

THE INTERIM DEVON CARBON PLAN SUMMARY

Creating a resilient net-zero carbon Devon –
where people and nature thrive

1. CLIMATE CHANGE – WHY DO WE NEED TO ACT NOW?

1.1 Effects and Impacts

Our planet's climate is changing and warming at an accelerating rate. 2019 saw the UK's hottest ever recorded temperature and the warmest winter temperature.¹ Globally, 2020 is on course to be the hottest year since records began.² The increased levels of greenhouse gases (GHG) from human activities mean we are trapping more heat and causing our planet to warm at an unprecedented rate.³

This warming is causing more extreme storms, droughts, heat waves, melting ice, ocean acidification and rising sea levels. The changes to the climate system result in a range of impacts from flooding to food insecurity, health impacts, migration of people and unparalleled loss of biodiversity. Climate change is not just an environmental problem. It has been described as “humanity’s greatest threat” by Sir David Attenborough;⁴ as the “biggest threat to the global economy” by the World Economic Forum;⁵ and as the “greatest threat to global security” by the UN Security Council.⁶ As the climate continues to change, the scale and frequency of impacts will increase, as will the economic costs of not taking action.⁷ **The science is clear: we are in a climate emergency and need to act now to reduce carbon emissions to limit global temperature rise to below 1.5°C.**⁸

1.2 The Opportunity

It is possible to achieve multiple benefits for society whilst addressing the climate and ecological emergency.

It is an opportunity to **create a fairer, healthier, more resilient and more prosperous society**. Those most affected by climate change need more of a say in how we respond, and our actions to mitigate climate change must be aligned with goals for public health improvement, green growth and the reduction of social vulnerability.⁹

Encouraging everyone to be more active by walking and cycling; improving air quality through the electrification of vehicles; insulating our homes to make them warmer; and eating more balanced diets will all **improve public health and reduce pressures on the NHS.**¹⁰

There is considerable potential for the transition to clean technologies to **create new jobs and skills** requirements, **improve our national energy security** and **increase economic prosperity** – nationally and locally in Devon. Retrofitting energy efficiency measures into existing housing will **reduce fuel poverty** and illnesses associated with cold homes and subsequently provide enhanced **opportunities for work and study.**¹⁰

Enhancing the ability of habitats along our coast, in our countryside and in our villages, towns and cities to store carbon offers tremendous opportunities to **reverse the decline of biodiversity** and restore the benefits healthy ecosystems provide. These include **reduced flood risk, improved water and air quality, nutritious food, timber and fuel, and accessible greenspace.**

The Devon Climate Emergency project aims to create a resilient net-zero carbon Devon – where people and nature thrive.

2. INTRODUCTION

2.1 Background

In May 2019, a partnership formed to respond to the climate and ecological emergency in Devon (including the areas of Plymouth and Torbay). Its members represent public bodies, private sector interests, environmental organisations and academic institutions.

The Devon Climate Emergency partners invited a Net-Zero Task Force of fifteen specialists to create an evidence-led Devon Carbon Plan recommending a pathway to achieve net-zero emissions and the earliest credible date to do so. A separate body, the Climate Impacts Group, is producing a Devon, Cornwall and Isles of Scilly Adaptation Plan to help prepare communities to live in a warmer and more resilient world.

2.2 What does Net-Zero Mean?

“‘Net-zero’ emissions means that the total of active removals from the atmosphere offsets any remaining emissions from the rest of the economy”¹¹

For Devon to become net-zero, overall, the emissions produced and put into the atmosphere and the emissions removed must balance. Emissions can be removed from the atmosphere through initiatives such as planting trees or restoring peat bogs, as plants absorb carbon dioxide from the air. This is often termed ‘offsetting’.

2.3 A Roadmap for Devon to Achieve Net-Zero

This Plan lays out a roadmap for Devon to achieve **net-zero carbon by 2050 at the latest**, with an interim target of **50% reduction by 2030 below 2010 levels**. Five-year carbon budgets are proposed that set a declining emissions cap between now and 2050 for Devon to remain on track to meet these targets. The **Plan is frontloaded with impactful actions** to support the partners that have set earlier net-zero targets for their areas and activities.

The Plan outlines how everyone in Devon can work together to reduce our emissions to net-zero. It highlights the barriers that need to be overcome and where collaboration with national government is needed to do so. It also presents the opportunities and co-benefits of the transformations required.

Based on the work of the Committee on Climate Change, the net cost (sum of costs minus benefits) to achieve net-zero carbon in Devon in 2050 is estimated to be £895 million per year. This equates to 1.5% of the area's projected 2050 Gross Domestic Product (GDP) and £661 per resident per year.¹²

It is important to note that this is not the investment cost: Essentially this is the funding required for which there is not currently a financial investment opportunity. There will be opportunities for unanticipated technology innovation over the next three decades to bring about investment opportunities to reduce this figure, but it's likely there will remain costs to be sought from philanthropic grant funding and the public sector, principally from national government via taxation. The Committee on Climate Change acknowledges that if the wider social benefits to human health and the environment from achieving net-zero can be monetised, then these would "partially or

possibly even fully" offset the net costs.

Bringing the date forward from 2050, to achieve net-zero ahead of the national timetable, would be challenging and more costly.

Achieving net-zero carbon by 2030 would increase the estimated annual net cost to Devon to about £2,522 million per year (6.6% of the area's projected 2030 GDP) and £1,992 per resident per year. These costs would put Devon at a disadvantage if other regions do not do the same. However, achieving net-zero sooner than 2050 would also bring forward the co-benefits, as well as give a head start on the economic opportunities available in certain sectors. But it requires the social transformations described in this plan to be achieved within 10 years rather than 30.

The challenges arise when it's considered how Devon could achieve net-zero ahead of the national timetable. Many policy aspects relevant to reducing greenhouse gas (GHG) emissions and their associated funding are controlled nationally. Assuming national policy remains focussed on 2050, for Devon to achieve net-zero sooner would require the emissions in Devon that result from activity over which there is little local control (such as whether somebody chooses to operate a diesel car rather than an electric alternative) in the intervening years would need to be offset using local schemes. But who will fund the offsetting? Devon's emissions are all attributable to individuals and organisations operating in and visiting Devon, yet there is no mechanism to force these emitters to buy carbon offsets ahead of 2050. If such a policy was implemented, these emitters might move away from Devon or choose to visit other areas

of the UK that do not require them to pay to offset their emissions.

However, the costs and challenges of achieving net-zero ahead of 2050 in Devon are less significant if the UK was to bring forward the national target. We **strongly encourage national government to bring forward the net-zero carbon date for the UK**, which we are

ready to implement locally given the necessary national support.

Recognising the opportunities and importance of responding to the climate emergency, the Devon Climate Emergency partnership **encourages all Devon-based organisations to become net-zero by 2030**, including their supply chains. As part of the consultation on this Interim Devon Carbon Plan there is **an opportunity for you to say what is an appropriate target date to achieve net-zero in Devon**.

2.4 A Chance to Build Back Better

The Covid-19 pandemic continues to highlight how rapidly we can change how we live our lives, for better and for worse. This has stimulated discussion about the changes we want in society. There is strong public support nationally for the recovery from the pandemic to align with the imperatives created by the climate emergency.

We welcome the government's recently announced 'Ten Point Plan for a Green Industrial Revolution' which sets out the approach government will take to build back better, support green jobs, and accelerate our path to net-zero. It is well aligned with the Interim Devon Carbon Plan, which goes further and into more detail, and is a positive start on the recommendations of the Committee on Climate Change for how the UK can meet net-zero by 2050.

2.5 Plan Objectives

A set of eight objectives has been developed, which demonstrates concisely what this plan needs to achieve by 2050 at the latest. These are listed below. Indicators to monitor progress towards achieving these are proposed in Section 12 of this Plan.

1. Fossil fuels phased out as an energy source
2. Minimise energy consumption
3. Engaged communities acting for resilience and a net-zero carbon Devon
4. Carbon captured and stored from the burning of fuels
5. Minimise fugitive greenhouse gas emissions
6. Resilient local economies with access to green finance
7. A circular use of resources
8. Maximise carbon storage in marine and terrestrial environments

2.6 Co-Produced with Devon's Citizens

The Interim Devon Carbon Plan is a co-produced plan combining expert knowledge with the local experiences of Devon's citizens. This has been achieved in the following ways to date: A Call for Evidence that received 893 submissions from the public, each of which was reviewed by the Net-Zero Task Force; six Thematic Hearings (meetings) gathered expert input about barriers to reaching net-zero; and a Youth Parliament Climate Summit with 75 students from 15 primary and secondary schools across Devon. This consultation is a further opportunity for Devon's citizens to contribute.

Due to the delay to the Citizens' Assembly owing to the COVID-19 pandemic the Plan has been prepared initially as an Interim Carbon Plan. This Interim Plan contains actions which are less difficult to adopt and are more publicly acceptable. A combination of the recurring themes in the Call for Evidence and the opinion of the Devon Climate Emergency partners have been used to identify the more controversial and challenging issues for achieving net-zero in Devon. Actions have not been included in this Interim Plan to resolve these issues. Instead, this Plan highlights these controversial issues and proposes these for consideration by a Citizens' Assembly in summer 2021, see Figure 1. The Plan will be updated and finalised following the Citizens' Assembly and a second public consultation will follow.

Revised Devon Carbon Plan Process

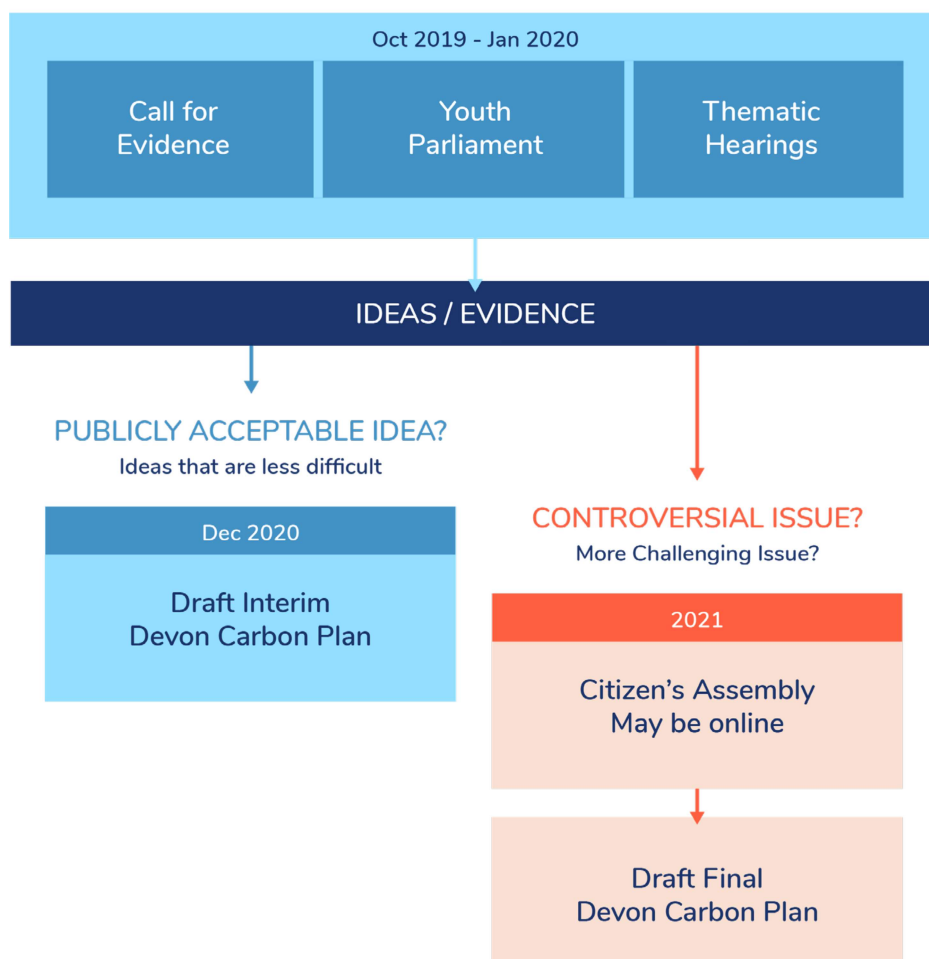


Figure 1 – Process for Developing the Devon Carbon Plan

2.7 Who is this Plan for?

Delivering net-zero in Devon will require and benefit from the involvement and collaboration of all sections of Devon society including local authorities, businesses, community groups and individuals. We have indicated within this Plan the types of groups and organisations we think are best placed to implement each action.

3. DEVON NOW AND THE FUTURE

3.1 The Devon Context

Devon has distinctive qualities and characteristics that provide the context for planning for net-zero emissions. They include that:

- 90% of Devon's land area is rural
- Devon has over 200 miles of shoreline
- Almost half the population live in the three major urban centres of Exeter, Plymouth and Torbay
- 35% of Devon is recognised as landscapes of national importance
- The County has rich biological and geological diversity which is becoming increasingly vulnerable to the effects of climate change

This diversity means that the challenges of reaching net-zero will vary between different parts of the County as well as between sectors of its economy. For example, a net-zero future will look different in Exeter compared to that of villages in Torridge or coastal towns in the South Hams. The challenges of decarbonisation vary spatially and so do the opportunities, but all areas of Devon need to fully contribute, respecting their individual identities, to creating a resilient, net-zero carbon Devon where people and nature can thrive.

3.2 Greenhouse Gas Emissions in Devon

Figure 2 shows Devon's GHG emissions in 2018 (including Plymouth and Torbay), on a production basis. 'Production' means these data reflect the GHG emissions that arise from activity taking place within the boundary of Devon. The total production emissions for Devon, Plymouth and Torbay was 7.9 million tonnes of carbon dioxide equivalent (CO₂e) in 2018. This reflects the effect of the emissions of a basket of six GHGs on global warming, converted into equivalent units of carbon dioxide. The most substantial emitters are Buildings, On Road Transportation and Agriculture. Since 2010, Devon's production GHG emissions have reduced by 20%

The plan also considers how to reduce emissions associated with Devon's citizens' day-to-day lives which are not emitted within Devon itself but instead occur overseas ('consumption emissions').

Consumption emissions arising overseas that are attributable to our consumption habits in Devon were 4.7 million tonnes of CO₂e. Overseas consumption emissions have reduced by 18% since 2010.

Combining the overseas consumption emissions with Devon's production emissions results in the total emissions attributable to our lives in Devon each year. These are 11.6 million tonnes CO₂e, of which 36% arise overseas.

The Devon Climate Emergency partners have currently agreed to work to reduce Devon's consumption and production emissions to net-zero by 2050 at the latest. Prominent policy scenarios for achieving net-zero emissions in the UK, such as those produced by the Committee on Climate Change²² and The Centre for Alternative Technology¹³ only address production emissions and so this commitment from local partners is ambitious.

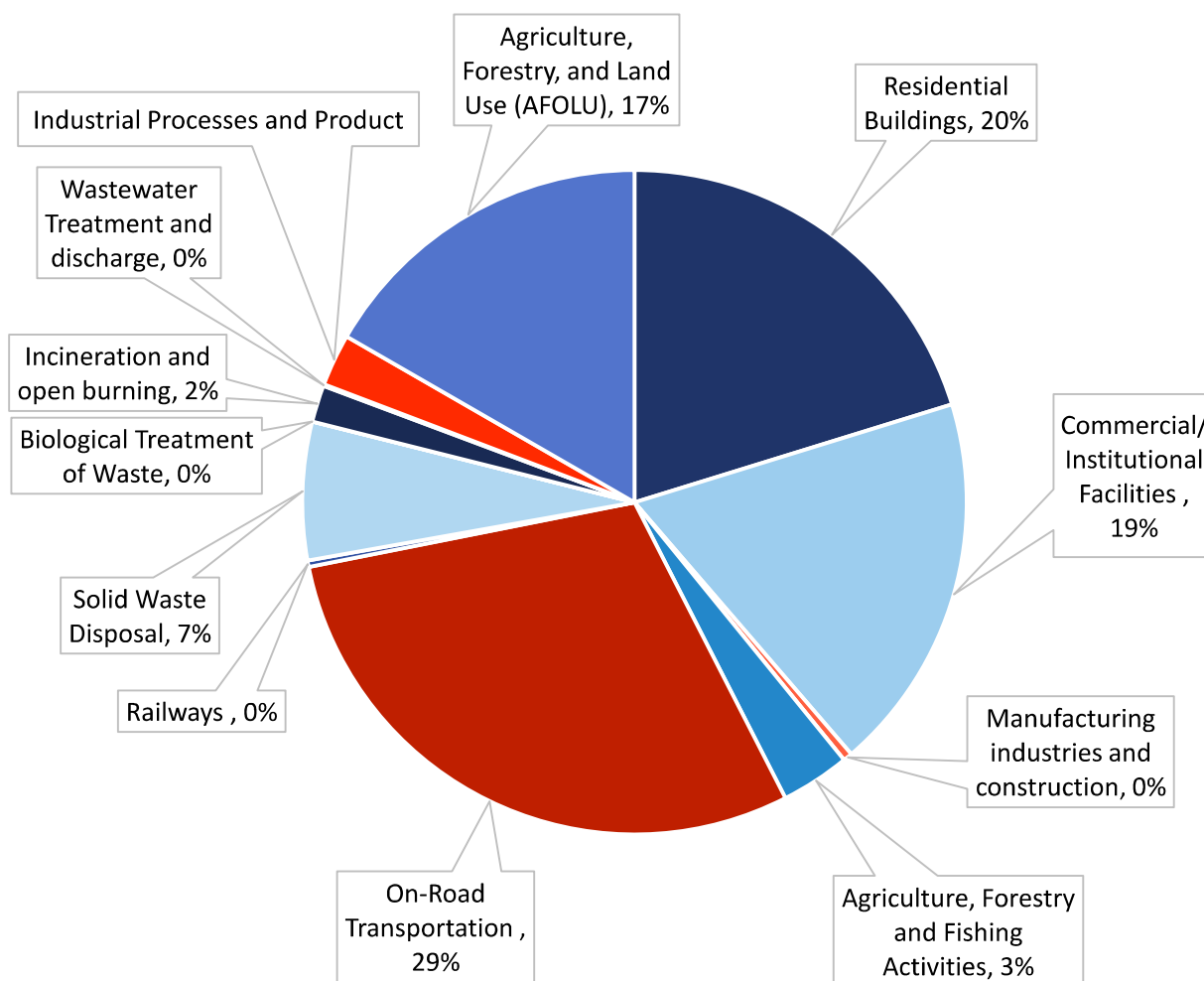


Figure 2: Devon, Plymouth and Torbay's 2018 Greenhouse Gas Emissions by Sector¹⁴

The plan is summarised below by section with an overview of what needs to happen and the key outcomes. The sections are: Cross Cutting Themes; Economy and Resources; Energy Supply; Built Environment; Transport and Food, Land and Sea.

3.3 A Vision for a Net-Zero Devon

In order to move towards a net-zero carbon Devon, it is essential that we can imagine what it might look like.

When the DCE partners first declared a climate emergency, they outlined key social, economic and environmental changes they collectively expect to be needed to achieve net-zero. These are encapsulated within the Devon Climate Declaration which has been endorsed by all Devon's local authorities and many parish councils. The transformational changes in the Declaration include:

- Deploying more renewable, decentralised and smart energy systems
- Retrofitting energy-efficiency measures into our existing buildings
- Constructing zero-carbon new buildings
- Travelling less and using improved walking, cycling and public transport infrastructure more often, and using electric and hydrogen vehicles
- Changing our consumption to use less, re-use more and choose low-carbon options
- Challenging all economic sectors to review their practices and the values of those they do business with
- Divesting from fossil fuels
- Changing dietary patterns and reducing food waste
- Changing agricultural practices to reduce emissions associated with farming operations, manage soils sustainably and replenish soil carbon
- Encouraging carbon storage such as through tree planting, the use of wood in construction and peatland restoration
- Empowering the people of Devon with the knowledge and skills to act collectively.

Through responses to the public Call for Evidence, residents have told us many things which they envisage as being part of a net-zero carbon Devon, and so the richness of the vision has continued to deepen. The Devon Carbon Plan articulates in more detail what a net-zero Devon could be like.

All organisations and communities are encouraged to sign up to endorse the Devon Climate Emergency Declaration online at www.devonclimateemergency.org.uk/devon-climate-declaration/endorse

4. CROSS CUTTING THEMES



This Plan attempts to look at the whole picture in assessing how Devon can reduce its emissions to net-zero. We have tried to consider how sectors, such as energy and transport, interact and relate to each other in the real world. This approach to considering themes, as opposed to sectors, is an attempt to avoid the potential pitfalls that could arise from considering topics in isolation: such as a transport solution placing unfeasible demands on the energy network, which would require additional and further effort in that sector to then realise net-zero.

The Interim Devon Carbon Plan is broken down into sections on economy and resources; energy supply; the built environment; transport; and food, land and sea. However, we have identified themes and issues which cut across these categories and relate to all sectors.

4.1 What Needs to Happen?

The evidence provided at the Thematic Hearings and responses to the Call for Evidence indicated that the principal cross-cutting themes of action needed are:

1. Behaviour change and community engagement

Deep transformations in behaviour are needed across society to reach net-zero emissions. Behaviour change and technological solutions are complementary. We need a combination of both for the Plan to be successful.

2. Knowledge sharing, skills and learning

We will each need the skills and knowledge to switch to net-zero lifestyles at work, at home and when taking leisure and recreation.

3. Spatial planning

Where things are in Devon and how they connect shapes most areas of our lives and is a driver

of GHG emissions. We will need to consider how to organise new development to best support achieving net-zero, such as where we site renewable energy or how we locate new housing so that workplaces and services can be accessed by walking, cycling or public transport.

4. Finance, economy and resource access

We need new financial products and mechanisms to stimulate change in the economy towards net-zero carbon.

5. Procurement and commissioning

Organisations have influence over net-zero ambitions through what they buy, who they buy it from and how they show leadership to their suppliers.

4.3 Key Outcomes

- A culture of innovation, contributing to achieving net-zero
- Communities with shared visions of what net-zero could look and feel like in their local places
- Citizens who feel part of shaping the transition to net-zero
- Plans for settlements which contribute to radical reductions in greenhouse gases
- Landscape qualities, features and characteristics which support our health, wellbeing and economy and contribute to resilience are protected whilst accommodating necessary changes towards net-zero

5. ECONOMY AND RESOURCES



Devon's economy: just, smart, circular, regenerative and rich in natural capital

We rely on planet Earth to meet our needs. It provides all our raw materials from the air we breathe, to food and iron ore for example, which we process producing waste products. But Earth's ability to provide for us and to absorb our waste is not without limits.¹⁵

In recent history we have made products, used them and then discarded them without recovering all of the materials they are made from or questioning the extent to which we really need them in the first place. This linear economy is ecologically damaging as well as carbon intensive as it creates GHG emissions during manufacture, transport to the consumer and from disposal itself.

In addition to the GHG emissions produced in Devon's boundary, our consumption habits also contribute to emissions overseas due to our purchasing of goods produced abroad.

How the economy functions influences GHG emissions associated with every section of this Plan.

5.1 What Needs to Happen?

The evidence provided at the Thematic Hearings and responses to the Call for Evidence indicated that we need to:

- 1.** Enable the economy to meet everyone's needs more equally without exceeding planetary boundaries
- 2.** Avoid creating waste, by buying less, buying second hand, repairing the things we have and sharing rather than each individually owning items

3. Transition to a circular economy, by designing products for disassembly so we can recover materials for reuse and recycling
4. Reduce emissions from biodegradable waste and wastewater treatment
5. Accelerate the transition to net-zero carbon by targeting the purchasing and commissioning power of Devon's organisations to get best value locally
6. Support communities and businesses to make the transition to net-zero livelihoods using innovative channels of finance, fostering innovation and ensuring we have the skills we need for the emerging economy

5.2 Key Outcomes

- Better understanding and reduction of household and commercial waste flows
- A circular economy – we reuse and recycle more, creating business efficiencies
- Net-zero and social value outcomes accelerated through anchor institution procurement
- Retain more value locally (Cleveland model)
- The creation and use of green finance and investment products
- A reskilled workforce redeployed into low-carbon sectors, e.g. renewable energy, low-carbon aviation, electricians, energy assessors, agro-economic advisors, carbon sequestration accreditors, circular economy equipment engineers, cycle technicians, electric vehicle maintenance, and robotics and artificial intelligence



5.3 Actions



6. ENERGY SUPPLY



Increasing renewables, introducing flexibility and capturing carbon

In 2018, 62% of Devon's greenhouse gas emissions related to energy use in the form of electricity and fossil fuel in buildings, manufacturing and construction activity, and transport. In the same year, seven percent of the total energy used in Devon was met by renewable sources.¹⁶

6.1 What Needs to Happen?

The evidence provided at the Thematic Hearings and responses to the Call for Evidence indicated that four key transformations are needed to decarbonise the energy we all use:

1. Use less energy – We need to reduce demand for energy and use what we really need as efficiently as possible. Devon needs a high take-up of energy-efficiency measures across its 581,000 homes and its commercial and industrial premises. These technological changes must be combined with enhancing awareness and understanding of energy issues so that behaviour and accepted social norms are changed to help avoid wasting energy and use it more efficiently. Using less energy for our transport requirements starts with reducing the need to travel. If the journey is necessary then we must consider using active travel (walking and cycling), buses and trains, shared mobility schemes and taxis (for the first or last mile of a journey), particularly in more urban areas. Private vehicle use will continue, more so for journeys within rural areas and between rural and urban centres; for these, electrification of vehicles will reduce energy demand because an electric vehicle is over four times more efficient than a petrol or diesel car.¹⁷

2. Transition to renewables – The energy we do use needs to be from renewable sources (e.g. wind, solar, biofuel). Switching most of our energy needs away from fossil fuel to renewable electricity will increase Devon's electricity consumption by about two-and-a-half times 2018 levels. If Devon were to generate all this new demand within its boundary, approximately eight times¹⁸ more renewable

electricity generating capacity would need to be installed on rooftops and through field-scale projects. District heating (systems that distribute hot water heated by centralised power plants, in a network of highly-insulated pipes to a collection of buildings) supplied by renewable energy has a role in reducing the need for new electrification. These must be considered for all large-scale new developments or retrofitted in areas of high heat density, such as industrial estates or urban centres. A Renewable Energy Strategy for Devon is proposed to coordinate this activity.

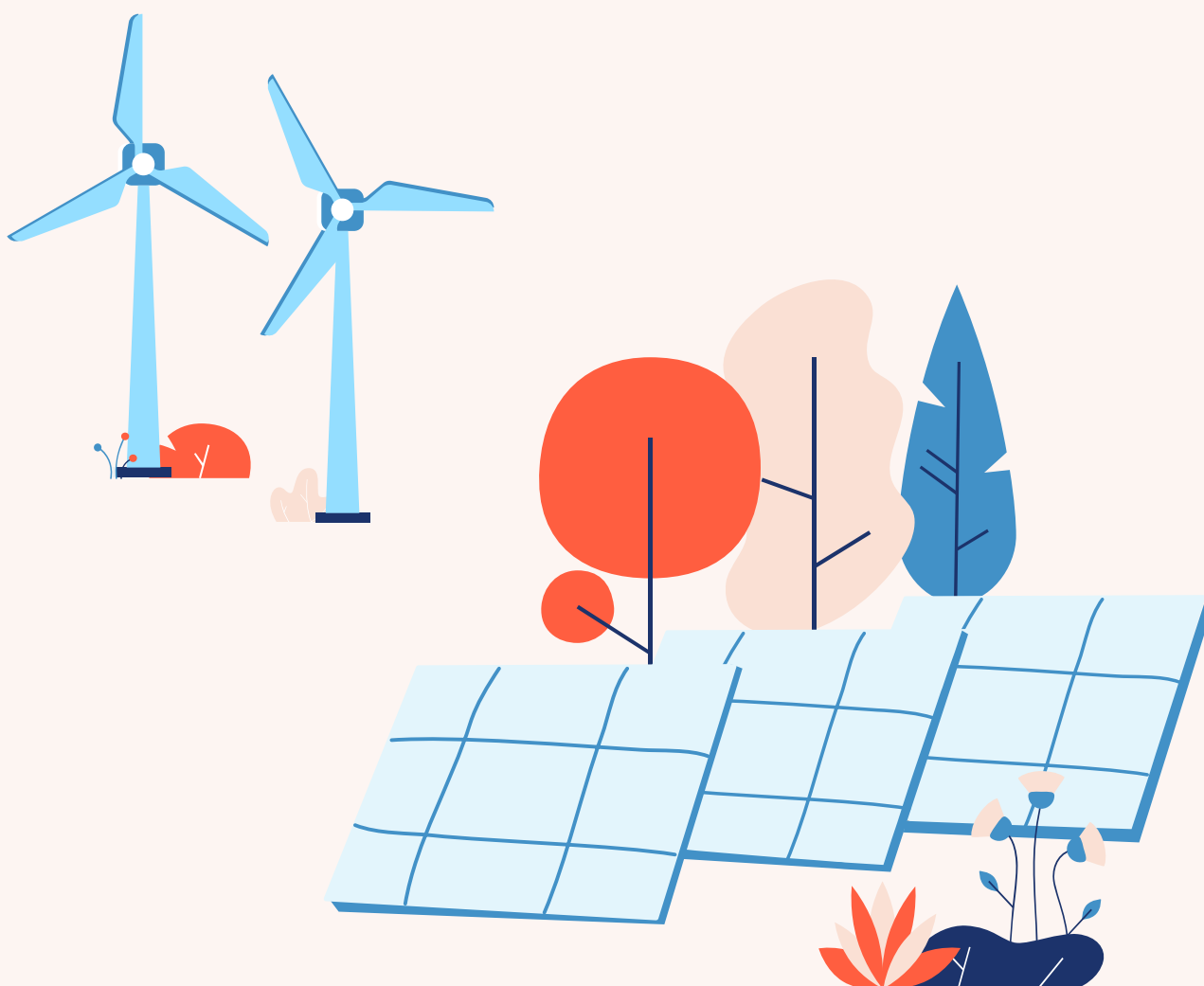
3. Flexibility and storage – Making best use of renewable resources will need the ability to match the natural variability of renewable energy output with demand by creating improved flexibility and storage of generated energy. Deploying flexibility services and storage technologies will reduce the amount of new renewable energy capacity required – making best use of the resource, reducing investment costs and avoiding the need for fossil-fuel powered peaking plants.

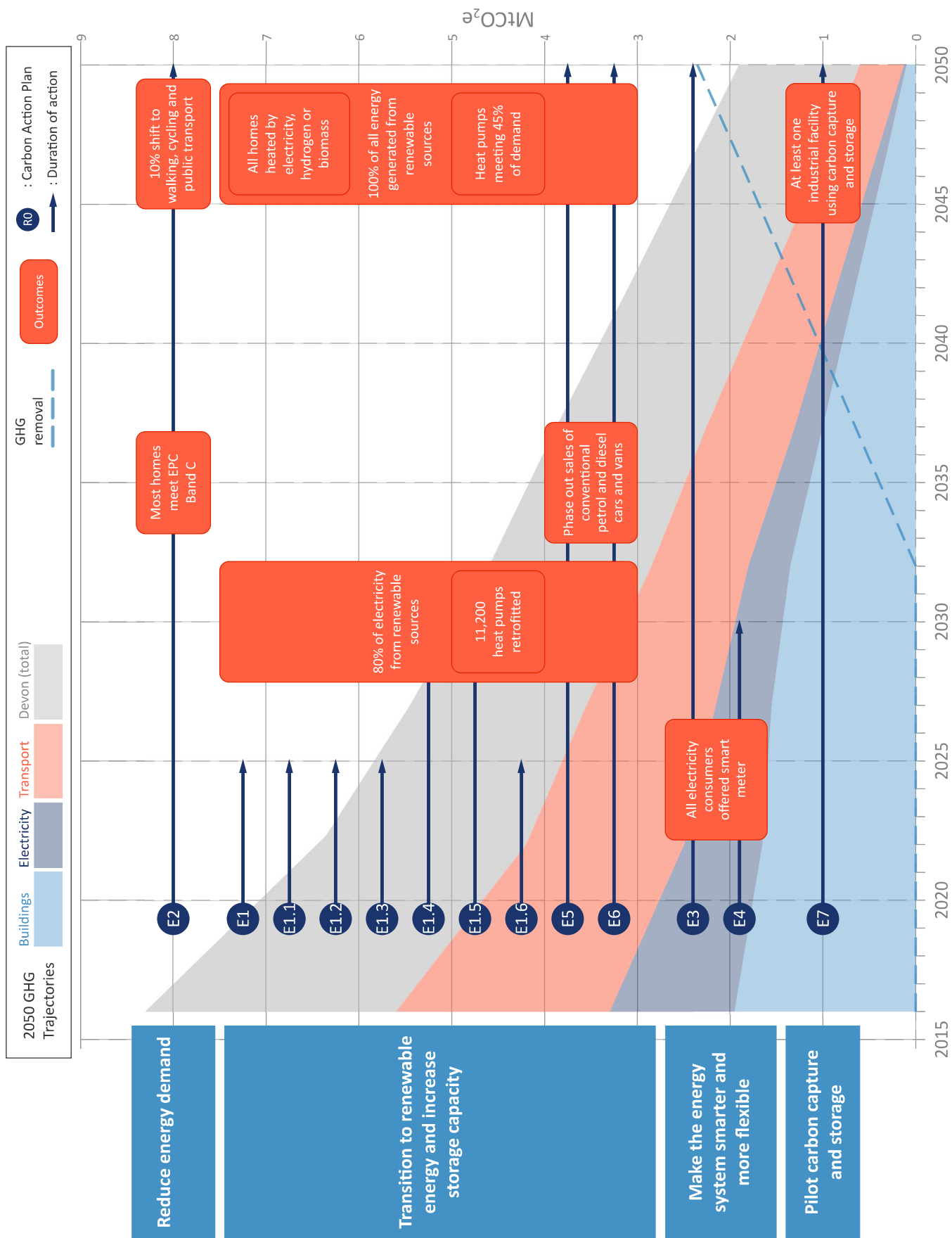
4. Carbon capture and storage (CCS) – Where small amounts of fossil fuels continue to be used, the carbon emitted needs to be captured and permanently stored to prevent it from reaching the atmosphere. CCS can also be used to remove carbon dioxide from the atmosphere by capturing the carbon emitted from using biomass (e.g. maize or willow) for energy; by doing so, between 70% and 100% of the carbon dioxide that was absorbed from the atmosphere when the biofuel was growing is permanently captured¹⁹ and so achieves negative emissions.

6.2 Key Outcomes

- Devon's installed renewable energy and storage capacity increases substantially, bringing with it jobs and skills opportunities
- Innovation opportunities have been seized to test offshore technologies, such as floating offshore wind, and hydrogen infrastructure
- Communities become more engaged in local energy issues and energy investment
- New development is expanding Devon's expertise in the use of district heating systems

6.3 Actions





7. BUILT ENVIRONMENT



Improving the standard, comfort and efficiency of our buildings, both new and old

Buildings and amenity lighting in outdoor spaces produced 42% of Devon's GHG emissions in 2018, shared almost equally between residential and commercial/industrial buildings.

7.1 What Needs to Happen?

The evidence provided through the Thematic Hearings and Call for Evidence indicated that four key transformations are needed to decarbonise our built environment:

1. Retrofit existing houses, including insulation, household renewable energy and heat pumps, through both whole-house retrofit with a package of improvements at one time and supporting householders to make their houses energy efficient incrementally over a period of time. The following upgrades are needed:

- Insulation of all practicable lofts by 2022.
- All cavity walls insulated by 2030.
- 36,000 solid walls insulated by 2030 and 109,000 by 2050.
- 18,100 heat pumps installed in existing homes by 2030 and 344,000 by 2050.
- Low carbon heat networks deployed with the connection of 91,000 homes in Devon by 2050.
- Longer term, the remaining houses (146,000) to be switched to a combination of carbon neutral hydrogen (requiring the installation of hydrogen ready boilers and national distribution infrastructure), hybrid heat pumps and biomass boilers.
- A small number of homes (just 1,000 nationally) using direct electric heating (such as heritage homes or others unable to use heat pumps or hydrogen).

Ultimately, we need every home to undergo a deep retrofit. This will require the use of new technology using offsite prefabrication techniques that provide a bespoke retrofit for each home.²⁰

2. Retrofit non-domestic buildings, reducing heat and energy requirements and decarbonising heating systems. Retrofit public buildings early to stimulate local supply chains. The Committee on Climate Change scenario for net-zero in 2050 requires energy efficiency upgrades to achieve a 25% reduction in energy demand from non-domestic buildings by 2050. Heating requirements are assumed to switch to heat pumps, with 11,200 heat pumps in non-residential buildings by 2030 and heat pumps meeting 45% of demand by 2050.

3. New buildings to be net-zero as soon as possible. They need to be highly energy-efficient from the outset and use low-carbon heat sources. Just because the fabric may be very energy efficient does not mean that the building is energy efficient if it is not used in an energy efficient manner. Therefore, support must be provided to building occupants to make best use of the highly efficient fabric and new technologies.

The embodied carbon (the carbon associated with the production and transport of building materials and the energy used on the construction site) needs to reduce to zero by 2050 as well. The Committee on Climate Change's expectation is that timber will become more widespread in construction as an opportunity to provide a market for storing carbon in timber and locking it away in building fabric. The carbon associated with manufacturing and processing carbon-intensive materials where they continue to be used, such as concrete, will reduce over time through decarbonisation of the energy sources these industries use. Remaining emissions will be captured at source where appropriate and otherwise offset nationally.

4. Achieve energy savings in public and shared spaces in the built environment, by converting lighting to LED technology and rationalising its use.

7.2 Key Outcomes

- Devon and the Greater South West develops its reputation as a centre of excellence in low carbon buildings
- The energy efficiency of Devon's existing buildings is significantly improved
- People have retrained with the skills required to retrofit our buildings with new technology and the supply chain is benefiting
- We all change our behaviour to run our homes and businesses energy-efficiently
- New homes are built to net-zero standards with green, tree-lined streets

7.3 Actions



8. TRANSPORT



Reducing transport need, switching to shared and human powered transport

Transport accounts for 31% of Devon's greenhouse gas (GHG) emissions.²¹ The sector is the single largest emitter of GHG across the County, which also reflects the UK-wide position. Addressing the challenge will require a combination of behavioural, policy and technological changes. The movement of people, as opposed to goods, accounts for around two thirds of all transport emissions. Whilst all areas of transport must decarbonise, and do so rapidly, transforming how we move about Devon will provide the opportunity to realise significant wider benefits: for our health, safety, public and personal finances and enjoyment of public space.

8.1 What Needs to Happen?

The Thematic Hearings and Call for Evidence supported the following hierarchy of action: ²²

1. Reduce the need to travel. We must better consider spatial planning to reduce the need for travel. Rural villages and towns have often become locked into having to travel to access amenities and services, as well as employment. Creating thriving and more self-reliant rural communities through a relocalisation of services is important to address the drivers of travel. However, when communities want and need to go further afield, they need access to sustainable travel and transport.

1.1 Enhanced digital connectivity can promote further flexible and remote working patterns and access to services, which directly reduces the need to travel. Whilst it is recognised that not all people can work from home, enabling and supporting those who could continue to work from home in the future could lead to a material reduction in the demand for travel – particularly in peak hours.

2. Shift to sustainable transport options. These themselves have a preferred hierarchy of 1) active

travel, followed by 2) mass/shared transit (low/no emissions), and 3) taxi (e.g. first/last-mile use). Overall, public transport and active travel (walking, cycling, scooting) have not been attractive enough and have not been invested in to the same extent as the roads resulting in greater use of cars, except for in a few locations.²³ Merely substituting existing transport usage in Devon with electric vehicles and maintaining current behaviours could be a “successful failure”, missing a once-in-a-generational opportunity to realise the benefits for health and wellbeing that increased active travel would bring²⁴ and the transformational changes that this could bring to Devon’s town and city centres.

We need to encourage the use of sustainable transport by making it the most attractive choice, particularly in urban areas. There are challenges to shifting rural transport to sustainable modes, particularly due to Devon’s dispersed geography and the need to access larger settlements for services. Further consideration will be needed on how best to deliver active travel opportunities for rural communities and improved public transport and shared mobility facilities for less densely populated parts of Devon. It is accepted that electrification will be a key part of decarbonising transport in rural areas.

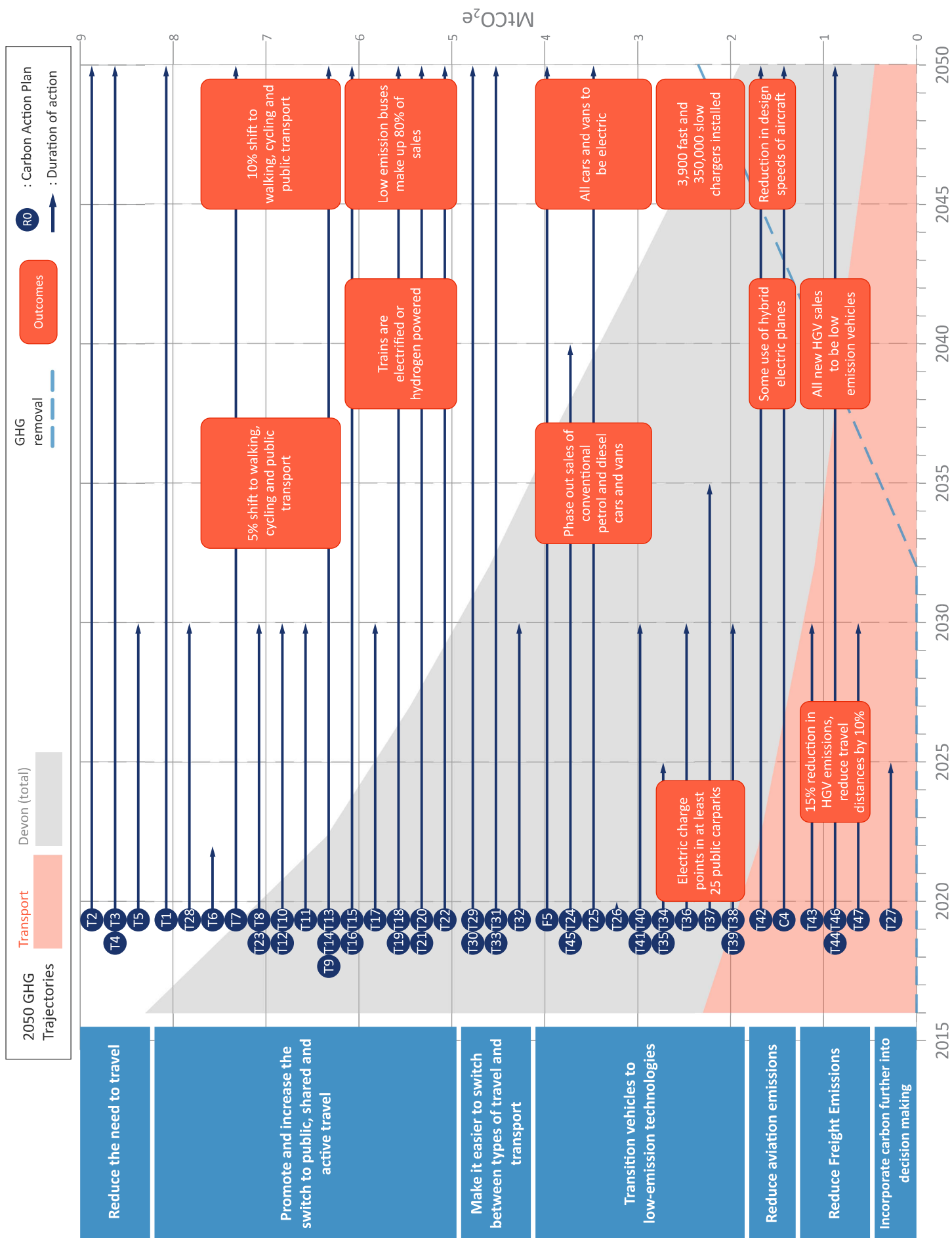
3. Electrification of the remainder of the private vehicle fleet and reducing emissions from larger vehicles and aviation. Personal vehicles will become electric and therefore we need to facilitate the increase of electric vehicle charging provision across Devon. Reducing emissions from larger vehicles and aviation poses distinct challenges from personal transport, as the power requirements are greater and the travel patterns are different. We signpost a range of actions for finding solutions for larger vehicles and freight movements. Devon has valuable aerospace expertise to contribute to pathways to net-zero aviation, but the timelines for bringing new aeroplanes to market are challenging and point to a need to constrain air travel nationally.

8.2 Key Outcomes

- Relocalisation of services and technology and to reduce the need to travel
- Access to village, town and city centres is enhanced for pedestrians, cyclists and public transport
- All benefit from the relocalisation of facilities and services, including the local economy, particularly small businesses
- We are all feeling fitter and healthier from being more active outdoors
- Wider environmental benefits, including reduced pollution and improved biodiversity
- Ultra-low emission vehicles are used for travel in rural areas and between rural and urban areas where the distances are prohibitive for active travel and existing commercial models for public transport are not viable
- A great proportion of people travelling by sustainable modes of transport

8.3 Actions





9. FOOD, LAND AND SEA



Enhancing carbon storage in our landscapes and coasts, providing for the needs of Devon's citizens and enhancing wildlife.

How Devon manages its land and seas is a crucial element of our response to climate change and the linked ecological emergency. Agriculture and fishing are key sectors of Devon's economy and have national importance for the delivery of food and the natural environment. In pursuing net-zero there will be new opportunities for land based and coastal livelihoods and farm diversification in Devon.

Emissions from agriculture, forestry and land use accounted for 17% of Devon's GHG emissions in 2018. The main emissions include: enteric fermentation in livestock (e.g. from cow's digestion of grassfeed), the management of manures produced by livestock, the application of organic and inorganic fertilisers to land, changes in land cover and the cultivation of organic soils.²⁵

This is a distinctive sector in that it is both a source of GHG emissions and provides significant opportunities for their removal from the atmosphere.

9.1 What Needs to Happen?

The Thematic Hearings and Call for Evidence supported the following actions:

1. Maximise carbon sequestration and storage by natural carbon sinks: trees, peat and other wetland habitats and soils. To do so, establish a Land Use Framework, underpinned by a Nature Recovery Network, to promote coherent long-term land-use planning to meet our needs, nature recovery and climate change mitigation and adaptation.

2. Establish funding mechanism for carbon sequestration and storage. Funding mechanisms considered include working with government on the Environmental Land Management Scheme, environmental net-gain initiatives and the development of carbon sequestration accreditation systems locally, as well as the creation of a Devon Carbon Investment platform.

3. Reduce Greenhouse Gas emissions from farming practices and increase soil carbon by enabling farmers and land managers to have access to impartial advice to help them transition towards a mix of regenerative agriculture, agroforestry, pasture-based farming and making best use of farm wastes for energy purposes.

4. Develop demand for and access to local, nutritious, sustainably produced food by: providing shared retail, processing and marketing resources for Devon's food producers; offering engagement programmes to empower people to engage with food and its production; and use the spending power of Devon's anchor institutions to support farming businesses to have a positive impact on the environment.

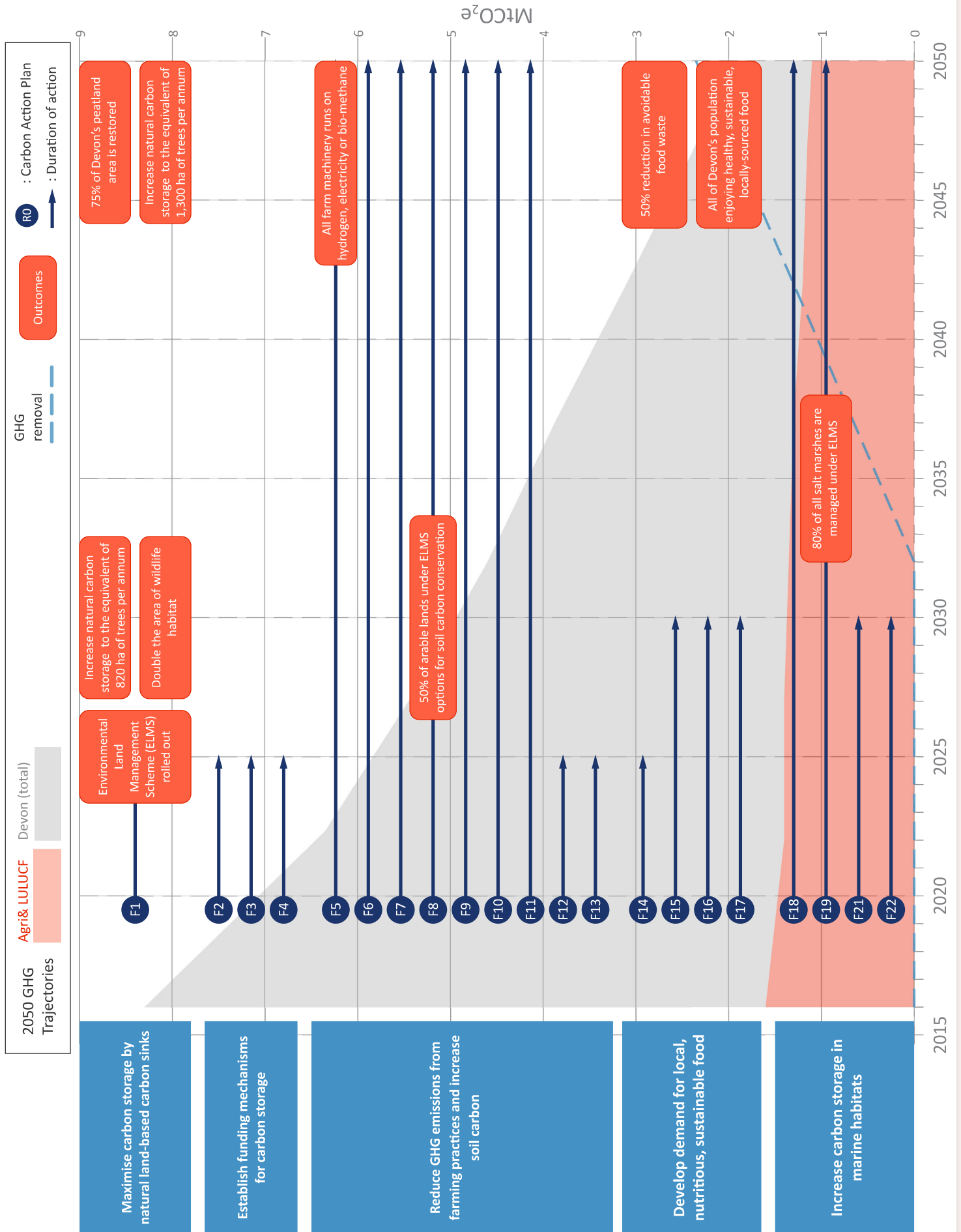
5. Increase carbon sequestration and storage in coastal and marine habitats. Devon must protect its important marine ecosystems and their carbon sequestration and storage capacity to reduce and prevent blue carbon emissions arising from their loss and degradation. Equally, measures are needed to restore and enhance lost and damaged marine and coastal habitats such as seagrass beds and saltmarsh to increase carbon sequestration and storage.

9.2 Key Outcomes

- The landscapes of Devon are enriched by actions to increase the sequestration and storage of carbon through carefully located tree planting, habitat restoration for wildlife and a more diverse farmed environment
- Actions to aid carbon sequestration and storage are located appropriately to greatly aid adaptations to climate change, such as flood control measures
- People are enjoying nutritious, healthy, high standard food, sourced locally where this provides a carbon benefit
- Rural businesses are enjoying a renewed focus on food quality and rural materials and a new market in carbon offsets linked to the delivery of other environmental services
- Devon leads the UK in engaging with natural capital approaches and developing carbon-offset standards for marine and terrestrial habitats

9.3 Actions





10. MAKING THE PLAN REALITY

10.1 Principles for Implementing the Devon Carbon Plan

A set of 17 principles have been established for implementing the Devon Carbon Plan, based on the key messages the Net-Zero Task Force heard from the public in the Call for Evidence and the Thematic Hearings. They must be considered when implementing each action. They have also been applied to the development of the plan.

1. Achieving net-zero is **not optional**, it is essential.
2. The role of this Plan is to **map out all of the change needed**, even if some are not possible yet.
3. The Plan needs to **reflect the specific qualities and characteristics of Devon** in planning for net-zero. This includes that Devon is more rural than much of England, is relatively remote, and has a significant proportion of upland and coast.
4. Although this is a Plan for Devon, it also **seeks common cause with other areas of the country facing similar challenges** to reach net-zero, and will seek to work with them to make finding the right solutions more efficient and effective.
5. All policies and actions must deliver carbon reductions across their life cycle; cradle to grave.
6. We must deliver and account for multiple benefits for health, well-being and resilience of communities and nature.
7. The term 'emergency' should have due consideration given to it. Any activities incompatible with net-zero emissions by 2050 at the latest must be reconsidered.
8. The implementation of the plan must be democratic and involve communities, so not 'done to' people.
9. **A just transition** is required to ensure that:
 - a. Vulnerable and low-income segments of society and rural communities are not disadvantaged.
 - b. The differing impacts of climate change on different groups e.g. disabled, minorities, gender, are addressed.
 - c. Actions to decarbonise Devon must not be at the expense of other communities or ecology globally.
10. Significant **behaviour change** must be recognised as a necessity.
11. We must reframe how we envisage our **local economy to move beyond using growth** as the measure of success.
12. The Plan must **recognise the varying geography of the County**, including the importance of linkage and networks.

13. **Spatial planning has a clear role** to reorganise society towards net-zero living:

- a. Ensuring that new development strongly contributes to the transformation required to achieve Net-Zero.
- b. The importance of 'place' and people's connection to a location has to be a priority in all future development.
- c. Spatial planning and transport planning need to be better linked. Relocalisation should be an organising principle wherever it can assist achievement of net-zero.
- d. A net-zero Devon needs to recognise the importance of rural areas in delivering net-zero not only for their communities, but also the growing importance of the resources and services they provide for larger towns and cities, including ecosystem services. Therefore, a more balanced emphasis is required between spatial planning for urban and rural areas.

14. **Resources**, energy, and mobility, should be considered in a **hierarchy**:

- 1. Avoid where possible, reduce our resource and energy consumption and the need to travel
- 2. Improve the efficiency of our use of resources and energy, e.g. reusing, recycling, insulating buildings and active and shared travel modes
- 3. Use renewable and low-carbon resources, e.g. timber, solar power and ultra-low emission vehicles.

15. We must be innovative and dynamic in our pursuit of a net-zero Devon, sometimes leading and steering policy **and action ahead of national initiatives**.

16. We must collaborate to make use of a range of financing opportunities, e.g.

- a. Find financially viable, self-sustaining solutions and work with the private sector to develop these.
- b. Work with national government to develop public-sector support.
- c. Community investment.

17. The implementation of this Plan will be **monitored regularly**, and a review will be triggered if carbon emissions are not reducing at the necessary pace.

10.2 Engagement and Ownership

Our goal is that everyone in Devon will know about this Plan and feel that they can play an active role in its implementation. Coordination is needed to ensure that actions to deliver the plan work in complementary ways towards agreed objectives, the consultation and the proposed governance structure aim to assist in this.

10.3 Governance

Many people and organisations will need to be involved in the implementation of the Devon Carbon Plan and the emerging Devon, Cornwall and Isles of Scilly Adaptation Plan. Furthermore, strategic oversight is needed of both projects of the Devon Climate Emergency response, the Devon Carbon Plan and also the emerging Devon, Cornwall and Isles of Scilly Climate Adaptation Plan being developed by the Climate Impacts Group. The new governance structure will need to aid collaboration and have representation from all corners and sectors of Devon and ensure opportunities to work with regional partners and government are harnessed.

Figure 3 shows suggested governance arrangements to encourage discussion. The Devon Climate Emergency partners welcome your thoughts and feedback on this and your suggestions for alternative arrangements.

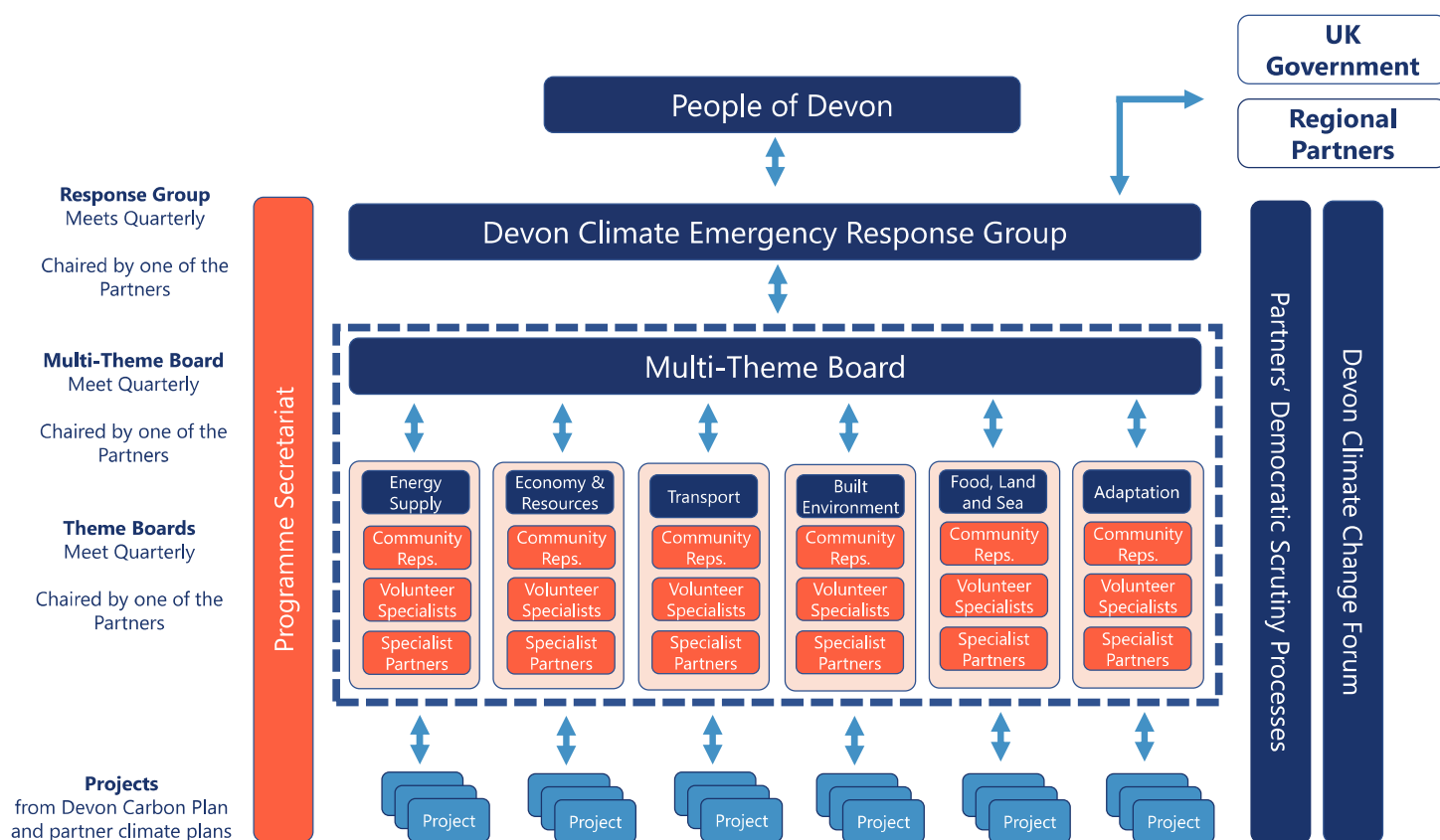


Figure 3 Suggested governance arrangements for the implementation of the Devon Carbon Plan and. Theme Boards representing the themes of the Devon, Cornwall and Isles of Scilly Adaptation Plan. could be added in due course.

Further description of the component groups of the proposed governance structure and how they interrelate is given in Section 12 of the Plan.

10.4 Funding and Investment

Achieving net-zero carbon in Devon by 2050 will require substantial investment, but there are major economic opportunities identified throughout this Plan for the private and community sectors to develop innovative business models and green finance products to help fund the transformations to Devon's energy system, homes and workplaces, the way we communicate and travel, food systems and the management of Devon's countryside.

Many of the resources to deliver the Plan are yet to be identified and secured. Many actions will also require further local analysis. We need to be innovative in funding the actions in this Plan and to work towards self-financing models which generate local income that can be re-invested into further action.

This Plan highlights the opportunities for public sector investment. We would like to work with national government on these, Building Back Better as the UK and Devon respond to COVID-19.

11. WHAT HAPPENS NEXT:

11.1 Responding to the Public Consultation

The public consultation on the Interim Devon Carbon Plan runs for 10 weeks until the 15th of February 2021. The consultation allows you to comment primarily on:

- Which date you support for reaching net-zero
- The key outcomes and actions of the Interim Devon Carbon plan

There is also an opportunity to give more detailed feedback on:

- All specific actions in the plan, including their relative importance – you can either complete the sections of the consultation survey which are most relevant to your interests or expertise or complete all the sections
- Any omissions from the plan
- The issues highlighted as potential topics for discussion at the Citizens' Assembly, including their prioritisation
- Projects and strategies already occurring which contribute to the fulfilment of the plan
- The proposed governance structure for implementing the plan, including your ideas about representatives of organisations and communities you would like to see involved

11.2 Engaging with the Citizens' Assembly in 2021

Due to delay caused by the Covid-19 pandemic, the Citizens' Assembly is now expected to occur online during the summer of 2021. Approximately 70 citizens will be invited to participate. Participants will be selected using a stratified random sample of Devon's citizens to achieve membership that is representative of Devon's population as whole. It is not possible to put yourself forward to participate in the Citizens' Assembly, however if you receive a letter inviting you to express your interest in participating, we welcome your response.

The resulting conclusions and recommendations from the Citizens' Assembly will be shared later in 2021 and will inform the Final Devon Carbon Plan. The Final Devon Carbon Plan will recommend actions to address the issues considered by the Citizens' Assembly.

11.3 Responding to the Public Consultation on the Final Devon Carbon Plan

The Final Devon Carbon Plan will be published for public consultation after the Citizens' Assembly. This is another opportunity to feed into the process, particularly on the actions recommended for the more controversial issues which will have been considered by the Citizens' Assembly.

11.4 Helping to Make the Plan a Reality

We encourage everyone to look at the Interim Devon Carbon Plan and later the Final Devon Carbon Plan and select the actions you are most able to help with to achieve net-zero emissions across Devon. For more individual-centred actions you can browse a growing set of resources on the Devon Climate Emergency website at www.devonclimateemergency.org.uk/individual-top-tips.

Something that everyone can do is to raise awareness of the Plan and its goals within your network. Please talk to your friends, family and colleagues about the Plan – we want everyone to know about the Plan so that they can understand their role in it.

12. CLOSING REMARK

Now is the right time to set a target to achieve net-zero emissions and put in place a plan to reach it. The broad-based involvement of businesses, the public sector, voluntary organisations and communities working together will help to create a resilient, net-zero carbon Devon where people and nature thrive and will provide an example for other counties and regions as part of the wider collective effort to address climate change.