is a good exponent of PassivHaus building.

Building to PassivHaus standard needs to be more prominent on the Carlisle City Council website and not hidden away as at present.

Achieving Well Designed Housing, Supplementary Planning Document, Carlisle City Council, April 2011
and
Energy Efficiency, Supplementary Planning Document, Carlisle City Council, March 2011

Both can be found at <https://www.carlisle.gov.uk/planning-policy/Adopted-Plans/Supplementary-Planning-Documents-adopted>.

As these documents date from 2011, is it time to have a major revision to ensure that the energy efficiency standards in both documents meet Passiv Haus standard? Probably yes!

Solar Panels

I note that The Sands redevelopment includes a significant quantity of solar panels.

The Climate Change Strategy should mandate that solar panels form part of any new development.

All new build developments should include solar panels and to the maximum extent possible up to the permitted limit for a domestic property - and not just a token few panels.

All new industrial, commercial, retail and agricultural developments with large roof spaces should be mandated to include a significant number of solar panels. Note that planning application 19/0840 "Erection Of Discount Foodstore With Car Parking And Landscaping (Outline) | Land off Warwick Road, Carlisle" for LIDL does not appear to have any roof mounted solar panels (at least I could not see any on the diagrams so far submitted) and so planning application 19/0840 should be sent back to the applicant for remediation. Note that LIDL Sweden state "On the store roof there are solar panels that cover about 30% of the store's energy needs." So if LIDL Sweden can do it, so can LIDL UK and any other similar developer. I attach a document from the BRE website which includes solar panels on the store roof. Also refer to the LIDL Sustainability Report 2017/18 page 35 (file name is LIDL GB_The Good Food Report_17_18.pdf and is 5mb) and available from <https://corporate.lidl.co.uk/sustainability/sustainability-reports>

At Rosehill, Carlisle, both Lloyds Land Rover and Pioneer Foods have roof mounted solar panels and should be publicised more.

I have also included all farm buildings - there are lots of large barns, particularly on dairy farms, where the roof space can be adapted for a significant number of solar panels and this should be mandated.

Note - in the Newby Cross/Newby West/Fairy Beck area near the A595/A698 roundabout, there is a solar farm occupying 2 fields - this is good news and should be encouraged.

Electric Car Charging Points.

I note on page 4 of the Strategy document (by Jane Meek) that it states "The Council is developing projects.....Community Electric Vehicle Charging Points". I also found details of funding on webpage <https://www.carlisle.gov.uk/Residents/Grants-and-Funding/ArticleID/200/Workplace-Charging-Scheme-for-Applicants>.

However, there are exclusions which require to be remedied.

All new build properties should be mandated to have a passive provision for one car charging point for each off road car park place that is included within the property boundary. Passive provision means that the electric consumer unit and electric meter (and associated electrical works) should have a connection point readily available to wire in a car charger unit/device and also have the physical space (e.g. wall space next to the consumer unit) available for mounting any connection/devices/etc. and suitable space available for any necessary new holes in a wall for the external car cable(s), etc.

All the office and retail developments that include car parking should be mandated now to include electric car charging spaces and have the necessary equipment installed. Note that planning application 19/0840 for LIDL on Warwick Road appears not to have any electric car charging points (at least I could not see any on the diagrams so far submitted) and so planning application 19/0840 should be sent back to the applicant for remediation.

Note that LIDL Sweden have electric car charging points at stores so if LIDL Sweden can do it, so can LIDL UK and any other similar developer. I attach a document from the BRE website which includes LIDL electric car charging points. See also LIDL Sustainability Report 2017/18 page 36 (file name is Lidl GB_The Good Food Report_17_18.pdf and is 5mb) and available from <https://corporate.lidl.co.uk/sustainability/sustainability-reports>

Where 'pay for' public car charging points are to be installed, Carlisle City Council should mandate that the payment regime be flexible and consistent to as to avoid a plethora of charging regimes. Is it not possible to have one payment mechanism that will work regardless of the electric car charging provider?

I also note that Carlisle City Council has provided electric car charging points near to the Civic Centre - this facility needs to be publicised more and used as an example to all developers and to suitably set the planning expectations and mandatory requirements.

Air Quality, Air Pollution and Shrubs/Hedges/Trees

Air Quality and the ability of shrubs/hedges/trees etc. to remove air pollution should be included.

During 2013, the BBC2 Trust Me I'm a Doctor series had a programme special which looked at roadside air pollution and asked "Could trees reduce pollution in busy streets?" An experiment was conducted on the A6 South Road, Lancaster opposite the Royal Lancaster Infirmary. The air pollution experiment was carried out by Professor Barbara Maher of Lancaster University after she was contacted by the BBC following similar research on road pollution which suggested that trees help to absorb vehicle fumes. The answer was yes.

Professor Maher presented a paper, which included the A6 Air Pollution Experiment, at Fundacio Catalunya Europa, held in Barcelona, and the paper was titled "The Effects of Ultrafine Air Pollution Particles on Health".

The relevant links and attachments are:

<https://www.bbc.co.uk/programmes/articles/1m0KylS04ZqwcswP5Q8MQQq/the-big-air-pollution-experiment> - pdf print attached.

<https://www.lancaster.ac.uk/news/articles/2013/residents-help-lancaster-university-research-roadside-particulate-pollution/> - pdf attached

<https://www.catalunyaeuropa.net/admin/assets/uploads/files/f219a-relatoria-barbara-maher.pdf> - pdf attached

<https://www.bbc.co.uk/programmes/articles/3mXHDs31VgMfhdlhDngnBdN/should-i-worry-about-air-pollution> - pdf attached

1.How concerned are you about Climate Change?

We are extremely concerned. The amount of man-made CO2 we are putting into the atmosphere continues to rise even as our governments make pledges to reduce it. The Global Heating it is producing drives the unprecedented rate of loss of ice (28 trillion tonnes since 1984) from melting ice caps and glaciers triggering rising ocean levels and disrupted coastal populations. This heating also drives the climatic changes that are resulting in raging wildfires from Australia through Siberia to California. It is responsible for flooding and droughts across the globe and the attendant misery, deaths and rocketing costs. It is pushing to near extinction the very biodiversity on which we rely to source our

food and the wildlife from fish to mammals that play such an important part in our natural ecosystem.

This Climate Crisis threatens our ability to maintain anything like an ordered human society.

2.What role do you see Carlisle City Council playing?

The Climate Crisis is a worldwide threat with huge consequences and can only seriously be tackled by local communities, counties, and nations all working together. For this reason the local council must first appreciate and explain this and not only describe it as 'a change in temperature and rainfall over a long period of time'. The council has a responsibility to present the truth of the massive impacts of the Climate Crisis to the local community and join the growing ranks of scientists, banks, businesses, government and intergovernmental panels, statutory and non- statutory agencies and threatened communities around the globe in calling for and carrying through concerted action to tackle the problem. There is no more time for downplaying this massive challenge.

The City Council can lead by firstly implementing the many small scale actions within its power from introducing measures to reduce traffic and enhance other forms of transport to large-scale tree planting and measures to protect and enhance biodiversity. These actions should include the involvement of local residents and organised in such a way as to disseminate information and education on the wider issues. There are many such actions being implemented across the country that can be 'borrowed' by the council without reinventing the wheel. (Please see the 'What Next' document previously sent to the council by Sustainable Carlisle and the publicly available document by Friends of the Earth document on 35 things local councils can do without cost.)

Secondly the council should set the signposts that will take us in the right direction in the long term to tackle this problem by recognising that it is people who drive prosperity. By adopting the likes of 'the Preston model' which can help in overall community wealth-building, encouraging new forms of small businesses such as co-ops, employee owned businesses, partnerships etc, which can enrich the culture of our community and looking at ways to set up public- led projects to deliver new, clean, green, sustainable jobs in retro-fitting, insulation and energy production and distribution, the council can develop the groundwork for a truly local thriving community.

Thirdly, the council and our local politicians and MP must lobby and argue for the financial resources and legal changes that will be required to bring these plans to fruition. There is no more time for hand-wringing and unsupported good intentions.

3.What role do you see other local organisations playing?

Local organisations have a vital part to play in informing and activating our communities. Their involvement will be dependent on the amount of trust and confidence the council can engender through transparency and engagement. We must all be able to move beyond political dogma and edicts from on high if we are to find the necessary ways of working together. And it must be together. Local organisations, statutory and non-statutory must be truly involved at every level and not become a dumping ground for others responsibilities. It is also difficult to cultivate trust and confidence when stated objectives such as ‘avoid inappropriate development in areas at risk of flooding’ conflict with the pushing forward with the Sands Centre Redevelopment on just such an area. Other such examples would include measures that increase traffic such as road and car park construction and allowing private developers to continue building housing that does not meet high passivehaus standards nor include solar installations which just pushes the financial burden further down the line. Trust and confidence cannot be built on such contradictory and weak foundations.

4.What role do you see the public playing?

Without the public on board the chances of success in tackling the Climate Crisis are hugely diminished. This is why it is crucial the council immediately begin to set up a Citizens Assembly/Jury. We can see the benefits of this from other parts of the country and from the People’s Assembly set up by government. Residents become much better informed, deliberate more fully and come to better decisions that can then give confidence to local officials to carry out those decisions. If this process is handled correctly and made transparent, larger and larger parts of our community become informed and involved leading to more action and increased activity with increased public backing.

Participatory budgeting can also engage the public and increase the sense of involvement and responsibility that comes with being valued as a citizen and not just a consumer.

5.Are there any additional objectives and actions that will improve this strategy?

It would be useful if the council were more ambitious and creative. Actions that have already been started within property, estate and fleet, such as the introduction of photo-voltaic installations and car charging facilities should be expanded. Council led information campaigns on the crisis should be organised with local organisations. Lessons should be learned from the current covid pandemic and working from home promoted, alleviation of poverty and injustice highlighted and investment focussed on key workers and green sustainable jobs.

6.Is it clear whether the actions in the action plan (page 10-14) are best delivered locally, Cumbria-wide and/or nationally?

Without a wider description of ‘Climate Change ‘ in terms of the actual Climate Crisis, clarity is difficult to achieve. By setting these terms correctly and explaining how all our actions are

important at all levels, our interconnected responsibilities will be more apparent as will be the reasons for our actions.

7. Would a separation of local, Cumbria-wide and/or national actions make the strategy clearer.

Most likely no. There certainly must be appropriate coordinating bodies at all these levels but they must all be working together in the same direction, implementing appropriate parts of the larger plan and supporting each other.

8. Which parts of the strategy and actions (page 10-14) do you think will really help to tackle climate change the most?

All the stated objectives are admirable in their stated intention but do seem to lack the strong philosophical underpinnings and more concrete actions that would help deflect criticism of paying lip service. There is an sense of 'tinkering' within the strategy. Confidence starts at home and more ambition is required. Having said that..

Objective 2 could be extremely effective. If projects can be set up to reduce energy consumption from homes and businesses by retrofitting and insulation, new green jobs can be created and fuel poverty tackled. The difficulty is how this is done. By setting up public partnership run companies the council could make great strides in this area while creating new jobs, increasing climate awareness and strengthening community resilience, avoiding some of the exploitative practices that have helped bring us to where we are today. The promotion and indeed requirement of sustainable and energy efficient construction is paramount and should be implemented immediately.

Objective 3 seems at odds with calls from the council to fill up the car parks and build yet more. Proposed developments around the railway station and extending the ring road also fail to live up to this intention. A much more serious attitude must be developed, and much more serious measures implemented if this objective is to be met. There are specific plans for improving cycling infrastructure in the city and they should be given priority. There is much to be learned from other cities and a fact finding trip may be fruitful.

Objective 4 requires much more pressure on the producers and spreaders of waste such as supermarkets. While they continue to sell products in unnecessary packaging, especially plastics, we have next to no chance of seriously reducing this problem. They must be held to account and the council/residents should be talking to them and organising to bring pressure to bear.

Objective 5 goes without saying.

9. Do you think we should follow production or consumption accounting?

Both. This will obviously be more difficult but it will also be the most meaningful and useful.

10. What would make the best target for this strategy?

Scientific consensus suggests that the target of 2050 may be too late to mitigate many of the consequences of the climate crisis. The Cumbria baseline report may set a closer date but we must aim to move as quickly and efficiently as we can. We must bear in mind that target dates can, counter intuitively, slow action down by giving a sense that we have more time than we actually have.

11. What is your reasoning behind your answer to question 10.

Given above.

12. Should there be more focus on carbon capture and storage through council land assets.

Yes. There should be a sizeable increase in tree planting on council land assets which would also create many jobs. Although it must be recognised that carbon capture technologies are often proposed as offering an answer to our problems, they do not yet exist in any realistically helpful way. Well planned tree planting offers not just carbon capture but hope to our stressed and depleted biodiversity and wildlife.

13. Should there be more focus on carbon capture, storage and future use?

No, not if it means directing energy and resources towards technologies that are either unproven, non-existent or prohibitively costly. At the moment natural methods such as tree planting, protection of bogs, wetlands and others should be the focus.

14. Do you have any other comments you wish to make about the draft strategy?

The strategy needs to adopt the language of the Climate Crisis, and needs to focus more on building a thriving local community with full involvement in decision making. A greater emphasis on clean, green, sustainable job creation would help make it more attractive and help set us forward on a more positive route rather than backwards towards tinkering with 'business as usual'.

It would be helpful if there was some way for organisations such as ourselves to input orally at the next stage in the process of developing the strategy. There are a number

of limitations in this current consultation process. The document as it stands is a bit too heavy on intention and light on concrete actions. We believe we have something to offer in correcting this state of affairs and would be happy to have discussions.

15. How do you think the City Council can best engage and work with residents to implement this strategy?

As mentioned above, the council must move immediately to set up a Citizens Assembly/Jury and organise meetings with interested local groups to explore the way forward. Participatory budgeting models should be explored.

Also as mentioned above, the council should begin a series of actions around the city to help begin practically inform the public on the direction of travel. More transparency would also help engage the public.

I have already mentioned Waverley Viaduct and Waverley Line, incentives and improvements for public transport, cycling and walking provision.

I am becoming increasingly excited by the excellent scheme in Stranraer, the Community Reuse shop, and this could be done easily in Carlisle, as the council owns space next to Boustead Grassing, and this could start immediately.

Further mentions for cycling, all A roads, all new repairs to roads, and most importantly all new development, e.g Garden village and Southern bypass, housing estates, should have Integrated and well maintained cycling lanes, easy routes from residential areas to schools and secure cycling sheds. Some city roads are very dangerous, e.g the lethal Newtown Road, with cars parked, doors opening, and shops, people going downhill at speed, we need a safe route, e.g perhaps round the back, via Ruthella Street. Other roads, e.g London Road, have some cycle areas, but then they stop, and the gaps in provision force people onto the roads or pavements. Close the gaps, and consult cyclists to point out where!

There was not mention in the strategy of the suggested green roof gardens, living walls, but they are a great idea and the community could be involved.

Introduce local recycling schemes, e.g plastic bottles, campaign about plastic waste, fine people for throwing away their plastic face masks, reintroduce home collections of domestic waste, to avoid fly tipping, oh, there is so much, I am so anxious that more can be done, easily and quickly! Grow vegetables and fruit in community gardens and allotments, work with Sustainable Carlisle to produce meals for care homes and schools.

Flood prevention. No more building of any kind on flood plains. Tree planting on hills, reduce sheep intensity, restore and plant hedges, replacing fencing, build drystone walls, leave field margins rotate crops and leave some fields fallow to retain soil . Introduce beavers to the Eden Valley, remove Himalayan Balsam and Knotweed. Why not employ more probation officers or youth leaders, use Community Service Orders for cleaning up our rivers, roadside verges, etc? Plant lots of trees wherever possible, sow wildflowers on edges of pavements in residential areas and mow the grass less often.

Housing. More truly affordable housing and increase in rental availability. Preserve and reuse our existing buildings, bring people back to the city centre. Double council Tax on all second homes which lie empty for more than 6 months in a year. Use existing powers and law to requisition buildings that have been empty and neglected for more than 6 years, by owners just waiting for the price to go up. Social housing increase Shared ownership for first time buyers to 25%, with the council acting as security, in addition to the existing 50 and

75% schemes. Extend Heritage share schemes, where people can live on low rent in historic properties, in exchange for maintenance and improvements. Extend Homeshare schemes, in partnership with social workers and social care providers, to mix generations and allow young people to be lodgers with old people for reduced rent in exchange for hours of practical help and company, shopping, housework, meals, etc. Relax restrictions on converting old properties with heritage features, don't just let them fall into disrepair because people are not allowed to install lifts or bathrooms, be more flexible, relax the interiors while keeping the facade intact. Use small waste areas, e.g, the space created by the Central Plaza, the horrible black building that used to be Farmfoods on Lowther St, to create green spaces, community gardens, parks with trees. No need for new retail, use what we have. Demolish the Civic Centre, move offices to Castle Street, empty offices and retail, and make a lovely green space there.

Here are a few ideas for now, I will probably think of more!

Hello, thank you for the opportunity to make some suggestions.

Two projects can go ahead straight away, the cycle/footpath on the Waverley Viaduct, and the continuation of the Waverley railway line from Edinburgh to Carlisle.

Incentives could be made to encourage people to take their bikes, either to passengers or to railway companies.

Clean air Zones can be created, including a possible Park and Ride Scheme, and gaps in safe provision of cycle lanes and spaces should be joined up, shared paths need to be widened and clearly marked, also green areas marked on the roadsides.

Cycle Proficiency should be taught at all primary schools.

Electric charging points should be massively and very quickly scaled up, and all new houses should not be built without a minimum of 4 solar panels. Part exchange should be encouraged to reduce petrol and diesel cars and change to electric, and also help to buy electric bikes, as well as normal bicycles.

Public transport can be electrified, maybe even hydrogen powered vehicles considered.

Green spaces should be created when buildings are demolished, empty or in need of repair.

These could just be areas with grass, flowers and trees, or perhaps turned into allotments.

Existing buildings, especially heritage buildings, e.g in "historic Quarter" must be restored, and restrictions on change of use need to be relaxed, so these can be converted into homes.

Don't waste our assets, use them!

Green roof gardens and living walls could be created, and the community could be involved.

Recycled plastic bottle scheme could be introduced locally, with immediate effect.

These are a few ideas for now, I will add more later,

Boustead Grassing could be used in conjunction with a "Community reuse shop, as in the excellent example of Stranraer.

My main concern locally is reducing emissions from transport by promoting sustainable transport, reducing car travel and traffic congestion. For the last ten years the 'Carlisle Waverley Viaduct Trust', of which I am a director, has been working to re-open the old Waverley Line Railway Viaduct which crosses the Eden at Engine Lonning. Initially we wish to open it as a footpath linking Newtown to Etterby for which plans have already been passed. In the longer term we intend it to become part of the proposed Carlisle Cycle Network Plan. Highways England who own the viaduct wish to see it re-opened.

In 2015 Highways England spent £303,000 renovating the listed structure and will continue to own it and keep it safe. They are prepared to provide our Trust with a peppercorn lease for at least 30 years providing the Trust constructs and maintains a safe footway across the viaduct. This has been costed at about £350,000. The Trust already has a £100,000 grant from the Railway Heritage Trust which will be paid once a contract has been agreed.

However this grant is only available until March 2022 so time is short. The Trust cannot proceed at the moment raising the extra funds needed because we do not have access to a small strip of land descending from the viaduct on the north side.

Major funders have advised us to bid for the rest of the money but not until we have access.

Carlisle City Council have effectively blocked any further progress by demanding that we have all funds to complete the project in our bank before they will act against the landowner to gain access. Initially this was for a PPCO (Public Footpath Creation Order) which we have since been told is not possible as such an order must be from one end of the route to the other. The viaduct is Crown Land and Highways England can only lease the land to us. They will not agree to a PPCO across their land.

Our Trust has been trying now for many months to obtain a meeting with both County and City officials to find a way forward such as a compulsory purchase order on this small strip of land, so far to no avail.

If no progress is made in the near future the viaduct will remain closed.

Our Trust will lose the £100,000 grant from the Railway Heritage Trust, the City and County will lose the benefit of having the viaduct re-opened at little cost to their citizens as our Trust will raise the funds to complete and maintain the crossing in the future.

Re-opening the viaduct as a traffic free crossing of the river would tick all of the boxes for improving the local environment regarding reduction of pollution, promoting exercise both for leisure and commuting and improving the local footpath and eventually the cycling network of the city. Incidentally the viaduct is on the cycling network plan for Carlisle as a traffic-free crossing of the Eden. The attached image, courtesy of VisitCumbria.com, illustrates the proximity of the Cumberland Infirmary to the viaduct. In the future we could have shorter dedicated foot/cycle links between North and West Carlisle avoiding Eden Bridges. All of the existing long distance cycle routes could use the traffic free viaduct instead of Eden Bridges.

Action by both City and County to re-open the viaduct NOW would be a great example to kickstart the process within our city of complying with the Government's demands for improving our environment and tackling climate change.

I would like to contribute the following proposal to be considered as part of the climate change strategy:

- The population of Scotby and the immediate area, has significantly increased in recent years. A high percentage of residents are now young families with school children, who in the next few years will attend high school, most likely in Carlisle. Scotby has frequent trains passing through into Carlisle on the Newcastle line. By re-opening Scotby railway station, there is the potential to reduce the carbon footprint from cars driving into the city centre. The bus service is wholly inadequate and expensive i.e. £10 return into Carlisle.

For obvious health and wellness to all who live and visit Carlisle I'd like to see more straight forward cycle routes. Ideally, they should radiate from the centre outwards to the all-encompassing Carlisle ring road. One can enter as a visitor on the cycle lane come path which encircles the city at many alternative suggested lanes. These lanes would make commuting to work easier traffic free and appeal to other users too (maybe going to school) or small shopping trips. The monies saved on less polluting ways of transport would make Carlisle a better place to be and visit. Park and ride would also help de congestion in the city. The small lanes can also be used by the less abled in their variety of vehicles. With Thanks

Thanks for allowing the public to share their thoughts on the strategy. I only have a short email.

There's lots to consider, but my main request is for trees. I'd like there to be a limited number of new houses - the water runoff and flooding in our area is bad, but we can help this and make the area more beautiful with more trees.

Please with new houses too, I expect there will be a range of pricing, but please make sure all are attractively designed.

I'm also worried about the recycling and waste in our area, we need to improve on this - ideally with local facilities.

Lots of trees #1!

I've read through the documents and it seems to mainly be aimed at individual behaviour change.

If the council led by example and had a plant based menu at all meetings/events that would have a significant impact and help educate people on which in turn would help reduce climate change.

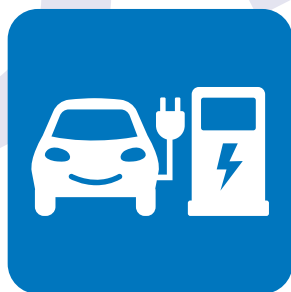
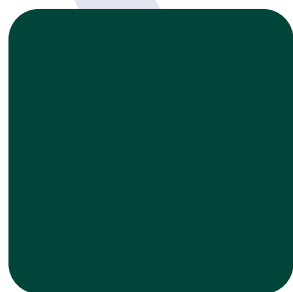
Would it be possible to include in all new build planning applications that solar panels be fitted? Such a move would be a boost to Carlisle Council's green credentials.

Appendix B: Additions and amendments to the draft strategy

In response to points made in the consultation the following additions are suggested:

- Address pollution (not climate)
Link this strategy to the work on Air Quality and Enforcement
- There was not mention in the strategy of the suggested green roof gardens, living walls, but they are a great idea and the community could be involved. Include green roof gardens and living walls as a consideration in the Tree Strategy (Action 5.3).
- More truly affordable housing and increase in rental availability.
Link strategy to Economic Strategy
- Existing buildings, especially heritage buildings, e.g in "historic Quarter" must be restored, and restrictions on change of use need to be relaxed, so these can be converted into homes.
Link this strategy to Regeneration work
- Local energy masterplan
Update action plan with Borderland work on energy masterplanning.
- Consider UN Sustainable Development Goals
Raise with the Member Advisory Group
- We would recommend that the council uses the Ashden Co-benefits Toolkit (<https://ashden.org/climate-action-co-benefits-toolkit/#2>) to investigate further actions, and implement the quick-win actions in Friends of the Earth's '33 Actions Local Authorities Can Take': <https://policy.friendsoftheearth.uk/insight/33-actions-local-authorities-can-take-climate-change>
Raise with the Member Advisory Group
- Make some effort to define what is meant by sustainable housing (Objective 2)
Link to St Cuthbert's Garden Village
- Consumption methodology aligns with the countywide Zero Carbon Cumbria Partnership, and the budget and staff resource available through the Lottery Climate Action Fund for establishing a clear methodology and shared reporting framework to evaluate impact of work at a county level.
Discuss at ZCCP meetings
- Engaging more with planning about SMARTER objectives .Look into these:
<https://policy.friendsoftheearth.uk/insight/33-actions-local-authorities-can-take-climate-change>
Raise at MAG.
- Food production & food waste & fair distribution of food
Link to Food City work
- Sustainable job creation
Link to Economic Strategy

Carlisle Local Environment (Climate Change) Strategy



Foreword



Human activity is damaging the environment in which we live and changing the world's climate.

Our Draft Local Environment (Climate Change) Strategy aims to ensure that Carlisle City Council plays its full role in protecting the environment and in the worldwide movement which aims to tackle climate change.

Our commitment is, subject to public consultation and legal constraints, that all the activities of the Council, all strategic decisions, budgeting, and, in so far as the Council can influence, arrangements with partners, are in line with eliminating pollution and achieving net zero carbon emissions at the earliest possible date.

The challenge is deciding what the City Council can do. If we try to do everything, we will squander our resources and achieve nothing. It is important that we focus where we can influence change.

I would like to thank the Members who attended the working group for their contributions to this work. I would also like to thank all those that have contributed so far. Our strategy aims to ensure that all ideas and opportunities to address climate change or improve environmental performance are drawn together and are incorporated into appropriate actions, plans, strategies and future committee agendas for consideration.

The key to the success of our strategy, reaching net zero, will depend upon a co-ordinated and comprehensive programme of communication and engagement to encourage behavioural change by residents and businesses as well as the Council.

Working in partnership will be essential to reduce the carbon footprint for the whole of Carlisle.

Councillor Nigel Christian
Portfolio Holder for Environment and Transport

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Vision and High-Level Strategy



In March 2019 the Council passed a motion to declare a Climate Change Emergency. In April 2019, the Council adopted the Joint Public Health Strategy. The Strategy included the key aim:

‘To become a “carbon neutral” County and to mitigate the likely impact of existing climate change.’

In June, the Government announced an amend to the Climate Change Act 2008 to require net United Kingdom carbon emissions to be zero by 2050. The Council is committed to achieving net zero greenhouse gas emissions (GHG) at the earliest possible date.

The Joint Public Health Strategy sets out a vision for a Healthier Cumbria based on the five capitals, taking inspiration from the World Health Organization’s Healthy Cities Model. The future for a healthier Cumbria can be seen as having five key components:

Planet: Cumbria’s natural environment, from our world-class landscapes to the centre of our towns, will be protected and enhanced. Sustainability will be at the heart of future development and Cumbria will reduce its ecological footprint even as it develops economically.

People: Everyone in Cumbria will have the opportunity to develop and use their skills and talents in a way that recognises the value they bring to society and to enjoy a varied and fulfilling life.

Participation: Cumbrian communities will be strong, resilient and inclusive, with well developed social networks and widespread engagement with community life.

Place: Cumbria’s physical infrastructure will promote health and wellbeing, with good quality housing, a high-quality urban environment and good access to the services needed for a healthy lifestyle.

Prosperity: Cumbria’s economy will develop sustainably, with growth particularly focused on tackling poverty and providing quality employment for all.

The work done so far



Local Plan Policies

The Carlisle District Local Plan 2015-2030 sets out the long-term vision through the spatial strategy and strategic planning policies, seeking to ensure that future growth is sustainable. The Local Plan has four policy objectives that are directly related to this strategy:

Spatial Strategy and Strategic Policies Objectives

- To promote a sustainable pattern of development, which will contribute to building a strong, responsive and competitive economy, to support the vision for managed growth.
- To support strong, vibrant and healthy communities, by meeting the housing needs of present and future generations, in a high-quality environment with accessible local services.
- To contribute to protecting and enhancing our natural, built and historic environment (including improving biodiversity), using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change including moving to a low carbon economy.

Climate Change and Flood Risk Objectives

- To reduce emissions of greenhouse gases, including through securing energy from renewable sources, and avoid inappropriate development in areas at risk of flooding to ensure that the District is more resilient and less vulnerable to the effects of climate change and can successfully adapt to its effects.

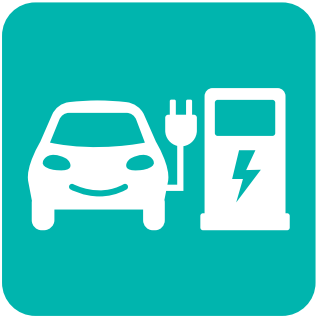
Health, Education and Community Objectives

- To create a thriving, successful and healthy community for all by promoting cohesive mixed communities and ensuring that everyone can have a decent home, in a safe environment, with good access to health care, educational provision and other community facilities by sustainable modes, including walking and cycling.

Green Infrastructure Objectives

- To protect, enhance and increase the provision of the green and blue infrastructure across the District to create and maintain multifunctional, interconnected and attractive recreational and ecological networks for the benefit of residents, businesses, visitors and the wider natural environment.

Property, estate and fleet



The Council owns over £120.7 million in assets¹ across the whole district area, delivering a range of statutory and discretionary services. The operational and investment assets have been assessed to produce Display Energy Certificates (DECS) and Energy Performance Certificates (EPCS), where required. This information is being used to assess the assets against the Minimum Energy Efficiency Standards (MEES), these are the minimum level of energy efficiency required to let non-domestic property under the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015.

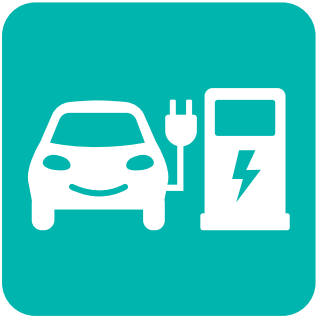
The 3 Year Repair and Maintenance Programme (2020/21 - 2022/23) delivers on the duty to manage property assets, particularly operational assets, in a safe and efficient manner and which contributes to the quality of service delivery. This maintenance strategy is fully integrated with the Asset Management Plan and environmental policy.

The Council has developed a Fleet and Plant Strategy that delivers on the commitment to reducing its impact on the local environment and improve local air quality by reducing vehicle emissions. Controlling fleet costs and conducting a robust 'fleet challenge' to determine genuine business need to support all fleet decisions is a key part of this strategy.

Recent projects that are making a positive impact include:

- Review of depots and efficient use of operational assets.
- Replacement of waste and recycling fleet with modern efficient vehicles.
- Continued investment in cycling and walking infrastructure.
- Renewable electricity generation through Photo-Voltaic installations on the roof spaces of The Sands Centre and Civic Centre.
- Programmed maintenance to improve the energy efficiency of the estate.
- Homelife grants tackling energy efficiency and fuel poverty.

Property, estate and fleet



The Council and its partners continue to develop and deliver Climate Change adaptation and mitigation. The following projects are underway, together they will significantly reduce the Council's greenhouse gas emissions:

- Sands Centre Redevelopment.
- Civic Centre Ground Floor Reinstatement.
- Replacement of footway lighting with energy efficient lamps.
- Ongoing replacement of fleet and plant with lower carbon vehicles and equipment.
- Waste management and recycling initiatives at operational sites.

The Council is delivering projects to help reduce Carlisle district's greenhouse gas emissions:

- Community Electric Vehicle Charging Points.
- Improvements to the cycling and walking infrastructure, increasing the network for active transport.

The Council is also working in partnership to adapt to Climate Change, over the next three years Carlisle will benefit from the delivery of new flood defences and upstream natural flood management projects.

Waste and recycling



The collection of waste is a duty of the Council, since 2004 the Council has provided extensive kerbside and community recycling services, leading the way on waste recycling.

The Joint Cumbria Waste Management Strategy 2008-20 and Cumbria Minerals and Waste Plan 2015-30 sets out the overall countywide strategy for waste and recycling. The simple goal is to climb the Waste Hierarchy, whilst retaining self-sufficiency and dealing with waste as close as practicable to the point at which it is generated.

The key targets from the strategy are:

The goal of increasing the recycling rate to 50% (by 2020) and 65% (by 2030) is reported as a Key Performance Indicator. The collected recycling rate for 2018/19 is 41.3%.

When the collection recycling rate is combined with the tonnages from the Household Waste Recycling Centres and the recovery of materials during disposal, this rate of recycling increases to 55.7%² (CSe05/2018/19).

Determining Carlisle's Carbon Footprint



A carbon footprint measures the total greenhouse gas emissions caused directly and indirectly by a person, organisation, event or product.³

Carbon emission largely come from several main sectors of the Cumbria economy:

- Energy.
- Housing.
- Transport.
- Waste.
- Industry/Infrastructure.
- Farming and Rural.
- Tourism.

The Countywide Climate Change Working Group will connect into these sectors to influence and communicate what will be needed to become zero carbon. The purpose of this group is to plan and oversee a radical programme of action that will enable Cumbria to become a carbon neutral county and to mitigate the likely impact of existing climate change.

In order to do this, the group will:

- Propose a shared definition of “carbon neutral”.
- Propose a target date by which this is to be achieved.
- Commission a baseline carbon audit for the County and agree ongoing monitoring mechanisms.
- Identify leadership for developing action across key topics.
- Establish a programme of action by key partners.
- Lead joint campaigning to encourage wider public awareness and action.

The Countywide Climate Change Working Group has commissioned work from Small World Consultancy which will be pivotal to establishing a robust and consistent methodology.

The Council has also been working in partnership with all the local authorities in Cumbria to develop a methodology for organisation carbon footprinting. This combined approach will enable the Council to report a carbon footprint alongside the Carlisle district footprint, whilst putting these figures into the wider Cumbria and national context.

Objectives



To achieve the strategic goal of net zero greenhouse gas emissions the following objectives will be progressed:

Objective 1:

Reducing emissions from the City Council estate and operations.

Objective 2:

Reducing energy consumption and emissions from homes and businesses in Carlisle and tackling fuel poverty, by promoting energy efficiency measures, sustainable construction, renewable energy sources and behaviour change.

Objective 3:

Reducing emissions from transport by promoting sustainable transport, reducing car travel and traffic congestion and encouraging behaviour change.

Objective 4:

Reducing consumption of resources, increasing recycling and reducing waste.

Objective 5:

Supporting Council services, residents and businesses to adapt to the impacts of Climate Change.

Each objective has a set of draft actions, listed with relevant service areas and proposed timescale for delivery. Each action will be linked to the carbon footprint and baselining work, using scopes (1,2,3) and district options.

The timescale for the delivery of any actions is linked to capacity and resources. A simple approach to the timescale using the terms short, medium or longterm is included. These timescales are best described in terms of financial planning:

Short: Within the current budget year or budget cycle for the following year

Medium: Within the period of the current Medium-Term Financial Plan (currently 2020-25)

Long: Beyond the Medium-Term Financial Plan period but before the target date for net-zero

Key Actions

OBJECTIVE 1: Reducing emissions from the City Council estate and operations

	Action/Outcomes	Service Area	Timescale	Carbon footprint scope
1.1	Develop a new Carbon Management Plan for 2020-2025 to reduce energy and fuel consumption for the City Council's estate and operations.	Policy & Communications Property Services Neighbourhood Services Finance and Resources	Short	Scope 1 and 2
1.2	Take opportunities to improve the energy efficiency of the operational and commercial properties owned by the Council as they arise.	Property Services	Short	Scope 1 and 2
1.3	Explore the potential for introducing an Environmental Management System in key services and operational sites.	Property Services Policy & Communications Health & Wellbeing Neighbourhood Services	Short	Scope 3 and district
1.4	Develop and implement a Council Employee Travel Plan including promoting and incentivising alternative methods of transport for Council business e.g. through provision of pool bikes, cycle mileage allowance, travel warrants, train travel and the provision of electric pool cars.	Human Resources & Payroll Organisational Development Policy & Communications	Medium	Scope 1, 2 and 3
1.5	Review of the procurement guide for staff to promote and support sustainable procurement.	Finance and Resources Internal Audit	Short	Scope 3
1.6	Work with partners to develop partnership projects to reduce greenhouse gas emissions, including the development of Energy Masterplan (Borderlands Inclusive Growth Deal).	Corporate Director of Economic Growth Regeneration Planning	Short	District

OBJECTIVE 2: Reducing energy consumption and emissions from homes and businesses in Carlisle and tackling fuel poverty, by promoting energy efficiency measures, sustainable construction, renewable energy sources and behaviour change.

	Action/Outcomes	Service Area	Timescale	Carbon footprint scope
2.1	Support residents to improve the energy efficiency of their property.	Regulatory Services Investment & Policy Development Management Building Control	Long	District
2.2	Work with voluntary and community groups to provide advice to businesses on reducing energy consumption and emissions as part of wider advice on sustainability.	Policy & Communications Carlisle Partnership Property Services Investment & Policy	Long	District
2.3	Require new non-domestic properties to be constructed to BREEAM Excellent Sustainability Standards, through policies in the revised Local Plan.	Investment & Policy Development Management Building Control	Long	District
2.4	Work with developers to deliver sustainable housing developments in Carlisle and promoting sustainable construction methodologies.	Investment & Policy Development Management Building Control	Long	District
2.5	Work in partnership with social landlords, developers and architects to share knowledge and learning on sustainable construction and promote the application of these principles on new developments.	Investment & Policy Development Management Building Control	Long	District
2.6	Promote low carbon and renewable energy provisions in new developments through Local Plan policies.	Investment & Policy	Long	District
2.7	Work in partnership where appropriate, including County wide, on projects to promote energy efficiency and low carbon energy.	Policy & Communications Carlisle Partnership Investment & Policy	Long	District

	Action/Outcomes	Service Area	Timescale	Carbon footprint scope
2.8	Develop a co-ordinated and comprehensive programme to encourage behaviour change by residents and businesses to reduce their carbon footprint.	Policy & Communications Carlisle Partnership	Long	District
2.9	Introduce a Consequential Improvements Policy as part of the Local Plan.	Investment & Policy Development Management Building Control	Long	District

OBJECTIVE 3: Reducing emissions from transport by promoting sustainable transport, reducing car travel and traffic congestion and encouraging behaviour change.

	Action/Outcomes	Service Area	Timescale	Carbon footprint scope
3.1	Work in partnership with the Local Transport Authority in improvements to transport infrastructure to tackle congestion, reduce journey times, reduce greenhouse gases emissions and improve air quality.	Policy & Communications Health & Wellbeing Neighbourhood Services Investment & Policy	Long	District
3.2	Work with partners and developers to ensure that new developments are served by public transport connections as well as making provision for cyclists and pedestrians.	Investment & Policy Development Management Carlisle Partnership	Long	District
3.4	Work with partners to facilitate provision of electric charging hubs for all types of vehicles in Carlisle, including bikes.	Health & Wellbeing Investment & Policy Development Management Carlisle Partnership	Long	District
3.5	Support and promote a Travel for Work Partnership to develop travel options for employees in the city.	Policy & Communications Carlisle Partnership	Long	District

OBJECTIVE 4: Reducing consumption of resources, increasing recycling and reducing waste

	Action/Outcomes	Service Area	Timescale	Carbon footprint scope
4.1	Work with partners on the Sustainable Food Action Plan to achieve Sustainable Food City Status.	Carlisle Partnership Health and Wellbeing	Medium	District
4.2	Maintain the current level of occupying rates at existing allotments and support take-up of new community gardens and allotments in development areas.	Health and Wellbeing Development Management	Medium	Scope 3 and district
4.3	Work with partners on a programme for healthy eating including cooking skills to help reduce reliance on processed and packaged food.	Carlisle Partnership Health and Wellbeing	Long	District
4.4	Increase food waste collections from commercial properties.	Policy & Communications Carlisle Partnership Neighbourhood Services	Medium	Scope 3 and district
4.5	Explore opportunities to increase recycling through the range of materials and the number of sites.	Neighbourhood Services	Medium	Scope 3 and district
4.6	Develop and implement targeted recycling and waste minimisation awareness campaigns, including promoting national Zero Waste Week.	Policy & Communications Neighbourhood Services	Short	District
4.7	Help to promote Voluntary and Community Groups to be involved in recycling and reuse activities.	Policy & Communications Carlisle Partnership Neighbourhood Services	Medium	District

OBJECTIVE 5: Supporting Council services, residents and businesses to adapt to the impacts of Climate Change

	Action/Outcomes	Service Area	Timescale	Carbon footprint scope
5.1	<p>Include policies in a Supplementary Planning Document of the Local Plan which will support residents to adapt to the impact of Climate Change, including policies on:</p> <ul style="list-style-type: none"> - Designing buildings which are simple to keep cool and do not overheat in the hotter weather; - Requiring applications where appropriate to include Sustainable Drainage Systems (SUDs) and ensuring that development is not at risk from flooding and that it does not increase the risk of flooding elsewhere. 	Investment & Policy	Long	District
5.2	Work with Cumbria County Council and other partners in the Cumbria Strategic Flood Partnership to manage climate change related flood risks.	Corporate Director of Economic Investment & Policy Development Management Policy & Communications	Long	District
5.3	Develop and implement a new tree strategy for managing risks and increasing the city's tree stock.	Health and Wellbeing	Medium	District
5.4	Work with partners of the Cumbria Local Resilience Forum to ensure that plans are in place to respond to climate change risks and that these are regularly tested and reviewed.	Policy & Communications Carlisle Partnership	Medium	District
5.5	Develop an evidence base for climate change adaption. To have a better understanding of the climate risks facing the Council and district and the adaptation actions that will be the most effective.	Policy & Communications Carlisle Partnership Investment & Policy	Medium	District

Partnerships and procurement



Everyone and every organisation can get involved in this strategy. The Carlisle Partnership stakeholder map recognises the many examples of positive actions already underway. In addition, this map identifies the key groups and organisations that have specific roles in driving forward this strategy and commitments.

The Council, along with its partners, is committed to ensuring that services are delivered in a way that protects the quality of the environment and minimises any adverse impact on health and wellbeing. The Council recognises that procurement and commissioning is fundamental in delivering more sustainable outcomes. To achieve this, it is necessary to ensure that environmental and broader sustainability considerations are considered throughout the procurement and commissioning process, along with the use of local suppliers where appropriate.

Three key actions will help deliver this:

- Carbon Footprint.
- National and Countywide Citizens' Assembly/ Jury, to involve the wider population.
- Carlisle Partnership Climate Change focus, which will proactively include young people, ensuring that they have a voice in shaping the future.

Procurement decisions will provide opportunities to continually improve our environmental performance, especially in major capital projects and service contracts. The key partners will include:

- Zero Carbon Cumbria Partnership.
- Carlisle Partnership.
- Carlisle Ambassadors.
- Borderlands Inclusive Growth Deal partners.
- Cumbria Strategic Waste Partnership.
- Cumbria Strategic Flood Partnership.
- Cumbria Local Resilience Forum.
- Cumbria Public Health Alliance.

Performance



Alongside this strategy datasets will be identified and developed into management information for monitoring. As projects are initiated Key Performance Indicators will be established and monitored throughout the project lifecycle. This management information will be added to the Performance Dashboard and the KPIs will be included in the End of Year Performance Report for the Council's Executive and the Carlisle Partnership.

This strategy will be reviewed annually, and this review will be made available for public overview and scrutiny.

A Carbon Baseline for Cumbria

A report by Small World Consulting Ltd

February 2020

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1 Executive Summary

This report looks at Cumbria's greenhouse gas emissions in three ways:

Extraction-based emissions: These are the emissions that will result from the burning of any fossil fuels that are extracted from the ground in Cumbria, *wherever this takes place*. This type of emissions reporting is important for understanding the climate change implications of decisions relating to mining and other forms of extraction in the county.

Production-based emissions: These are the *net emissions that are physically released in Cumbria*, most notably by the burning of coal, oil and gas, plus those arising from the production of electricity used in the county (wherever that generation takes place). This is the UK government's standard emissions reporting approach, and only CO₂ emissions are reported by BEIS at the local level. However, it also excludes emissions arising from the production of goods and services that are used by residents, visitors and industry, if they are produced elsewhere; for example, emissions from lime production taking place in Cumbria, even though the lime is transported outside of the county and used elsewhere. It also includes motorway emissions from vehicles that are passing through the country without stopping. We use the term 'net emissions' because we subtract any negative emissions (taking CO₂ back out of the air) that result from Land Use, Land Use Change and Forestry (LULUCF).

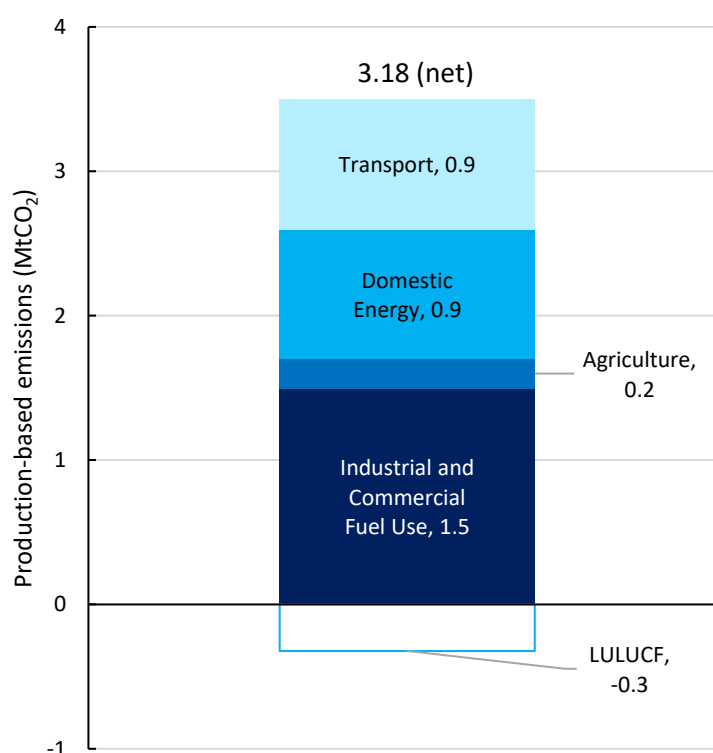


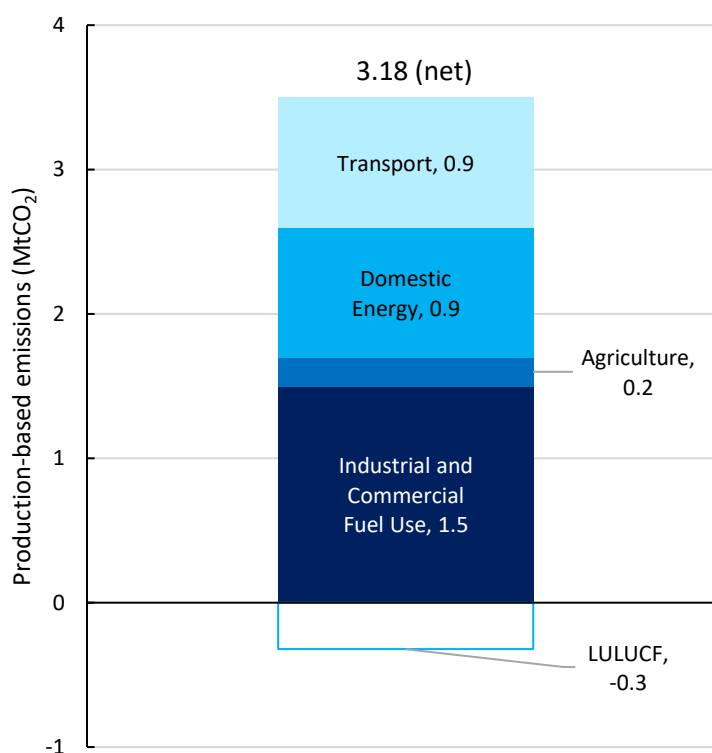
Figure 1. Cumbria's production-based CO₂ emissions in 2017 by category.

Consumption-based emissions: We assess the greenhouse gas 'footprint' of residents, visitors and industry, including the supply chains of everything that residents and visitors buy and do whilst in Cumbria. Consumption-based reporting attributes the emissions from product and service supply chains to Cumbria, *regardless of where emissions are physically released during production*. Consumption-based reporting is important for looking at the climate change impacts that people and businesses have through their entire

lifestyles, including the food they eat and the things they buy. For example, taking a consumption-based approach, the impact of driving includes not just the exhaust pipe emissions, but also emissions resulting from the manufacture and maintenance of cars and emissions resulting from the extraction, refining and transport of fuels to the pump. For businesses, it includes the full impact of business practices, including procurement supply chains. The footprint of Cumbria's industry is reported separately as there is some unavoidable double counting with the footprint of residents and visitors, where people buy from local companies.

There is currently no fossil fuel extraction in Cumbria, although planning permission has been given for a Whitehaven coal mine with extraction-based emissions of 8.4 million tonnes (Mt) CO₂e per year for 50 years, totalling 420 MtCO₂e.

The largest part of the production-based carbon footprint comes from transport, closely followed by industrial and commercial fuel use. Emissions from vehicles on the M6 motorway have been excluded. Cumbria's



production-based footprint is 3.2 Mt CO₂ (

Figure 1). Note that only CO₂ data was available, and so other GHG emissions (e.g. methane from Agriculture) are not captured in this analysis. The data is also produced on a two-year lag, and so the most recent data from 2017 are presented in this report.

Cumbria's consumption-based GHG emissions by consumer type in 2018 (Figure 2) were as follows:

- Annual emissions from residents: 6,315 kilotonnes (kt) CO₂e (12.7 tCO₂e per person per year)
- Annual emissions from visitors whilst in Cumbria: 1,608 ktCO₂e (26 kgCO₂e per visitor day)
- Annual emissions from visitors travelling to/from Cumbria: 4,452 ktCO₂e (71 kgCO₂e per visitor day)
- Annual industry emissions: 13,174 tCO₂e

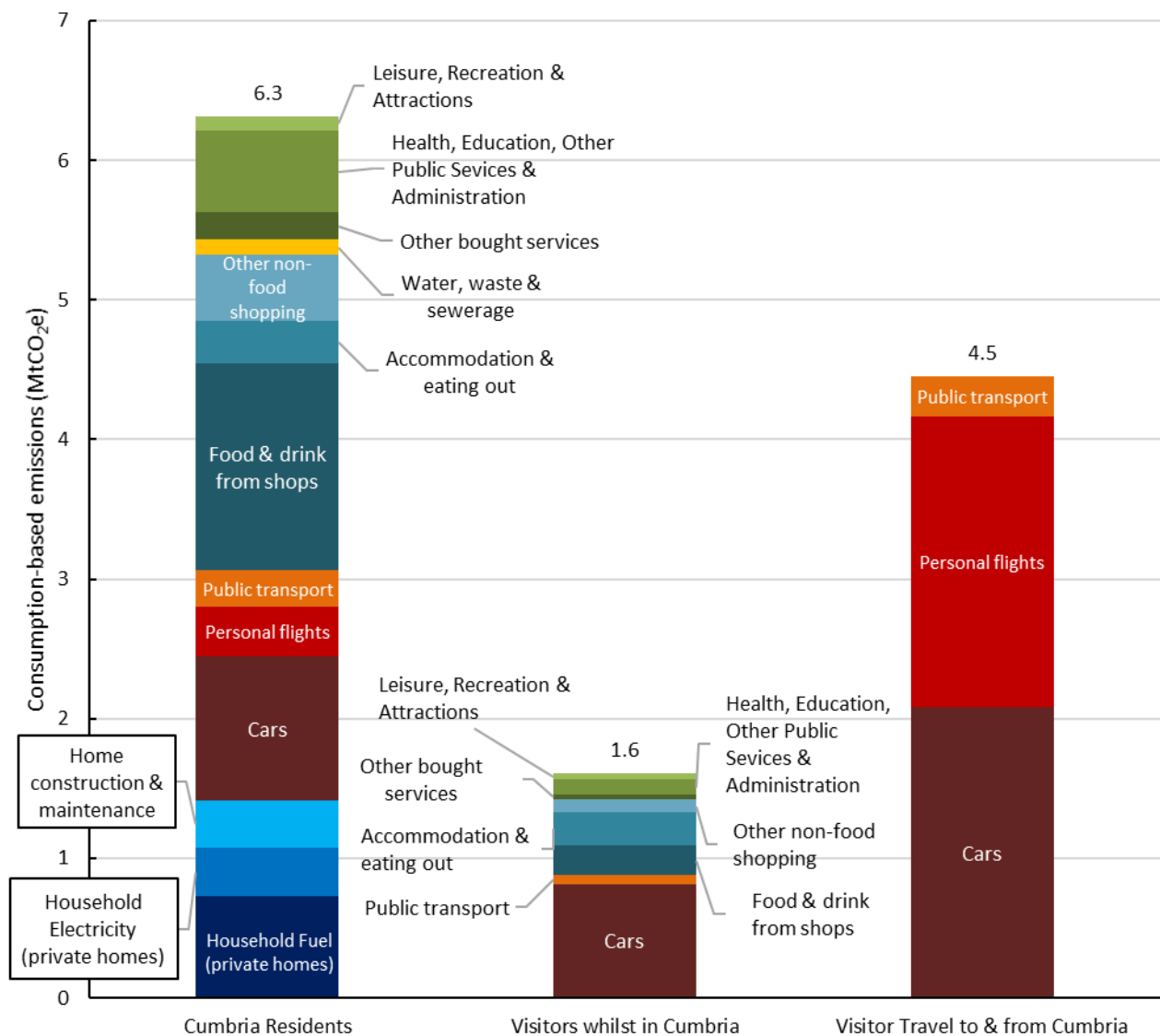


Figure 2. Cumbria's consumption-based GHG emissions in 2018 by category.

Vision

We sketch out a vision for low-carbon Cumbria which would improve quality of life for residents and promote sustainable tourism. We also outline how industry, in particular agriculture, will contribute to and thrive in low-carbon Cumbria.

Targets and Recommendations

We propose a target that includes the following components:

- Energy-only CO₂ measured on production basis, excluding the M6 (which Cumbria has little influence over);
- GHG emissions for Food consumed by residents and visitors;
- GHG emissions for Other goods purchased by residents and visitors;

- GHG emissions from Visitor travel to and from Cumbria, excluding international visitor travel; and
- Land Use, Land Use Change and Forestry (negative emissions).

We provide five possible targets and from these recommend Net Zero by 2037 (Figure 3), which is the most feasible target that can be regarded as being in line with the requirements laid down by the IPCC for “well below 2 degrees and in pursuit of 1.5 degrees.”

Extraction-based emissions and renewable and nuclear energy production figures are excluded from the methodology for the net-zero trajectory for Cumbria. We suggest adopting separate targets for renewable energy produced in Cumbria that is exported to the national grid, and for extraction-based emissions reporting.

Option 3 - Net Zero by 2037: 13% annual reduction in energy only CO₂ emissions; 5% annual reduction in food and other purchased goods emissions; 10% annual reduction in visitor travel per visitor day emissions; 400% increase in annual LULUCF removals after 15 years.

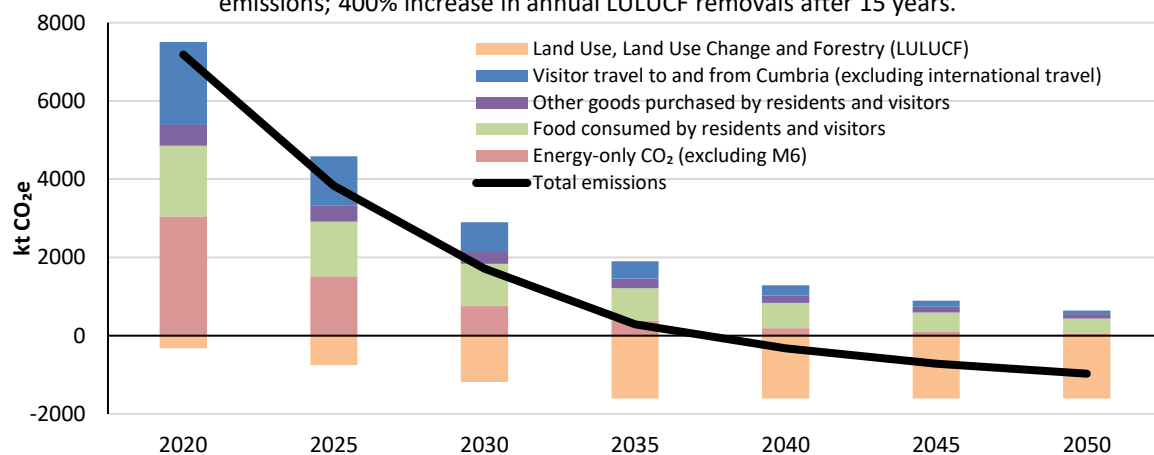


Figure 3: Recommended pathways to Net Zero for Cumbria by 2037

2 Introduction

In May 2019, the UK parliament followed Carlisle, South Lakeland district councils in declaring a climate emergency, and the government amended the 2008 Climate Change Act to strengthen its climate ambition, legislating for a target to reduce the UK’s emissions to Net Zero by 2050. Subsequently, many other local authorities, including two more of the six local authorities within Cumbria, have begun to declare climate emergencies and make commitments to reduce local emissions. By mapping out Cumbria’s carbon footprint, this report seeks to help the county’s policymakers understand how best to respond to the climate emergency. We have taken a broad look at the emissions in Cumbria from three different perspectives: extraction-based, production-based and consumption-based emissions. This enables us to analyse the priorities for industry, individual residents and visitors, and mines and quarries respectively.

Following the limited global action on emissions reduction in the last decade, the United Nations Environment Programme (UNEP) now estimates that CO₂ cuts of 2.7% per year are required to keep within 2°C of warming

and much greater cuts of 7.6% per year would be required to limit warming to 1.5°C¹. The UNEP sets a global requirement to limit temperature rise to “well below 2°C and in pursuit of 1.5 °C,” and for rich industrialised countries such as the UK to cut further and faster than this. This report sets out a 2018 baseline of emissions against which Cumbria can measure its reductions and recommended reduction targets.

For the consumption-based emissions estimate, we are using the term ‘footprint’ to describe the sum of the direct and indirect greenhouse gas emissions that arise throughout supply chains of activities and products in carbon equivalents. The inclusive treatment of supply chain emissions differs from the more standard production-based emissions assessment that is also included in this report but gives a more complete and realistic view of impacts of final consumption of residents, visitors and industries.

Emissions resulting from the production of goods purchased by Cumbrian residents and visitors would not feature in a production-based emissions assessment, unless the entire supply chain was within Cumbria. For example, in the case of local beer much of the supply chain might lie within Cumbria but in the case of a smartphone it would not. To give another example, in a consumption-based assessment, the footprint of travel includes, on top of the direct vehicle emissions, those resulting from the extraction, shipping, refining and distribution of fuel, emissions resulting from the manufacture and maintenance of vehicles, and so on. Thus, in the case of car travel the final figure is typically around double that of the exhaust pipe emissions. In a third example, the consumption-based footprint of electricity consumption includes components for the emissions associated with fossil fuel extraction, shipping, refining and transport to power stations, as well as those resulting from the electricity generation process itself; whereas a production-based footprint would only include emissions arising at the point of generation.

We also include an extraction-based emissions assessment in order to properly reflect the impact of any fossil fuel mining or drilling activities that may take place in Cumbria, even if the fuel is burned elsewhere.

¹ UNEP (2019). Emissions Gap Report 2019. Executive summary. United Nations Environment Programme, Nairobi. <https://www.ipcc.ch/sr15/>

The figures are best estimates-based on the data made available to us, and there are caveats based on assumptions made. The intention of the carbon budget is to ‘measure the unmeasurable’ as far as possible and thereby:

- Create best estimates;
- Differentiate between more significant and less significant actions (at least by order of magnitude);
- Create a culture of climate action;
- Cut carbon;
- Raise awareness at a policy level and show leadership; and
- Learn about how to deal with climate change at a local area level.

New for the 2019 report, we provide extraction-based and production-based emissions in addition to the updated consumption-based emissions which we reported on in 2012.

2.1 Extraction-based GHG emissions

We provide a short analysis of emissions arising as a result of extraction activities in Cumbria. This includes any fossil fuels that are extracted within the boundaries of Cumbria regardless of where they will ultimately be burned. This type of emissions reporting is important for understanding the climate change implications of decisions relating to mining and other forms of extraction in the county.

2.2 Production-based CO₂ emissions

We provide a summary of production-based emissions for Cumbria in 2017 as estimated by Ricardo Energy for BEIS². This is the UK’s standard emissions reporting approach. It is useful for monitoring energy use but does not cover the impact of purchased goods and services. The production-based assessment covers the net emissions that take place in Cumbria plus those arising from the production of electricity used in the county, wherever that generation takes place. However, it excludes imported emissions from the production of goods and services that are used by residents, visitors and industry in the county, whenever their supply chains are not within Cumbria. It includes emissions from:

- Industrial and commercial energy use;
- Domestic Electricity, Gas and Other fuels;
- Transport (excluding aviation and sea shipping, but including vehicles that pass through the county on the M6 without stopping); and
- Net negative emissions resulting from land management, such as peat restoration and tree planting.

The production-based estimate covers only CO₂ and most significantly omits CH₄ and N₂O emissions from Agricultural activities.

2.3 Consumption-based GHG emissions

Since the last carbon baseline for Cumbria carried out in 2012 by Small World Consulting, there have been changes in the numbers and behaviours of residents and visitors in Cumbria, changes in the data that is

² BEIS, June 2019, UK local authority and regional carbon dioxide emissions national statistics: 2005-2017.

<https://tinyurl.com/UKCO2PB>

available to understand these behaviours, and changes in the carbon intensity of different activities and consumables, as well as some evolution in the details of the methodology used. For example, the carbon intensity of electricity in the UK has decreased by nearly 40% since 2012, bringing the carbon footprint of electricity down relative to 2012.

This report provides a fresh estimate of carbon emissions for Cumbria, using a similar consumption-based approach to the one used in 2012. It provides an up-to-date basis for understanding the carbon management priorities and a new baseline against which future actions can be evaluated.

Because there have been changes in the background economy as well as developments in the methodology, and the type and quality of data that is available, the results presented here cannot be used to compare against the 2012 footprint nor to assess the impact of local actions since 2012.

2.4 Scope and Limitations

We provide a broad perspective on the carbon issues and help to clarify the priorities from a carbon management perspective. The figures contained are best estimates. Even where accurate data are available, all carbon footprints that seek to include supply chain emissions almost always contain considerable uncertainty. This report also relies upon estimates of consumption-based emissions from a range of data sources, including visitor surveys, which themselves contain considerable uncertainty.

This report estimates greenhouse gas (GHG) emissions from consumption by Cumbria residents and visitors, including travel to and from Cumbria. It covers all the 'basket of six' greenhouse gases and the term 'carbon footprint' is used as a shorthand to mean the GHG emissions released both directly and indirectly within supply chains of goods and services.

The consumption-based assessment includes emissions resulting from everything residents do and buy in their personal lives and everything that visitors do and buy while in Cumbria, as well as their travel to and from the county. More specifically, the following is within the scope of this report:

- all residents' personal travel and visitor travel to, from and around Cumbria;
- fuel and electricity consumed in homes and places to stay;
- emissions from food and drink and other purchases;
- emissions resulting from the use of services, including public services; and
- the supply chains of all the above (e.g. fuel supply chains and embodied emissions).

As a separate analysis, we also include a simple assessment of industry emissions. Consistent with the consumption-based reporting approach, this includes both direct emissions and supply chain emissions.

Electricity generated and fed into the National Grid, whether from renewables, nuclear or fossil fuel, is not a carbon removal, and therefore cannot be counted as a negative emission in either production-based or consumption-based accounting. As is the convention in production-based emissions reporting, emissions from electricity production are attributed to electricity use. Therefore the direct emissions from Sellafield are excluded from the production-based accounts, which instead apply a UK grid average carbon intensity to all grid electricity use.

It is worth noting that double counting occurs when businesses within Cumbria sell either to other businesses in Cumbria or to residents or visitors (Figure 4). This is difficult to eliminate, but should be remembered. In particular, accommodation is both sold and consumed by residents and visitors, and the same is true for food and drink, except where this is exported from Cumbria.

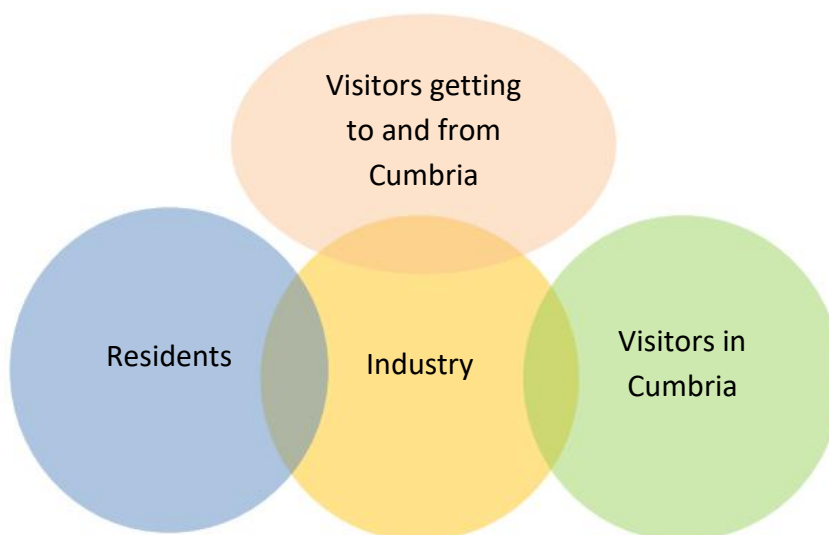


Figure 4: The consumption-based footprint of industry overlaps with that of residents and visitors where they buy locally produced goods and services.

3 Cumbria's Extraction-based GHG emissions

There are currently no active sites extracting hydrocarbons in Cumbria. However, in 2019 Cumbria County Council gave planning permission for the proposed Woodhouse Colliery near Whitehaven, to extract 2.43 million tonnes of coking and 0.35 million tonnes middling coal per year. If used, **this coal would generate around 8.4 MtCO₂e per year** (calculated using emissions factors from BEIS, 2017). This is just over one and a half times the annual consumption-based greenhouse gas footprint of all Cumbria's residents. Over the course of its 50-year lifetime, the mine would be expected to extract coal with an extraction-based footprint of 419 MtCO₂e.

4 Cumbria's Production-based CO₂ emissions

Cumbria's total production-based emissions for 2017 were 3.18 MtCO₂ (Figure 5). This includes emissions railways passing through the county, and removals from land use, such as through peat restoration and tree planting. Emissions from vehicles travelling along the M6 motorway have been excluded.

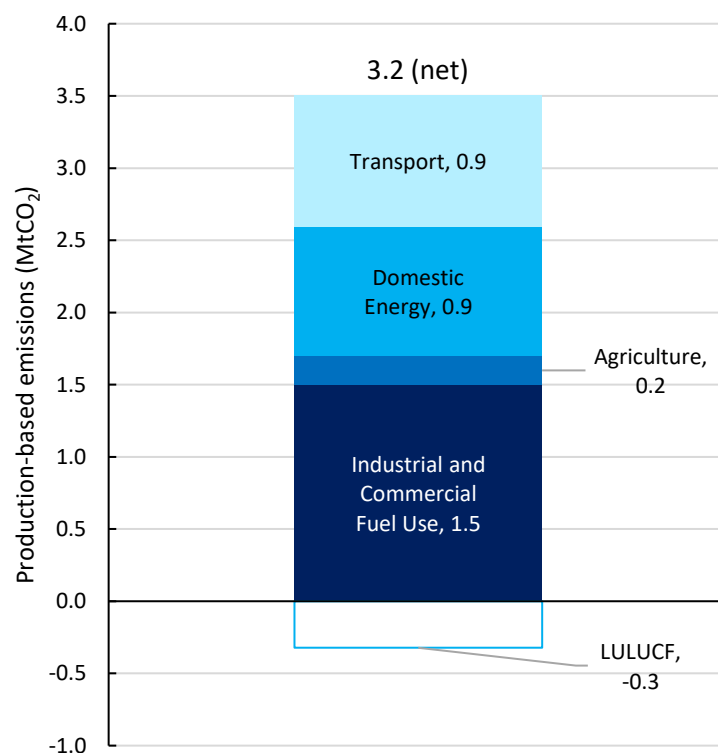


Figure 5: Production-based CO₂ emissions and removals from Cumbria in 2017

Broken down by local authority, the highest emissions (excluding removals from Land Use, Land Use Change and Forestry – LULUCF) originated in Eden and South Lakeland (both approximately 0.74 MtCO₂ in 2017), followed by Allerdale (0.65 MtCO₂, Figure 6A). Removals from LULUCF in Cumbria are estimated to be around 0-20 tonnes Carbon per km² from Forest Land, with minor removals from grassland and cropland management³. When LULUCF is included, CO₂ emissions from South Lakeland were lower than Eden in 2017.

³ Centre for Ecology & Hydrology for BEIS (2019). Mapping Carbon Emissions & Removals for the Land Use, Land Use Change and Forestry Sector: Report based on the 1990-2017 Inventory. See: www.gov.uk/government/statistics/uk-local-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2017

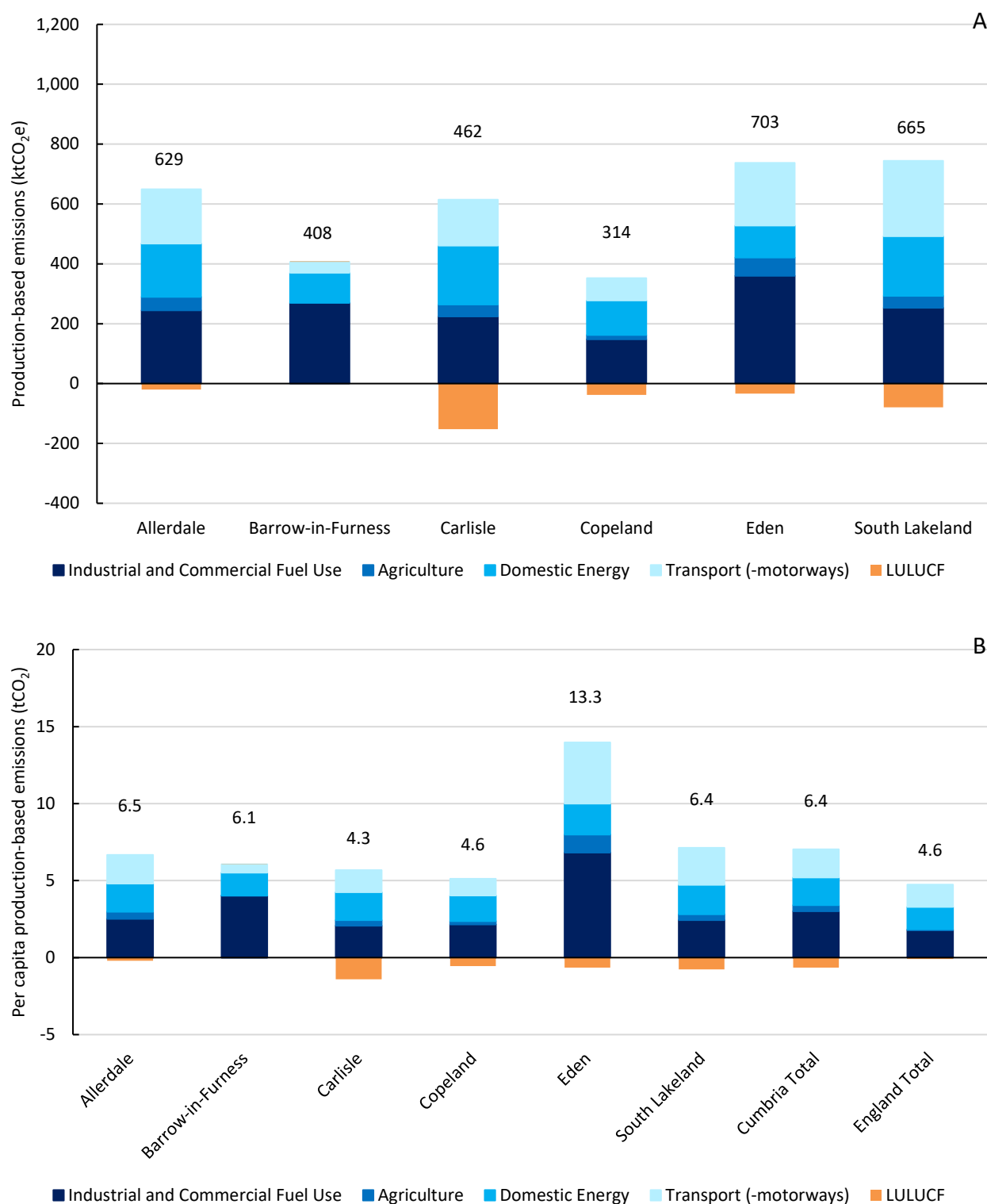


Figure 6: A) Total production-based CO₂ emissions by sector, broken down by Cumbrian local authority; B) Production-based CO₂ emissions by sector and region, per capita basis. Totals above bars include removals from LULUCF

4.1 Transport

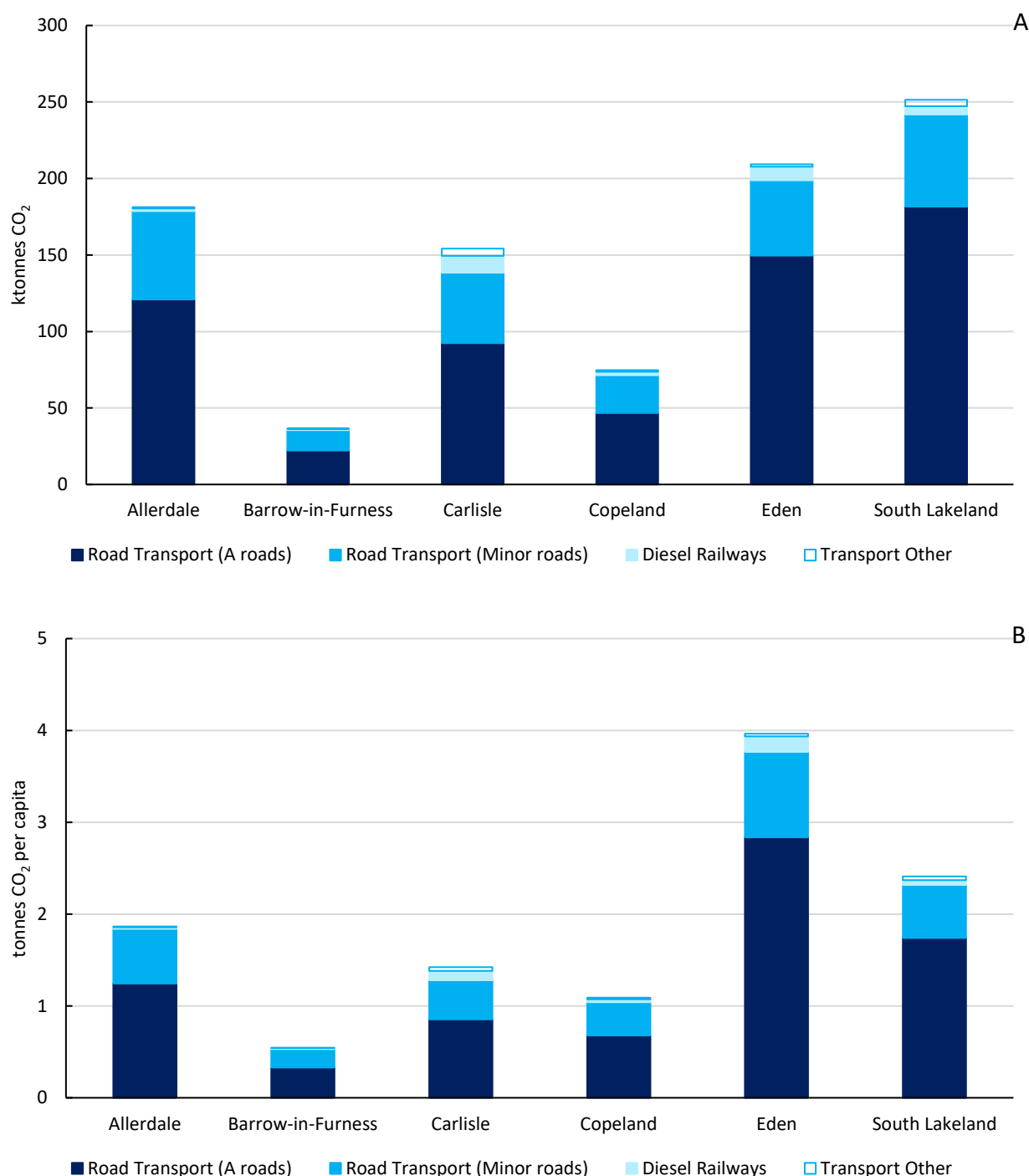


Figure 7: Production-based CO₂ emissions from Transport in Cumbria, broken down by mode and local authority. A) Total emissions by LA and sector; B) Per capita emissions by LA and sector

As the largest component of the production-based footprint (Figure 5), Cumbria's transport emissions can be broken down by transport mode, and split by local authority (Figure 7A). The M6 motorway passes through Eden, South Lakeland and Carlisle, resulting in high transport emissions from traffic, but these have been

excluded from the analysis. A roads and minor roads are significant sources of emissions across all local authority areas. On a per capita basis, Eden residents have the highest production-based transport footprint (Figure 7), likely because the popular A66 passes through the area, and the vehicle emissions are shared among a relatively low population. Per capita transport emissions from Carlisle and South Lakeland are more similar to those of Allerdale and Copeland, due to their higher populations. Cumbria's transport emissions per capita are, 22% higher than the UK national average (Figure 8).

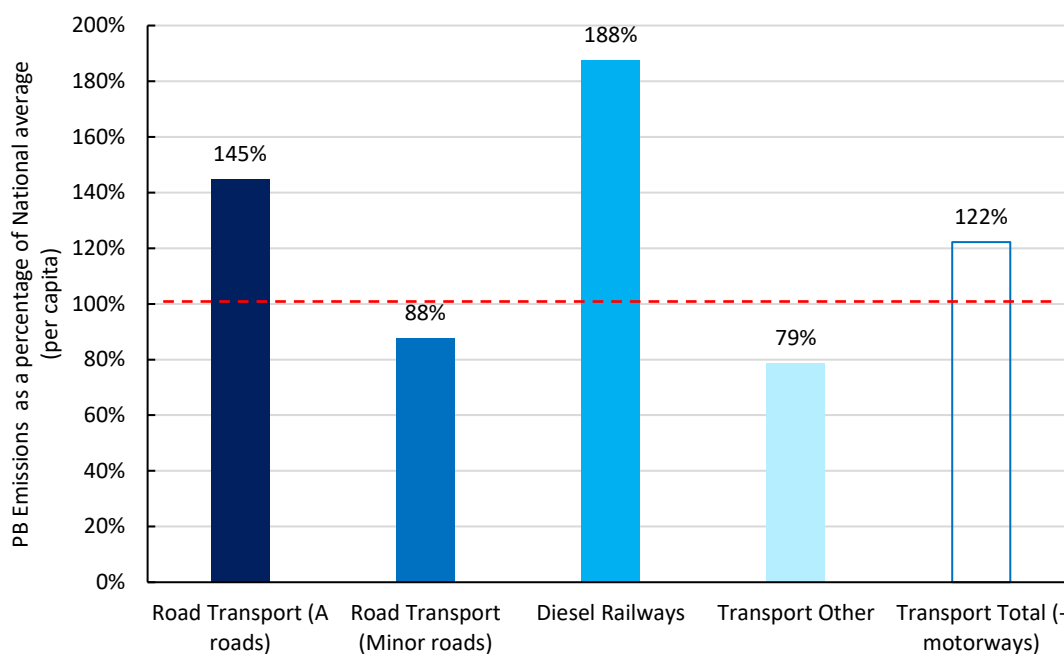


Figure 8: Per capita production-based emissions as a percentage of the national average

By excluding motorways, the production-based emissions for Eden and South Lakeland are significantly reduced although they are still the highest in Cumbria – due in part to the number of visitors to these areas. Whilst this information is useful to inform decisions about how best to reduce emissions from road travel within Cumbria, the issue of motorways must not be ignored for the following reasons:

- 40% of all production-based transport emissions in Cumbria are a result of motorway travel (Figure 9), and even if all other emissions were reduced, these emissions would still remain. This highlights the need for Cumbria to join the national call for more incentives to buy and use electric vehicles.
- The presence of motorways in Cumbria allows many of the residents to live where they do.
- Whilst many of the motorway users are travelling straight through without stopping, many also do stop in Cumbria and the Cumbria visitor economy is built on the fact that visitors can access the area easily.
- Whilst it may not be possible for Cumbria authorities to directly impact the emissions arising from motorways, they can play a part by sending important messages to make more polluting vehicles less socially acceptable.

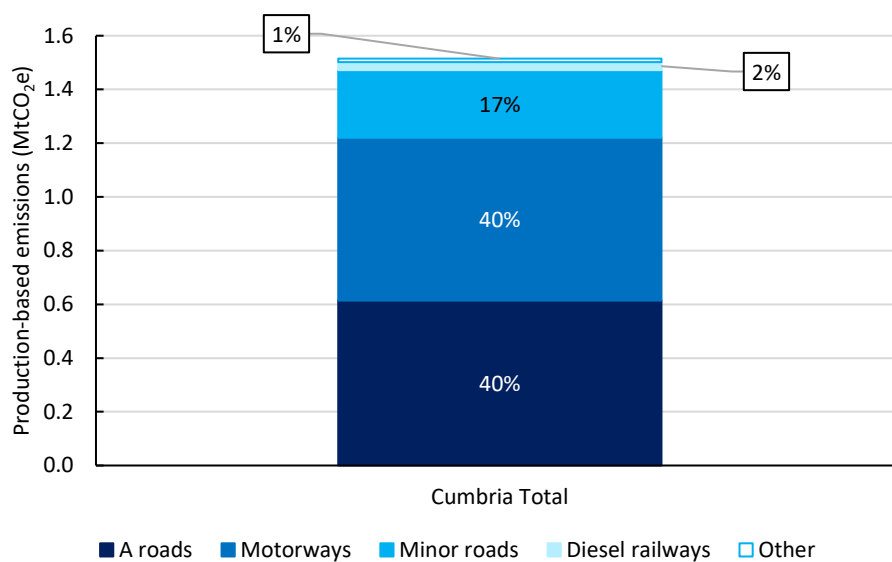


Figure 9: Total production-based emissions (2017) from Transport in Cumbria, *including* emissions from motorways

4.2 Industry and Commercial

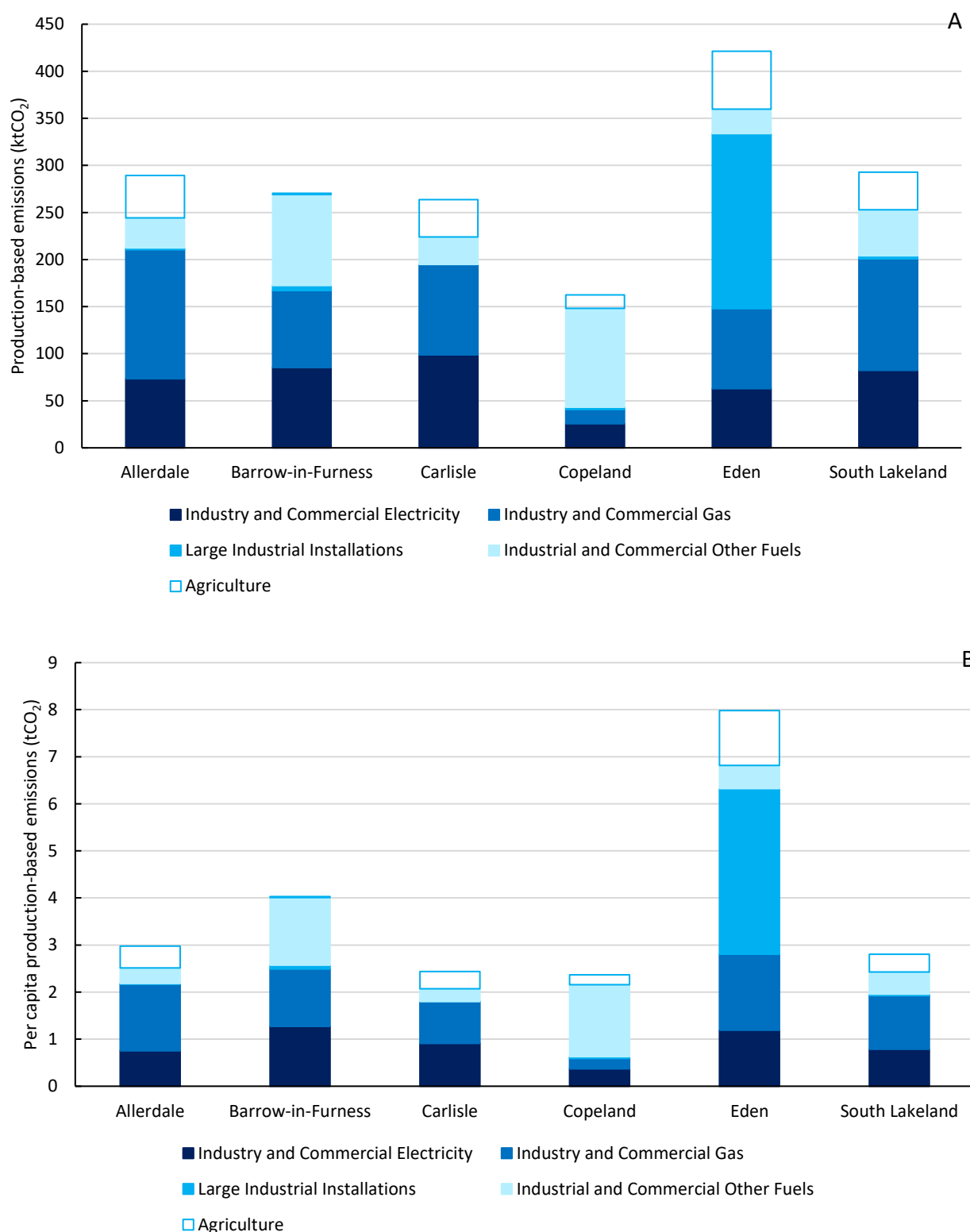


Figure 10: Production-based CO₂ emissions from the Industrial and Commercial sectors. A) Total production-based emissions by LA and sector; B) Per capita emissions by LA and sector

Cumbria's Industrial and Commercial (including Agriculture) production-based emissions was estimated as 1.7 MtCO₂ in 2017. This category encompasses direct CO₂ emissions from businesses in Cumbria. At the local authority level, Eden was projected to be the main source, responsible for 421.2 ktCO₂ (Figure 10), of which

emissions from “Large Industrial Installations” comprised 44%. Production of lime in this area is a major source of CO₂ emissions. “Large Industrial Installations” refers to point sources of CO₂ emissions from sectors including manufacturing and mining. It is estimated from fuel consumption and emissions from industrial processes.

Per capita emissions are again highest in Eden, due to high emissions (particularly from “Large Industrial Installations”) spread over a low population.

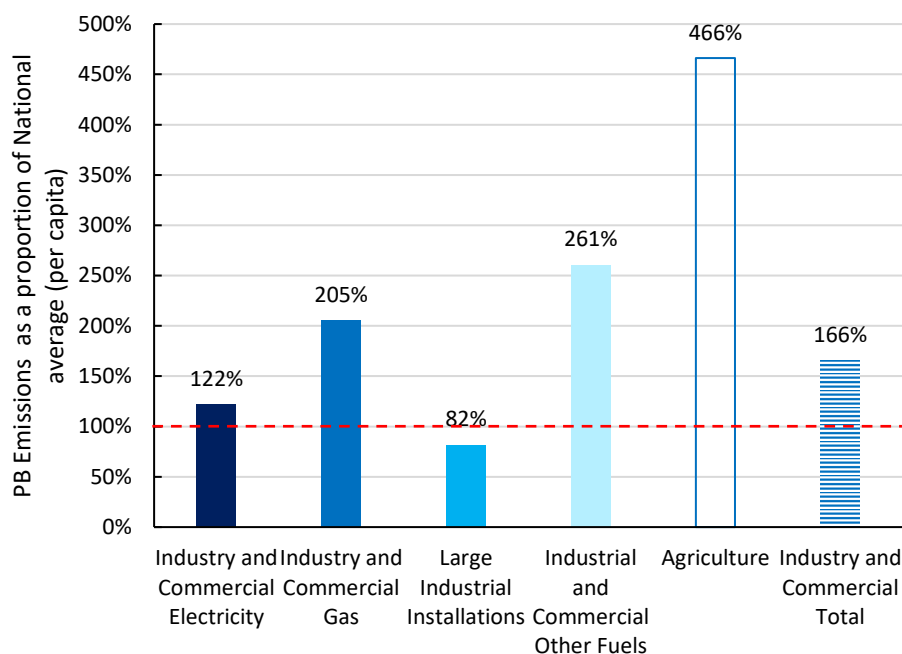


Figure 11: Industrial and Commercial production-based CO₂ emissions per capita as a proportion of the national average. The red dashed line marks the national average (100%).

Cumbria's per capita Industry and Commercial CO₂ emissions are 66% higher than the UK national average (3.41 vs. 2.06 tCO₂; Figure 11). This is primarily driven by Cumbria's Industrial and Commercial consumption of gas, electricity and other fuels. Despite being 4.6 times higher than the national average, agricultural CO₂ emissions are only a small proportion (12%) of Cumbria's overall Industry and Commercial footprint. It should be noted that non-CO₂ agricultural emissions are not captured here, and the true scale of GHG emissions from Agriculture may be much greater.

4.3 Domestic (within the home)

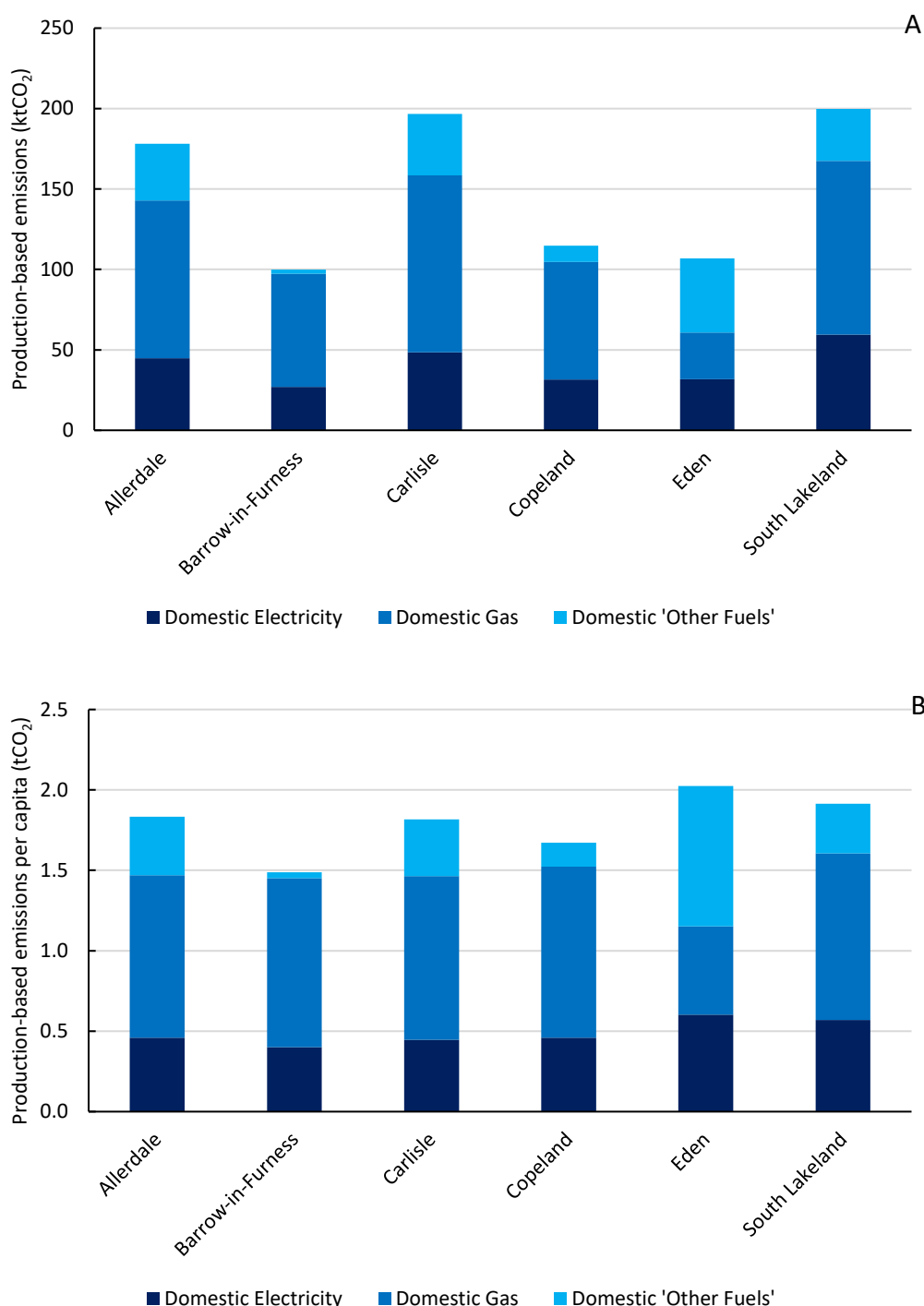


Figure 12: Production-based CO₂ emissions from Domestic sources. A) Total CO₂ emissions by LA and energy type; B) per capita production-based CO₂ emissions by LA and energy type

Total domestic production-based CO₂ emissions were highest in South Lakeland, Carlisle and Allerdale, the three most populous local authorities in Cumbria (Figure 12A). Emissions from gas consumption account for the biggest proportion of domestic emissions, at 55%. On a per capita basis, emissions from domestic energy use are similar across all local authorities, ranging from 1.49 tCO₂ in Barrow-in-Furness to 2.02 tCO₂ in Eden (Figure 12). However, the components of the footprint vary across local authorities, particularly with regards to consumption of gas or "Other Fuels". The contribution of "Other Fuels" to the per capita footprint is greatest

in Eden (43%, vs 14% Gas), where rural communities are less likely to be connected to mains gas, instead relying on heating oils or solid fuels. "Other Fuels" contribute between 16-20% of the average resident's Domestic emissions footprints in Allerdale, Carlisle and South Lakeland.

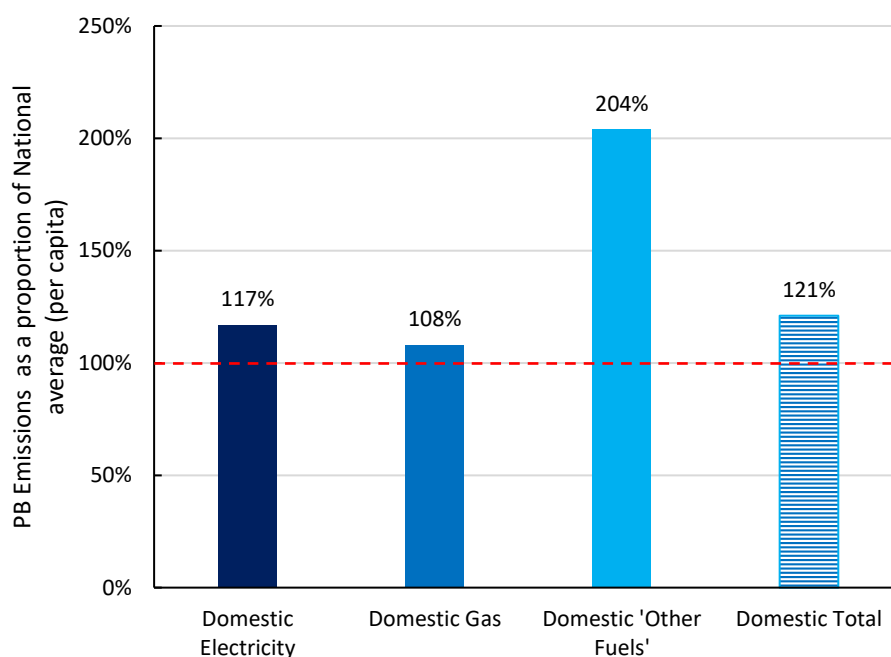


Figure 13: Domestic production-based CO₂ emissions per capita as a proportion of the national average. The red dashed line marks the national average (100%).

Cumbria's overall per capita production-based domestic emissions are 21% higher than the UK national average of 1.49 tCO₂ (Figure 13). Emissions from "Other Fuels" are over double the national average, but only form 18% of Cumbria's overall Domestic footprint.

5 Cumbria's Consumption-Based GHG Emissions

The total GHG 'footprint' of residents and visitors is estimated at 11.5 MtCO₂e for 2018. This includes visitors' travel to and from Cumbria, their consumption within Cumbria, and everything residents do, whether within or outside of the boundary of Cumbria. The consumption-based assessment includes all GHG emissions associated with everything that residents and visitors buy or consume – this includes the supply chains involved in provision of goods and services.

5.1 Emissions by consumers

Emissions by consumers are broken down into two categories: Residents of Cumbria and Visitors to Cumbria. Resident emissions account for 51% of the total (Figure 14). Visitors travelling to and from Cumbria make up 36% of the total footprint, and 13% of the emissions come from visitors within Cumbria. The emissions per resident per day are 35 kgCO₂e which is the same as the UK average, whereas the emissions for visitor are 26 kgCO₂e.

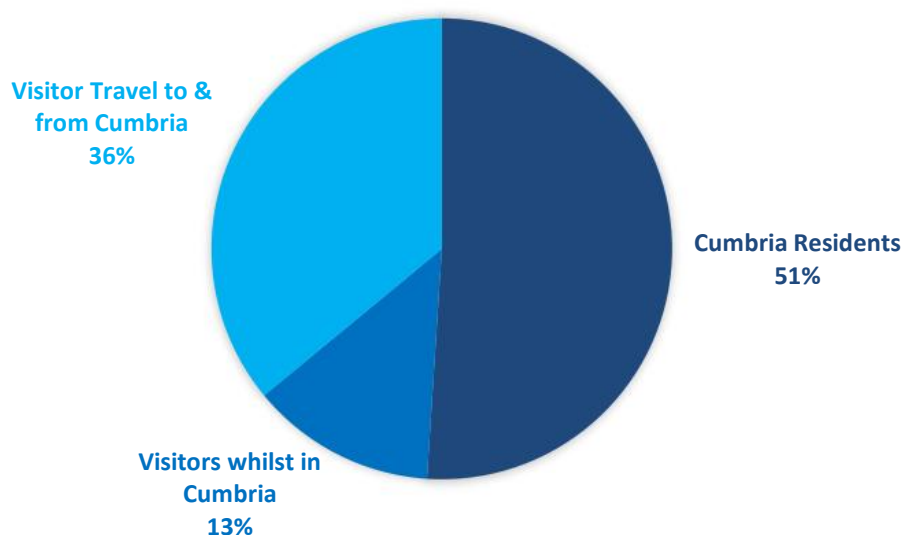


Figure 14: The GHG footprint of residents and visitors: 12.3 MtCO₂e.

Broken down by category, highest emissions arise from visitor air travel (2.1 MtCO₂e), visitor fuel consumption (1.4 MtCO₂e travelling to Cumbria and 540 kilotonnes (kt) CO₂e within Cumbria) and resident food and drink (1.5 MtCO₂e; Figure 15).

On a per capita basis, Cumbria residents' consumption-based footprint is broadly in line with the UK average. Cumbria visitors have a greater proportion of driving emissions (both fuel and wear and tear) in their footprint whilst in Cumbria (approximately three times the UK average), and a higher proportion of emissions from eating out and recreational activities than residents. Overall, visitors' footprint is less than that of the UK average due to lower emissions from household energy and other services. These differences reflect the difference between typical activities of residents and visitors. In contrast to residents, visitors' emissions are dominated by air and road travel. Visitors emit more carbon travelling to and from Cumbria than they do during their stay.

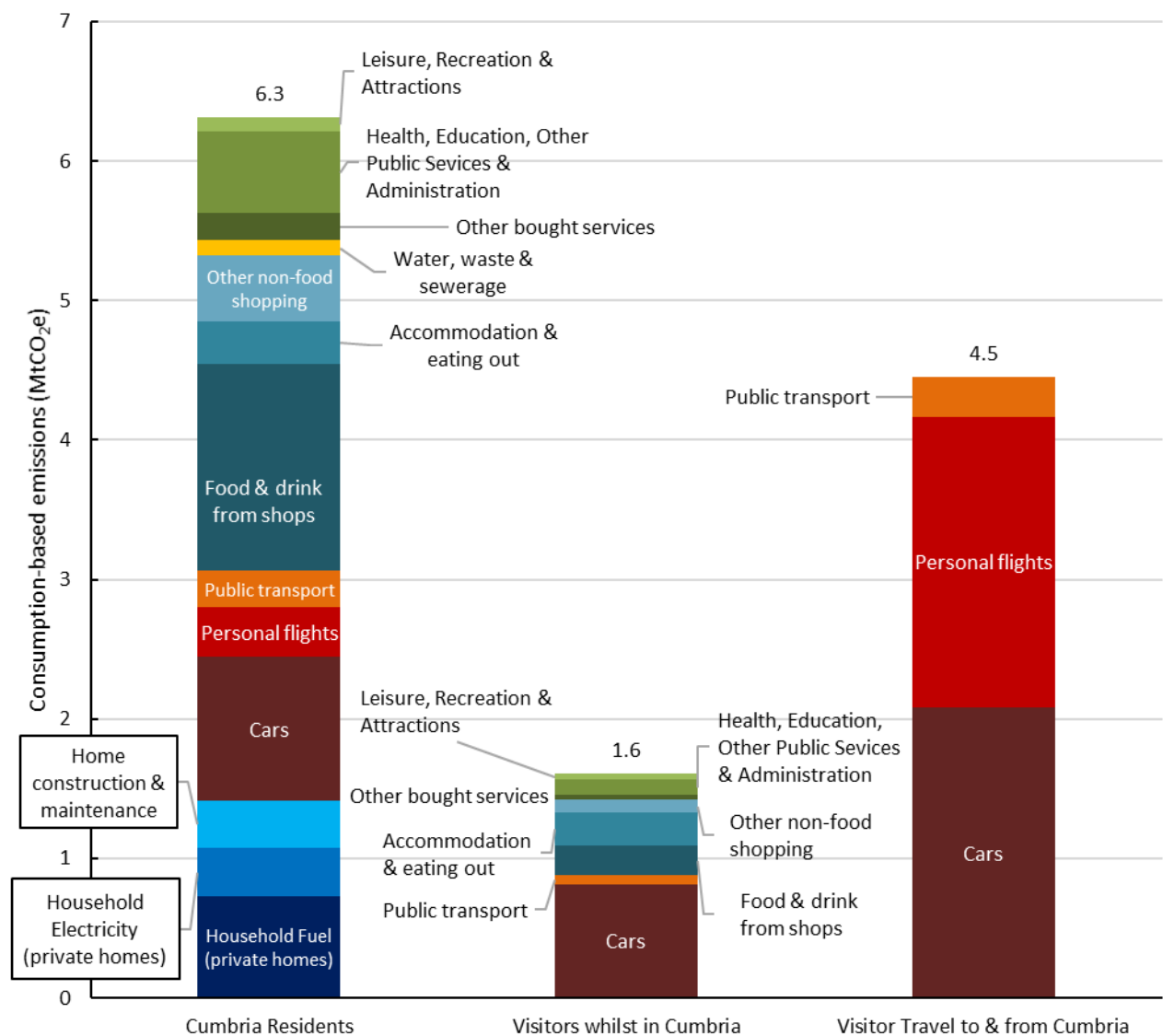


Figure 15: Total consumption-based GHG emissions broken down by category and consumer

5.1.1 Residents

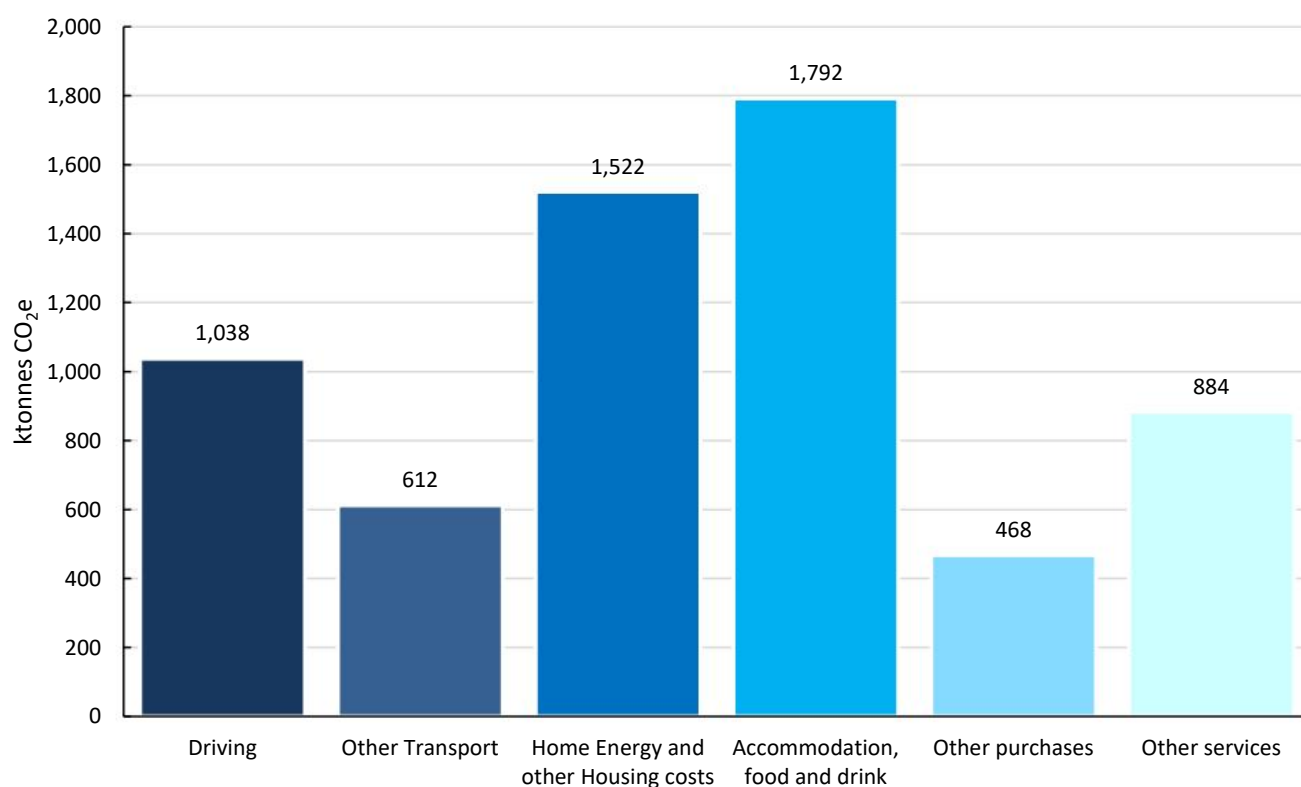


Figure 16: Cumbria residents' total emissions broken down by broad category

The biggest area of consumption is food and drink (and any accommodation whilst travelling) which contributes 28% (1.8 MtCO₂e) to the resident footprint (Figure 16). This is mainly derived from the production of food and drink bought in shops. Housing account for 24% (1.5 MtCO₂e) of residents' emissions. Emissions are predominantly from gas and electricity consumption. At 16% (1.0 MtCO₂e), driving is the third biggest impact of the resident footprint. This includes both fuel and vehicle wear and tear.

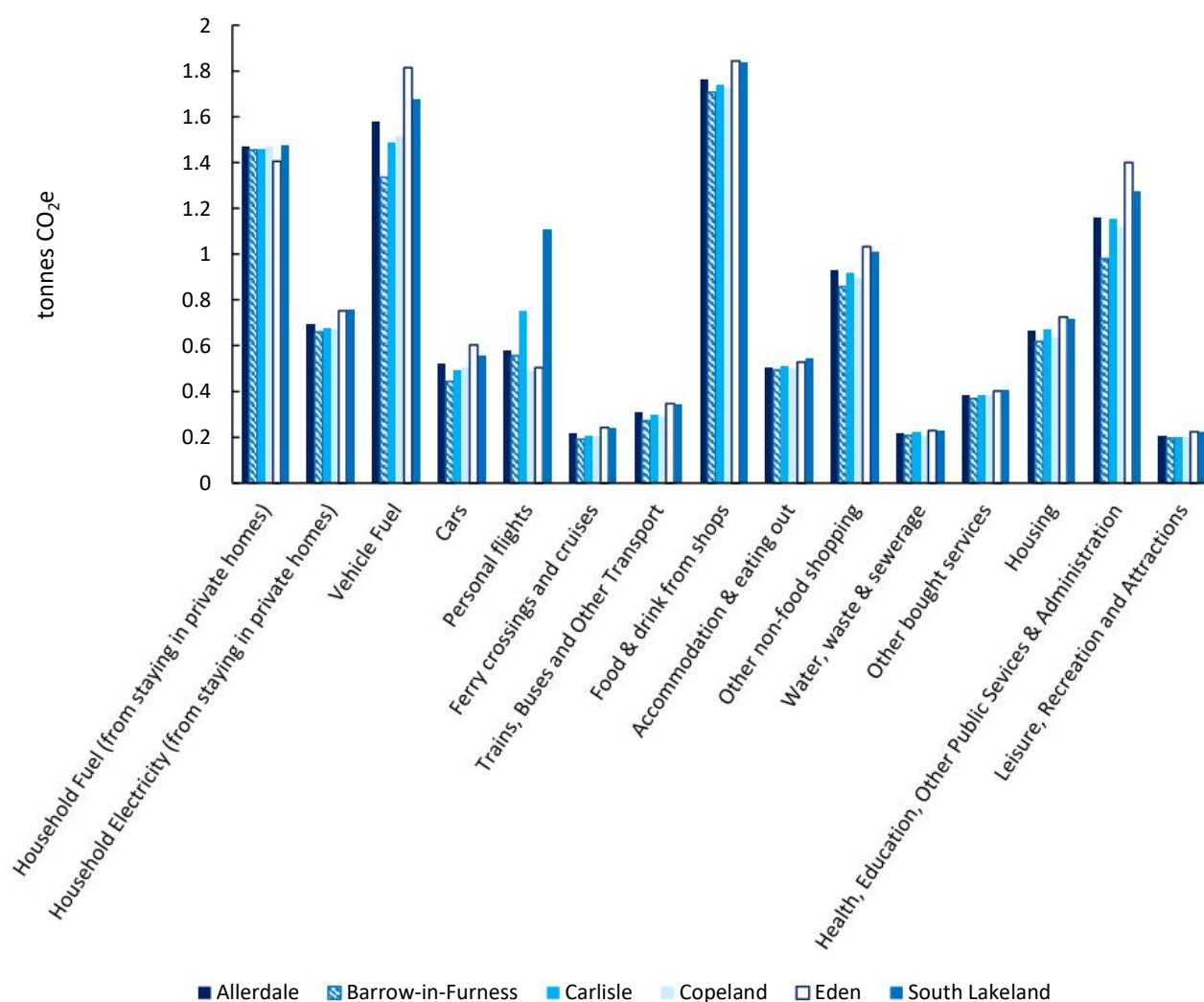


Figure 17: Per capita resident emissions broken down by category and local authority.

Figure 17 shows emissions per resident by category and local authority. Notable spikes in per capita emissions include driving in Eden and flying in South Lakeland and Carlisle.

5.1.2 Visitor travel to and from Cumbria

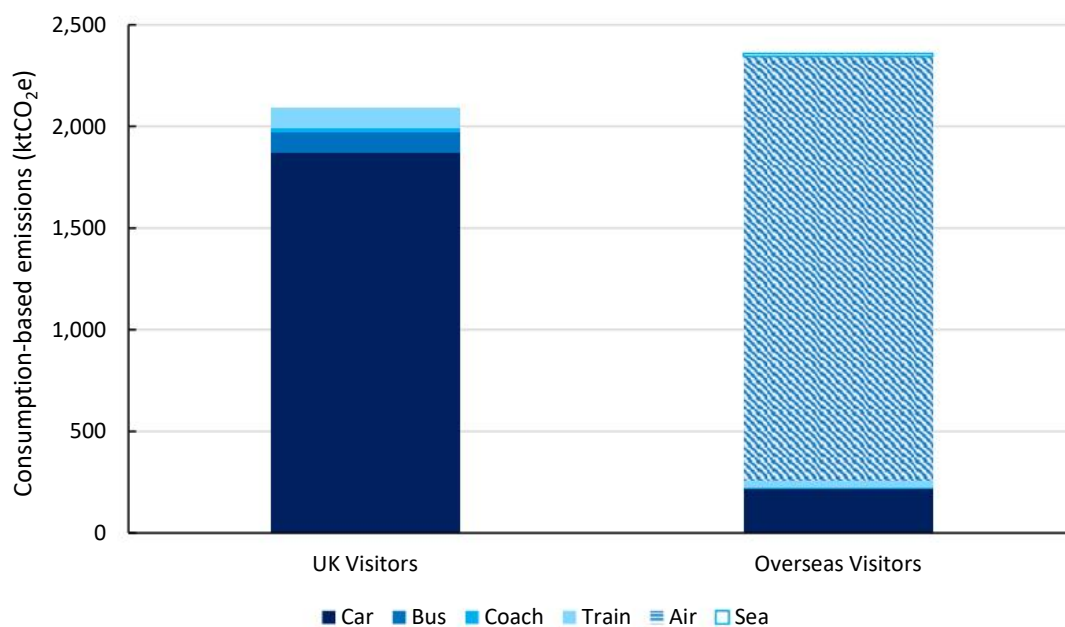


Figure 18: Emissions from visitor travel to Cumbria broken down by origin

Overseas visitor travel is dominated by air travel, whilst UK visitor travel is dominated by car transport (Figure 18). Together these constitute 36% of Cumbria's total GHG emissions.

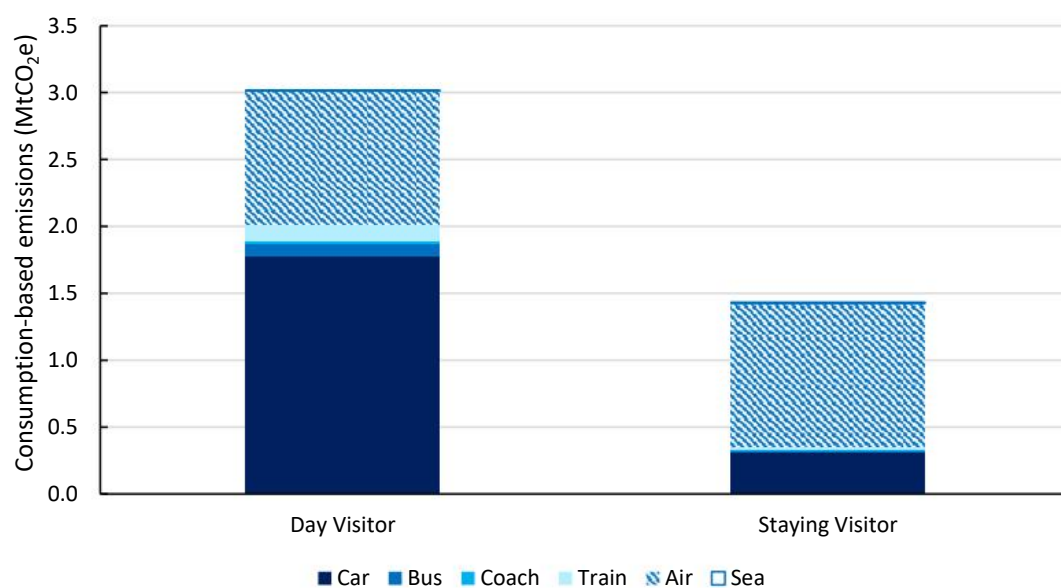


Figure 19: Emissions from visitor travel to Cumbria broken down by visitor type

The footprint of day visitors travelling to Cumbria is twice that of staying visitors. Whilst emissions from air transport are broadly similar between both groups, car transport emissions are much higher for day visitors (Figure 19).

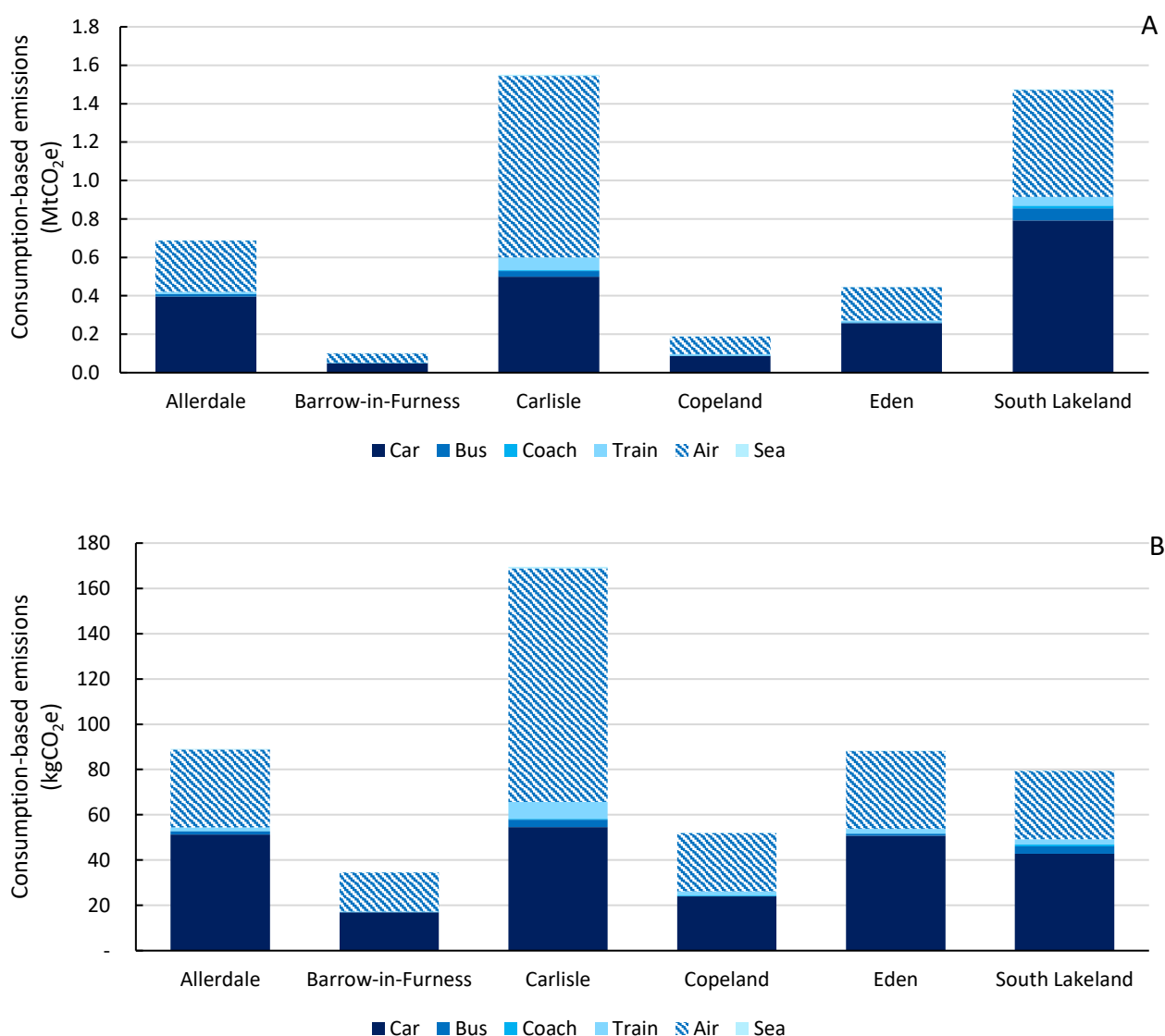


Figure 20: A) Total emissions from travelling to Cumbria broken down by area; B) Emissions per visitor travelling to Cumbria broken down by area.

Overall, Carlisle has the highest emissions from visitors travelling to Cumbria, mainly due to air travel (Figure 20A). South Lakeland has the second highest footprint due to the high number of visitors. This is evidenced by the lower emissions for South Lakeland on a per visitor basis (Figure 20B).

5.2 Emissions by activity

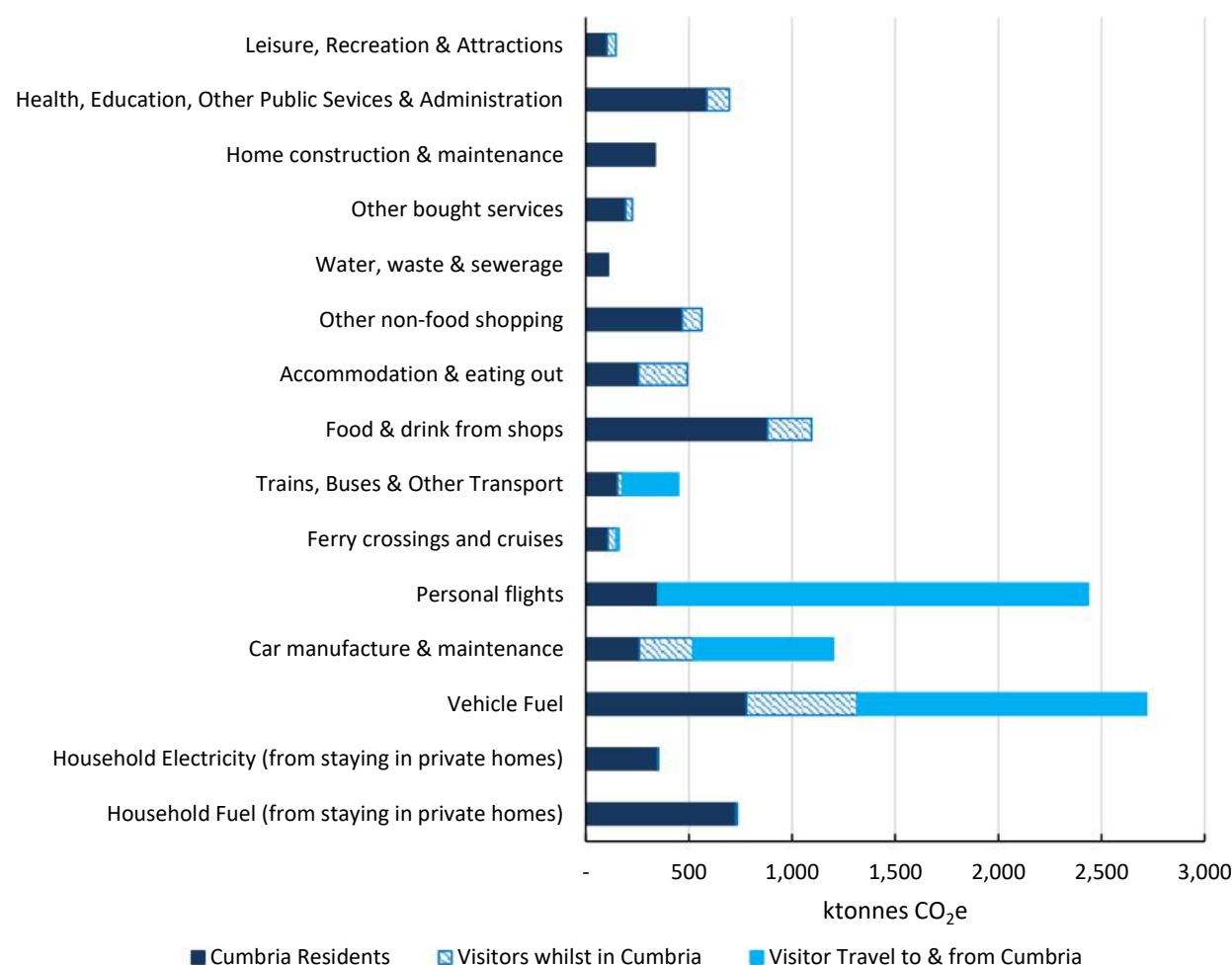


Figure 21: The GHG footprint by consumption category

Driving (including both fuel and vehicle wear and tear) and flying are the two biggest hitters, followed by accommodation, food and drink (Figure 21).

Below, we set out the main sources of emissions, starting with the largest categories.

5.2.1 Driving

Emissions attributable to driving, that is direct and supply chain emissions from vehicle fuel combustion and emissions from vehicle manufacture and maintenance, represent 32% of the total footprint of residents and visitors combined. Two thirds of this is attributable to fuel consumption, accounting for 22% of the total footprint.

Resident driving within and outside Cumbria accounts for 8% of the total footprint. The available data suggests that Cumbria residents drive around 20% more than the UK average, which is unsurprising given the geography of the County.

Visitor driving accounts for 17% of the total footprint. Of this, 72% comes from journeys to and from Cumbria, and 27% within Cumbria.

5.2.2 Flights

All flights make up 20% of the total footprint and can be broken down as follows.

Visitor flights account for 17% of the total footprint. Approximately 6% of visitors have flown to get to Cumbria. We have attributed only a proportion of the emissions from those flights to the Cumbria visit, based on the proportion of time spent in Cumbria. For example, if someone flies to the UK on holiday for ten days, and spends two days in the Lake District, then 20% of their flight is attributable to Cumbria.

Residents' flights, excluding those for business (included in industry carbon footprints), make up 3% of Cumbria's total footprint. These include all recreational flights to all destinations, made by Cumbria residents.

5.2.3 Accommodation, food and drink

Food and drink and staying in paid accommodation account for 18% of all emissions. This includes both food bought in shops and food and drink consumed in pubs, cafes, restaurants and hotels, as well as the footprint of accommodation itself.

Residents' food and drink contributes 15% to the total GHG footprint of Cumbria, of which 83% is from food purchased in shops and 17% is from eating out. This is around 28% of the total footprint of residents.

Visitor accommodation, food and drink together account for 4% of the total footprint. This includes food bought from pubs, cafes, restaurants and hotels, as well as the footprint of accommodation itself, and food from shops, which we estimate to account for around half of the 4%.

5.2.4 Household energy

Household energy (electricity and domestic fuel) makes up 9% of the total footprint and breaks down as follows.

Residents' domestic fuel comes in at 6% of the total footprint for Cumbria and 12% of the footprint of residents (3% higher than the UK average).

Residents' household electricity is 3% of the total footprint, being 6% of residents' footprint (9% higher than the UK average).

Visitor electricity and domestic fuel: a small proportion of visitor nights are spent staying with friends and relatives, giving visitors a small footprint for domestic electricity and fuel⁴.

5.2.5 Non-food shopping

This category includes all inedible purchased items, apart from cars, and makes up 5% of the total footprint. Approximately 83% of non-food shopping emissions come from residents, and 17% from visitors.

⁴ When staying in paid accommodation, household energy is included as part of accommodation.

5.2.6 Other Transport

This comes to 5% of the total footprint, 74% of which is from trains, buses and other land transport and 26% is from ferries and cruises. Residents account for 43% of these emissions whilst 46% arise from visitors travelling to Cumbria and only about 11% of it attributable to visitor travel during their stay. The low figures for use of public transport are probably a reflection of poor coverage in most areas of Cumbria.

5.2.7 Other

The footprint of a range of (mainly public) services has been calculated based on estimated household expenditure for residents. It has been assumed that there is no expenditure on housing and water for visitors and visitor spend on other services is estimated to be half the average of Cumbria residents. These include the following:

- **Health, education, defence and other services** (6% of the total footprint of residents and visitors combined). Several stakeholders of this report, including Cumbria County Council itself, lie within this category. Also included in this section are proportionate allocations of emissions from national infrastructure and services, such as central government and defence.
- **Housing within Cumbria** (3%). This includes both the construction and maintenance of dwellings as well as the emissions associated with renting and buying houses. In-use energy consumption, such as from heating, usually dwarfs the embodied carbon in the construction, maintenance and upgrading of the buildings themselves and should therefore be the primary consideration.
- **Water and sanitation** (1%).
- **Other expenses** (2%). This includes a range of mainly intangible services including financial and professional services.

5.3 The carbon footprint of industry

This simple analysis of industries gives a broad perspective on emissions from businesses in Cumbria (Table 1 & Figure 22). It should not form part of the baseline figure because there is double counting between this and the footprint of residents and visitors and also because this simple analysis is drawn only from gross value added (GVA) data and generic macro-economic modelling of the carbon intensity of different industries in the UK. It is not based on local information about the characteristics of each industry in Cumbria. It does not, for example, take account of any of the specific characteristics of farming in Cumbria, compared to farming in the UK as a whole. However, the analysis does suggest the following:

- The overall scale of industry's footprint is larger than that of all residents and visitors together;
- Emissions from manufacturing of basic materials (a wide-ranging category covering the discovery and processing of raw materials, including minerals, metals, forestry and chemical products) are estimated at 37% of the total from all industry (Table 1);
- Transport is the next most important sector; and

For most industrial sectors, supply chain emissions (scope 3) are much higher than those emitted directly by businesses themselves (scope 1) or from their electricity consumption (scope 2). However, in the case of agriculture, emissions from fertilizer and livestock mean that direct emissions dominate. It should be noted that the data covers all businesses that are registered in Cumbria. Also, in line with Office of National Statistics conventions on the treatment of distribution sectors, the footprint of retail and wholesale businesses does not include the emissions embodied in the goods that are sold but not produced by those businesses. Figure 23 presents a breakdown of consumption-based industry emissions by district council area.

Table 1: Annual GHG footprint of industry by sector and scope

Sector	ktCO ₂ e				% of Grand Total
	Direct	Electricity	Supply Chain	Total	
Agriculture, forestry and fishing	619	9	338	967	7.3%
Mining and quarrying	65	1	29	95	0.7%
Manufacturing of food and drink	65	16	756	837	6.4%
Manufacturing of basic materials	1,719	154	2,971	4,844	36.8%
Manufacturing of equipment and machinery	87	38	906	1,031	7.8%
Electricity, gas, steam and air-conditioning supply	352	153	344	849	6.4%
Water supply; sewerage, waste management	164	5	125	294	2.2%
Construction	82	8	674	764	5.8%
Wholesale and retail trade, repair of motor vehicles	107	21	421	549	4.2%
Transportation and storage	891	9	413	1,313	10.0%
Accommodation and food service activities	41	11	413	465	3.5%
Other Services	123	48	995	1,166	8.9%
Grand Total	4,315	473	8,386	13,174	100%

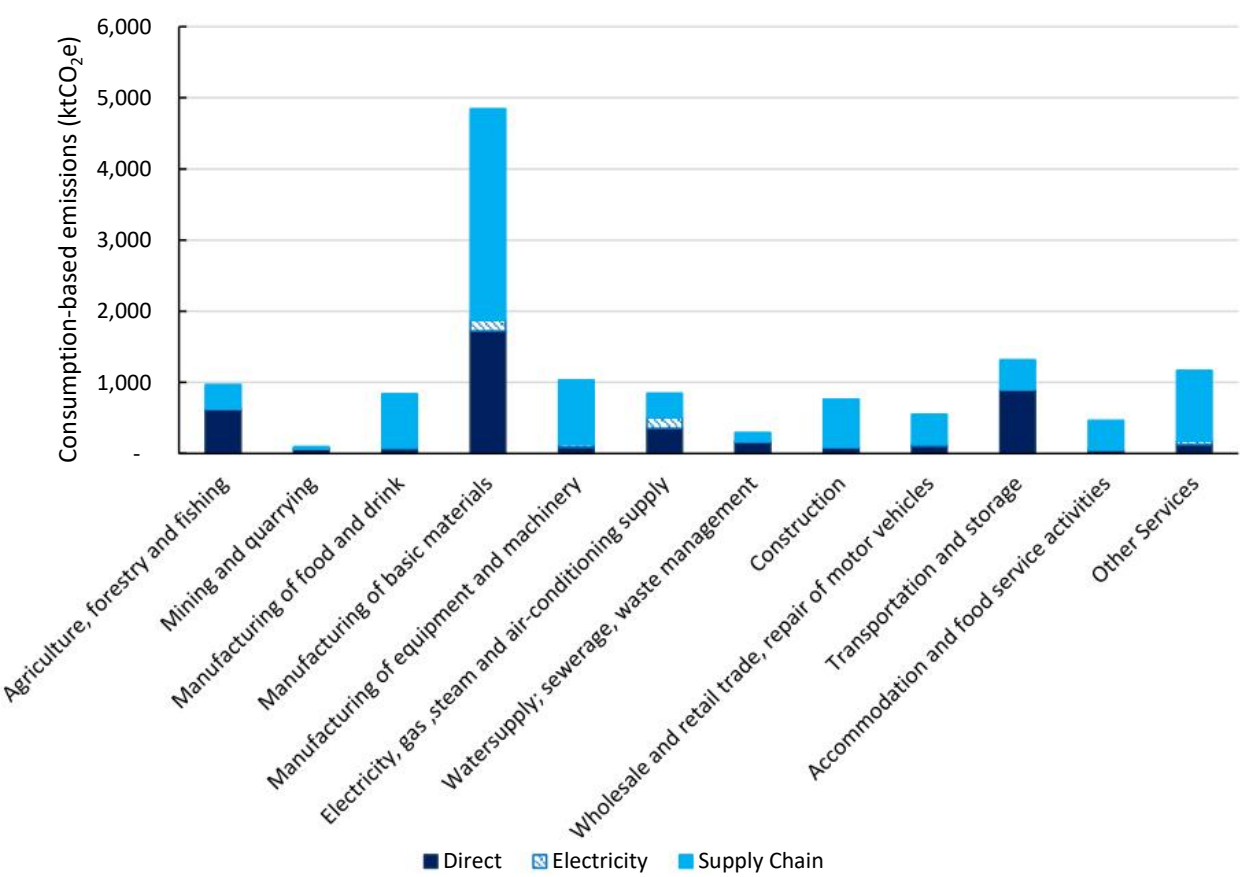


Figure 22: An estimate of the carbon footprint of industry

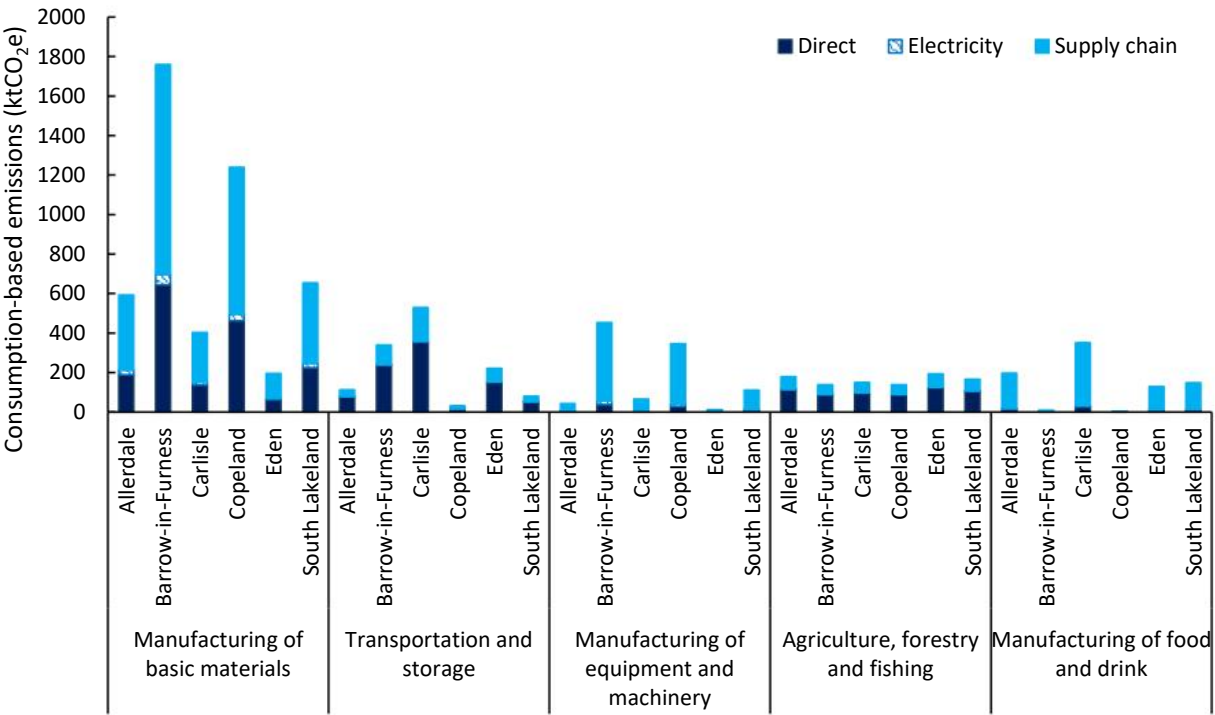


Figure 23: Top five industries broken down by scope and district council

6 A vision for low-carbon Cumbria

The targets and recommendations that follow are intended as part of wider roadmap to a better future for Cumbria. We imagine them to be implemented in ways that maximise co-benefits, especially in terms of health, community and economy. We now sketch out that vision from the perspective of residents, visitors and businesses.

6.1.1 For residents

Although there are more visitors, it feels less crowded. People are spending less time on the roads and have more freedom to take more exercise. The diets are improved, nutritionally balanced and sustainably sourced. Homes are more comfortable to live in; warmer, safer, and cheaper to run and more resilient to the climate crisis. Residents stay for longer, as there is no need to move on for better pastures. Communities are more integrated thanks to greater co-operation between residents, businesses and local government to improve peoples' lives.

6.1.2 For visitors

Cumbria is more beautiful, quieter and cleaner. It's exciting to visit because you can feel the sustainability transition taking place here. It is easier than ever to leave the car behind. Bikes (electric and conventional) are everywhere. There are fewer cars, and all are electric. The roads in towns and countryside are cleaner, quieter and calmer. You can get any and every kind of food you desire, but delicious, healthy, plant-based options are everywhere. People come to Cumbria for a glimpse of a better future; tourism is thriving.

The stunning landscape looks all the more beautiful with more wildlife, more trees, less erosion and no pollution in our lakes and rivers.

6.1.3 For businesses

The economy thrives with more jobs, especially in tourism, land management, and green energy. Emphasis on the green economy sectors shows that Cumbria is leading the way toward Net Zero, and this is a major attraction for young, educated workers to take up the job opportunities the county has to offer in both new and traditional industries. The quality of the environment is recognised as the best in England. Plenty of leisure time provides opportunities for employees to live active healthy outdoor lives, and this is a major draw for inward investment.

Farming thrives, maintains a strong links with our cultural heritage whilst taking a leading role in its response to the emerging science on sustainable agriculture. Farming still produces some high-quality meat as well as grazing for improved biodiversity, as well as an increase in crop production where appropriate. Cumbria has an even stronger reputation for high quality agricultural produce that commands a high price and is increasingly exported.

7 Targets

7.1 Guiding principles

In creating target options, we have tried to work from the following principles, as far as is practical, recognising trade-off between these attributes:

- everything that is important and within Cumbria's strong influence should be included;
- the headline target should be easy to describe;

- there should be a Net Zero year and a trajectory to meet it;
- the overall target should be made up of sub- targets covering different elements of Cumbria's carbon; and
- the target should be achievable, as part of a wider pathway to improving the quality of life for residents and visitors, and the health of the economy.

7.2 Scope

The target includes the following:

- Energy-only CO₂ measured on a production basis, excluding the M6 (over which Cumbria has little influence);
- GHG emissions from Food consumed by residents and visitors;
- GHG emissions from Other goods purchased by residents and visitors;
- GHG emissions from Visitor travel to and from Cumbria, excluding international visitor travel; and
- Land Use, Land Use Change and Forestry (LULUCF) – these are net negative emissions.

Since both resident and visitor numbers are likely to increase, the target will be normalised to reflect changes in resident and visitor populations as a proportion of the UK population.

After careful consideration, we have excluded the international component of visitor travel from this target. This is not because flights are unimportant, but rather because we do not have the metrics to estimate the proportion of each flight that should be attributed to Cumbria and how this might change over time.

The energy-only component is CO₂ rather than GHGs as this is how BEIS reports production-based emissions; the data for other GHGs is not available.

Business supply chains are included where businesses supply the local and visitor economy. To include all business supply chains would require more detailed assessment than the rough first estimate provided in this report. However, businesses should still be encouraged to manage their own supply chain carbon.

7.3 Target Options

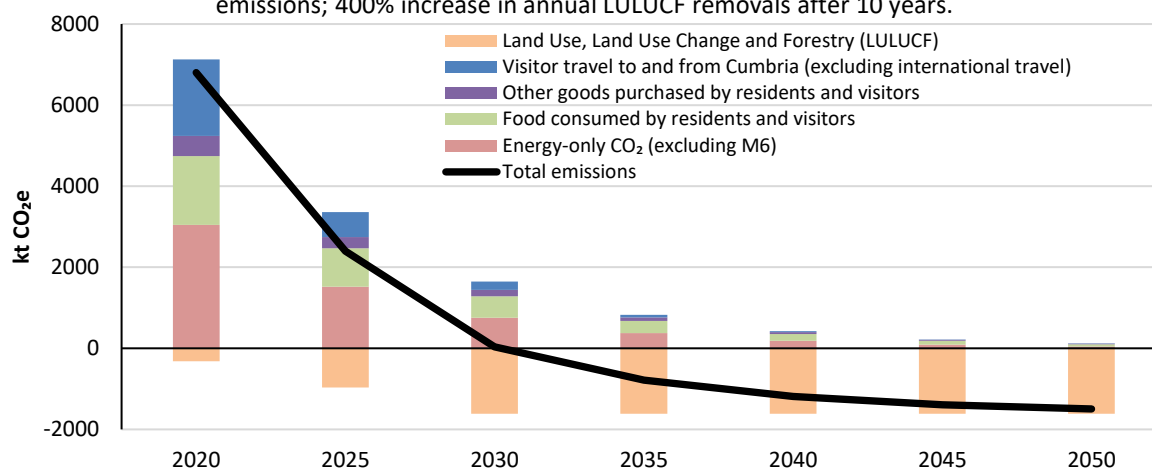
Five target options are offered with varying levels of ambition. Each has a different Net Zero date and a different trajectory for each component within the scope. We provide a rough guide to what meeting each target might require in terms of actions on each component.

For example, Option 3 comprises a 13% per year reduction in energy-related CO₂ (as prescribed by the Tyndall Carbon Budget Tool⁵), 5% per year reductions in the footprint of food and purchased goods, and a 10% per year reduction in the carbon footprint per visitor day of visitors travelling to and from Cumbria. As for all options, negative emissions from land use change rise by a factor of 5 over either a 10- or 15-year period (and this figure has been chosen as a feasible target after discussion with Lake District National Park Authority).

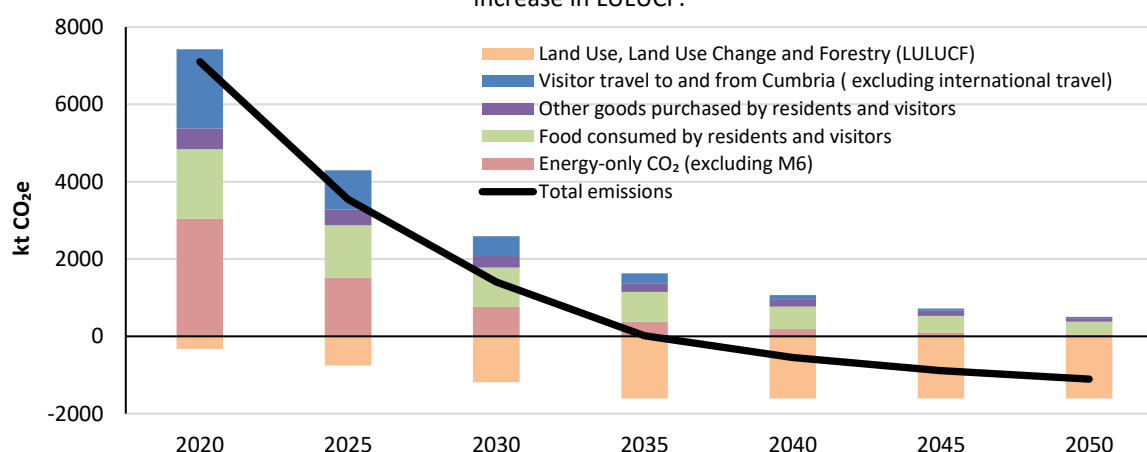
⁵ A budget tool for energy only CO₂ for local authorities, based on IPCC recommendations for 'well below 2 degrees and in pursuit of 1.5 degrees,' developed by the Tyndall Centre and available at <https://carbonbudget.manchester.ac.uk/reports/>

The five options and their trajectories are summarised in Figure 24 and Table 2.

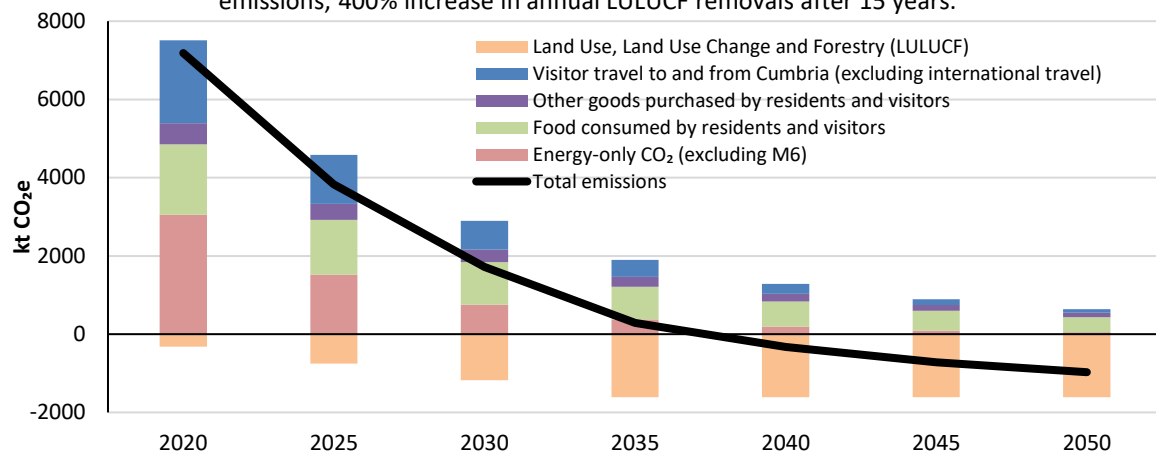
Option 1 - Net Zero by 2030: 13% annual reduction in energy-only CO₂ emissions; 11% annual reduction in food and other purchased goods emissions; 20% annual reduction in visitor travel per visitor day emissions; 400% increase in annual LULUCF removals after 10 years.



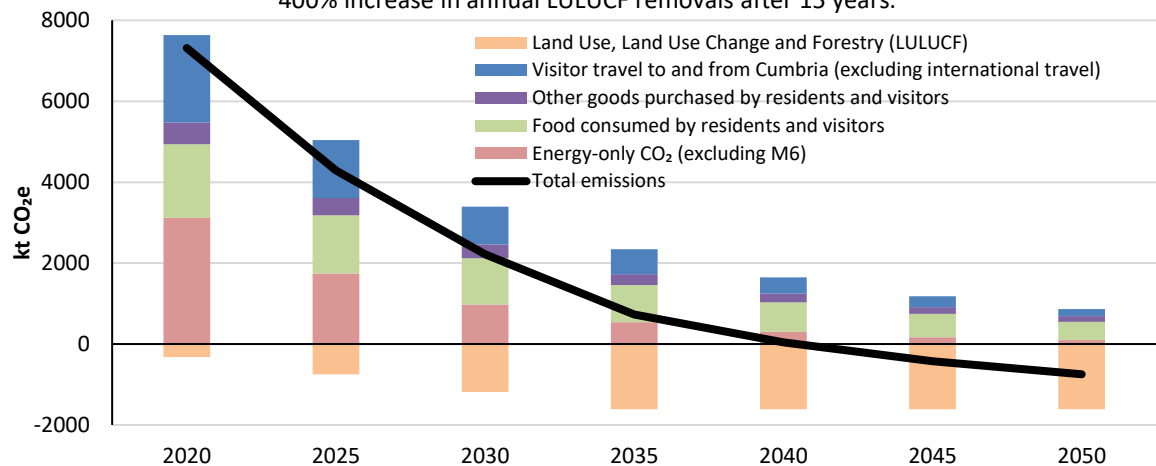
Option 2 - Net Zero by 2035: 13% per year in energy-only CO₂ emissions; 5.5% per year cuts in cut GHG from food and other purchased goods; 13% per year cut in visitor travel GHG per visitor day; 400% increase in LULUCF.



Option 3 - Net Zero by 2037: 13% annual reduction in energy-only CO₂ emissions; 5% annual reduction in food and other purchased goods emissions; 10% annual reduction in visitor travel per visitor day emissions; 400% increase in annual LULUCF removals after 15 years.



Option 4 - Net Zero by 2040: 11% annual reduction energy-only CO₂ emissions; 4.5% annual reduction in food other purchased goods emissions; 8% annual reduction in visitor travel per visitor day emissions; 400% increase in annual LULUCF removals after 15 years.



Option 5 - Net Zero by 2045: 9% annual reduction in energy-only CO₂ emissions; 4% annual reduction in food and other purchased goods emissions; 6% annual reduction in visitor travel per visitor day emissions; 400% increase in annual LULUCF removals after 15 years.

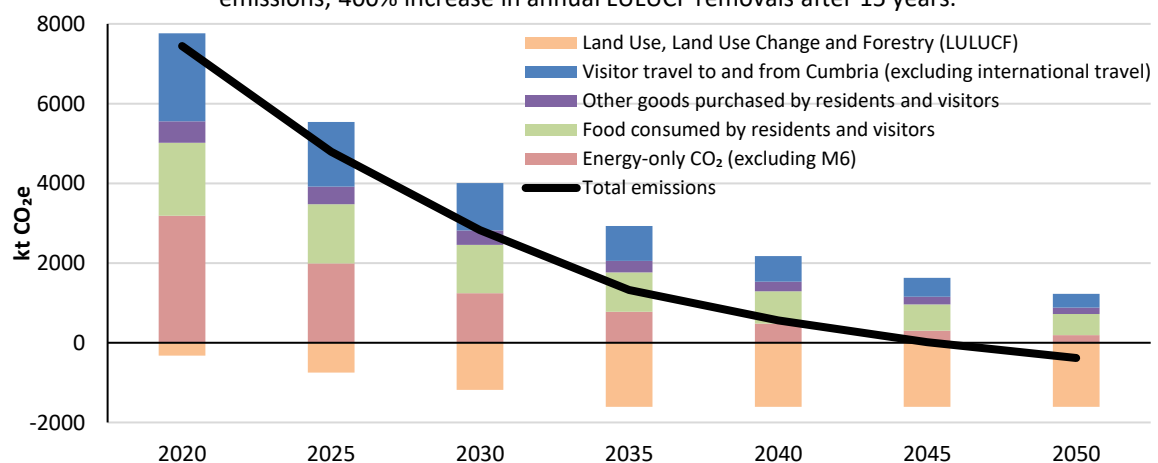


Figure 24: Five pathways to Net Zero for Cumbria

Table 2: Summary of annual reduction and total annual LULUCF removals for each target option

Target options		1	2	3	4	5
Net Zero Date		2030	2035	2037	2040	2045
Annual changes starting from 2019 baseline	Energy only CO ₂ (annual reduction)	13%	13%	13%	11%	9%
	Food footprint (annual reduction)	11%	5.5%	5%	4.5%	4%
	Footprint of purchased goods (annual reduction)	11%	5.5%	5%	4.5%	4%
	Footprint of visitor travel to and from per visitor day, excluding overseas travel (annual reduction)	20%	13%	10%	8%	6%
	Removals from Land Use, Land Use Change and Forestry (LULUCF), (Total increase compared to baseline year)	400%	400%	400%	400%	400%

In order to help understand the realism of the options, for each one we have roughly modelled a scenario which could deliver the target (Table 3). These cover energy use (including changes in household fuel use, decarbonisation of grid electricity), transport (including the carbon intensity of driving, and the amounts of driving), food consumption (including waste levels, meat and dairy consumption, and air freight), and visitor travel (covering average length of stay, carbon intensity of driving and visitor modal shift from driving). We emphasise that our scenarios may not be the optimal pathways but are designed to give some sense of the scale of the challenge.

Table 3: An indication of how each target might be met in terms of energy, food and visitor travel

Net Zero Date		2030	2035	2037	2040	2045
Emissions reductions at net zero compared to 2019 baseline	Reduction in energy only CO ₂ emissions	78%	89%	92%	91%	91%
	Reduction in household fuel use	60%	80%	90%	90%	90%
	Electricity decarbonisation	90%	90%	90%	90%	95%
	Reduction in carbon intensity of driving	65%	60%	50%	57%	65%
	Reduction in residents driving	65%	85%	79%	74%	68%
	Reduction in food emissions	72%	60%	60%	62%	65%
	Cut in waste	83%	70%	73%	75%	80%
	Cut in meat and dairy	83%	64%	65%	67%	72%
	Cut in air freight	85%	80%	80%	80%	80%
	Reduction in emissions from visitors travelling to and from	91%	89%	85%	83%	80%
	Increase in average stay length	100%	100%	100%	80%	50%
	Reduction in carbon intensity of driving	65%	60%	50%	57%	65%
	Reduction in visitors driving	50%	45%	40%	27%	15%

8 Discussion and Recommendations

Cumbria's target should reflect what the science tells us needs to be done in response to climate change.

It is important to be clear that the headline Net Zero date is not on its own a good indication of the level of ambition of any carbon target. Cumbria has chosen a particularly challenging scope to bring to Net Zero. This is because it has chosen to include the elements of its footprint that matter most, even though some of these they are difficult or impossible to bring to zero. For example, even with the most sustainable practices, GHGs from food cannot reach zero. Also, the inclusion of visitor travel within the UK to and from Cumbria is also relatively difficult to decarbonise to zero. On the other hand, compared to many other local areas, Cumbria has relatively high potential for negative emissions from LULUCF.

The feasibility of each target option is to a large degree dependent on emerging national policies to support the low carbon transition, as well as actions at the local level. They are also influenced to some degree by the global response to the climate change.

Option 3, Net Zero by 2037, is the most feasible target that can be regarded as being in line with the requirements laid down by the IPCC for "well below 2 degrees and in pursuit of 1.5 degrees."

We therefore recommend as follows:

- The adoption of Option 3: Net Zero by 2037.
- As well as doing what it can to meet that target, we recommend that Cumbria Net Zero Partnership identifies the support it requires from central government to make this possible.
- A further simple target on extraction-based emissions: these should remain at zero.
- Whilst visitor flying is not included within the target option, its impact on climate change should be considered as a factor in tourism strategy.
- An additional target is developed for total renewable energy exported to the grid from sources within Cumbria.

The challenge for Cumbria will be to deliver these recommendations in ways that work for everyone: residents, visitors, and industries. It will be essential to deliver the Food and LULUCF components in ways that create opportunities for farmers. This will require thoughtful conversations that combine the best science with the interests of rural communities. The climate strategy will also need to be joined up with an industrial strategy that can deliver high quality employment throughout the county.

With enough creativity, Cumbria's response to climate change can be an opportunity to enhance quality of life throughout the county. Cumbria can be a role model for local areas around the world.

9 Methodology for Extraction-based emissions

Data for the annual coal output from the West Cumbria Mine was obtained from the agenda of the 19th March 2019 meeting of Cumbria County Council's Development Control and Regulation Committee⁶. The proposal projected annual output for the mine at 2.4 Mt coking coal and 0.35 Mt middlings coal when the mine reached full operational capacity (approximately five years into operations). We based our calculations on a lifetime of 50 years at full capacity and multiplied this output volume by the emissions factors (BEIS, 2017) for combustion of coking coal and electricity generation (middlings) coal.

10 Methodology for Production based emissions

The data behind these emissions estimates is from the Office of National Statistics Local Authority CO₂ Emissions Estimates 2005-2017, calculated by Ricardo Energy and Environment⁷.

11 Methodology for Consumption-based emissions

Whilst the term 'footprint' is used in various ways, we are using it to mean the sum of the direct and indirect emissions that arise throughout supply chains of activities and products. The inclusive treatment of supply chain emissions, as presented here, differs from more standard 'production-based' emissions assessments, but gives a more complete and realistic view of impacts of final consumption.

As an example, emissions resulting from the purchase of goods by residents and visitors would not feature in a production-based emissions assessment, since all the emissions take place in the supply chains of the products rather than at the point of purchase. To give another example, in a consumption-based assessment, the footprint of travel includes, on top of the direct vehicle emissions, those resulting from the extraction, shipping, refining and distribution of fuel, emissions resulting from the manufacture and maintenance of vehicles, and so on. Thus, in the case of car travel the final figure is typically around double that of the exhaust pipe emissions. In a third example, the footprint of electricity consumption includes components for the emissions associated with fossil fuel extraction, shipping, refining and transport to power stations, as well as those resulting from the electricity generation process itself.

11.1 Boundaries of the study

The following is within the scope of this study:

- all residents personal travel and visitor travel to, from and around Cumbria;
- fuel and electricity consumed in homes and places to stay;
- emissions from food and drink and other purchased items;
- the supply chains of all the above (e.g. fuel supply chains and embodied emissions); and
- business emissions for businesses operating within Cumbria.

The following is specifically excluded:

- Bespoke treatment of impacts of land-use in the specific circumstances of Cumbria.

⁶ Available here: <https://tinyurl.com/vey2x5p>

⁷ BEIS, June 2019, UK local authority and regional carbon dioxide emissions national statistics: 2005-2017. <https://tinyurl.com/UKCO2PB>

11.2 Inclusion of the Kyoto Greenhouse Gases

This assessment considers the basket of Greenhouse Gases (GHG) that is covered in the Kyoto Protocol, expressed in terms of carbon dioxide equivalent (CO₂e), the sum of the weights of each gas emitted multiplied by their global warming potential (GWP) relative to carbon dioxide over a 100 year period.

11.3 GHG Protocol guidelines

We have followed the reporting principles of the '*GHG Protocol, a Corporate Accounting and Reporting Standard – Revised Edition*' (GGP) published by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI) (Ranganathan *et al*, 2015).

The GGP defines 3 scopes for emissions reporting. Scope 1 covers direct emissions from company-owned vehicles and facilities. Scope 2 includes net emissions from energy imports and exports, such as electricity. Scope 3 includes other indirect emissions resulting from company activities, as detailed by the boundaries of the study. This report includes all Scope 1 and 2 emissions and comprehensive treatment of Scope 3 emissions throughout supply chains of activities and purchases within the boundaries laid out above.

11.4 Treatment of high-altitude emissions

High-altitude emissions from aircraft are known to have a higher global warming impact than would be caused by burning the equivalent fuel at ground level. Although the science of this is still poorly understood, this study has applied an emissions weighting factor of 1.9 to aircraft emissions, to take this into account. This is in agreement with the figure suggested in Defra (2009) '*Guidelines for Company Reporting on GHG Emissions*'. The figure can also be inferred from the Intergovernmental Panel on Climate Change's Fourth Assessment Review (IPCC 2007).

11.5 Reporting approach

The start point for this work is a model of GHG emissions per capita from UK consumption. For this we used an environmental input–output model (EIO) based on 2018 ONS combined use tables and UK environmental accounts. The specific model used was developed by Small World Consulting with Lancaster University (see below). The categorisation of emissions into 105 consumption categories was simplified into a 14 category model.

An estimate of the average visitor population was derived from the Cumbria Tourism (2018) 'Visitor Survey' figures for UK and overseas visitor numbers and visitor days and from the Scarborough Tourism Economic Activity Measure (STEAM) report.

In the first instance the GHG footprint of consumption by residents and visitors whilst in Cumbria was obtained simply by multiplying average populations of each district by the UK per capita consumption footprint estimates.

11.6 Environmental Input–Output analysis (EIO)

EIO combines economic information about the trade between industrial sectors with environmental information about the emissions arising directly from those sectors to produce estimates of the emissions per unit of output from each sector. The central technique is well established and documented (for example: Leontief, 1986; Miller & Blair 1985, 2009; Berners-Lee *et al*. 2010). In the UK, the main data sources are the '*Supply and Use Tables 1997 - 2016*' and the '*Greenhouse gas emissions in the UK, 1990 to 2016*' (ONS, 2018a; ONS, 2018b), both provided by the Office of National Statistics (ONS).

The specific model used for this project was developed by Small World Consulting with Lancaster University. This model takes account of such factors as the impact of high altitude emissions that are not factored into the environmental accounts and the effect of imports. We have also used price indices to take account of changes in the economy between the production of the supply and use tables for 2016 and the baseline year of 2019.

Three main advantages of EIO over more traditional process-based life-cycle analysis (LCA) approaches to GHG footprinting are worth noting:

- 1) EIO attributes all the emissions in the economy to final consumption. Although, as with process-based LCA, there may be inaccuracies in the ways in which it does this, it does not suffer from the systematic underestimation (truncation error) that process-based LCAs incur through their inability to trace every pathway in the supply chains (Lenzen, 2001; Nässén *et al*, 2007).
- 2) EIO is an analytical and therefore impartial process for the calculation of emissions factors per unit of expenditure, whereas process-based LCA approaches entail subjective judgements over the setting of boundaries and the selection of secondary conversion factors.
- 3) Through EIO, it is possible to make estimates of the footprints resulting from complex activities such as the purchase of intangible services that LCAs struggle to take into account.

One of the limitations of EIO in its most basic form is that it assumes that the demands placed upon (and therefore the direct emissions from) other sectors by a unit of output within one sector are homogeneous. As an example, a basic EIO model does not take account of the carbon efficiencies that may arise from switching the expenditure on paper from a virgin source to a renewable source without reducing the actual spend. In this report, the carbon intensity per unit turnover of, for example, the hotels, pubs and catering establishments of Cumbria are assumed to be 'UK typical'. It is possible, with additional resource, to make bespoke adjustments to these generalities given relevant local data and a defensible basis for relating that data to emissions. A further assumption in the model used here is that goods from overseas are produced with the same carbon efficiency as they would have been in the UK. Overall, this assumption usually results in an underestimation of the footprint of purchased goods. A further omission for this and all EIO models that we are aware of is that the impact of land-use change around the world has not been taken into account. This would be likely to result in an increased assessment of the footprint of foods, especially animal products⁸.

11.7 Adjustments based on bespoke national and local data

The result based on EIO and UK averages was adjusted to take account of key differences in consumption patterns for both visitors and residents from the UK average, wherever available data provided a reasonable basis for doing so. Estimates were also added for visitor travel to and from Cumbria. Specifically, the following adjustments were made.

11.7.1 Visitors

Travel to and from Cumbria was estimated using data from Cumbria Tourism's 2018 'Visitor Survey'. It gave the following data:

- Travel modes to and from Cumbria by overseas visitors, day visitors and UK staying visitors;

⁸ 'How Low Can We Go?' WWF(2010) estimates that emissions from red meat production outside Europe rises by a factor around five when land-use change is taken into account.

- Ports of entry to the UK for overseas visitors from which we deduced the different modes of travel to the UK for overseas visitors;
- Proportions of overseas visitors from different countries which combined with the above gave us a tolerable estimation of the all overseas visitor miles by different modes to and from Cumbria (distances from each country from Webflyer.com); and
- Proportions of UK visitors from each UK region (allowing journey miles to be plotted using data from AA journey planner website).

In the case of overseas visitors, estimates of time spent in Cumbria were divided by estimates of the length of overseas visitor trips to give the proportion of each journey to the UK that should be allocated to Cumbria visit. ONS Travel and Tourism data (ONS 2018b) gave information leading to estimates of the average length of stay in the UK by visitors from each of the countries and regions being analysed and estimates of the lengths of stay in Cumbria came from the Cumbria Tourism visitor surveys.

Travel around Cumbria was estimated by combining data on visitor spend on transport from the STEAM report (Cumbria, 2018) and primary modes of transport used (*'Cumbria Tourism Visitor Survey,'* 2018) along with a weighting of the cost of different transport methods from primary research to achieve an estimate of the spend on different transport modes. This combined with data on visitor numbers enabled the calculation of adjustment factors for the EIO model. Assuming UK typical car efficiency and an average fuel price of £1.28 per litre in 2018 a bespoke calculation was made for car use based on Small World Consulting's hybrid "Defra plus EIO methodology" and this was used in place of adjusting the existing EIO estimate. This directly calculated the emissions based on the expected number of litres consumed based on the expenditure and then factors in the additional emissions from supply chains. The embodied emissions of car use are then added into this based on a typical ratio of embodied emissions to fuel consumption.

Other expenditure areas were adjusted using STEAM (Cumbria, 2018) data on total spend to estimate the average spend per capita based on visitor full time equivalents. These were compared to the UK typical spend per capita to obtain an adjustment factor. Where no data was available on visitor spend it was assumed to be the same as UK typical.

Visitors were not buying certain items. Some types of goods were assumed not to be bought or directly depreciated by Cumbria visitors. These included, for example, domestic appliances and power tools.

11.7.2 Residents

The basis for adjustment of resident data was taken mainly from information from the 2011 UK Census (ONS, 2011). The data from the census is described in geographical areas known as output areas (OAs). Each OA is given a specific code and describes a specific part of the country. We identified those which fell within the boundary of Cumbria to allow us to analyse the census and other data to establish facts about the resident population of Cumbria.

Electricity and domestic fuel consumption data were obtained from the ONS broken down by Local Authority (ONS, 2018). This was then used to estimate gas and electricity consumption within Cumbria. This was then compared to the UK gas and electricity consumption per capita, to obtain an adjustment factor for the EIO model.

Car fuel use and embodied emissions of driving were calculated based on ONS transport energy statistics (ONS, 2017). These were also available at local authority level. They were then compared to the UK emissions

per capita to arrive at an adjustment factor for the EIO model. The same adjustment factor was used for embodied emissions of driving.

Food consumption is not well dealt with by input output analysis due to the fact that a significant amount of food is imported to the UK. EEIO does not reflect the different practices in farming and land use in other countries or the emissions associated with importing the food. Therefore, we have used a lifecycle analysis estimate of the impact of food (Hoolohan et. al., 2013) and replaced the EEIO estimate for emissions per capita with this figure.

Other expenditure. Based on 2011 census data, similar OAs across the country have been grouped together and described by their shared social and physical demographics in a so called “output area classification” (OAC) (Gale *et al*, 2016). Thus, each OA within Cumbria is nominated an OAC name (ONS, 2011a). The family spending survey publishes estimates of typical spending profiles of each OAC group (ONS, 2018d). By combining these datasets, we estimated the typical spending profiles of the OAs within Cumbria and thus the typical spending of Cumbria. This was then compared to the typical UK spending to establish adjustment factors for typical household goods such as, clothing, transport, accommodation, which was then mapped onto the EIO model to adjust the UK model to reflect the typical spending of households within Cumbria. In areas of the economy not covered by the family spending survey it was assumed that Cumbria did not differ from typical UK spending.

11.7.3 Industry

Average emissions intensities for 105 UK industries, broken down by direct emissions (scope 1) emissions from power generation (scope 2) and supply chain (upstream scope 3) were taken from the EEIO model. These were multiplied by GVA within Cumbria from ONS GVA estimates (ONS, 2017) to arrive at an estimate of the overall consumption-based industry emissions.

11.8 Other Emissions Factors.

Where consumption estimates were based upon expenditure, the carbon intensity of activities and purchases have been taken from the EEIO model.

Where emissions estimates have been based upon physical consumption, the direct components associated with fuel combustion, from electricity generation and from most transport have been calculated using conversion factors provided by department for Business, Energy and Industrial Strategy (BEIS) in their ‘Greenhouse gas reporting: conversion factors 2018’ (BEIS, 2018). However, the BEIS figures do not take account of supply chain emissions other than those produced at the point of electricity generation, and these need to be considered separately and we have referred, again to the EIO model.

11.9 Data Sources

The main sources are listed in Appendix A.

11.10 Uncertainties

The complexity of supply chains and the difficulties in obtaining accurate data dictate that footprinting can only offer an estimate rather than an exact measure, and the figures in this report should be viewed in that context. We have operated from the principle that it is more informative to make best estimates of even the most poorly understood components of the footprint, and to discuss the uncertainty openly, than to omit them from the analysis.

Overall, the results in this report should be viewed as offering a broad guide to the size and relative significance of different components.

11.10.1 Uncertainties over data

Sources of error were numerous, but the largest are thought to be as follows. Much of the data was drawn from visitor surveys, in which responses may have been systematically inaccurate, the sample group not fully representative and sample sizes were not always ideal.

11.10.2 Uncertainties over conversion factors

The areas in which the relationship between consumption and footprints is best understood are gas and electricity consumption. There is relatively good consensus over conversion factors to within around 5% in these areas. The next most certain group of conversion factors are those for travel and transport. In this category, there is uncertainty over the impact of high altitude emissions and the embodied emissions in the manufacture and maintenance of vehicles, roads and other infrastructure.

Supplies and services are the areas of greatest uncertainty. As an example, credible process based life cycle analyses of a particular specification of paper typically differ by factors of around 50% depending on the specific practices employed in the particular mill in which it was manufactured. It would also be possible for two detailed studies of exactly the same process to arrive at significantly different estimates, depending on the precise assumptions made. The EIO approach that we have adopted overcomes the truncation error that process-based approaches incur, but does suffer its own series of problems, most notably errors of aggregation – the failure to look at the particular circumstances of a supply chain by using an industry average.

12 Appendices

12.1 Appendix A: Main data sources and references

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<https://www.ons.gov.uk/census/2011census/2011censusdata>

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<https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables>

Office of National Statistics (2018b). Leisure and Tourism 2018 Overseas Residents visits to the UK, Section 4. Table 4. Lengths of stay in the UK of visitors from different countries of origin. Used to determine proportion of international travel attributable to the Park visit. URL:

<https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/datasets/overseasresidentsvisittotheuk>

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12.2 Appendix B: Supplementary data for Error! Reference source not found.

Breakdown of emissions (kg CO ₂ e)	Option 1: Net zero by 2030						2050
	2020	2025	2030	2035	2040	2045	
Energy-only CO ₂ (excluding M6)	3048	1519	757	377	188	94	47
Food consumed by residents and visitors	1693	945	528	295	165	92	51
Other goods purchased by residents and visitors	501	280	156	87	49	27	15
Visitor travel to and from Cumbria (excluding international travel)	1882	617	202	66	22	7	2
Land Use, Land Use Change and Forestry (LULUCF)	-322	-967	-1611	-1611	-1611	-1611	-1611
Total emissions	6802	2394	32	-786	-1188	-1391	-1496

Table 4: Raw data for 'Option 1: Net Zero by 2030'

Breakdown of emissions (kg CO ₂ e)	Option 2: Net zero by 2035						2050
	2020	2025	2030	2035	2040	2045	
Energy-only CO ₂ (excluding M6)	3048	1519	757	377	188	94	47
Food consumed by residents and visitors	1797	1354	1021	769	580	437	329
Other goods purchased by residents and visitors	532	401	302	228	172	129	98
Visitor travel to and from Cumbria (excluding international travel)	2047	1020	508	253	126	63	31
Land Use, Land Use Change and Forestry (LULUCF)	-322	-752	-1182	-1611	-1611	-1611	-1611
Total emissions	7102	3543	1407	17	-545	-888	-1106

Table 5: Raw data for 'Option 2: Net Zero by 2035'

Breakdown of emissions (kg CO ₂ e)	Option 3: Net zero by 2037						2050
	2020	2025	2030	2035	2040	2045	
Energy-only CO ₂ (excluding M6)	3048	1519	757	377	188	94	47
Food consumed by residents and visitors	1807	1398	1082	837	648	501	388
Other goods purchased by residents and visitors	535	414	320	248	192	148	115
Visitor travel to and from Cumbria (excluding international travel)	2117	1250	738	436	257	152	90
Land Use, Land Use Change and Forestry (LULUCF)	-322	-752	-1182	-1611	-1611	-1611	-1611
Total emissions	7185	3830	1716	287	-326	-716	-972

Table 6: Raw data for 'Option 3: Net Zero by 2037'

Breakdown of emissions (kg CO ₂ e)	Option 4: Net zero by 2040						
	2020	2025	2030	2035	2040	2045	2050
Energy-only CO ₂ (excluding M6)	3118	1741	972	543	303	169	95
Food consumed by residents and visitors	1816	1443	1146	910	723	574	456
Other goods purchased by residents and visitors	538	427	339	270	214	170	135
Visitor travel to and from Cumbria (excluding international travel)	2164	1426	940	620	408	269	177
Land Use, Land Use Change and Forestry (LULUCF)	-322	-752	-1182	-1611	-1611	-1611	-1611
Total emissions	7314	4286	2216	731	38	-428	-748

Table 7: Raw data for 'Option 4: Net Zero by 2040'

Breakdown of emissions (kg CO ₂ e)	Option 5: Net zero by 2045						
	2020	2025	2030	2035	2040	2045	2050
Energy-only CO ₂ (excluding M6)	3188	1990	1242	775	484	302	188
Food consumed by residents and visitors	1826	1489	1214	990	807	658	537
Other goods purchased by residents and visitors	541	441	359	293	239	195	159
Visitor travel to and from Cumbria (excluding international travel)	2211	1623	1191	874	642	471	346
Land Use, Land Use Change and Forestry (LULUCF)	-322	-752	-1182	-1611	-1611	-1611	-1611
Total emissions	7444	4790	2824	1320	560	14	-382

Table 8: Raw data for 'Option 5: Net Zero by 2045'

EXCERPT FROM THE MINUTES OF THE HEALTH AND WELLBEING SCRUTINY PANEL HELD ON 20 FEBRUARY 2020

HWSP.15/20 LOCAL ENVIRONMENT (CLIMATE CHANGE) STRATEGY

The Policy and Communications Manager submitted report PC.08/20 which set out the background and context within which the draft Local Environment (Climate Change) Strategy was being developed.

The Policy and Communications Manager provided an overview of the various local authority partnership groups and the work undertaken by the Council, he emphasised the importance of countywide planning, action and joint working in achieving the best results in relation to climate change.

Selecting the methodology for carbon accounting going forward had proved challenging: effectively there were two models, production and consumption accounting. The Policy and Communications Manager summarised each and noted that it was feasible for a mixture of both models to be used, however it was important to ensure that double counting of carbon did not take place.

The process for consulting on the draft Strategy along with the timetable for its progress through the Council's democratic processes was explained.

In considering the report, Members raised the following questions and comments:

- A Member noted that there were two targets referred to in the report: the government's requirement for a carbon neutral UK by 2050 and the Council's target of net zero-carbon by 2030. She asked whether it was a risk to have two targets.

The Policy and Communications Manager responded that an initial countywide report had noted the Council's target for 2030 was stringent and questioned its achievability. The national strategy would comprise a 12 year rolling carbon budget. In terms of the Council's target it was possible that an annual review may be considered for the 2030 target as part of a statement of intent. It was his view that a pragmatic approach was needed.

- What had been the outcome of the Lottery Bid the Climate Action Fund?

The Policy and Communications Manager advised that the bid had not yet been determined but that the initial response from the Lottery had been positive, there was no date set for a final decision on the matter.

- How were the planned public consultation events to be advertised?

Levels of footfall were important to the success of the events, therefore consideration of appropriate venues and existing events was taking place. Draft documentation was also being compiled for the events and may need to be tailored to particular events and sectors, for example agriculture.

The Member responded stressing the importance of involving individuals in the consultation and the need for literature that was accessible to all. Another Member added that consultation in schools would be an important area to consider.

The Environment and Transport Portfolio Holder noted that the Council had experience of carrying out successful consultation events, most notably in relation to the St Cuthbert's Garden Village project. It was anticipated the activities undertaken in relation to the draft Strategy would also achieve a high level of positive engagement. Moreover, he added that it was important that all Members of the Council were communicating about the draft Strategy in their communities.

A Member commented that it would be useful for an Informal Council Briefing to be held so that Councillors were equipped with the most up to date information to share with their residents. Another Member suggested that Mike Berners-Lee (Lancaster University) be invited to the briefing to address Members.

In response to a question from a Member regarding the holding of a Citizen's Jury as part of the consultation events, the Policy and Communications Manager advised that he was keeping a watching brief on a national Citizens' Assembly that was currently taking place. The Assembly was expected to report in Spring 2020, consideration was being given to such an event being held in Carlisle, but it was important that any work undertaken added value to the consultation and did not duplicate the work of other organisations.

- A Member thanked the Officer for his explanation of different approaches to carbon accounting, he asked which the Council was most likely to adopt.

The Policy and Communications Manager explained that the production accounting model seemed most appropriate method of assessment for the Council's operations. It was noted that the Climate Emergency Motion adopted by the Council also stipulated a reduction in the carbon emission of the district. Consideration was being given to the most appropriate accounting mechanisms as it was important to avoid double counting.

The Panel discussed the importance of embedding consideration of Climate Change in all the Council's activities.

RESOLVED 1) That the draft Local Environment (Climate Change Strategy) be included in a future Informal Briefing for all Members of the Council.

2) That a further report on the draft Local Environment (Climate Change Strategy) be submitted to a future meeting of the Panel.

3) That Officers be thanked for their work in developing the draft Local Environment (Climate Change Strategy) thus far.

EXCERPT FROM THE MINUTES OF THE ECONOMIC GROWTH SCRUTINY PANEL HELD ON 27 FEBRUARY 2020

EGSP.16/20 LOCAL ENVIRONMENT (CLIMATE CHANGE) STRATEGY

The Policy and Communications Manager submitted report PC.09/20 which set out the background and context within which the draft Local Environment (Climate Change) Strategy was being developed.

The Policy and Communications Manager provided an overview of the various local authority partnership groups and the work undertaken by the Council, he emphasised the importance of countywide planning, action and joint working in achieving the best results in relation to climate change.

Selecting the methodology for carbon accounting going forward had proved challenging: effectively there were two models, production and consumption accounting. The Policy and Communications Manager summarised each and noted that it was feasible for both models to be used in tandem, however it was important to ensure that double counting of carbon did not take place.

The process for consulting on the draft Strategy along with the timetable for its progress through the Council's democratic processes was explained.

In considering the report, Members raised the following questions and comments:

- A Member commented that the timetable for consultation appeared disjointed, he noted that the matter was not scheduled to be submitted to the Panel again.

The Policy and Communications Manager responded that should the Panel wish to scrutinise the matter again it was able to be added to its Work Programme. He added that the Strategy was an aspect of emerging work for the authority, it was intended be a working document that would respond to the evolving understanding of responses to climate change. Moreover, the Strategy would be submitted to Full Council for approval.

The Member added that he had been a member of the Council's Working Group which contributed to the development of the Strategy, however, he had not been advised that a draft document had been completed.

The Environment and Transport Portfolio Holder apologised for the quicker than anticipated emergence of the Strategy, he had felt that it was important that the matter be progressed, therefore he had instructed Officers to formulate and consult on the draft Strategy. He appreciated the Member's comments regarding the Working Group and indicated his intention to reform the body in the future.

The Member thanked the Environment and Transport Portfolio Holder for his comments and stated that he felt it was incumbent upon all Councillors to support the Strategy.

- Would a Citizen's Jury be a useful method for consulting on the Strategy?

The Policy and Communications Manager advised that he was currently following a national Citizens' Assembly to assess the process, a Jury was a scaled down Assembly. The research he had undertaken on the Citizens' Assembly illustrated that they met over a number of weeks or months after which a report on their work was published. There was little information on the outcomes generated by the Juries.

The Corporate Director stated that the Council had a good track record of conducting consultations and it would do its best to ensure that the widest possible audience was reached.

The Environment and Transport Portfolio Holder added that the consultation, in addition to seeking views also sought to provide information to residents and businesses in the district about the Strategy.

The Panel discussed a number of issues relating to Climate Change: carbon capture; carbon off setting; the global recycling market, and the environmental impact of schemes which supported economic growth, and potential areas of challenge between the two.

- Referring to objective 2, a Member noted the timescale for working with developers to deliver sustainable housing developments was listed as long term, he asked whether the Council was able to impose the requirements of the Strategy on developers?

The Corporate Director responded that the Council was only able to ask developers to comply with the Strategy, it was not in a position to require compliance. However, there was Building Control legislation which stipulated standards within house building which developers had to adhere to.

- Which method of carbon accounting was the Council likely to adopt?

The Policy and Communications Manager gave an overview of the consumption and production methodologies. He considered that the production accounting model seemed most appropriate method of assessment for the Council's operations. It was noted that the Climate Emergency Motion adopted by the Council also stipulated a reduction in the carbon emission of the district. Consideration was being given to the most appropriate accounting mechanisms as it was important to avoid double counting.

RESOLVED – 1) That report PC.09/20 be received and welcomed.

2) That a report on the Local Environment (Climate Change) Strategy be submitted annually to the Panel for scrutiny.