EASTBOURNE
Carbon Neutral 2030

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CO₂
2030
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ECN2030
Eastbourne Borough Council Climate Emergency Strategy

Baseline Report and Action Plan
November 2020

Contents

Introduction

This report has been completed to provide the baseline evidence against which we can measure the borough's progress towards our carbon neutral target by 2030 and sets out the initial action plan.

The Council and the Eastbourne Eco-Action Network CIC (EEAN CIC) will use this work to help inform the nature and extent of actions needed.
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- Section 1 sets the context for this report: the policy background and how the town will work together to deliver Eastbourne Carbon Neutral 2030 (ECN 2030). It also defines what we mean by 'carbon neutral'.

- Section 2 sets out the current baseline emissions profile in Eastbourne determined from the (carbon dioxide only) BEIS Local Authority Emissions data from 2017, it provides an update to this using the 2018 data released in July 2020, an overview of historic trends and domestic contextual data.

- Section 3 provides the Council's baseline emission data for 2018/19

- Section 4 of this report provides a more detailed borough footprint also from 2017 data, which incorporates additional greenhouse house gases and is reported as carbon dioxide equivalents. This uses the Scatter methodology and has been used to produce a future emissions pathway defined by a range of measures and interventions across the energy system.

- Section 5 provides information on the priority themes for action

- Section 6 contains the action plan for reducing emissions within the borough for the period 2020/21

- Appendices-
  1. SCATTER interventions and frequently asked questions

1. Setting the scene for ECN2030

1.1 UK Policy Background

Various national targets and regulatory drivers have been created to incentivise action to avoid the potentially devastating impacts of climate change. These include:

The **UK Climate Change Act 2008** is the principle piece of legislation legally committing the UK to deliver net-zero emissions by 2050 against a 1990 baseline. It previously required an 80% emission reduction but was updated in 2019 after the Climate Change Committee produced a report called 'Net Zero- The UK's contribution to stopping global warming'. As a result the UK became the first major economy to commit to a net zero carbon target by 2050.

The 2016 Paris Agreement, ratified by the UK, has the aim to 'strengthen the global response to the threat of climate change by keeping a global temperature rise this century to well below 2°Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°Celsius'

The **Clean Growth Strategy** (2017) and **The Road to Zero** (2018) report sets out illustrative pathways as to how the Government plans to meet the legislated fourth and fifth carbon budgets through a transition to a low-carbon economy. Together they include ambitions to phase out petrol and diesel vehicles, improve the energy efficiency of homes and targets for low carbon electricity generation, smart grids and energy storage.

In early January 2018 the government's Department for Environment, Farming and Rural Affairs **released A Green Future: Our 25-Year Plan to Improve the Environment**. The plan sets out government action to help the natural word retain and regain good health, deliver cleaner air and water, protect threatened species and improve wildlife habitats. 10 key objectives fall from this which range from clean air and thriving plants and wildlife to mitigating and adapting to climate change and minimising waste.

The Environment Bill 2020 will put the environment at the centre of policy making. It will make sure that we have a cleaner, greener and more resilient country for the next generation.

The Agricultural Bill will have the objectives of protecting the environment alongside ensuring food production, and rewarding those farmers who take the health of soil, the quality and management of water, and the abundance of pollinators seriously.

The National Planning Policy Framework and the Building Regulations (specifically Part L) are key to delivering the low carbon development agenda and are being updated and reviewed to progress the move to the **Future Homes Standard.**

Gear Change (2020) -A bold vision for cycling and walking sets the governments ambition to accelerate the uptake of active travel to shift the mobility away from the car and take advantage of the multitude of co-benefits this will bring.

1.2 Regional Policy Context

National policies are subsequently translated into regional strategies that will work to deliver the largescale infrastructure changes and upgrades needed to enable our own local decarbonisation and economic regeneration. This strategy recognises those plans and the Council will work with these partners to ensure that our understanding of what is required for our communities is addressed, best practice is shared and economies of scale are achieved where possible.

Key regional strategies include:

- The **East Sussex Environment Strategy** (2020) which seeks to 'contribute to the emerging urgent global and local environmental challenges and to maximise the available opportunities.' The strategy identifies local specific challenges and opportunities and has identified the five priority themes of climate change, natural capital, air quality, water and resource efficiency.

- The **South2East Energy Strategy** (2018) was developed by three Local Enterprise Partnerships (LEPs), which are joint private / public organisations intended to drive economic growth in a broad geographic area encompassing Eastbourne. The Strategy outlines a vision for achieving clean growth through the year 2050, with a focus on the power, heat and transportation sectors.

- The **East Sussex Local Transport Plan** (2011) runs up to 2026 and seeks to improve sustainable transport within the county and the **Transport Strategy for the South East** (due 2020) by Transport for the South East which seeks to work regionally refocusing the approach from 'planning for vehicles', to 'planning for people', and 'for places'

- Eastbourne borders the **South Downs National Park** which has recently produced a **climate change adaptation plan.**

- **Sussex Natural Capital Investment Strategy (2019-2024)** Produced by the Sussex Local Nature Partnership it is a plan to conserve, enhance and expand Sussex's Natural Capital and ensure that Sussex residents share in the benefits provided by healthy, well-functioning ecosystems

1.3 Local Policy Context

- **Planning policy**

The Eastbourne Core Strategy Local Plan is used to guide decisions on the location, amount and type of development the Borough needs. This includes ensuring that new development contributes towards the town becoming carbon neutral; identifying land and uses that are required to create a prosperous economy; protecting what we value in terms of the environment and heritage of the area; creating thriving communities that meet the needs of local residents; delivering the right types of homes in the right locations; and providing effective infrastructure to sustain future growth. Eastbourne's current Local Plan, which consists of the Eastbourne Core Strategy Local Plan 2006-2027 (2013), the Town Centre Local Plan (2013), the Employment Land Local Plan (2016), and the saved policies from the Eastbourne Borough Plan 2001-2011 (2003), is considered to be out of date and is being reviewed. The council concluded its consultation on its 'Eastbourne's Direction of Travel: Issues and Options for the Eastbourne Local Plan' document in January 2020. The consultation, along with impending national changes to planning policy will inform the production of a new Local Plan and associated policies.

- **Housing Strategy**

The new Eastbourne Housing Strategy 2020-2024 was published in March 2020. It was noted that comments made during the consultation recognised the importance of the need to reduce emissions from housing and to balance new development with investment in public transport and infrastructure.

1.4 What do we mean by carbon neutral?

We have stated that we wish to **"achieve a carbon neutral town by 2030"**

This means that we expect to have **net zero** carbon dioxide (CO_2) emissions by 2030. To achieve this we expect to have lowered our emissions as much as possible and captured the remaining amount through carbon capture projects.

As a Borough Council we understand that reducing our emissions to absolute zero within the next decade is extremely difficult. We can only directly influence a small proportion of emissions but our sphere of influence is wide and in conjunction **with our partners we can achieve this target** and do our bit to keep global temperatures within the 1.5°C increase beyond which catastrophic climate change is predicted. It will also help with our national target to meet the requirements of the Paris Agreement.

No later than 2030, we will have mechanisms in place to invest in projects within the town that **capture all of our residual carbon emissions**

1.5 Working Together Locally

Meeting the target of a carbon neutral town by 2030 is not something the council can achieve alone. The council must lead by example and enable residents, businesses and visitors to reduce their carbon emissions also.

To meet our aims the council is working in collaboration with Eastbourne ECO Action Network Community Interest Company (EEAN CIC) set up to achieve the ECN2030 goal. It has a reach to over 975 business, charities and social organisations and has a growing membership of more than 400 local people with 8 active project working groups.

Eastbourne officially began its carbon neutral journey on January 18th 2020, with the launch of Eastbourne Carbon Neutral 2030 (ECN 2030) at the Welcome Building in the Devonshire Quarter. It was a hugely successful event with 40 exhibitors, around 1,000 visitors, and speakers from the NHS and Bespoke, Friends of the Earth and XR Eastbourne in addition to EEAN CIC Director Miles Berkley and Councillor Jonathan Dow.

There were 244 comments posted on the comments wall at the launch event and these, along with our carbon baseline work, have helped inform the themes for our work priorities described later in this document.
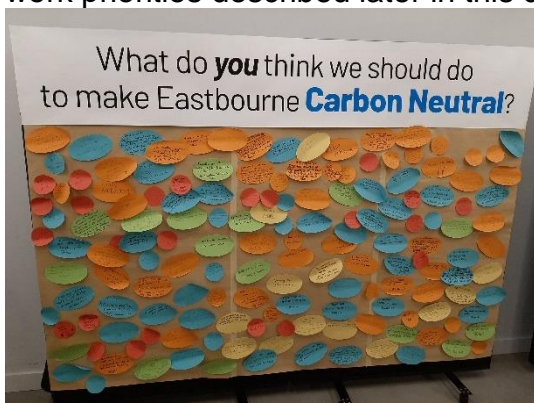
The majority of comments, 47%, were related to the decarbonising of transport through increasing use of low carbon public transport and by cycling.

The other key themes that emerged were;
waste and recycling; energy and housing; tourism; and biodiversity.

Overall, attendees were optimistic and keen to see projects delivered, but they also shared their concerns about the timescales and lack of resources we have to deliver such change at a local level.

2. The Borough Baseline

2.1 Introduction

The emissions baseline year is defined as 2017.

The baseline is a carbon dioxide only figure that is derived from annually reported BEIS data published 2 years in arrears. We now have access (July 2020) to 2018 data and as such this update is used for the baseline calculation and historical trend analysis. Moving forward this updating of data will be provided in an annual update report that will be produced by September each year.

As and when BEIS update their methodology the council baseline will likewise be updated.

BEIS data is being used for the baseline as this is the most consistent method used nationally and poses the least amount of admin burden on the Council. There is also historical data that does not exist for other calculation methodologies such as Scatter. [Details of the BEIS methodology can be found by clicking here](#).

Note that the BEIS dataset does not cover all potential sources of greenhouse gas emissions within the Local Authority. For example, in the agricultural sector, it includes the CO_2 emissions from fuels used in agricultural processes and vehicles but does *not* include methane emissions from livestock.

2.2 Scope of the analysis

In accordance with the [Greenhouse Gas (GHG) Protocol](#) and the Department of Business, Energy and Industrial Strategy (BEIS) 'Emissions Reduction Pledge 2020' guidance, for the purpose of greenhouse gas reporting, emissions are divided into three categories:

• **Scope 1** This refers to direct emissions from the combustion of fuels such as gas, oil, petrol, diesel, coal, or wood. This primarily includes fuel used in homes and other buildings to provide heating and hot water, and petrol or diesel used in vehicles. For the borough wide emissions estimates, this is restricted to fuels used within the geographic boundaries of Eastbourne Borough.

• **Scope 2** Indirect emissions associated with the generation of electricity. For the borough wide estimate, this includes emissions from any electricity purchased for use within the borough.

• **Scope 3** Other indirect emissions that result from activities taking place within Eastbourne Borough.

The BEIS dataset does not currently report Scope 3 emissions. Notably this excludes emissions from aviation and consumption (the things we buy that are made outside the borough) but the council acknowledges that it has a key role in influencing residents with regards to reducing scope 3 emissions from things such as purchasing goods. This is reflected in the council action plan and in the work of local partners such as EEAN.
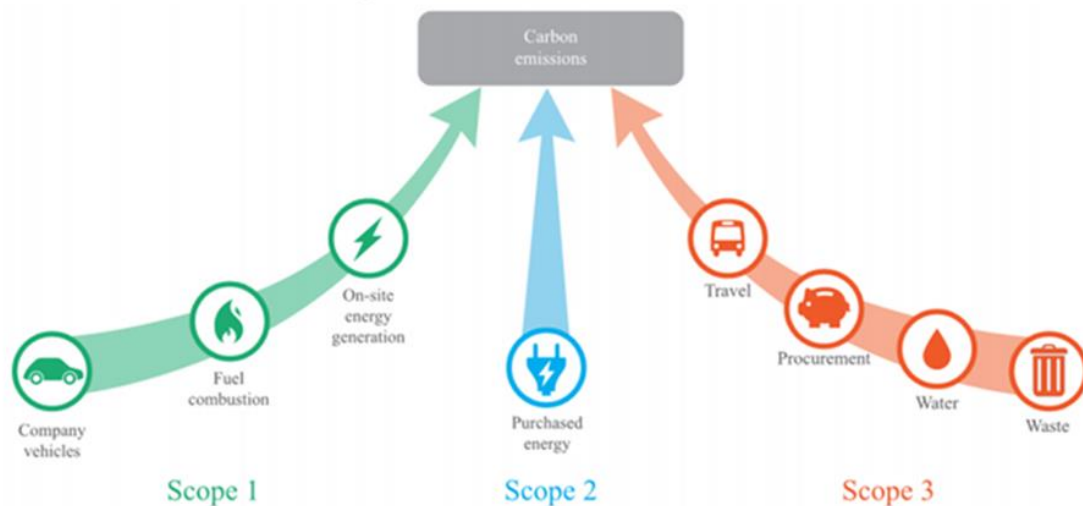
2.3 Eastbourne 2017 baseline emissions profile

The current emissions profile for the area administered by Eastbourne Borough Council is shown in Fig.1. with the data used to compile this in Table 1.

The profile has been compiled from the 2018 BEIS inventory which is the most recent available.

The baseline for 2017 = 296.7 ktCO$_2$

Because the level of information varies for different sectors, in the interest of simplicity and clarity, for the purpose of this report sectors have been grouped as follows:
• Non domestic: Includes fuel used in the industrial, commercial, public and agricultural sectors, for uses other than transportation
• Domestic: Domestic sector uses other than transportation
• Transport: Includes both road and rail transportation, although rail represents a very small portion of the total. Electricity used for transport, is not yet represented in the BEIS dataset.

Land use acted as a net carbon sink of 4.3 ktCO$_2$ or 1.5% of borough emissions. This amount of carbon dioxide was removed from the atmosphere by green spaces, trees and plants for example, as such this figure reduces **the overall borough emissions to 296.7kt.**

The largest emitter in the borough is the domestic sector at **44%** of total emissions. The non-domestic sector accounted for **30%** whilst transport followed closely behind with **26%**.

By fuel type, the largest emission source is from grid supplied gas at **41%** of emissions, primarily this is used for heating purposes within the borough. Electricity use accounts for **30%** of emissions.

Table 1. Eastbourne Borough emissions data table (2017)

	Sector source ktCO$_2$				Total Adjusted (ktCO$_2$)
	Transport	Non-domestic	Domestic	Total	
Transport (all fuels)	79.5	-	-	79.5	-4.34 Land use, land use change and forestry (LULUCF)
Agriculture (all fuels)	-	0.9	-	0.9	
Other fuels	-	7.4	1.95143	9.4	
Electricity	-	47.6	41.73729	89.3	
Gas	-	34.8	87.23008	122.0	
Total by sector	79.5	90.7	130.9188	301.1	**296.76**
Percentage of unadjusted total	26.4%	30.1%	43.5%		

Fig. 1 Eastbourne Baseline Emissions 2017
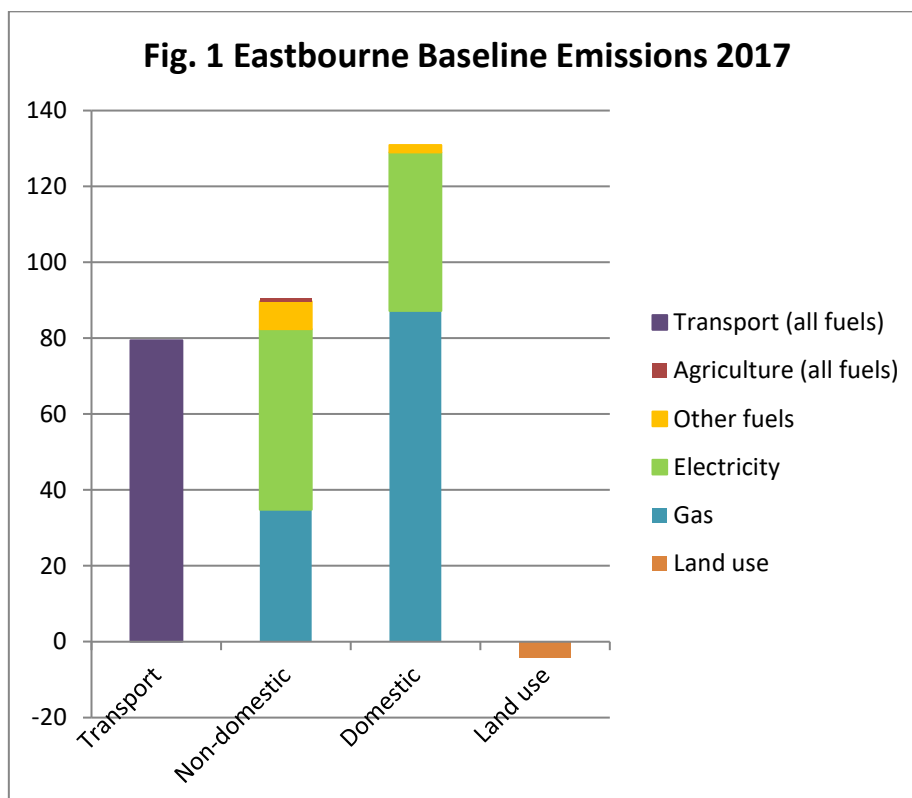
2.4 Emissions data for 2018
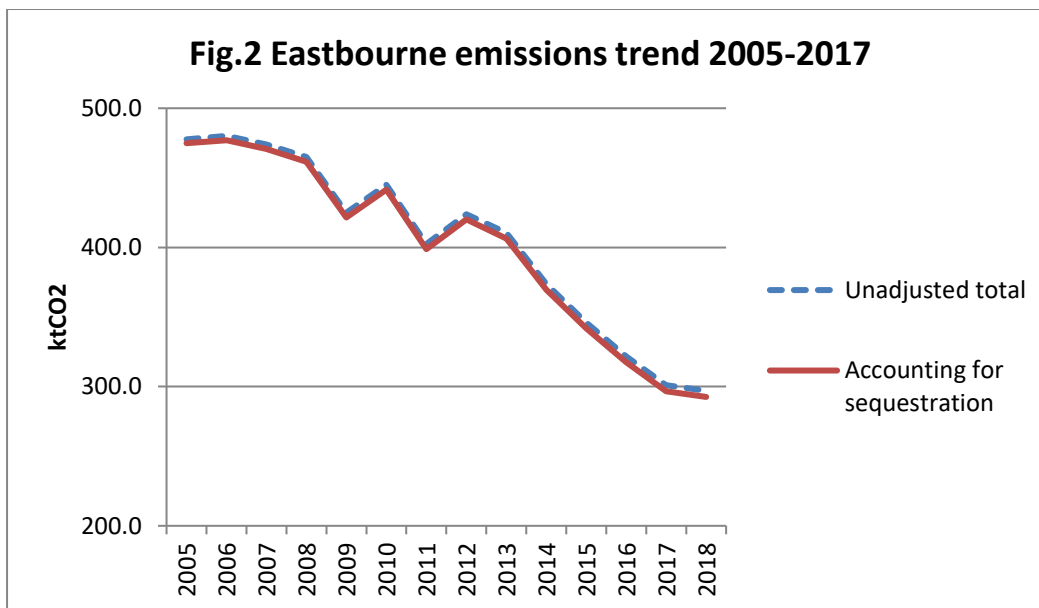
The emissions for 2018 = **292.6 ktCO$_2$**

This is a 1.4% decrease on the 2017 baseline.

2.5 Eastbourne Borough Emission Trends

In order to place these figures into context it is helpful to consider past trends.

On average, as shown in Figure 2 and in the emissions profile in Figure 3, emissions have fallen by around 38% since 2005. This is slightly better than regional and national trends (-35% nationally and -35% in East Sussex).
The downward trend has been largely due the decarbonisationsation of the national electricty grid and also more general improvements in the energy efficiency of products and equipment. The decrease has slowed recently as we use more electrical technology which offsets the improvement in efficiency and may also reflect the increase in LGV last mile deliveries.
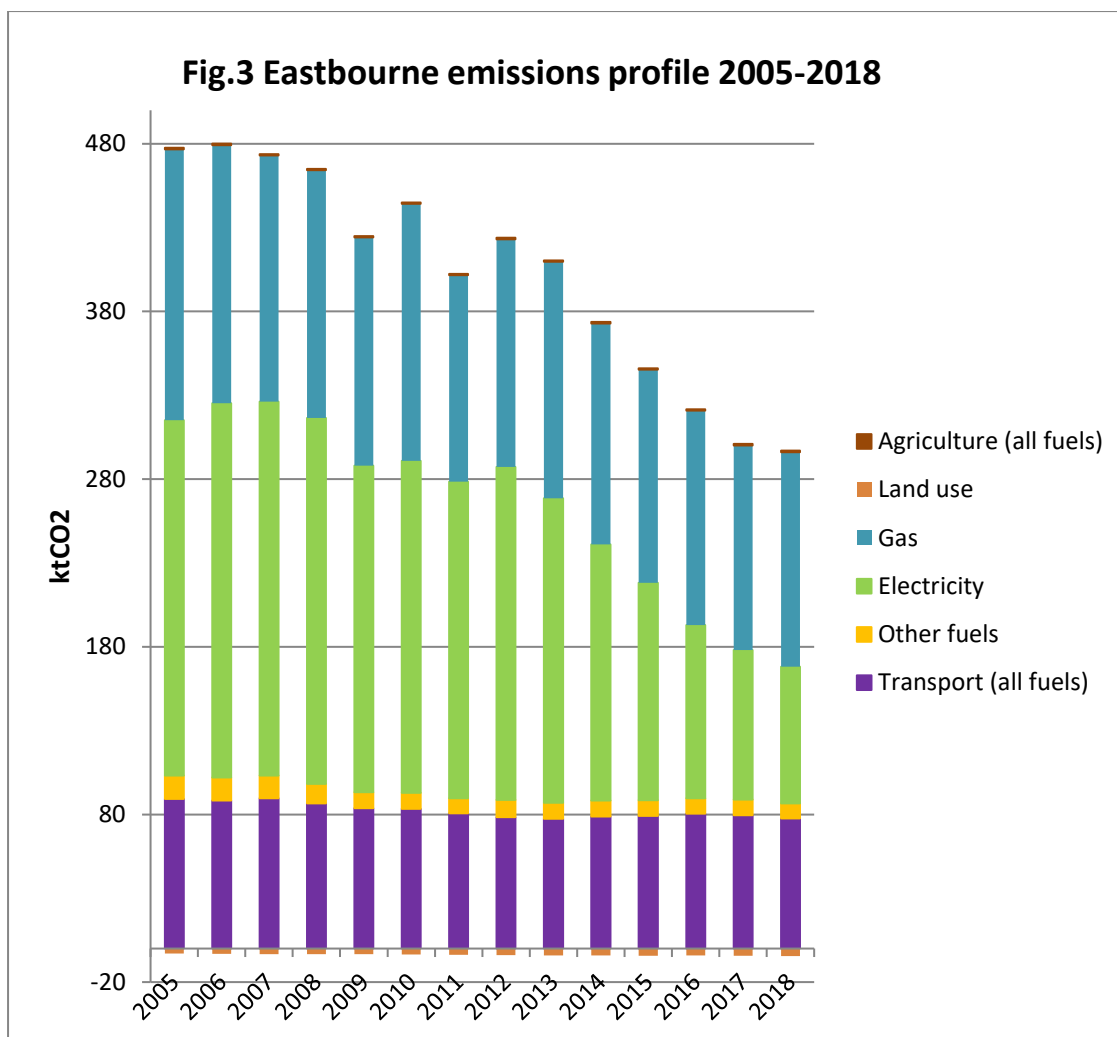
Fig.2 Eastbourne emissions trend 2005-2017

Fig.3 Eastbourne emissions profile 2005-2018

Legend:
- Agriculture (all fuels)
- Land use
- Gas
- Electricity
- Other fuels
- Transport (all fuels)

Table 2. Percentage change in emissions by sector 2005 to 2018

	Transport (all fuels)	Agriculture (all fuels)	Other fuels	Electricity	Gas	Land use
% Change	13% decrease	8% decrease	35% decrease	62% decrease	21% decrease	52% increase

Table 2 above shows that the largest emissions change has occurred due to decarbonisation of the electricity grid at a national level. Gas and other fuel use has also decreased, likely due to the move away from solid and oil based heating in older properties and businesses and the increasing efficiency of gas boilers.

Although only representing a small percentage of the overall borough emissions land use sequestration has increased demonstrating that although we are largely urban the borough has potentially improved the ability of our land to capture carbon (it should be noted that in general there is more uncertainty around these figures than those for fuels and overall natural sequestration is currently providing a very small contribution to carbon capture in the borough).

Regarding transport, despite a decrease of 13% it is evident form the Fig.4 that there has been a substantial increase in the use of diesel cars, this mirrors the national

trend of the last few years of the rising popularity of large SUV type vehicles whilst there has been a marked decrease in fuel use of petrol cars as engines have become smaller & more efficient. There is also an increase in diesel light goods vehicle fuel consumption, this is most likely due to the relatively recent increase in 'last mile' type delivery services due to the increase in home based internet shopping.

Fig.4

Fuel use by vehicle type
Eastbourne, 2005-2017

— Buses — Diesel cars — Diesel LGV — HGV — Motorcycles — Petrol cars — Petrol LGV


Source: BEIS
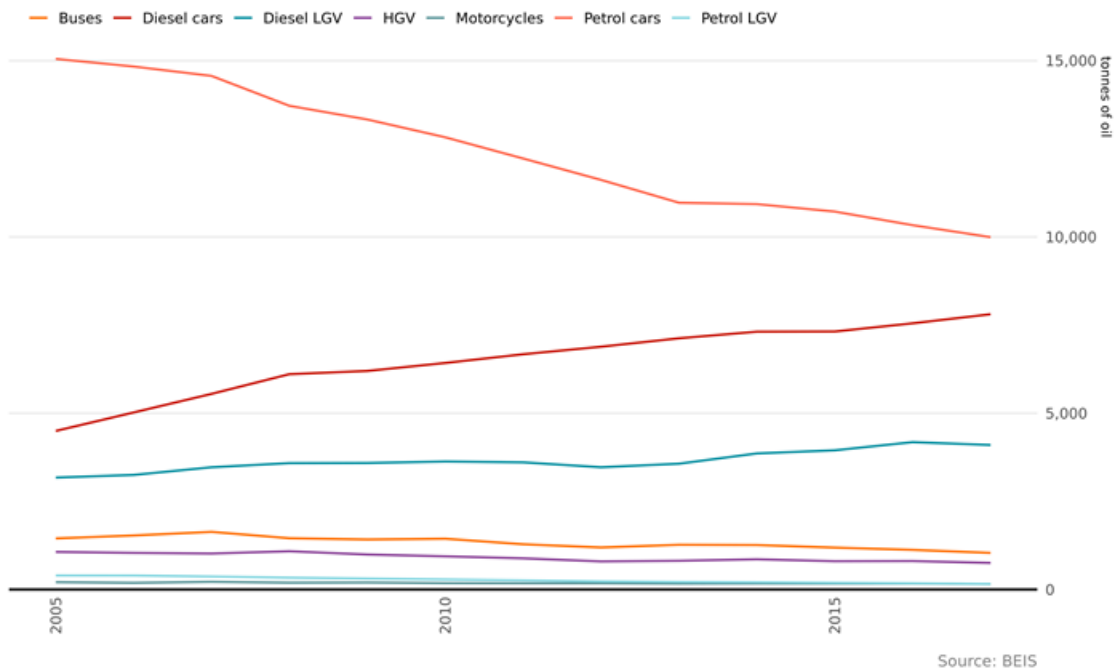
2.6 Contextual data

Eastbourne town has a variety of build types and ages as described by Fig.5 and a total of just under 51,000 domestic properties.

A substantial proportion of dwellings are pre 1970's with the single largest age bracket being pre-1900. This type of stock will be much harder to improve energy efficiency wise than newer build properties though we know that there remains post 1990 properties within the town that are still without modern levels of loft insulation and cavity wall.

The majority of properties in Eastbourne are EPC Band D or below as shown by Fig.6 though it is acknowledged that this data cannot always be considered accurate

Fig.5 Build period of domestic dwellings

Build period of domestic dwellings

Eastbourne, 2018
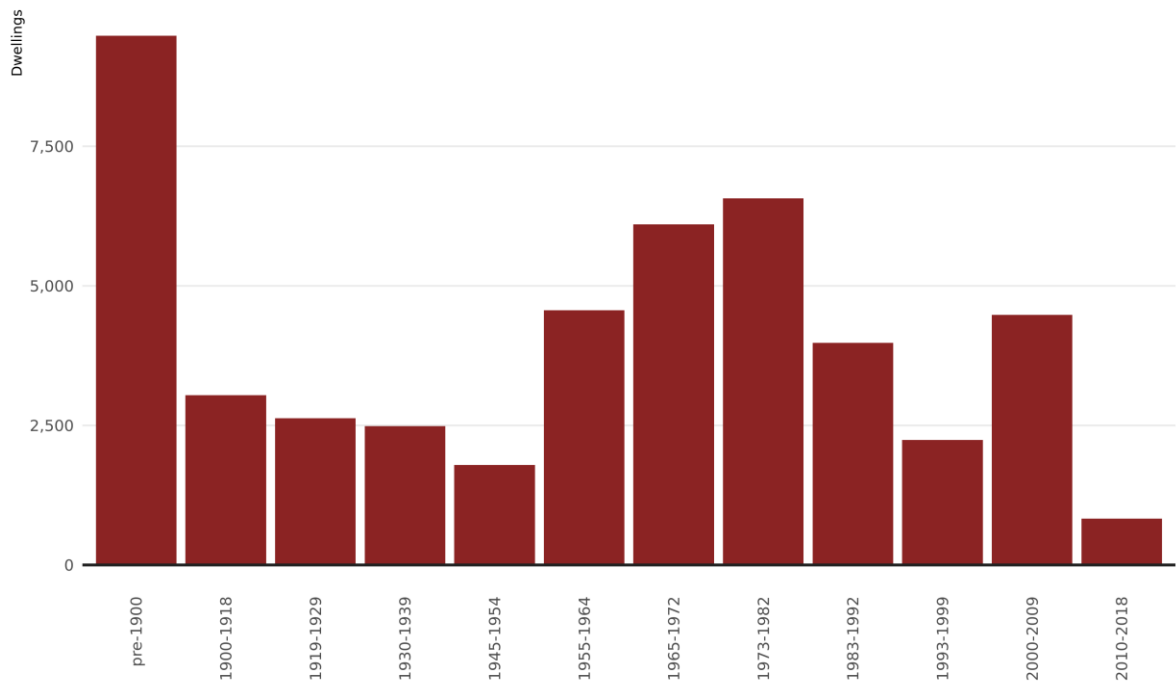
Source: Valuation Office Agency

Fig.6. EPC profile of Eastbourne dwellings (taken from CHROM analysis December 2019 courtesy of Warmer Sussex)

EPC Profile
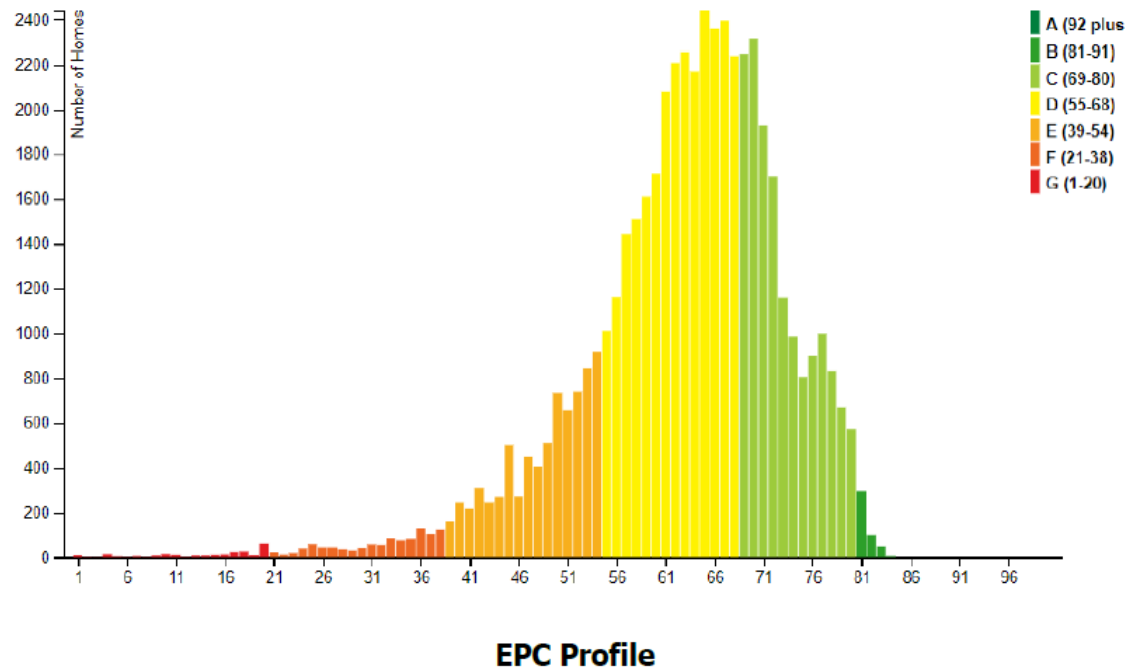
Figure 7 below shows the distribution of fuel poor households.

This data along with house archetypes will inform future work planning regarding energy efficiency and sustainability improvement works. It also provides evidence and knowledge to support bids to funding streams such as the recent Green Homes Grant.

Fig.7. Proportion of households in fuel poverty by Lower Super Output Area

Proportion of households in fuel poverty by LSOA

Eastbourne, 2017
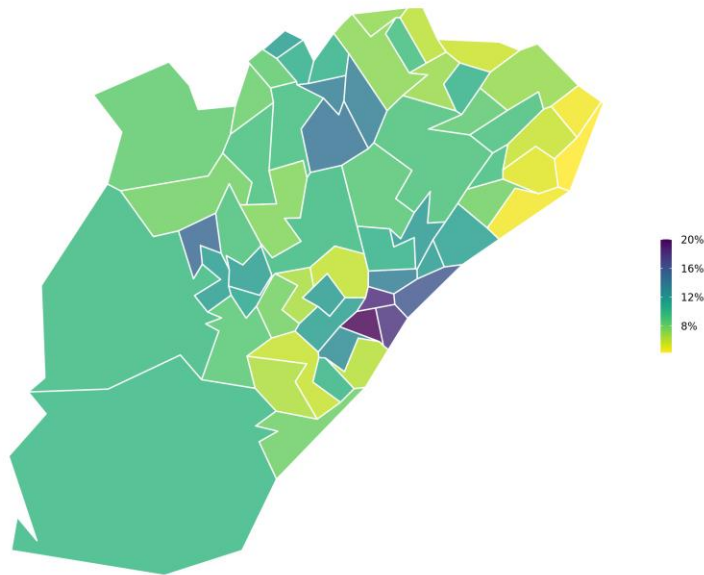
Contains Ordnance Survey data © Crown copyright and database right 2019
Source: BEIS

3.Eastbourne Borough Council Carbon Baseline 2018/19

3.1 Introduction

This report is provided to define the baseline against which the council will monitor its own progress against its target to be carbon neutral by 2030.

We have calculated the baseline using the Greenhouse Gas (GHG) Protocol methodology and the appropriate annual conversion factors for 2018 and for 2019 issued by the Department for Business, Energy and Industrial (BEIS). By using this method and these figures we are ensuring that the baseline emissions we measure can be reported accurately every year to 2030 using a peer reviewed and agreed process. Our choice of which emissions we include within the baseline have also been chosen with this in mind.

Baseline emissions are reported as carbon dioxide equivalents (CO_2e) and are calculated using the Scope 1 and 2 emissions detailed in the table below.

Scope 3 emissions are not something we directly control, they occur when we buy a product or service and the emissions are produced somewhere else. They can be more difficult than scope 1 and 2 to determine accurately. We will report these emissions as our data collecting procedures improve and where we feel the figures will be accurate. Our ability to reduce emissions from scope 3 sources will also be more difficult but we will work to report them and will clarify those where we have influence or not (for example- our emissions from water use is within our direct sphere of influence, we can try to reduce consumption once we know what we consume accurately).

Table 3. Data sources for baseline

Category	Description	Data used in this analysis
Scope 1	Direct emissions from sources owned or controlled by Eastbourne Borough Council	-Metered gas data (for buildings where the Council pay the gas bills)- including Eastbourne Homes Limited. -Litres of fuel consumed for Council fleet vehicles and equipment from tank purchasing records and fuel card records. -Actual fuel records from the Kier waste collection contract are unavailable for 18/19- we have extrapolated based on records from SEESL that were incurred during the first 3 full months (Aug-Oct 2019) of the new contract during which no changes were made to vehicles or rounds. Actual data will be used for 19/20.
Scope 2	Indirect emissions from the generation of energy purchased by Eastbourne Borough Council	-Metered electricity data (for buildings where the Council pay the electricity bills)- including Eastbourne Homes Limited
Scope 3 (not	Indirect emissions that result from other activities that	-Electricity transmission losses

included in baseline)	occur in the value chain, either upstream or downstream.	

3.2 Baseline emissions

Based on the Council's directly controllable consumption of gas, electricity and fuel the baseline emissions for 2018/19 financial year are approximately **3,047 tonnes CO$_2$e (tCO$_2$e).**

The CO$_2$ portion of this figure is included within the Borough wide emissions of 296.76 ktCO$_2$. As such the Council's Scope 1 and 2 emissions accounts for around **1%** of the overall footprint for the borough.

Fig.8 Eastbourne Borough Council - Baseline 2018-2019

25%

Total = 3,047 tCO$_2$e

48%

27%

■ 1 Gas
■ 1 Liquid Fuels
■ 2 Electricity
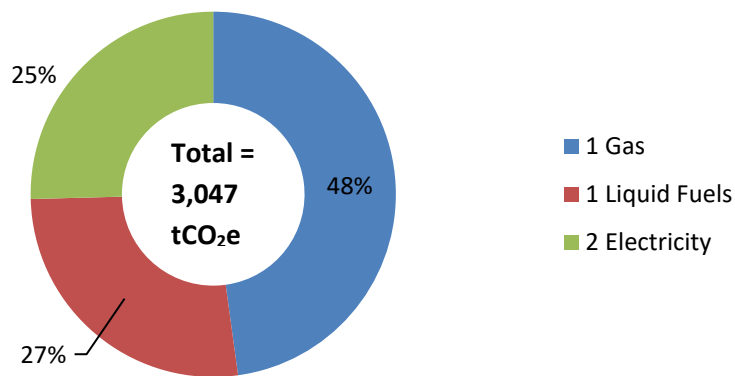
Fig.9 Scope 1 emissions by source

34%

32%

Total= 2,273 tCO$_2$e

2%

32%

■ Gas- Council buildings
■ Gas- Eastbourne Homes
■ Council liquid fuel use
■ Waste Services liquid fuel use
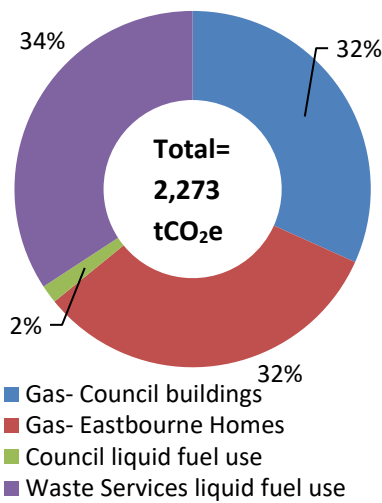
Fig.10 Scope 2 emissions by source

25%

Total= 774 tCO$_2$e

75%

■ Council buildings
■ Eastbourne Homes Limited

16
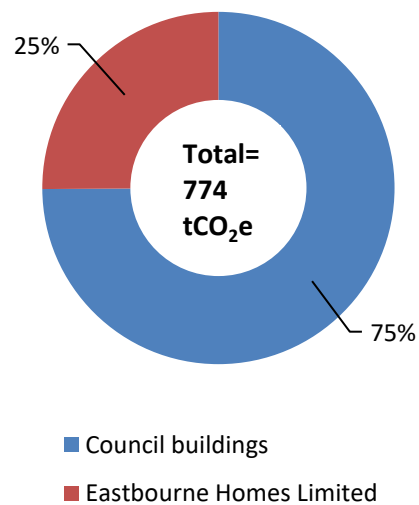
Fig.11 Emissions by operational area
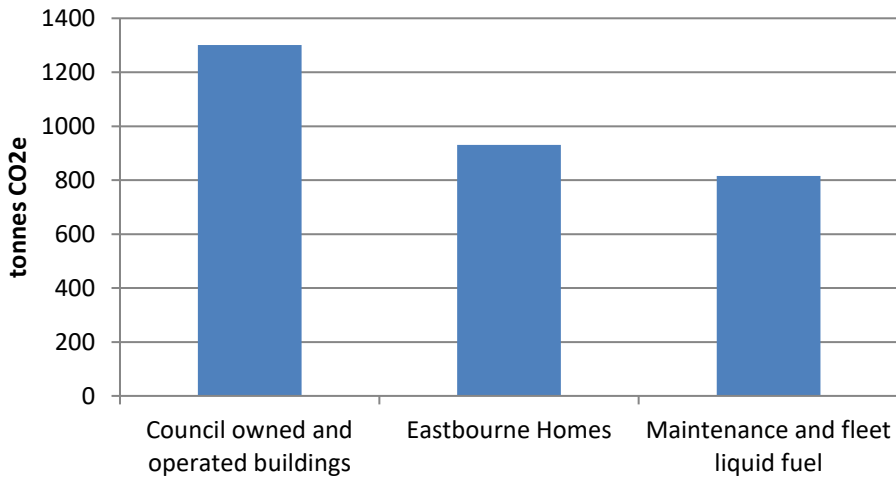
Fig.11 shows that our energy use within council owned and operated buildings accounts for the bulk of our emissions, **43%** of the total, so decarbonising this area will be key to hitting our net zero carbon goals. Nearly half of the gas consumption of our own buildings is from the crematorium (Fig.13).

3.3 Council owned and operated buildings

Fig.13 Gas use - kWh consumed
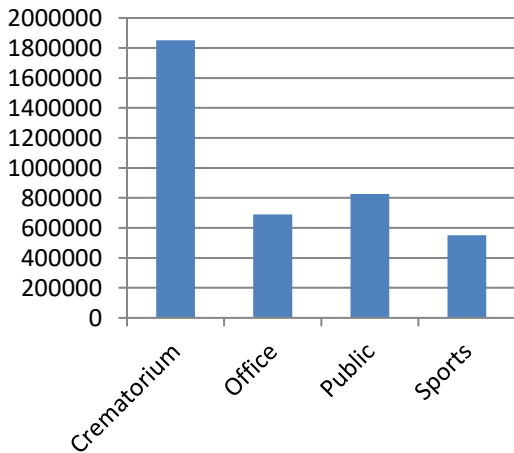
Fig.14 Electricity use- kWh consumed
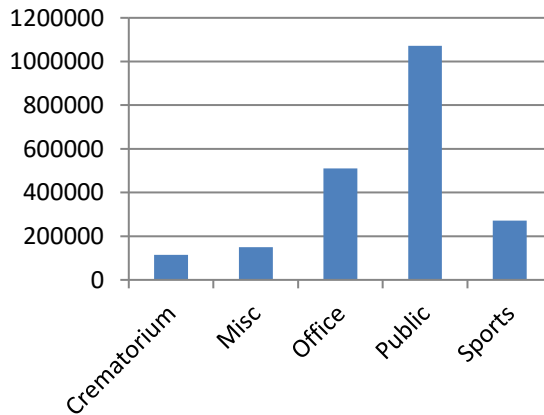
This category, shown in Fig.11, includes consumption from: offices (inc. depots and stores); our public use assets such as the theatres, the Tennis Centre, parks and public conveniences; our sports centres (that have not been outsourced); our crematorium; and miscellaneous electricity supplies such decorative lighting, pumps, aerial boosters etc.

The council consumed a total of 7,923.754 kWh of gas and 2,819,568 kWh of electricity in 2018/19.

Our office at Grove Road also has solar panels which reduces our purchased electricity consumption. We are in the process of determining the generation capacity we have at our offices and on our housing stock and how we go about increasing this capacity.

The gas and electricity use of our operational buildings account for **43%** of our baseline footprint.

3.4 Eastbourne Homes Limited (EHL)

The energy consumed by EHL is largely through supplies to communal areas and public way lighting.

EHL makes up **31%** of the baseline footprint and nearly 80% of this is from gas consumption (Fig.15)

Fig. 15 Eastbourne Homes Limited emissions

21%

79%

- EHL gas
- EHL elec
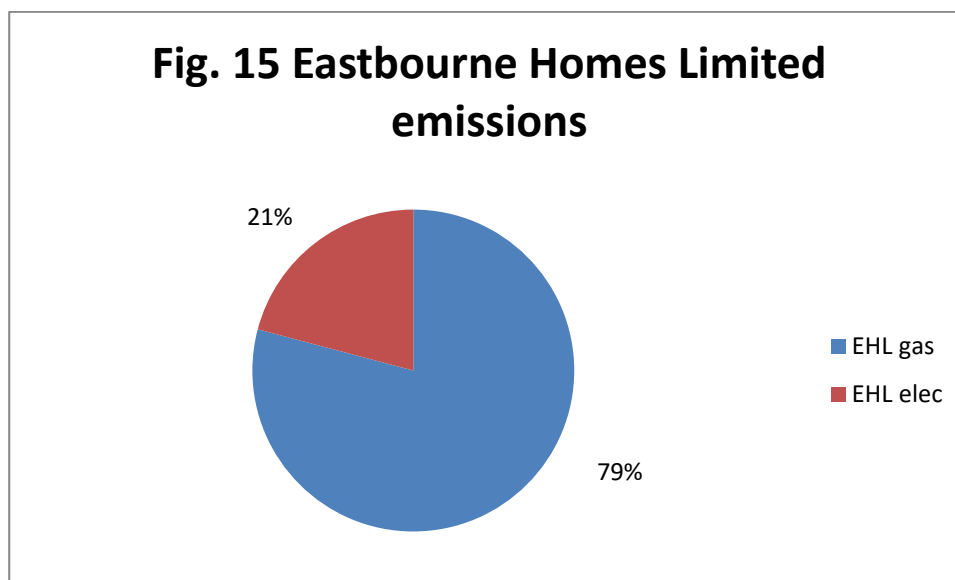
3.5 Maintenance and Fleet Liquid Fuel

The various sources of our liquid fuel emissions can be seen in Fig.12 below. Our fleet vehicles are included in this with the exception of our electric vehicles, the emissions of which are contained in our Scope 2 electricity figure. Liquid fuel includes diesel, unleaded petrol and gas oil used in machinery.

Fig.16 Emissions from liquid fuel by area and type 2018/19

Legend:
- EBC Diesel
- EBC Unleaded
- EBC Gas Oil
- Waste Services Diesel
- Waste Services Unleaded
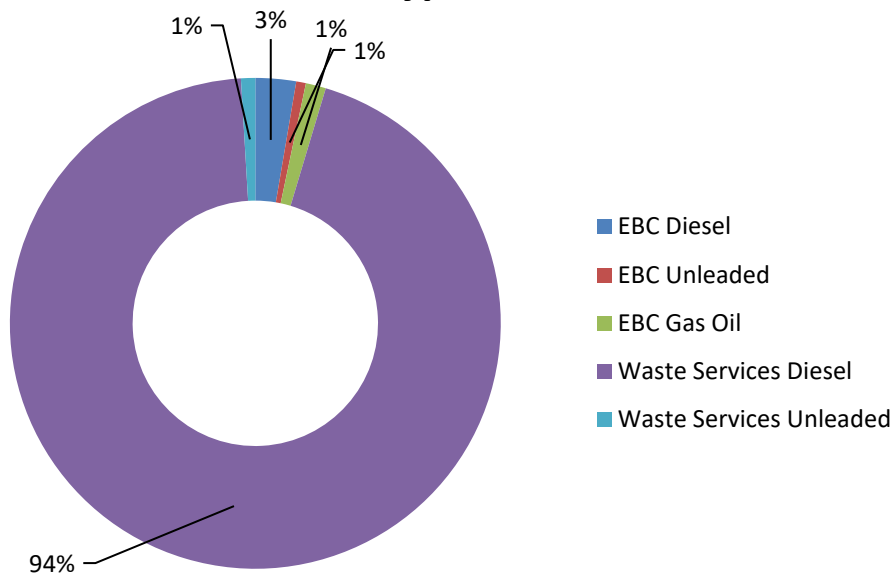
26% of our total emissions come from our waste services fleet vehicles. 5% is attributed to our Neighbourhood First and other service vehicles such as ride on mowers and 1% is for machinery using gas oil.

Fleet decarbonisation is at an early stage of development but we are not alone in needing to work out how we do this cost effectively so working in partnership on a regional approach to alternative fuels will help us work towards a zero carbon fleet by 2030.

Approximate average annual emissions per refuse collection vehicle (12 vehicles as of August 2019) = 29,000 kgCO$_2$e (**29 tonnes**)

Approximate average annual emissions per recycling collection vehicle (10 vehicles as of August 2019) = 18,000 kgCO$_2$e (**18 tonnes**)

3.6 Scope 3 emissions

We intend to report our directly controllable scope 3 using the table below as a starting point. When we report next year, we will report 18/19 data where possible.

Currently the easiest way to calculate our emissions from the things we buy is done using financial spend based conversion factors. We believe that this is not appropriate or helpful as this actively encourages contract award on the basis of lowest cost rather than sustainability. We will improve our procurement practices qualitatively, involving

partners locally and regionally, to meet the goals of the Climate Change Strategy and will report improvement through the action plan.

We anticipate that the scope 3 emissions for which we are responsible would be much more substantial than our scope 1 and 2 baseline combined.

Table 4. Data table for scope 3 emissions

Data source	2018/19 emissions
Business mileage of private vehicles	
Business travel on public transport	
Water consumption records	
Electricity transmission and distribution (from consumption records)	66 tCO_2e
Waste generated through own operations	

4. The Pathways to 2030

4.1 Introduction

Using baseline data and known carbon reduction policy and technological intervention information it is possible to model the impact of various future actions we could take, on our carbon footprint at 2030. We can use these models to estimate the effectiveness of actions and estimate the amount we may be looking to offset through carbon capture projects.

The council has chosen to use SCATTER, just one of many information sources designed to help local authorities inform priorities for emissions reduction. It is intended to focus on the 'what' rather than the 'how'.

The resulting 'pathways' serve as an indication of whether the adoption of certain interventions can drive the transition to a low carbon economy and help to guide target-setting. SCATTER pathways run up to 2050, though "checkpoint" interventions have been given for 2025 and 2030 to guide progress in the near-term.

It is also important to note that SCATTER does not intend to prescribe certain technologies or policies, and similarly does not intend to discount other methods of arriving at the same outcome, just because they do not feature in the model.

Scatter has been funded by BEIS and produced in collaboration by Anthesis Group, Nottingham City Council, GMCA and The Tyndall Centre.

4.2 Basic principles of SCATTER

Sir David MacKay's 'Sustainable Energy -Without Hot Air (2009)" provides the basis for the pathways modelling. As a scientific advisor to the Department for Energy & Climate Change (DECC), MacKay's work led to the development of the 2050 Pathways Calculator. Two key modifications were made by Anthesis:

1) Models were scaled down for sub-national regions: Scaling assumptions and localised data sets were built into the tool so that results were representative of cities and local authority regions, rather than the UK as a whole.

2) The ambition was pushed further: Technologies within the tool were reviewed and updated where judged to be out of date and constraining ambition. Given that almost a decade had passed between MacKay's publication and the release of the 2050 Pathways tool, we sought the counsel of a technical panel to make these updates. The technical panel comprised subject matter experts from Arup, BEIS, Electricity North West, GMCA, The Business Growth Hub, The Energy Systems Catapult, The Tyndall Centre and Siemens.

Because the SCATTER model uses more data than simply BEIS CO_2 data to calculate its baseline, the baseline for the pathways models is higher than that

we have used for the Borough baseline in Section 2. This does not reduce its effectiveness at illustrating the pathways for Eastbourne.

The council has not used the SCATTER method for our baseline as we do not know if it will update for future years reporting and we could not replicate the model ourselves.

4.3 The Scatter Pathways

For more information on what is included within the modelling for the scenarios please refer to Appendix 1.

Below is presented graphic representations of low ambition and high ambition pathways.

A high ambition pathway will reduce emissions by just over 43% by 2030 leaving more than half of current emissions to be offset through carbon capture projects.

A low ambition scenario is essentially business as usual and relies on grid decarbonisation and national policies. In this scenario, by 2030 emissions will have reduced by **just 3%.**

Fig.17 A low ambition 'business as usual' scenario- Emissions summary by end use 2020-2050 (tCO$_2$e)
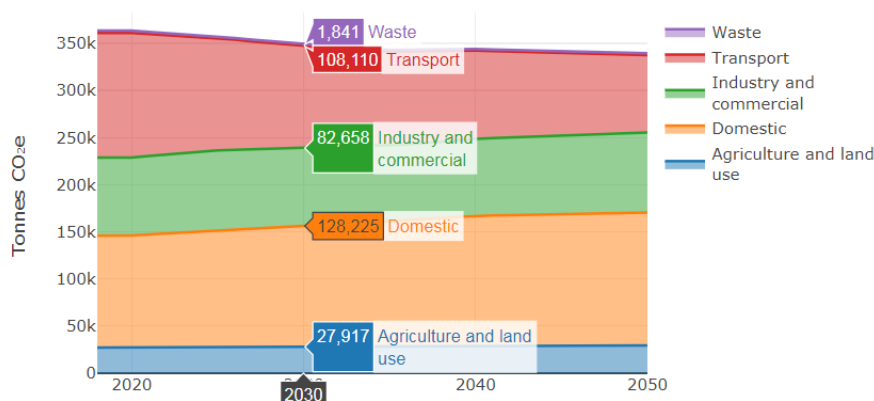
Fig. 18 The high ambition scenario - Emissions summary by end use 2020-2050 (tCO_2e)
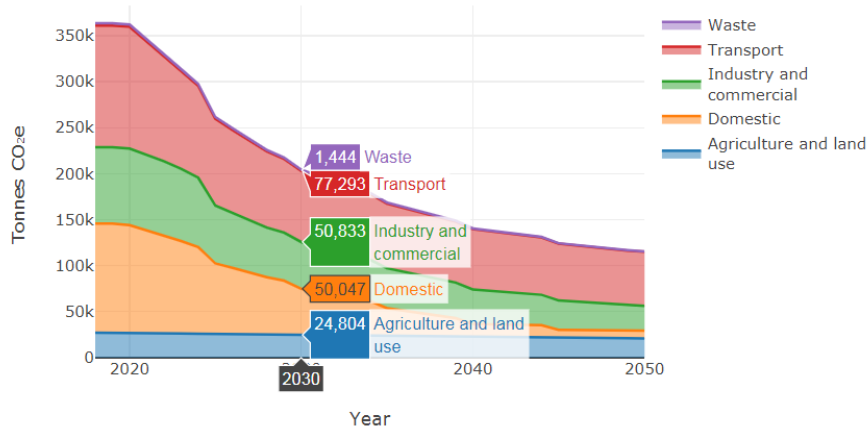
Fig.19. Emission summary by end use- high ambition scenario – 2050 (tCO_2e)
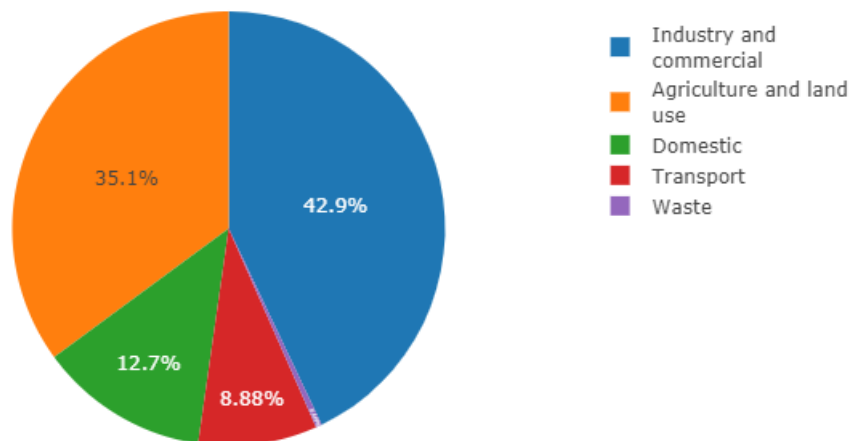
4.4 Prioritising actions

Aggressive and urgent emissions reductions interventions are demanded by the High Ambition Pathway. The scale of the actions necessary to reduce emissions even 40% by 2030 requires radical step changes in behaviour, across almost every area of activity within Eastbourne.

The next section of this report defines these interventions, but they can be thought of as falling into two main categories; interventions focused on reducing energy *demand* and interventions focused on decarbonising energy *supply.*

Being able to confidently prioritise actions is important for Eastbourne as it begins to coordinate actions and projects. It can be helpful to refer to a defined hierarchy of actions when considering new initiatives.

Reducing demand should always come first.

This avoids placing too much reliance on long-term, higher risk renewable supply infrastructure to deliver the emissions savings so urgently required, safeguarding carbon budgets in the process:

Economically, consumer energy bills are reduced. At the district level, costs associated with installing new generation assets, new grid connections and grid reinforcement works can be minimised.

Socially, there are benefits for citizens associated with increased walking and cycling. Increasing the efficiency of public transport services also maximises social benefits.

Environmentally, emissions savings can often be achieved much quicker by implementing various demand side behaviour changes or 'quick win' efficiency measures.

Future demand is hard to predict accurately –but decarbonising the energy supply is the next highest priority.

The National Grid's Future Energy Scenarios (FES) indicate that even under a scenario that meets the UK's net zero by 2050 (Two Degrees), electricity demand still increases. On the other hand, SCATTER's High Ambition Pathway assumes that electricity demand reduces due to improvements to efficiency of operation. Factors such as increased electrification of heat and transport are naturally big drivers for the increase, but incentives and opportunities for demand reduction and energy efficiency measures are still significant and could slow or tip trends in the other direction.

This hierarchy of actions is of course idealised and naturally the council's influence and key local stakeholders may allow for some initiatives to be implemented before others.

Fig.20 Hierarchy of actions and example interventions (Image: Anthesis)

Reducing demand through efficiency measures

Example interventions:

- Building retrofit
- Driving less/modal shifts
- Producing less waste

Switching to electric systems

- Phasing out gas appliances
- Electrifying processes
- Switching to electric buses and rail networks

Decarbonising energy supply

- Installing PV
- Improving storage capacity
- Installing off-shore wind

Offsetting

- Natural sequestration projects
- Out-of-boundary investments (i.e. carbon credits)

More detail on the SCATTER interventions and frequently asked questions can be found in Appendix 1.

5. The Vision for Eastbourne in 2030

The council has direct and indirect influence on Eastbourne. These 'spheres' of influence have determined whether the actions the council undertakes is direct and internally acted upon or done in partnership with others or whether it is an indirect policy or education role we have to play. The aim is to impact on all areas of action across the borough and empower residents and businesses to decarbonise with the council leading by example.

The work completed on the baseline and the comments received during the ECN2030 launch event led to the development of key priority areas that the council has framed its actions under within the 'Plan for Action' and the full Action Plan to be found in Section 6.

The themes and the vision for each are detailed below, we also indicate the influence and impact the council has in each area:

Transport- low and zero carbon travel is the natural choice throughout the town for residents and for those visiting.

*The council can have **high** impact with regards to its own fleet and can **influence** wider transportation through things like providing electric vehicle chargepoints in its carparks and by working with the Highways Authority and other partners to enable low carbon and active travel modes. The council can educate residents and encourage change through monitoring of air quality.*

Housing & Energy- housing is as energy and water efficient as it can be and everyone has an affordable clean energy supply

*The council has **high direct influence** on the energy efficiency of its own housing stock and we will work to decarbonise the whole portfolio by 2030. We can influence our tenants to decarbonise and become more sustainable through education, engagement and enabling work. Our learning from this work will be used to enable private homeowners and landlords as well. We may be able to use our property and land for the generation of solar electricity or other low carbon energy generation. The council can **influence** new development through planning guidance and policy and through development and building control.*

Workplaces- business, tourism enterprises, other workplaces and public facilities have significantly reduced the carbon emissions from their premises, transport, daily operations and supply chain.

*The council has **high direct impact** with regards to our own workplaces and public buildings and can influence the behaviour of its staff and procurement practices. The*

*council has a big role in the tourism sector and can assert **a high degree of influence** on others through its own events and contracts. It has an influencing role with regards to the business and workplaces within the borough.*

Biodiversity- Existing green spaces, the coast and the sea have been protected and enhanced where appropriate and new protected spaces have been created at sea and on the land to enable animal and plant life to flourish.

*The council directly manages numerous green spaces and can **directly impact** the management practices in favour of nature friendly methods. It can also **directly influence** through planning policy and the net gain requirement. The council has expert staff on hand to assist others in developing nature projects when needed and to provide advice on improving biodiversity.*

Food- local food production has increased through development of a local food economy and a low carbon distribution network. We have reduced food packaging and reduced food waste. Residents are enabled to make healthy choices and food poverty has been eliminated.

*The council has an **influencing role** in this area than in some others. It holds land for allotments and may be able to **directly** increase the area for food growing in the future. The council can **directly influence** its own tenants and can enable food growing projects. The council can act as a **facilitator** if needed or support local food groups who wish to encourage local food production and distribution. The council can provide education to residents and lobby for reduced food packaging. The council can **enable** local markets.*

Waste- We have a clean town that enables residents and visitors to reduce waste, our recycling rates put us in top 25% of authorities nationally and we have reduced non-recyclable waste

*The council has a **high degree of influence** over recycling as it controls the collection of waste and recycling from domestic properties and can provide more ways to recycle and educate residents on how to do it. How the council provides its waste service **directly impacts how much people recycle**. The council can educate residents on producing less waste and lobby for less packaging on products. The council works with the County Council to ensure the waste and recycling produced in Eastbourne is dealt with appropriately.*

Climate adaptation- We have delivered a sustainable town that can stand up to the future impacts of a changing climate.

*Climate adaptation requires adapting the town and how we work to minimise the negative impacts of climate change. A large amount of this requires decarbonisation and work in all the previously mentioned areas. The council can assert a **high direct influence** on ensuring new developments are ready for future impacts through their*

design, ensuring resilience to things like extreme weather, flooding and heat. The council can also prepare residents through education and awareness raising on subjects like collecting rainwater for gardens, reducing home water use, resisting the need to pave over gardens, home insulation and reducing summer over-heating.

Carbon Capture- The town has delivered on capturing as much carbon as it emits through land based and sea based measures.

*The council has a **high direct and influencing** role in enabling carbon capture projects across the borough to capture our residual emissions. This could be through direct funding and the enabling of community funding for tree planting, kelp forests and local energy generation.*

6. The Council Action Plan 2020/21

Over the next few pages you will find the action plan for 2020/21.

Progress on this will be reported in September each year along with the carbon footprints of the borough and the council. This is a live document for internal use and projects will be added as time goes on and the actions move forward.

We acknowledge that there is substantial work to do over the next year getting additional strategy and action plans in place and we are committed to achieving ECN2030 with our partners.

1. Housing & Energy

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions -to be undertaken and delivered by the council							
1.1	Complete social housing stock condition surveys	Provides baseline information to enable retrofit and long term planning	Internal	Short Term 2020-2022			Can be delivered using existing resources
1.2	Complete the Asset Management Strategy	The strategy will enable a long term plan to be developed to reduce energy consumption increase generation on our assets	Internal	Short Term 2020-2022			Strategy can be delivered using existing resources- projects will then need costing on a case by case basis
1.3	Develop and deliver the project plan for the 'Decarbonising Our Housing Stock (DOHS)' project	Completed trials/pilots of new techniques and technology to reduce the emissions of social housing, method is agreed to evaulate remaining stock for correct retrofit measures, plan to retrofit all housing stock has been developed	Internal	Short Term 2020-2022	Medium Term 2023-2026		£500k allocated from HRA
1.4	Deliver poject plan to decarbonise social housing post DOHS project	All social housing is as energy efficient as it can be and carbon emissions are reduced as far as practicably possible	Internal		Medium Term 2023-2026	Long Term 2027-2030	Delivery costs to be determined once plan is prepared
Enabling Actions- these actions by the council will enable others to reduce emissions							
1.5	Develop an ongoing programme of awareness raising and promotion of energy efficiency initiatives, especially in fuel poor and hard to reach communities	Educate and raise awareness, thos most vulnerable benefit from energy efficiency advice and measures	Partnership	Short Term 2020-2022	Medium Term 2023-2026	Long Term 2027-2030	Can be delivered using existing resources
1.6	Promote the Warmer Sussex retrofit scheme and the Solar Together solar panel purchasing project	Private sector homeowners have easier access to retrofitting advice and suppliers	Partnership	Short Term 2020-2022			Can be delivered using existing resources
1.7	Support and facilitate the Warm Homes East Sussex scheme	Fuel poverty on the borough reduces	Partnership	Short Term 2020-2022	Medium Term 2023-2026	Long Term 2027-2030	Can be delivered using existing resources
1.8	Take forward the DOHS project with other stock holding authorities	We can get better value for money by collaborating with other authorities	Partnership	Short Term 2020-2022	Medium Term 2023-2026		Can be delivered using existing resources
1.9	Work in collaboration with others to advertise and develop bids for the Governments Green Homes Grant and associated funding streams	Private sector housing can access funds to help retrofit and improve energy efficiency	Partnership	Short Term 2020-2022			Can be delivered using existing resources
1.10	Support the roll out of smart meters through promotion of the SmartEnergyGB scheme	Supports transition to smart energy grid and makes energy use more visible to residents which enables reductions	Led by SmartEnergyGB	Short Term 2020-2022	Medium Term 2023-2026		Can be delivered using existing resources
1.11	Work with the LEPs to deliver the South2East Energy Strategy	South2East Energy Strategy Outcomes met and decarbonisation at a regional level is progressed	Partnership	Short Term 2020-2022	Medium Term 2023-2026		Can be delivered using existing resources

1.12	Implement the actions defined in the Eatsbouren Housing Strategy 2020-2024-section B3 'Promoting access to housing that meets modern standards	Housing standards in the rented sector improve	Internal and in partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**		Can be delivered using existing resources
	Indicator			**Method**		**Outturn 2020**	
HE.1	Carbon dioxide emissions from domestic dwellings			From 2020 BEIS LA emissions data reported annually arrears		2017 data: 130.9 ktCO$_2$ 2018 data: 129 ktCO$_2$	
HE.2	Average SAP rating of Eastbourne Borough Council Housing Stock			Outturn from Eastbourne Homes Ltd. asset database.		2020 data: 73.29 (EPC rating = C)	
HE.3	Percentage of fuel poor households in the borough			Outturn from East Sussex in Figures dataset		2018 = 8.5%	
HE.4	Solar PV generation: number of sites and total generation capacity			BEIS regional renewables statistics 2014-2019		2019: 1,311 installations generating 5.5 MW	

2. Transport

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions							
2.1	Evaluate carparks for EV charging and prepare proposal for consideration by Councillors	The council can make a decision as to how to progress with increasing charging infrastructure in the town and a new project delivery action will be created if this goes ahead	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
2.2	Complete Phase 1 of the waste and recycling vehicle fleet review	Optimisation of routes and fleet reduction	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
2.3	Produce pathway to decarbonise the remaining fleet vehicles operated by the Council	Low carbon fleet	Internal			**Long Term 2027-2030**	Pathway can be delivered using existing resources- Fleet decisions to be costed at the appropriate time
2.4	Work in partnership with ESCC to deliver new cycling and walking initiatives as detailed in the Draft East Sussex Local Cycling & Walking Infrastructure Plan (LCWIP) and seek opportunities for funding.	Additional cycling and walking routes	Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**		Can be delivered using existing resources
Enabling Actions							
2.5	Work with ESCC to enable bank holiday waste disposal	This will reduce unessary mile stravelled to alternative sites further away onthese days	Internal and in partnership with ESCC	**Short Term 2020-2022**			Can be delivered using existing resources
2.6	Facilitate setting up a commercial and/or community car-share club with a low carbon vehicle	Residents can car share instead of owning their own vehicle- reduces vehicle numbers in town and provides control over type/efficiency of vehicle used.	Partnership	**Short Term 2020-2022**			Can be delivered using existing resources

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
2.7	Work with contractors to decarbonise fleet vehicles working our contracts	The wider town's fleet is decarbonised	Partnership	Short Term 2020-2022	Medium Term 2023-2026		Can be delivered using existing resources
2.8	Work with EEAN CIC to set up road closures under the auspices of school streets/play streets	Rat runs are potentially reduced, streets are made safer for walking and cycling especially at school drop off/pick up times	Partnership	Short Term 2020-2022	Medium Term 2023-2026	Long Term 2027-2030	Can be delivered using existing resources
2.9	Organise lobbying work on transport issues required at a county level and nationally, in partnership with EEAN	Coherent lobbying is delivered by both community groups and Councillors to achieve transport decarbonisation aims	Partership	Short Term 2020-2022	Medium Term 2023-2026		Can be delivered using existing resources
2.10	Work with ESCC to understand and overcome any barriers to setting up a Quality Bus Partnership (QBP) and see a QBP established for the town/area	A QBP would provide confidence to service providers to invest in services and enable the improvement of bus infrastructure- the result of this should be increased public transport use	Partnership	Short Term 2020-2022			Can be delivered using existing resources
2.11	Develop a pathway to a low carbon taxi fleet	Reduced carbon emissions and improved air quality	Internal and in partnership	Short Term 2020-2022	Medium Term 2023-2026		Can be delivered using existing resources

	Indicator		Method		Outturn 2020		
TR.1	Carbon dioxide emissions from transport		From 2020 BEIS LA emissions data		2017 data: 79.5 ktCO$_2$ 2018 data: 77.6ktCO$_2$		
TR.2	Number of Council enabled electric vehicle chargepoints		Number of completed installs each financial year		Zero		

3. Workplaces

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions							
3.1	Transfer the council to a green electricity provider	100% of electricity supplied will be REGO backed energy that will qualify a 100% reduction in carbon emissions from concumed electricity	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.2	Complete the Council Asset Management Strategy (as action 1.2)	The Council will know which assets it will retain long term so we can plan to reduce emissions	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.3	Once Asset Management Strategy is complete- Develop a carbon reduction plan for all non-housing assets	Plan allows for structured and planned delivery to meet carbon neutrality goal	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.4	Deliver the carbon reduction plan for non-housing assets	Non-housing assets are energy efficienct and generating energy where suitable	Internal		Medium Term 2023-2026	Long Term 2027-2030	Delivery costs to be determined once plan is prepared
3.5	Produce a council sustainable procurement strategy with a focus on local and sustainable purchasing	Reduced emissions from procurement. Increased local spend and resulting improved community wealth	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.6	Offset the emissions from Airbourne 2021 subject to it being Covid safe	A temporary solution to the emissions of Airbourne until the tourism decarbonisation plan is in place	Internal	Short Term 2020-2022			Can be delivered using existing resources

3.7	Eliminate use of Single Use Plastic (SUP) at EBC operated events and third party events supported by EBC wherever possible	Reduced plastic waste. EBC events no longer hand out SUP water bottles or carrier bags. Vendors are instructed not to either	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.8	Eliminate use of SUP at customer facing venues such as Cafes, Visitor Services and heritage service sites	Reduced plastic waste. Visitor Services switched to paper bags and introduced free water refill scheme. Cafes selling glass vessels, biodegradable takeaway cups and paper straws	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.9	Reduce harmful chemicals used in the upkeep of the grounds at Devonshire Park and Eastbourne Downs Golf Course (EDGC)	Alternatives with reduced environmental impact are constantly to be investigated	Internal	Short Term 2020-2022	Medium Term 2023-2026	Long Term 2027-2030	Can be delivered using existing resources
3.10	Replace diesel fuelled handtools used in the upkeep of the grounds at Devonshire Park and EDGC with electric alternatives	Reduced emissions from diesel and fuel oil	Internal	Short Term 2020-2022	Medium Term 2023-2026		Finance to be determined if existing resource to replace machinery is insufficient
3.11	Reduce water usage at Devonshire Park through collection of moisture data for targeted irrigation	Reduced emissions from water use	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.12	Eliminate use of unsustainable paper for printed marketing materials	Reduced emissions from consumption of paper products	Internal	Short Term 2020-2022			Can be delivered using existing resources
3.13	Produce a sustainable procurement strategy with a focus on local and sustainable purchasing	Reduced emissions from procurement. Increased local spend and resulting improved	Internal	Short Term 2020-2022			Can be delivered using existing resources
Enabling Actions							
3.14	Develop a tourism decarbonisation plan	Low carbon tourism is encourgaed and developed to support economic recovery	Internal and in partnership	Short Term 2020-2022			Can be delivered using existing resources
3.15	Promote public transport for tourists into Eastbourne	Reduced emissions from visitor transport	Internal and in partnership	Short Term 2020-2022	Medium Term 2023-2026		Can be delivered using existing resources
3.16	Develop comprehensive training and guidance for staff on climate change and carbon reduction. Also- specific training to ensure decisions properly take into account the carbon emission implications	All staff will improve their environmental awareness to enable carbon reductions in their work and private life. It will be clear to Councillors, officers and the public the carbon consequences of all decisions	Internal	Short Term 2020-2022			Can be delivered using existing resources
	Indicator			**Method**		**Outturn 2020**	
WP.1	Carbon dioxide emissions from Eastbourne Council Operations			Scope 1 & 2 emissions		2018/19 data: 3,047 tCO$_2$	
WP.2	Emissions offset from Airbourne 2021			TBC		TBC	
WP.3	Number of staff to have undertaken carbon reduction training			TBC		Zero	

4. Biodiversity

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions							
4.1	Develop and adopt a Biodiversity Strategy	We will have developed our aims and actions to deliver biodiversity improvements	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
4.2	Local Plans – work closely with Planning Policy and planners to achieve biodiversity wording that is fit for purpose and ambitious to arrest declines	Green and biodiversity beneficial Local Plans	Internal		**Medium Term 2023-2026**		Can be delivered using existing resources
4.3	Council Officer training in biodiversity	Decision makers are better informed about biodiversity and	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
4.4	Reduced mowing practices	Improved habitat for insects	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
4.5	Reducing the use of pesticides	Improved habitat for insects	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
4.6	Increase wildflower and pollinator planting where suitable	Improved habitat for insects	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
4.7	Provide direct assistance when required to tree planting projects at suitable sites such as those currently being delivered by EEAN at Tugwell Park and Sevenoaks Recreation Ground	Carbon capture and improved biodiversity	Internal and in Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources
Enabling Actions							
4.8	Develop pipeline of projects for biodiversity net gain and offsetting	Increase in biodiversity and projects enabled	Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**		Can be delivered using existing resources
4.9	Review land holdings for possible projects	Internal and Partnership projects enabled	Internal and/or partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**		Can be delivered using existing resources
4.10	Develop a programme of works on EBC land to increase joining up of biodiversity corridors & ecological networks	Increase in biodiversity Improved well being of residents	Internal	**Short Term 2020-2022**	**Medium Term 2023-2026**		Resources to be determined
4.11	Support Changing Chalk bid and project if successful	Community ranger for countryside/nature/downland education and involvement	Partnership	**Short Term 2020-2022**			Can be delivered using existing resources
4.12	Community groups, education and communication	Community groups encouraged and work progressed	Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
4.13	Develop and adopt a Biodiversity Net Gain Technical Note	Developers have specific guidance to meet the biodiversity net gain requirement on all sites	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
4.14	Increase public access into Eastbourne Park	To enable opportunities for: appreciation of nature; educational experiences ; and outdoor exercise		**Short Term 2020-2022**	**Medium Term 2023-2026**		Can be delivered using existing resources

	Indicator		Method			Outturn 2020	
BIO.1	Number of trees planted (as per CC.1)		Figure collected from council & community scheme records			EEAN have planted xx trees Jan to Oct 2020	
BIO.2	Biodiversity improvement/gain as a result of actions undertaken		TBC 2020/21			N/A	
BIO.3	% net biodiveristy gain achieved on development sites		TBC 2020/21			N/A	
BIO.4	% of SSSI's (Sites of Special Scientific Interest) in a favourable condition		Source: LA Monitoring report			2018/19= 71.4%	
BIO.5	Number of planning applications infringing on identified habitats, designated sites or reserves		Source: LA Monitoring report			2018/19= 24	
BIO.6	% of housing units delivered on previously developed land		Source: LA Monitoring report			2018/19 = 99.2%	

5. Food

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions							
5.1	Support local food growing initiatives by making suitable land available and incorporating it into our work with social housing tenants as part of DOHS	More residents can access lcoal food and grow their own	Internally and in partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**		Can be delivered using existing resources
Enabling Actions							
5.2	Support the EEAN Food Group in developing and meeting their aims, including enabling food networks	More residents have access to local food	Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources
5.3	Support initiatives that promote or enable low carbon and nature-friendly farming locally eg South East Downs Farm Cluster	Although there is minimal agriculture within Eatsbourne itself- this wider working will faciliate local (Sussex) food production	Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources
5.4	Feed Back to Central Government on Envornmental Land Management Scheme (ELMS)	Influences national policy	Internal	**Short Term 2020-2022**			Can be delivered using existing resources

	Indicator		Method			Outturn 2020	
FD.1	Area of land that has been made available for food growing		Records of land made available that did not exist prior to 2020			No change	

6. Waste

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions							
6.1	Comprehensive public consultation exercise to engage residents in recycling more	Recycling rates increase- target of 45% for 21/22	Internally	**Short Term 2020-2022**			Can be delivered using existing resources

			How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
6.2	Review waste & recycling service provision to align them with the requirements of increasing recycling and decreasing residual waste.	We recycle more than we incinerate, and our collection methods and schedules enable that and champion it.	Internal	**Short Term 2020-2022**	**Medium Term 2023-2026**		Can be delivered using existing resources

Enabling Actions

6.3	Work with ESCC to revise Bank Holiday disposal arrangements for both residual and recycling waste streams	Reduced mileage for tipping on Bank Holidays	Partnership	**Short Term 2020-2022**			Can be delivered using existing resources
6.4	Promote and enable the REFILL campaign	The public has easier access to drinking water to reduce the need to buy single use bottles.	Partnership	**Short Term 2020-2022**			Can be delivered using existing resources
6.5	Continue to sponser FREEGLE	Supports the re-use community and reduces waste	Internal	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources
6.6	Help develop local reuse and repair schemes which divert waste, for example Freegle, Freecycle, repair cafes etc.	Encourages a local circular economy and these schemes provide the most help and benefit to people in greater need.	Internal & Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources

	Indicator		Method			Outturn 2020	
W.1	Total amount of waster produced		Sourced from Waste Data Flow			2018/19 = 34,713 tonnes	
W.2	% of waste recycled		Sourced from Waste Data Flow			2018/19 = 35.2%	

7. Climate Adaptation

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions							
7.1	Complete the new Local Plan and ensure that planning policies and guidance reflect our carbon neutral ambition	New development is low carbon, energy efficient and is resilient to future climate change	Internal		**Medium Term 2023-2026**		Can be delivered using existing resources
Enabling Actions							
7.2	Ensure planning policy reflects th eneed to avoid substantial development on flood plain	Essential flood plain is retained and flood risk is minimised	Internal	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources
7.3	Develop and adopt guidance documents to help developers and property renovators to ensure their work makes homes resilient to climate change	People have the right information to ensure property is resilient to predicted climate change	Internal	**Short Term 2020-2022**			Can be delivered using existing resources
	Indicator		Method			Outturn 2020	
CA.1	Number of units approved contrary to Environment Advice regarding flooding		Source: LA Monitoring report			2018/19= zero	

8. Carbon Capture

Action reference	ACTION	OUTCOME	How will this be delivered?	TIMEFRAME (noting some things will be ongoing)			RESOURCES
Direct Actions							

8.1	Determine our method to enable local carbon offsetting	The residual borough emissions at 2030 are offset using local projects	Partnership	**Short Term 2020-2022**	**Medium Term 2023-2026**		Methodology can be delivered using existing resources- Financial resources for offsetting to be determined and agreed as part of this work
Enabling Actions							
8.2	Continue to provide project support for partnership projects, including expertise, volunteer management and fund raising support	Partners projects are enabled and supported to achieve multiple outcomes dependent on project	Direct to groups as required	**Short Term 2020-2022**	**Medium Term 2023-2026**	**Long Term 2027-2030**	Can be delivered using existing resources
8.3	Provide suitable land to enable tree planting and re-wilding	Carbon capture through trees, increased biodiversity, improved mental wellbeing, increased summer shading	Partnership with EEAN and others	**Short Term 2020-2022**	**Medium Term 2023-2026**		
	Indicator		**Method**			**Outturn 2020**	
CC.1	Number of trees planted (as per BIO.1)		Figure collected from council & community scheme records			EEAN have planted xx trees January to	
CC.2	Value of annual offsets		TBC			£ = NoneCarbon offset = 0 tonnes	

Appendix 1. SCATTER Emissions Reduction Interventions and frequently asked questions

The SCATTER Pathways tool models the influence of a range of interventions on emissions within Eastbourne. This chapter defines the measures which are locally influenceable, and which interventions are necessary to deliver drastic reductions in emissions.

The defined interventions are based on what is needed to achieve carbon reductions for the High Ambition pathway and do not consider how they can be delivered e.g. policy, feasibility, financing or skills required.

The tool also operates on more forecasts and predictions than are listed in this chapter. National measures, such as those including aviation & shipping, are set to central governmental forecasts. Other forecasts, such as those for increases to household numbers and population, also follow ONS predictions.

Summary of Measures considered in SCATTER

The range of measures considered as part of the SCATTER Pathways tool is summarised below. Activity in each of these areas underpins the forecast trajectories (i.e. the high and low ambition scenarios considered in section 4). Many of these measures are based on the DECC 2050 Calculator.

Measures have been grouped into different sectors.

Each group of measures has some sort of activity focused on *demand-side* reductions, switching to electrified systems, or greening energy *supply.*

BUILDINGS

Decreasing the demand for energy and electrifying our heating systems & appliances

The following measures relate to domestic households, commercial properties and institutional buildings, as well as industrial property. The first two measures consider demand-side reductions, whilst the second two consider the effects of electrification.

3. More energy efficient homes and buildings: For domestic property, this measure considers changes in the energy demand for heating and cooling our buildings. Different retrofit options are considered for existing households, as well as the performance of new builds. For non-domestic property, SCATTER considers improvements to practices and buildings, including improvements to building fabric. "Non-domestic" includes commercial, industrial and institutional buildings.

4. Appliance and lighting efficiency: Considers the reduction in energy demand from more efficient lighting and appliances, including electrical devices, and all forms of lighting and cooking.

5. Shifting off gas heaters: Considers the uptake of non-fossil fuel sources for heating within homes and commercial properties, including heat pumps, district heating and combined heat and power networks (CHP). The impact of the fuel mix will be heavily influenced by the increased availability of renewable energy. No fuel mixes contain any hydrogen technology.

6. Shifting off gas for cooking: Models the uptake of electrical cooking systems and discontinuation of gas cookers.

Improving the energy performance of the domestic property in Eastbourne addresses both carbon reductions and quality of living improvements.

More energy efficient homes –retrofitting & new builds
The energy we use within buildings is a significant driver of emissions. Tackling the causes behind energy demand can be met in a number of ways. Chief among these is the retrofitting of homes and ensuring that new builds are built to high efficiency standards.
We can think of retrofit measures as improvements to a building's energy performance; they include things like insulation (of windows, floors & ceilings) and improved ventilation. Retrofitting serves to drive down the energy required to heat a building. Currently, household retrofitting is led largely by the government-led ECO scheme. The nature of these retrofit measures vary widely, though the majority (roughly two-thirds) are some form of insulation. SCATTER makes its estimations based on two levels of retrofit:

- Medium –a 66% reduction in annual average energy demand through inner wall insulation.

- Deep –an 83% reduction in annual average energy demand, through inner & external wall insulation.

New builds must also be constructed to extremely high energy performance standards.
A PassivHaus standard home operates using roughly 10% of the average demand for a typical house.
The High Ambition Pathway demands these new builds in Eastbourne are constructed to PassivHaus standard.

More energy efficient buildings –demand reduction for heating
The aim of retrofitting is to drive down the energy demand for heating and hot water in buildings. Alongside behavioural change and other efficiency improvements, SCATTER measures this demand reduction in terms of energy usage.

The reductions in demand also take into account improvements to the efficiency of new water heating systems. Domestic demand is measured in terms of energy required per household. Reductions are applied to whatever fuel the household is using i.e. accounting for more efficient gas boilers as well as electrical heating systems.

Figure1 below: Energy demand reduction changes for heating, cooling and hot water, defined against a 2017 baseline. Since the number of different building types is much larger for non-domestic buildings than for households, more specific retrofit measures are not modelled within SCATTER. Instead, only the energy demand is modelled.
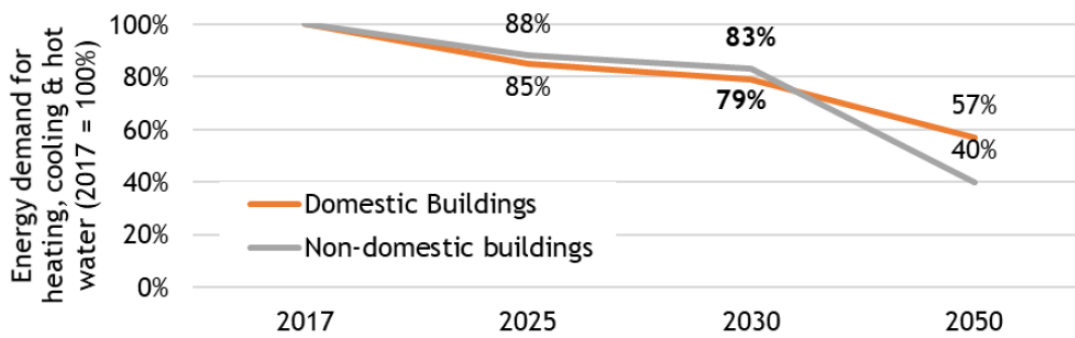
Appliance & lighting efficiency

SCATTER assumes a reduction in the net energy demand from lighting and appliances. Reductions are measured against a baseline of 2017 data. Both domestic and non-domestic buildings are considered.

Figure 2 below: Energy demand reduction changes for appliances, lighting and cooking, defined against a 2017 baseline.
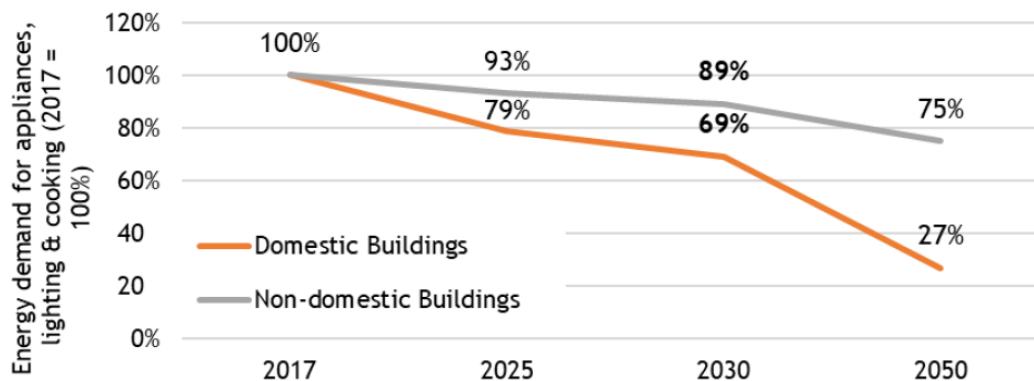

Shifting off gas for heating

Making demand-side reductions underpins significant progress for reducing emissions, with further significant steps being made in using low-carbon technologies for heating and cooking. The rate of decarbonisation of the electricity grid will have a significant impact on the potential emissions reductions for certain technologies. In other words, there is little value to be gained in switching to electrified systems if the carbon intensity of the grid remains high.

Shifting off gas for cooking

SCATTER takes into account an increased number of electrified cooking systems, again for both domestic and non-domestic buildings. Consideration is also made for systems which are not necessarily electrified, but are more energy efficient than existing systems. For the most part, the uptake of electrified cooking systems directly

reduces other fuel usage, though efficiency improvements also serve to reduce the fossil fuels used for cooking.

Figure 3 below. Changes in fuel demand for cooking, given uptake of electrified systems.
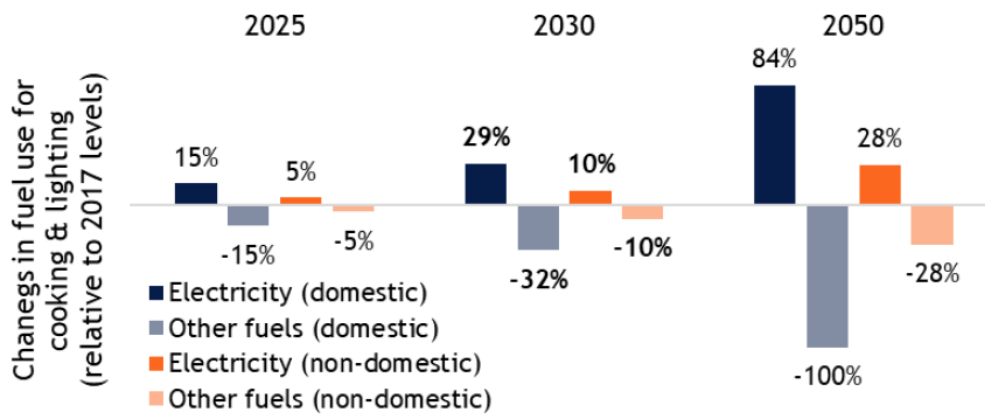
TRANSPORT

Changing the way we travel & phasing out fossil fuel vehicles
Transport measures consider changes in behaviour around transport, as well as the adoption of more electric vehicles for our journeys**:**

- Travelling shorter distances: A change in the overall mileage travelled per passenger across all forms of transport. Increases in population are also taken into account in this measure.
- Driving less: Changes to the means by which passengers travel, defined by miles travelled. These are broken down into car (which includes petrol, diesel, hybrid and electric vehicles), active (walking and cycling) and public (train and bus).
- Switching to electric vehicles: Considers the speed of the uptake of electric cars, trains and buses and phasing out of petrol and diesel vehicles. The impact of this measure is influenced by both the demand-side reductions and grid supply from renewable energy supply. The tool does **not** consider hydrogen-fuel vehicles.
- Improving freight emissions: Considers changes to both the fuel efficiency and mode of travel for freight and commercial journeys.
- International aviation and shipping: Applies government projections for aviation and percentage changes in fuel use at UK ports.

Travelling shorter distances
This measure models the reduction in total travel demand –across all transport modes –per person. Travelling shorter distances can be achieved in a number of ways; the COVID-19 pandemic encouraged large numbers of people to find remote

working solutions, such as home offices or remote working. Changes to transport infrastructure, public transport services and traffic management can are also key drivers for reducing the average distance travelled per person.

This intervention also considers increases in population between 2030 & 2050.

Figure 4 below. The shortening of the average number of miles travelled per passenger across all modes.

Between 2002 and 2018 the average distanced travelled per passenger per year in the UK dropped over 9%.
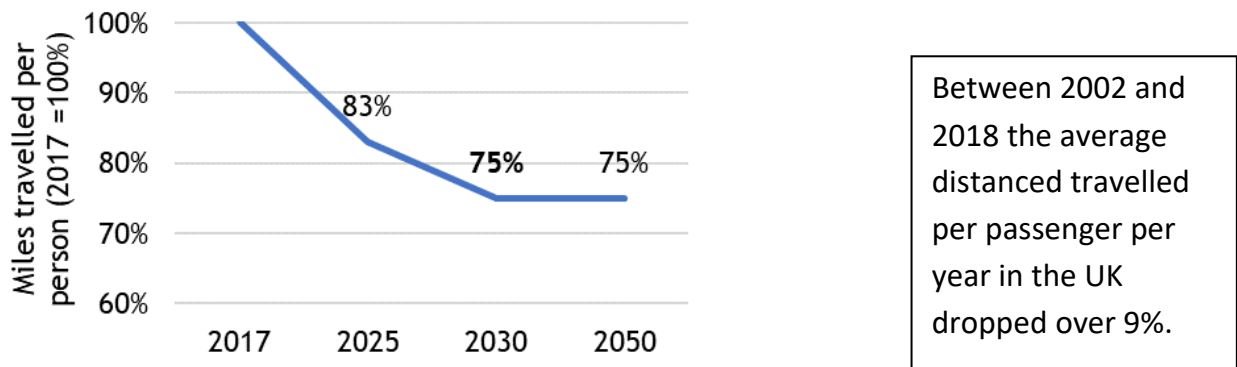
Driving less

As well as reducing the average distance travelled per passenger, SCATTER also considers changes to the *mode* of travel i.e. the means by which the journey was completed. SCATTER breaks these modes of transport into private vehicle (i.e. cars), public (which includes buses and trains) and active (i.e. walking & cycling). Emissions savings can be made by reducing the modal share of private vehicles and increasing the proportion of people who travel by bicycle or train.

Figure 5 below: Changes in mileage share for different modes of transport.
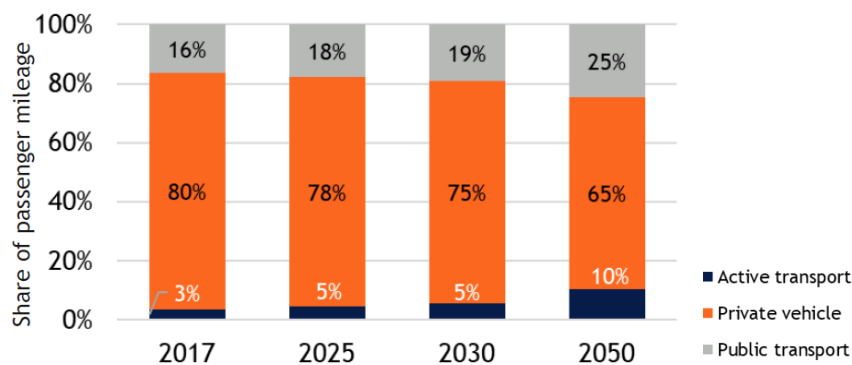
Switching to electric vehicles

One of the most important steps to reducing transport emissions in Eastbourne is the transition to electric vehicles. As with other measures around electrification, the success of the switch to EV relies heavily on grid decarbonisation and renewable electricity supply.

Figure 6 below: Changes in the share of electric vehicles for private vehicles (left), and public transport (right).
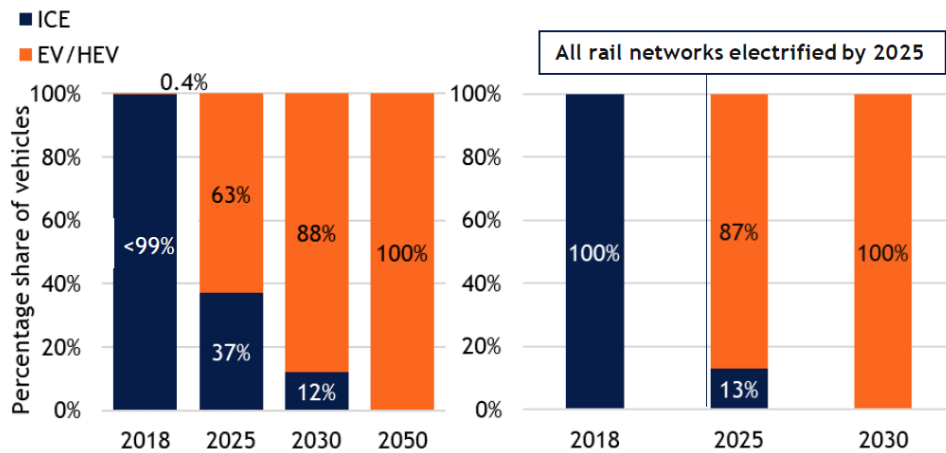

Improving freight emissions

Freight emissions are notoriously challenging to tackle. Limitations to existing electric battery technology for HGVs mean that within SCATTER, electric vehicles for freight are only modelled after 2040. SCATTER accounts for three things which improve freight emissions:

1. Improved journey efficiency: reducing the mileage travelled by HGVs through more efficient infrastructure and fewer "empty-trailer" journeys.

2. Improved efficiency of freight vehicles themselves i.e. a reduction in energy used per mile travelled as more fuel-efficient (and eventually, electric) vehicles are used.

3. A modal shift from road freight to waterborne transport.

The graph below (figure 6) plots these three measures to 2050, with 2017 serving as the baseline. All percentage changes are with respect to the 2017 figure (i.e. in 2050, the energy demand per mile travelled is 25% the current figure).

Figure 6 below: Improving freight emissions across three areas of activity.
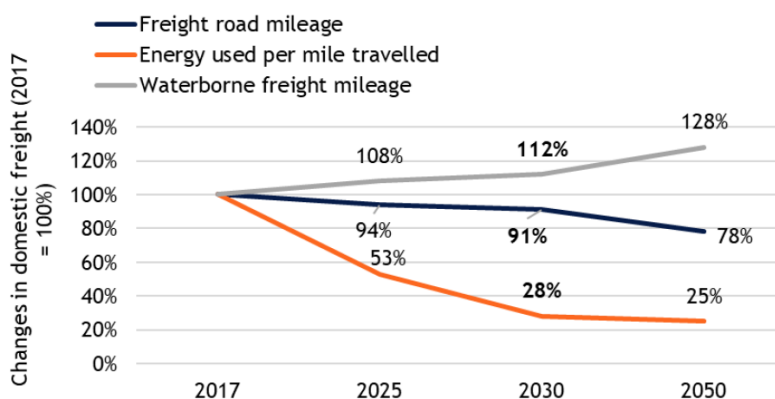
Aviation & shipping

The Department for Transport (DfT) "central" forecast for aviation was modelled within SCATTER, which represents the baseline trajectory for aviation emissions in the UK. It is worth noting that these forecasts were made pre-COVID-19 and the future of aviation emissions is uncertain.

The DfT scenarios model various factors related to aviation, including passenger mileage, fleet mix, fuel mix and other efficiencies. Trajectories for international shipping have been modelled based on assumptions used in the DECC 2050 Pathways calculator for fuel use from marine bunkers. These are also based on a fixed fuel mix and derive from DfT scenarios, before being applied to fuel usage at UK coastal ports.

Figure 7 below: Left: Projected changes in fuel usage at UK ports, from DfT scenarios. Right: Projected improvements to fuel efficiency according to DfT scenarios. *listed as improvement to fuel efficiency in the DfT report.
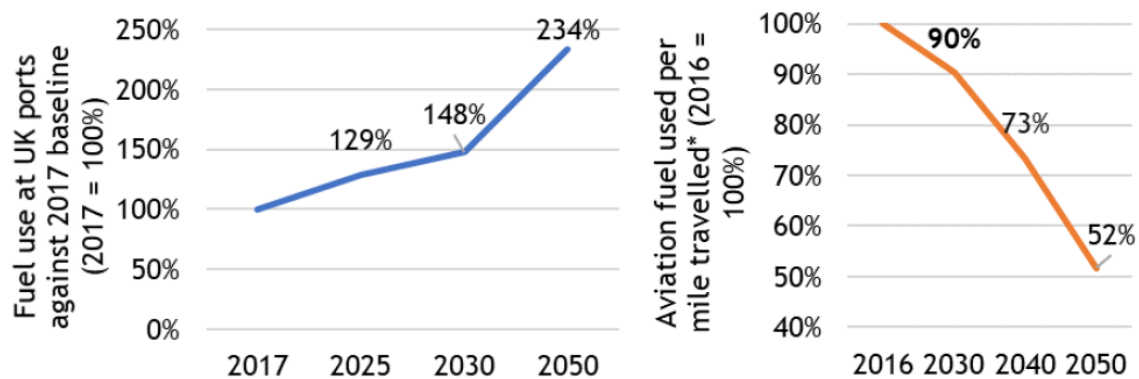
WASTE & INDUSTRY

Improving waste streams

The measures which relate to waste emissions are:
- Producing less waste**:** Considers changes in the overall weight of waste produced across all streams from domestic, commercial and industrial activity.
- Increased recycling rates: Considers the different destinations for waste streams.

Cutting industrial emissions

The following industrial measures are defined within the tool:
- Shifting off oil fuels: Considers changes to the energy consumption in industrial processes and activity. Trajectories measure the changing fuels used –and what proportion of processes can be powered with electricity and natural gas rather than heavier oil fuels.
- More efficient processes: Considers annual reductions in process emissions via a reduction in the production index of various industries. Separate trajectories are included for chemical, metal and mineral sectors, with all other industrial activity grouped together (labelled as "other" industry).

Producing less waste

The first step in improving emissions from waste is a reduction in the total volume of waste produced. This reduction covers waste from households, commercial & industrial usage, construction & demolition.

Increased recycling rates

After reducing the amount of waste produced outright, the second SCATTER intervention considers changes to the amount of waste that is recycled. SCATTER trajectories incorporate EU targets for a recycling rate for municipal waste of 60% by 2035, rising to 65% by 2035.

Shifting off oil fuels

Tackling industrial emissions can be extremely challenging, particularly the decarbonisation of very energy-intensive processes and reducing the emissions from the processes themselves. For the chemicals, metals and minerals industries, SCATTER models the changing use of fuels for these processes, shifting off the most carbon-intensive fuels (i.e. fuel oil) in favour of transition fuels such as natural gas.

More efficient processes

This intervention considers the growth of different industries' greenhouse gas emissions that result from the industrial processes themselves. Process emissions arise from the manufacture and/or production of materials, chemicals and other products e.g. through combustion.

ENERGY SUPPLY

Meeting demand with green energy

The measures described so far across the buildings, transport and industry sectors are heavily influenced by the provision of renewable electricity from zero-carbon sources. SCATTER considers a wide range of renewable technologies:

- Wind: Both onshore and "small-scale" wind are considered for Eastbourne. Small-scale is defined as power generated from sources that are not Major Power Producers.
- Solar PV: As with wind, installed capacity from both Major Power Producers and "small-scale" sites is considered.
- Biomass/coal power stations: Switching from fossil fuels to biomass generation in power stations.
- Hydroelectric power: Scaled to the local authority level by area of inland water.
- Offshore wind, as well as tidal and wave power, are applied only to local authorities with pre-existing installations. For all of the supply technologies referenced in this section, if the technology is not deemed feasible within Eastbourne to the suggested extent, the residual capacity is assumed to occur outside the boundary.

Wind

Wind power technologies vary between local, on-or off-shore installations. A typical on-shore wind turbine has a capacity of 2.5 MW, with off-shore turbines typically of higher capacity (e.g. those at Rampion Wind Farm off the West Sussex coast have a 3.5 MW capacity).

Solar PV
Similarly, solar PV technologies can be split out into local installations, and larger sites for ground-or roof-mounted arrays. According to the Energy Saving Trust, the typical household array capacity is between 2-4 kW.

Biomass
Biomass within SCATTER is assumed to displace fossil fuels as an energy source for generation in power stations. The combustion of solid biomass fuels (such as woodchips or chicken litter) still releases greenhouse gases into the atmosphere, albeit with a much smaller impact than that of coal or natural gas.
For the High Ambition pathway, generation in power stations from solid biomass fuels is modelled to increase fourfold by 2025, before dropping off to very low levels by 2050. Without the coupling of biomass generation to carbon capture and storage technology, there will always be residual emissions associated with the consumption of solid biomass fuels.
The phasing out of coal and natural gas follow trajectories in the National Grid Two Degrees scenario.

Other renewable technologies
The other technologies considered within SCATTER are wave, tidal and hydro power stations. Local wave, tidal & large scale hydro projects have not been forecast on the basis that no existing capacity exists within Eastbourne Borough. The tool only models a percentage increase on existing installed capacity for these technologies rather than new installations.

AGRICULTURE & LAND USE

Managing natural infrastructure
The use of green spaces and the natural environment has a significant role in acting as a carbon "sink" –meaning that it removes carbon emissions from the atmosphere in the form of trees, peat and other natural features.
- Increased tree coverage: Considers the increase in the proportion of land which is forest cover.
- Tree planting: Considers changes to the coverage of trees outside of woodland, through new trees being planted and maintenance of existing trees.
- land management: Considers changes to green belt, grassland and cropland coverage.
- Livestock management: Considers changes in the number of livestock in the area (cattle, pigs, sheep and horses).

Increased tree coverage & tree planting

Tree coverage and the associated sequestration potential has been separated out into "forest coverage" and "lone trees". Forest coverage relates to areas of trees which can be defined as such by a land use map.

Lone trees instead relates to smaller wooded areas, hedgerows, trees contained within gardens and so on.

Land & livestock management

The sequestration potential can also be maximised by transitioning towards natural features which absorb more carbon than grass-and cropland.

The Knepp Estate in Horsham is a pioneering local case study focused on *rewilding*, restoring land which was once intensively farmed to a wildlife conservation project.

SCATTER frequently asked questions

What do the different emissions categories mean within the SCATTER Inventory?

Direct= GHG emissions from sources located within the local authority boundary (also referred to as Scope 1). For example: petrol, diesel or natural gas.
Indirect= GHG emissions occurring as a consequence of the use of grid-supplied electricity, heat, steam and/or cooling within the local authority boundary (also referred to as Scope 2).
Other= All other GHG emissions that occur outside the local authority boundary as a result of activities taking place within the boundary (also referred to as Scope 3). This category is not complete and only shows sub-categories required for CDP/ Global Covenant of Mayors reporting.
The BEIS Local Emissions Summary does not differentiate between direct/indirect/other (or the various 'scopes').
Note that the categories may not sum to 100% due to rounding.

What do the different sectors and subsectors represent within the SCATTER Inventory?

- **The Direct Emissions Summary and Subsector categories** are aligned to the World Resource Institute's Global Protocol for Community-Scale Greenhouse Gas Emission Inventories ("GPC"), as accepted by CDP and the Global Covenant of Mayors.

- **The BEIS Local Emissions Summary** represents Local Authority level datapublished annually by the Department for Business Energy & Industrial Strategy (BEIS).

- **Stationary energy** includes emissions associated with industrial buildings and facilities (e.g. gas & electricity).

- **IPPU** specifically relates to emissions that arise from production of products within the following industries: iron and steel, non-ferrous metals, mineral products, chemicals. These are derived from DUKESdata (1.1-1.3 & 5.1).

- **Waterborne Navigation and Aviation** relate to trips that occur within the region. The figures are derived based on national data (Civil Aviation Authority & Department for Transport) and scaled to Eastbourne

- The full methodology is available at http://SCATTERcities.com/pages/methodology

Why does the BEIS summary differ from the SCATTER summary?

- The BEIS summary **represents CO2only**; SCATTER also includes emissions factors for other greenhouse gases such as Nitrous Oxide (N20) and Methane (CH4). These are reported as a CO2 'equivalents (e)'.

- The BEIS summary **does not provide scope split**; SCATTER reports emissions by scope 1, 2, and 3 (i.e. direct, indirect or other categories).

- **The BEIS summary categories are not directly consistent or mapped to the BEIS LA fuel data** which is available as a separate data set. SCATTER uses published fuel data and applies current-year emissions factors, whereas the BEIS data calculations scale down national emissions in each transport area. Specifically for road transport, BEIS data splits total emissions across road type; SCATTER uses fuel consumption for on-road transport per LA.

- **Different treatment of 'rural' emissions** i.e. Agriculture, Forestry and Other Land Use (AFOLU) and Land Use, Land Use Change & Forestry (LULUCF) categories are derived from different underlying data sets.