Climate and Environment Strategy 2021-2030

Isle of Wight Council

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Contents

Foreword

Introduction

The Intergovernmental Panel on Climate Change (IPCC) published a Special Report on Global Warming of 1.5°c in October 2018[1]. This report concluded that a 2°c increase in global average temperatures is likely to cause far greater harm to the global environment and economy than if we can limit global warming to 1.5°c. The report found that although it may not be too late to limit warming to 1.5°c, drastic global action will be required by 2030 to slash greenhouse gas emissions. Governments, businesses, and communities around the world will need to cooperate to reach this goal.

Following this, the UK's Climate Change Committee published a report in May 2019[2], recommending that the UK government commits to a 100% reduction in greenhouse gases "as soon as possible". The report outlined the expected cost of meeting this target as being approximately the same of meeting the existing target of an 80% reduction in emissions by 2050. Following this report, the UK government updated the 2008 Climate Change Act in June 2019, legislating a target of at least a 100% reduction in emissions by 2050[3] in the form of a net zero target including carbon offsetting.

Following the 2008 Climate Change Act, the UK's Climate Change Committee recommended setting legally binding carbon budgets that would set limits on the amount of greenhouse gases that could legally be produced across the country over five-year periods. These were introduced from 2009, and the sixth carbon budget for the period 2033-2037 was presented to Parliament in December 2020[4]. This report recommended a reduction in emissions of no less than 78% by 2035 for the UK to meet its target of net zero by 2050. The report also emphasised the need for a just transition, in which the costs and benefits of achieving net zero are distributed equally.

In response to 2018's IPCC report and the increase in public calls for climate action following publication of the report, Isle of Wight Council declared a climate emergency in July 2019[5] and declared an aim of meeting net zero by 2030 in both the Council's own operations and the wider Island area. These aims will help the Council to not only tackle the climate emergency, but also to help in meeting the Council's priorities of preserving our environment, delivering economic growth, protecting our community, and planning for our future needs.

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[1] Global Warming of 1.5 ºC — (ipcc.ch)

[2] https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf

[3] Net zero in the UK - House of Commons Library (parliament.uk)

[4] The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf (theccc.org.uk)

[5] Expenditure Code 0435 31110Cost £Job Number (iow.gov.uk)

Vision

The Isle of Wight Council's vision is for the Isle of Wight to be an inspiring place in which to grow up, work, live, and visit.

This Climate and Environment Strategy sets out key activities that the Isle of Wight Council can undertake in the fulfilment of its duties and undertakings to reduce the Isle of Wight Council's carbon footprint from its own operations, and outlines activities that we can facilitate and encourage to achieve specific outcomes that are outside of the Isle of Wight Council's direct control.

The activities set out in this plan will support the following medium-term and long-term outcomes of the corporate strategy:

- The environment and unique island characteristic are celebrated
- Outstanding transport connectivity
- The Isle of Wight is a leading UK visitor destination

The Council is well-placed to become a leader in developing and adopting climate and environment-friendly activities through internal behaviour change and the promotion of a sustainability strategy for our community, economy, and environment.

2030 target

The Isle of Wight has a stated aim to achieve net zero emissions by 2030, in both the council's own activities and the wider Isle of Wight environment. The Intergovernmental Panel on Climate Change (IPCC) defines net zero emissions as:

> *"Net zero emissions are achieved when anthropogenic [man-made] emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period."*[6]

In other words, any greenhouse gas emissions produced by human activities should ideally be eliminated from activities and processes (for example, by using renewable energy instead of fossil fuels). Any emissions that can't be eliminated from processes must be balanced out by removing carbon emissions from the atmosphere (for example, by planting more trees). This is known as offsetting.

[6] IPCC, 2020. Glossary. Available at: Glossary - Global Warming of 1.5ºc. Accessed 25/11/2020.

Strategic actions

The Climate and Environment Strategy will outline the actions in seven key areas, by the council and in supporting other stakeholders on the Island, as described in Figure 1. More detailed actions are stated in the **Error! Reference source not found.** and

Island sections of this document.

Figure 1. Key priority action areas

Council actions
Achieving net zero in the Council's estate and activities by 2030. This will be split into six sets of actions.

- Behaviour
- Energy
- Transport
- Waste
- Environment and Biosphere
- Business

Enabling actions
Enabling communities and Town and Parish Councils to support the Island journey towards net zero of carbon emissions

Energy actions
Developing opportunities and energy resilience for the Island

Transport actions
Ensuring that transport options on the Isle of Wight are in line with net zero targets

Housing actions
Ensuring that private homeowners and landlords can retrofit housing to meet net zero standards wherever possible

Environment actions
Protecting and enhancing the Island's natural environment and UNESCO Biosphere by managing land sustainably and connecting people with the environment

Resilience actions
Ensuring that the Island can meet future challenges presented by a changing climate

Climate change

Although climate change is a naturally occurring process over very long periods of time (i.e. moving into and out of ice ages), human activity over the last 150 years has caused the climate to change at a much faster rate than has previously been observed in entirely natural changes to the climate. Climate change takes place when changes to the Earth's atmosphere cause the planet to become warmer or cooler. These changes mean that more, or less, heat from the sun is retained within the atmosphere, which has an impact on the Earth's natural systems, such as weather. Climate change is measured by changes to 30-year averages of factors including temperatures and rainfall.

Since 1850, the Earth's global average temperature has increased by approximately 1ºc. While this may not sound like much, this temperature change is not consistent around the planet. Some areas have become much hotter, whereas others have only seen slight increases in temperatures, or have in a small number of areas become colder.

Without taking immediate action to prevent climate change, worst-case scenarios predict that we could see global average temperatures rise by 6ºc or more by the end of this century.

A more detailed explanation of climate change can be found in Appendix I.

Greenhouse gas emissions

There are several gases that contribute to global warming, known collectively as greenhouse gases (GHGs). Carbon dioxide, nitrous oxide, methane, water vapour, and fluorinated gases are all contributing to global warming and are considered GHGs. Carbon dioxide (CO_2) is the most abundant GHG generated by human activity, but other GHGs also have a significant impact on global warming and are usually included in emissions calculations.

Some analyses only focus on carbon dioxide emissions and simply use tonnes of CO_2 (tCO_2) as their units. These are also expressed in other units than tonnes so you will sometimes see amounts of CO_2 measured in, for example, kilograms ($kgCO_2$) or kilotonnes (thousand tonnes: $ktCO_2$), among other measurements.

Analyses that take into account all types of GHG emissions use a conversion factor to convert them into a carbon dioxide equivalent: CO_2e (this is based on carbon dioxide as it is the most abundant of the greenhouse gases).

As an example, methane causes around 25 times more global warming per tonne than carbon dioxide, so one tonne of methane is the equivalent of 25 tonnes of carbon dioxide and would be expressed as $25tCO_2e$.

The United Nations Paris Agreement

Since the 1990s, an annual United Nations meeting focused on climate change has taken place. This is known as the Conference of the Parties (COP). At COP21 in Paris, a significant achievement was made as nations around the world agreed to restrict their greenhouse gas (GHG) emissions with a target of preventing global warming of more than 2ºc from occurring, ideally capping warming at 1.5 ºc. This meant that each nation participating in the agreement (known as the Paris Agreement[7]) is required to set nationally determined contributions (NDCs)[8]: voluntary climate actions to take place from 2020 to reduce their country's emissions enough to meet the Paris Agreement's targets.

The United Kingdom is a signatory to the Paris Agreement, and as a result the environmental agenda is developing nationally, with pressure on Local Authorities to contribute towards the carbon budgets set out in the UK Climate Change Act 2008.

Implications of the United Nations Paris Agreement for Isle of Wight

The Tyndall Centre for Climate Change Research at Manchester University has set out a paper quantifying the implications of the Paris Agreement for the Isle of Wight[9]. The report proposes the use of **carbon budgets** for greenhouse gas emissions for 2020 to 2100. The analysis sets out the following recommendations for the Isle of Wight to make a 'fair' contribution towards the UK's commitments under the Paris Agreement:

1. Stay within a maximum cumulative carbon budget of 3.4 million tonnes (Mt CO_2) for the period of 2020 to 2100.
2. Initiate a Programme of CO_2 mitigation to deliver cuts in emissions averaging a minimum of 12.8% per year.
3. Reach zero or near zero carbon no later than 2042.

These annual reductions in emissions require national and local action and could be part of a wider collaboration with other local authorities.

At its current level of emissions production, the Isle of Wight is expected to use its entire carbon budget by 2027

[7] The Paris Agreement | UNFCCC

[8] Nationally Determined Contributions (NDCs) | UNFCCC

[9] Kuriakose et al, D., 2020. Local and Regional Implications of The United Nations Paris Agreement on Climate Change. [online] Tyndall Carbon Budget Reports. Available at: https://carbonbudget.manchester.ac.uk/reports/E06000046/print/ [Accessed 12 November 2020].

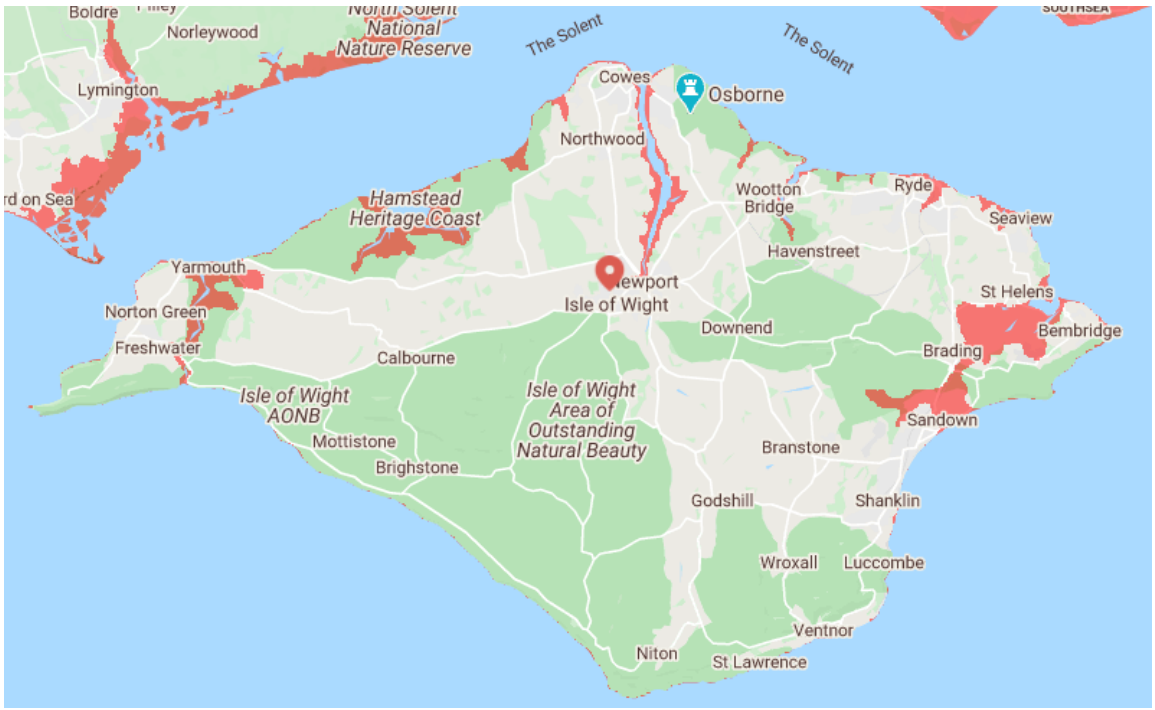
The Isle of Wight's climate

The Isle of Wight is one of the warmest and sunniest regions of the UK, with an average of 37 hours per week of sunshine during the summer compared to a national average of 29.7 hours per week[10]. The hottest recorded day on the Isle of Wight reached 33.8ºc, although if we continue to produce greenhouse gases at our current rate the Isle of Wight could see days as hot as 40.7ºc by 2100[11].

Over the past 30 years, the Island has seen on average 8 rainy days per summer month and 12 rainy days per winter month. Although climate change is not expected to change the number of rainy days on the Isle of Wight, it could potentially cause more rain to fall on rainy days, leading to an increased risk of flooding in many areas of the Island[11].

There are several other factors associated with climate change that could have severe impacts on the Isle of Wight, including sea level rise, coastal erosion, and ocean acidification and warming.

Figure 2. Island areas predicted to lie beneath the UK's annual flood level by 2050



Sea level rise is occurring as global warming increases, which melts glaciers and sea ice and causes thermal expansion of water in the oceans. This will lead to increased risk of flooding and coastal erosion around the world, with small islands likely to be at particular

[10] Isle of Wight weather

[11] What will climate change look like in your area?, based on County Hall's PO30 1UD postcode

risk. Sea levels are expected to rise by at least 20 centimetres by 2060, which could have severe impacts on lower-lying coastal areas. The areas shown in red in Figure 2[12] are forecast to be below the UK's annual flood level by 2050. The rise in sea level will also threaten beaches and other coastal areas, with The Needles considered to be under severe threat from coastal erosion by 2100[13].

Ocean acidification is caused by rising atmospheric carbon dioxide leading to increased seawater acidity[14]. This has adverse effects on both marine life and human society. Increased acidity of waters and increased ocean temperatures are highly likely to lead to die-offs of marine organisms such as fish, corals, sea grasses, and kelp[15]. Currently, there is little research around the impacts of ocean acidification on the Isle of Wight specifically, but the UK area is thought to have already experienced fish and shellfish catch decreases of up to 30% and may see losses in employment from fisheries and associated industries of up to 20% by 2050[16].

[12] Land projected to be below annual flood level in 2050

[13] 21 UK Landmarks Threatened by Rising Seas

[14] Report by the Ocean Acidification sub-group of the Science Advisory Council

[15] The Ocean (IPCC)

[16] Estimating the ecological, economic and social impacts of ocean acidification and warming on UK fisheries - Fernandes - 2017 - Fish and Fisheries - Wiley Online Library

Carbon footprints

A carbon footprint is defined by the Carbon Trust as:

> *"The total greenhouse gas emissions caused directly and indirectly by a person, organisation, event or product."*[17]

The emissions that make up a carbon footprint are separated into three types, or scopes. While many organisations focus solely on scope 1 and 2 emissions, an increasing number are also including scope 3 emissions in their carbon footprints to provide a fuller picture across all their activities.

Scope 1	Direct emissions from owned or controlled sources – onsite power generation (e.g. rooftop solar PV) or gas, and fleet vehicles
Scope 2	Indirect emissions relating to energy use – purchased grid electricity, steam, heating, and cooling
Scope 3	Indirect emissions in an organisation's value chain – purchased goods and/or services, business travel and employee commuting, waste, transportation, and investments

Isle of Wight Council emissions

The Isle of Wight Council published its baseline carbon footprint for the financial year 2009-10, finding a carbon footprint of **22,558 tCO_2**. Since then, this footprint has been adjusted to remove emissions from schools and refrigerant gases[18], leading to a new baseline calculation for 2009-10 of **11,568 tCO_2**. By 2018-19, this carbon footprint had been reduced by approximately 65% to **4,077 tCO_2e**.

The 2018-19 carbon footprint includes emissions from energy, transport, waste, and water, as outlined in

Table 1 and Figure 3.

As discussed, many organisations have now expanded their carbon footprint calculations to include emissions from their value chains. The Isle of Wight Council may need to consider

[17] Carbon footprinting guide | Carbon Trust

[18] The figure for 2009/10 was significantly higher at the time of its publication as it included emissions from schools and refrigerant gases. This figure was adjusted for the publication of the 2015-2020 Carbon Management Plan. Schools were excluded from the 2015 figure as the Council no longer has access to schools' energy management and their budgets are now devolved from the Council. Refrigerant gases were excluded at the same time as most air conditioning units were removed from Council properties by 2013.

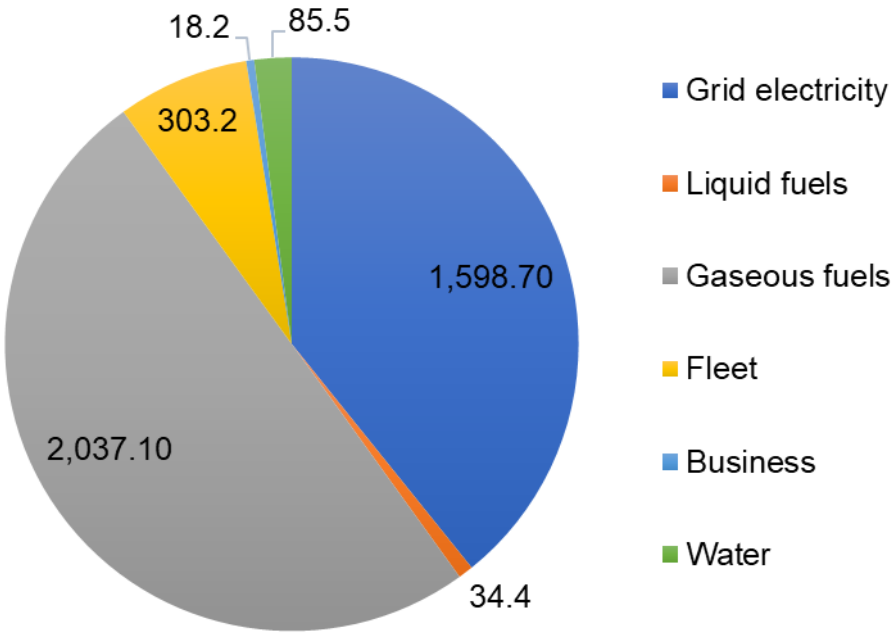
updating their carbon footprint to include all scope 1, 2, and 3 emissions in the future to provide a more accurate picture of emissions produced from all its activities.

Table 1. Isle of Wight Council's carbon footprint, 2018-19 (tCO_2e)

Category	Emissions (kilotonnes of CO_2e)	Percentage of total emissions
Stationary sources		
Grid electricity	1,598.7	39.2
Liquid fuels	34.4	0.8
Gaseous fuels	2,037.1	50.0
Transport		
Fleet	303.2	7.4
Business	18.2	0.4
Further sources		
Office waste	To be confirmed	
Water	85.5	2.1
Actual total	**4,077.10 tCO_2e**	**100.0**

The Isle of Wight Council had a carbon footprint of 4,077 tCO_2e[19] in 2018/19

Figure 3. Isle of Wight Council carbon footprint, 2018/19 (tCO_2e)



[19] Energy Management - Service Details (iow.gov.uk)

IWC has significant annual costs related to energy management. The Council's electricity, oil, and gas expenditure in 2018/19 was £906,120.00. As well as reducing emissions, a key aim of any action taken to reduce the Council's energy use will be to reduce the costs associated with providing energy and heat in Council-owned and operated buildings.

Island-wide emissions

Isle of Wight Council commissioned a study by Regen[20], which has produced an emissions baseline for the Isle of Wight based on its statistics from 2017. The Regen analysis focuses on scope 1 and 2 emissions, and largely excludes scope 3 emissions. It examines ten categories (outlined in
Table 2), which were then used to create pathways for emissions reductions to 2030 or to 2040.

Table 2: Emissions included in Regen's scope 1 and 2 analysis

Domestic heating	• Calculated from average heat demand using average gas consumption and boiler efficiency
Domestic non-heating	• Emissions generated by powering homes other than those from heating, e.g. lighting, appliances, cooking
Commercial and industrial	• Rail transport and off-road transport other than agricultural vehicles • Waste and wastewater • Industrial processes • Commercial and industrial buildings
Road transport	• Calculated using BEIS fuel consumption statistics and national split of petrol/diesel vehicles • Includes emissions from electricity generation to power electric vehicles
Waterborne transport	• Calculated using data on ferry passenger numbers • Freight emissions are excluded
Agriculture	• Off-road machinery • Solid and liquid fuels • Other agricultural emissions not covered by livestock or land use
Livestock	• Methane and waste emissions from livestock
Land use	• Currently sequesters almost 6% of Island emissions
Electricity-only generation	• Emissions caused by the generation of electricity used to power the Isle of Wight, e.g. Cowes Power Station generates electricity
Combined heat and power (CHP) generation	• Emissions caused by sources that generate both heat and power, e.g. Arreton anaerobic digestion plant generates both electricity and gas

Key assumptions in Regen calculations

[20] Crook, T and Haynes, J, 2020. *Regen Zero Carbon Pathways Study*, prepared for Isle of Wight Council

The Regen analysis indicates that current land use on the Island current sequesters 29.3 $ktCO_2e$ annually. This means 29,300 tonnes of CO_2 are absorbed each year by, for example, the trees and plants currently present on the island.

Regen assume that the population of the Isle of Wight will grow 0.5% each year. It is based on the Office for National Statistics' 2016 population data.

Aviation has been excluded as a separate transport category as there are no airports on the Isle of Wight, only two small airfields. Any emissions arising from operations of these airfields will be accounted for under the 'commercial and industrial' emissions. Water transport has been included as 50% of emissions generated by the passenger ferries running to and from the Isle of Wight. The other 50% are attributed to the mainland.

Domestic heating is based on the 78% of homes on the Island that use gas boilers and assumes that 7.5% of domestic boilers on the Island are replaced each year.

The Island's carbon footprint

The carbon footprint for the Isle of Wight, based on 2017 emissions, is 506,900 tCO_2e

Island-wide emissions are expressed as CO_2e. Most emissions included in the Regen analysis are CO_2, but agriculture produces some methane, which has beeen converted into its carbon dioxide equivalent. A breakdown of the Island's sources of emissions can be seen in Table 3**Error! Not a valid bookmark self-reference.** and

The three largest sources of emissions on the Isle of Wight are:

1. Commercial and industrial
2. Road transport
3. Domestic heating

Figure 4.

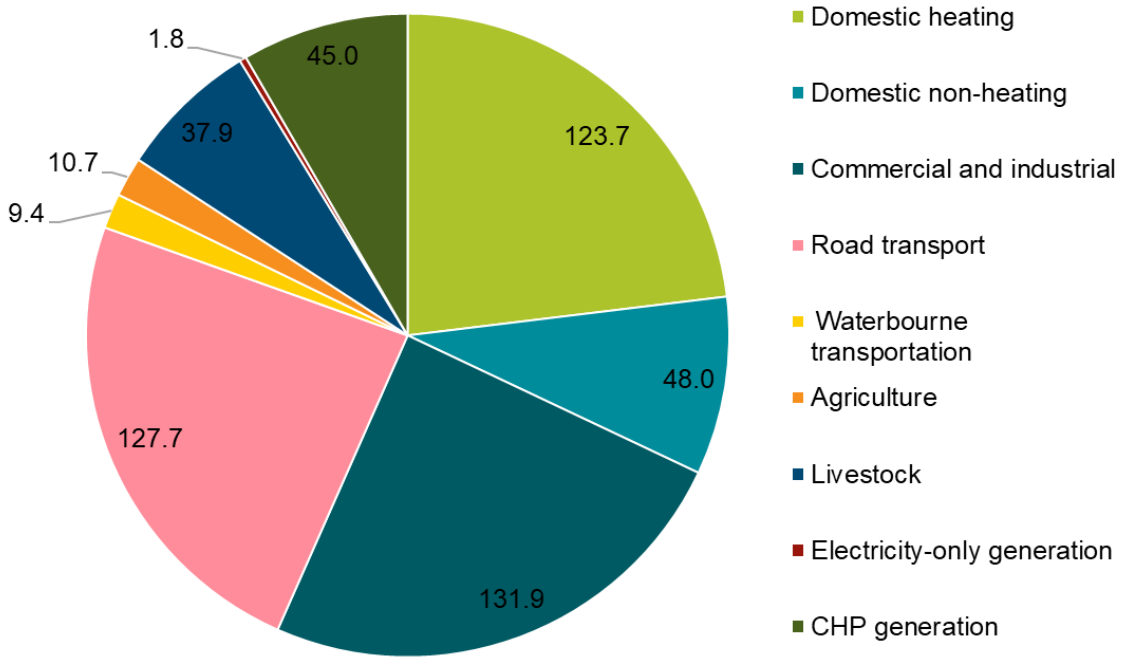
Table 3: Regen analysis of Isle of Wight emissions

Category	**Emissions (kilotonnes of CO_2e)**	**Percentage of total emissions**
Domestic heating	123.7	24.41%
Domestic non-heating	48.0	9.47%
Commercial and industrial	131.9	26.03%
Road transport	127.7	25.20%
Waterborne transportation	9.4	1.85%
Agriculture	10.7	2.11%
Livestock	37.9	7.48%
Land use	- 29.3	- 5.78%
Electricity-only generation	1.8	0.36%
CHP generation	45.0	8.88%
Total	**506.9 ktCO_2e**	**100%**

The three largest sources of emissions on the Isle of Wight are:

4. Commercial and industrial
5. Road transport
6. Domestic heating

Figure 4. Baseline emissions for the Isle of Wight by sector, from Regen analysis ($ktCO_2e$)



In order to meet net zero emissions by 2030, the Isle of Wight area will need to reduce and offset carbon emissions by an average of 12.8% per year

Pathways to net zero

Regen have included three pathways to net zero for consideration by the Isle of Wight. These are:

- Net zero by 2030 with no offset
- Net zero by 2030 with 3% offset
- Net zero by 2040 with no offset

Many local authorities in the UK are considering offsetting up to 15% of their emissions in order to meet net zero goals. Owing to the challenges involved in meeting a true net zero target, the Isle of Wight will also consider a pathway of net zero by 2030 with 15% offset.

Emission reductions will largely come from activities including:

- Switching to use renewable energy
- Expanding and increasing the production of renewable energy
- Significantly improving energy efficiency in buildings (domestic and other)
- Reducing vehicle use

Carbon offsetting will largely occur through reforestation, afforestation, rewilding, and biodiversity projects.

Net zero by 2030 with no offset

In a reduction strategy without additional carbon offsetting (e.g. planting more trees), achieving net zero carbon by 2030 would take significant commitments by all residents and businesses on the island. It is important to note that even in this scenario, some carbon offsetting will occur from existing land use on the Island. This is considered a ‘true’ net zero pathway as no additional carbon offsetting is included in the scenario. Required reductions to achieve this pathway are shown in

Figure 5.

Changing the way energy is consumed on the Island is fundamental to achieving this change, as seen in Figure 6. The feasibility of such wide-scale changes will be challenging given the Island's demographics, low wage economy, and property stock, and will depend to a large extent on incentives through central government-led schemes. In this scenario, it will be necessary for residents to transition to electric heating, hot water, and transport options, as well as to utilise active travel and public transport wherever possible.

Energy efficiency will be another area of concern. It is vital to ensure buildings, businesses, vehicles, and industrial processes are as energy efficient as possible to reduce the amount of energy required. This pathway will require the Island to reduce the amount of energy used by more than half by 2030 to meet a true net zero target, as outlined in Figure 6.

Figure 5. Net Zero 2030 (true) decarbonisation trajectory

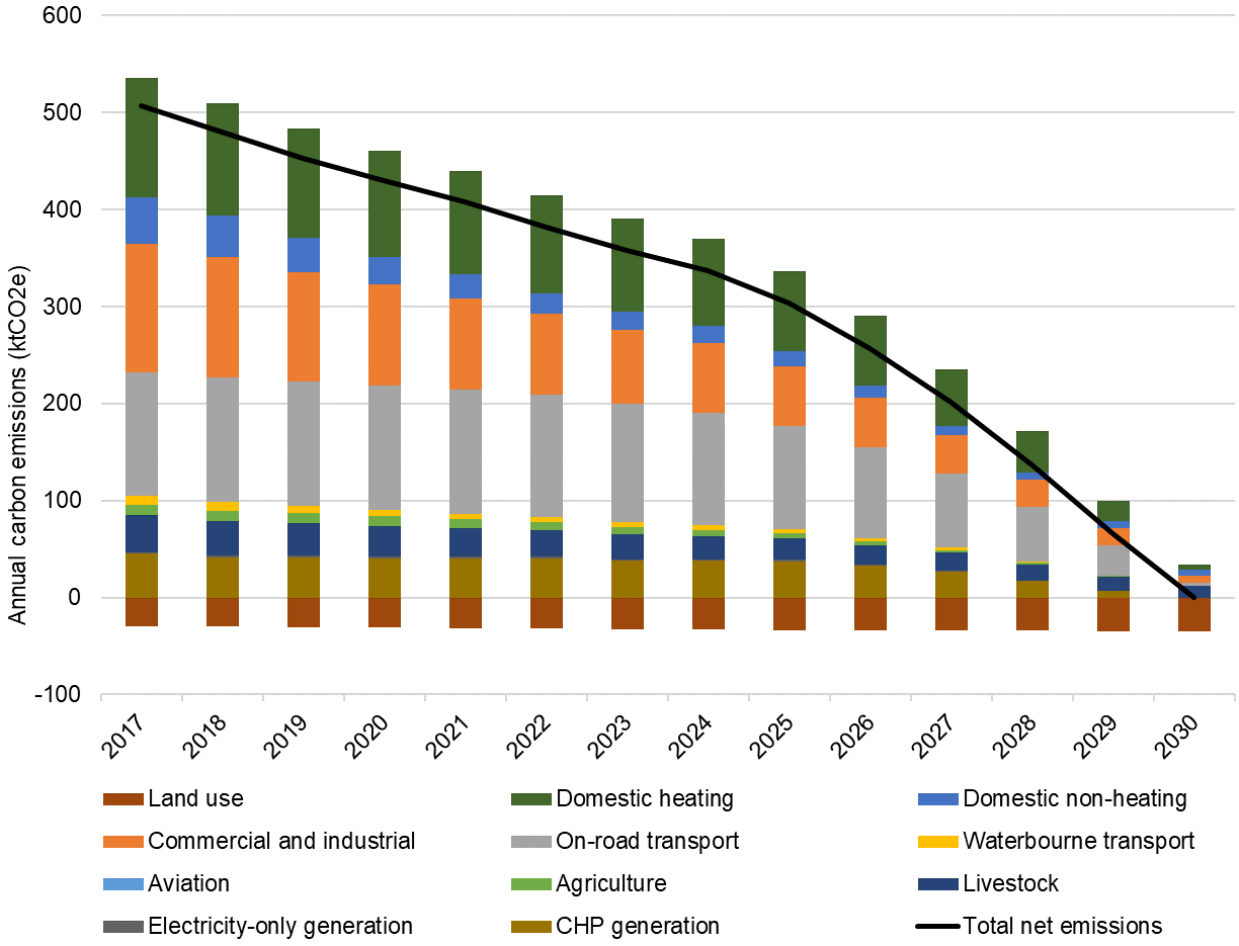
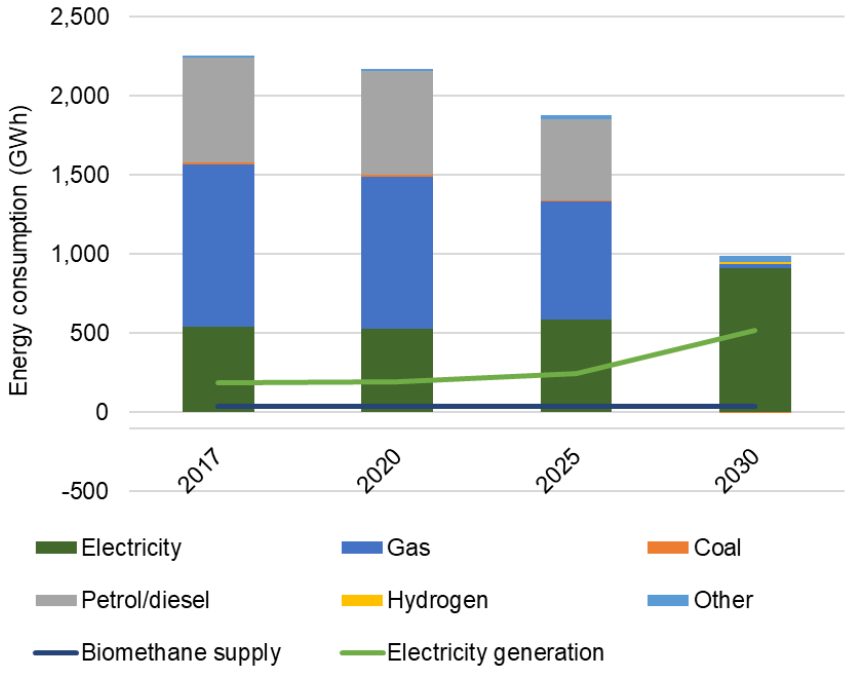


Figure 6. True Net Zero 2030 energy consumption by fuel



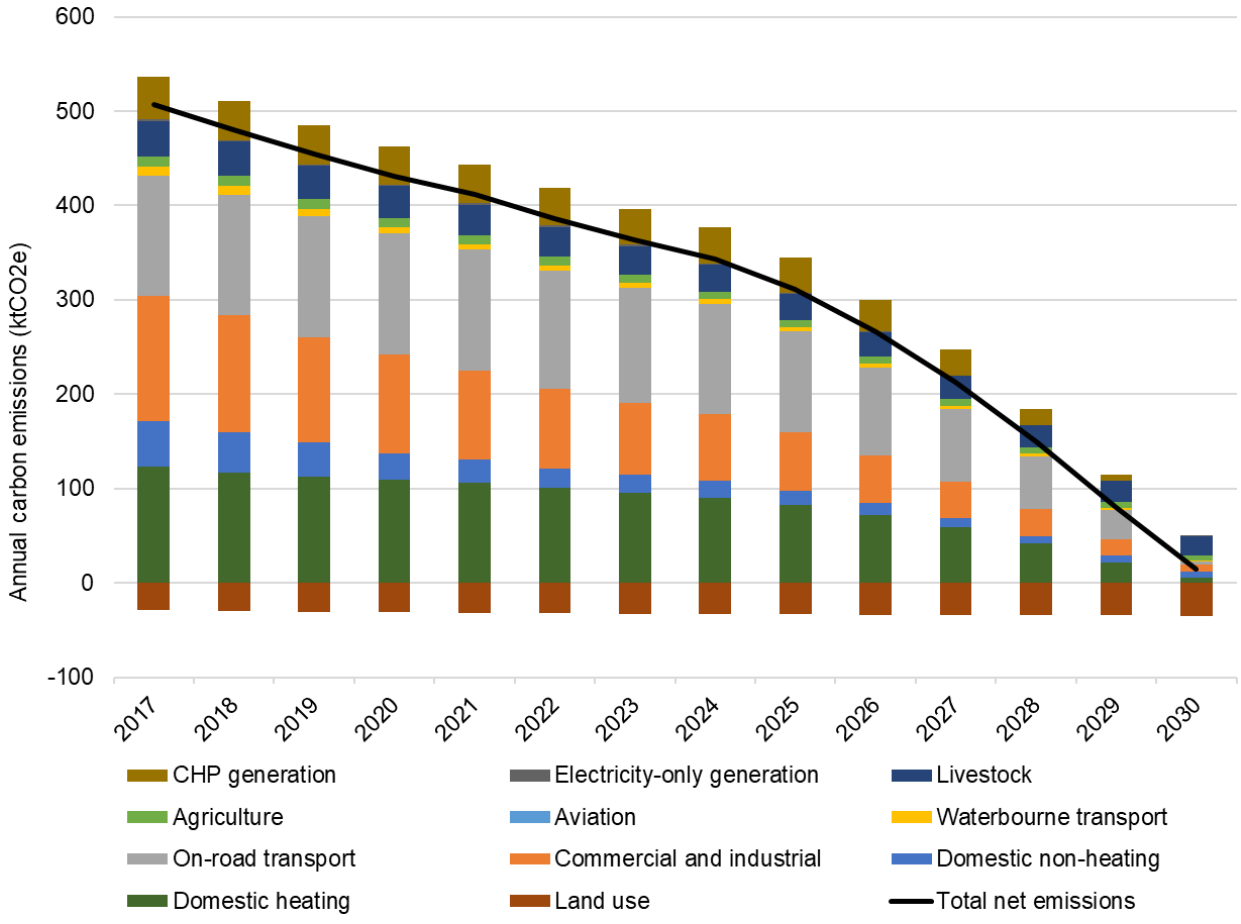
Net zero with 3% offset

Regen's pathway to net zero with a 3% offsetting approach has modelled a 97% reduction in emissions and assumes the remaining 3% can be dealt with through carbon offsetting measures such as tree planting or other changes in land use. Many local authorities are exploring scenarios that include an option to offset a portion of their emissions.

There are numerous challenges involved with meeting 'true' net zero goals, including financial costs, local community and business engagement, and reliance on future technology[21]. Offsetting will allow more flexibility for sectors that will struggle to eliminate all emissions as soon as 2030, such as agriculture.

In this scenario, by 2030 3% of emissions (from a 2017 baseline) would still be produced (approximately 15 $ktCO_2e$). The pathway to meet this trajectory is shown in Figure 7.

Figure 7: Net Zero 2030 with 3% offset trajectory



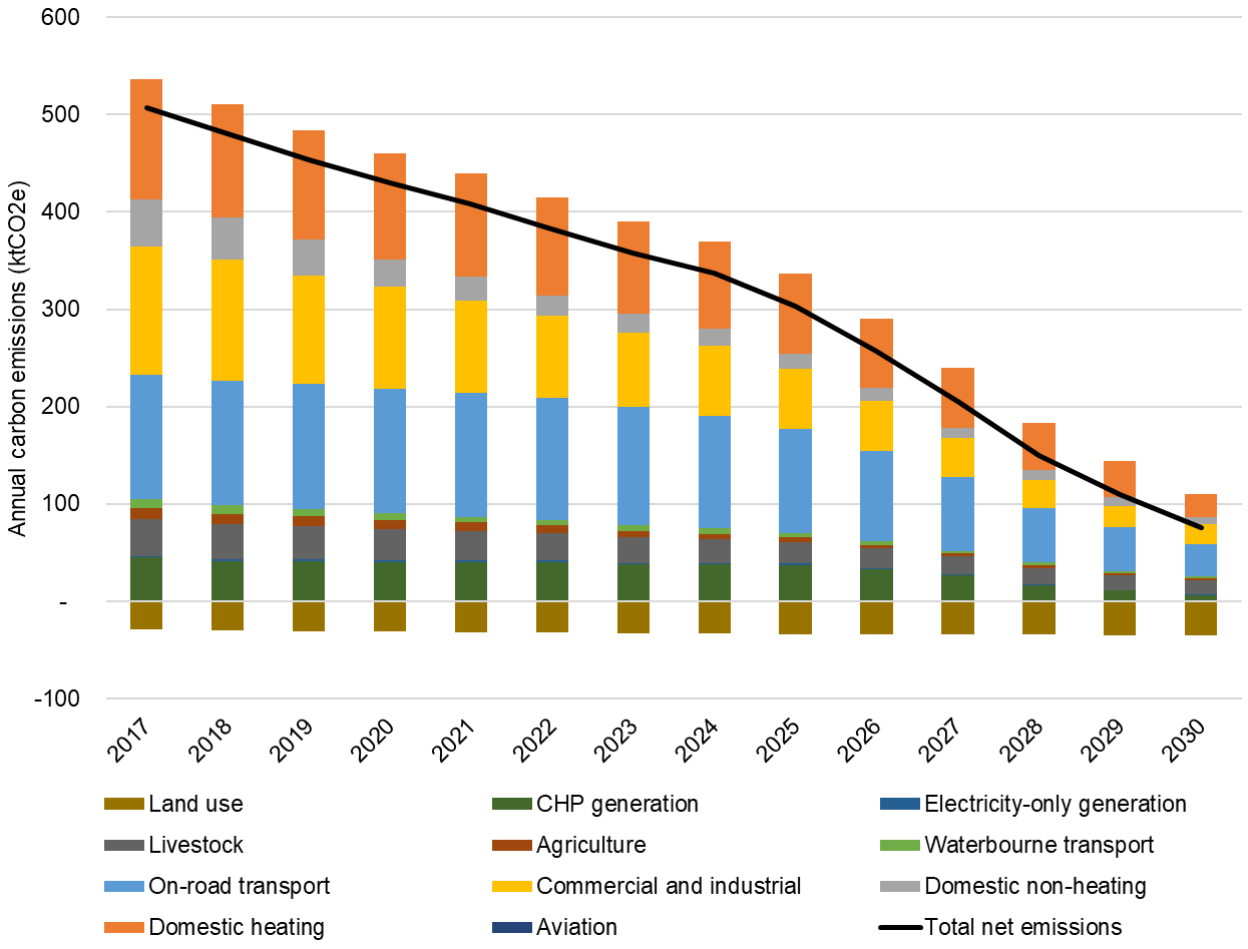
[21] While various carbon reduction and removal technologies already exist, they are currently very expensive and not efficient enough to use to remove large amounts of carbon from the atmosphere, although this may change in the future as the technology develops further or new technologies are created. Tree planting and other land use change is currently a far more affordable option to offset emissions.

Net zero with 15% offset

Many local authorities around the UK, such as the Borough of Enfield[22], are planning for a scenario in which they need to offset up to 20% of their emissions in order to meet net zero targets within their required timeframes. Although the Isle of Wight Council will aim to reduce its own emissions, and support Island-wide emissions reductions, as far as possible by 2030, it would be sensible to consider this scenario as a precaution to ensure that we are able to achieve our goal even if emissions remain higher than anticipated.

Offsetting up to 15% of emissions across the Island would allow for greater flexibility and may offer wider benefits, such as encouraging further reforestation and biodiversity schemes on the Island to meet offsetting goals. These schemes would have wider benefits for wildlife and people on the Island. The trajectory to meet this goal is outlined in Figure 8.

Figure 8: Net Zero 2030 with 15% offset trajectory[23]



[22] Enfield Climate Action Plan

[23] Please note that the figures used for this chart have not been provided by Regen as part of their analysis. This figure is an illustration created by Isle of Wight Council to demonstrate the potential trajectory required to meet 15% offset.

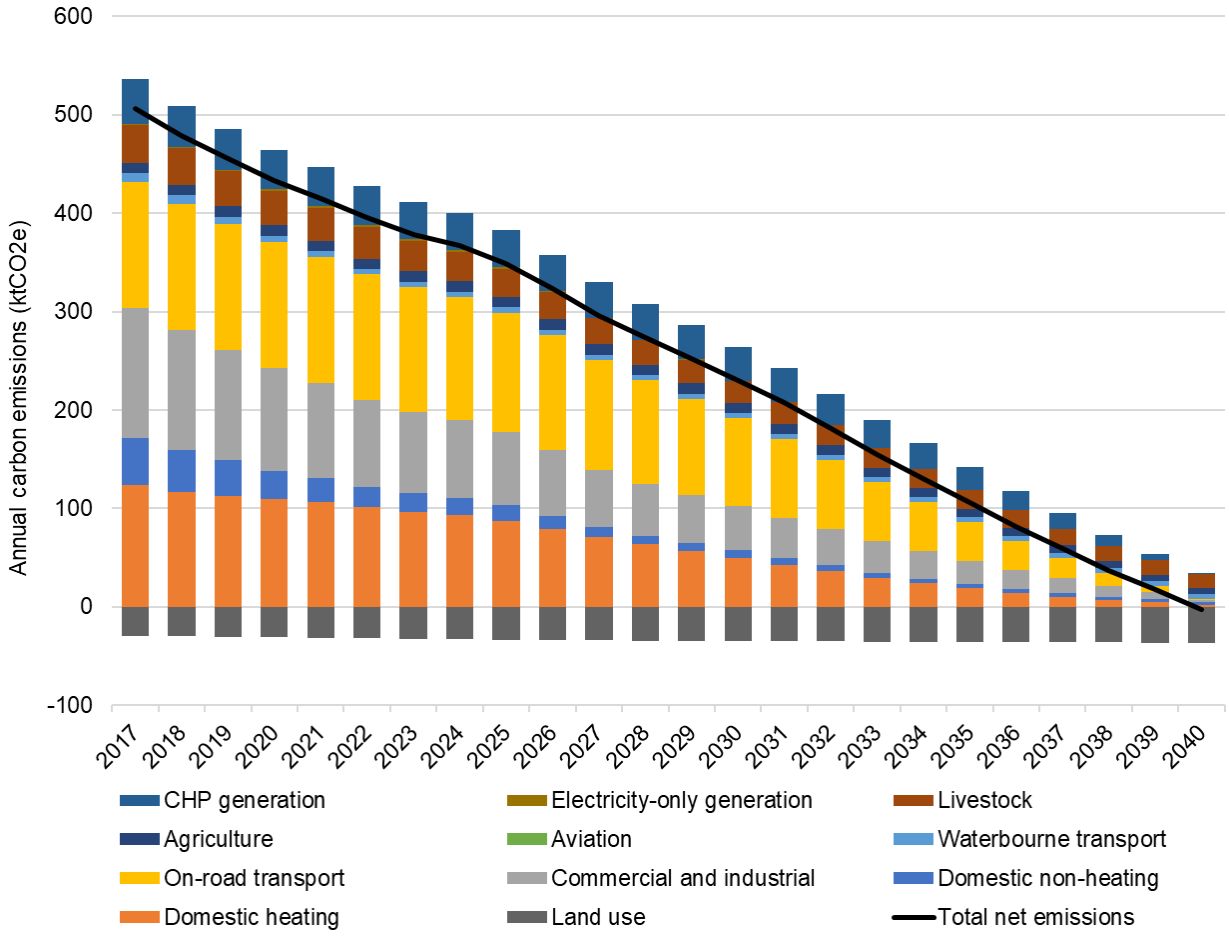
Net zero by 2040 with no offset

Again, in this scenario some carbon offsetting will occur from existing land use on the Island, but no further carbon offsetting would take place. Aiming to achieve net zero carbon emissions by 2040 would follow a similar pathway as the 2030 trajectory, just at a slower pace, as shown in Figure 9. However, this pathway would lessen the need to speed up emissions reductions activities around 2025 as would be required in the true net zero by 2030 trajectory shown in

Figure 5.

While following this pathway would lessen the need for immediate action, climate scientists and activists around the world are encouraging large-scale action at the earliest possible opportunity. This has led the Isle of Wight to declare a climate emergency and state a net zero target date of 2030. Therefore, the Isle of Wight should aim to meet one of the three scenarios, or some combination of these scenarios, discussed prior to this one.

Figure 9: Net Zero 2040 (true) decarbonisation trajectory



Carbon offsetting

Carbon offsetting is defined as:

"Taking action to ensure that any carbon emissions released are matched by an equal or greater amount of activity to remove emissions from the atmosphere"[6]

There are various methods to offset a carbon footprint. The most often used is planting trees through reforestation (replanting woodland that has been removed) or afforestation (creating completely new woodland). However, almost any planting scheme will contribute towards offsetting a carbon footprint, for example, planting wildflower meadows or hedgerows. There are other methods than tree planting to offset carbon– for example, salt marsh or peat bog restoration on land, and kelp forest or seagrass restoration in the ocean.

To offset the Isle of Wight's entire 2017 carbon footprint of 506,900 tCO_2e, approximately 2,534,700 new trees would have to be planted[24]

Currently, only 13% (5,073 hectares) of the Isle of Wight area is covered by trees[25]. This is in line with 13% across the whole of the UK and better than average for England, which only has 10% tree coverage. However, 46% of Europe is covered by trees and forests[26]. Trees play an important role in removing carbon dioxide from the atmosphere. They also provide homes for wildlife, reduce air pollution, decrease flood risk, and are beneficial for mental and physical health.

76,000 new trees would have to be planted to offset 3% of emissions in 2030

380,000 new trees would have to be planted to offset 15% of emissions in 2030

If the Isle of Wight were to eliminate 97% of emissions by 2030, this would require approximately 152 more hectares of tree coverage to plant enough trees to offset the remaining 3% of emissions. If the Isle of Wight were to eliminate 85% of emissions by 2030,

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[24] Carbon dioxide emission footprint calculator and offset estimator (carbonify.com)

[25] AncientWoodlandInventoryWight.pdf (wildonwight.co.uk)

[26] Forest cover: international comparisons - Forest Research

this would require approximately 760 more hectares of tree coverage to plant enough trees to offset the remaining 15% of emissions.

One hectare is about the size of a rugby pitch, or 100 metres by 100 metres

The Isle of Wight's approach to net zero

Regardless of the pathway the Isle of Wight takes to meet its net zero target, the pathway must focus primarily on emissions reductions, with a relatively small amount of offsetting taking place. While Isle of Wight Council can control its own operations and is very likely to be able to meet net zero by 2030, this only accounts for a tiny fraction (less than 1%) of the Island's overall emissions. Widespread behaviour change will be necessary across the Isle of Wight, with major changes to energy use and production, housing, and transport and its supporting infrastructure required, for the entire area to meet a net zero emissions target.

Several local authorities have set different target dates for net zero in their own operations and for the wider area. For example, Enfield has set targets of 2030 for council operations and 2040 for the borough to meet net zero[22]. Although Isle of Wight Council has stated 2030 as its target date for both, this is currently stated as an aim, so a different approach could be considered to allow the Island greater flexibility in meeting its goals. This would work particularly well for sectors that will be challenging to decarbonise.

The following sections cover the proposed action plan for the Isle of Wight Council and the desired outcomes for the Isle of Wight area. It is important to be aware that this action plan is intended as an overview to introduce the actions that should take place over the coming decade. More detailed feasibility studies and plans will be needed for many of the actions described. Where possible, these required plans have been named in the action plan, although it is likely that these requirements will change as time passes.

Isle of Wight Council expects to review this plan every other year to 2030 and to publish an updated version of the Strategy. A revised action plan will be published at the same time if it is deemed necessary, as the Council recognises that the actions required to meet a net zero goal are likely to change over time as climate research is updated and changes to the Island, such as population growth and increased tourism, take place. This revised action plan will include a review of actions from the previous Strategy and whether they have been completed, are in progress, or have been changed or cancelled in line with national and international policy changes and updates in climate research.

Action plan

Council outcomes

Achieving net zero in the Council's estate and activities by 2030. This will be split into six sets of actions.

When the Isle of Wight Council declared a climate emergency in July 2019 (see Appendix II), it stated an aim to achieve net zero emissions in both the Council's operations and the wider Island area by 2030[5]. While the Council recognises that many actions in the wider community will be outside its control, it can 'begin at home' by focusing on achieving net zero within its own operations. The actions that can be taken by Isle of Wight Council to reduce its own carbon footprint will be split into six categories: Behaviour, Energy, Transport, Waste, Environment and Biosphere, and Business.

Behaviour

Research has indicated that while the public's concern about climate change is growing, there is a general lack of knowledge about climate change. Additionally, many people demonstrate low willingness to change their behaviour in order to tackle issues associated with climate change[27]. The Paris Agreement states that the world must aim to limit warming, ideally to below 1.5ºc. However, Earth has already reached 1ºc of warming, and current global policies mean we will reach 3.3ºc of warming by 2100[28]. To tackle climate change, the world will need not only stronger policies but will require people and businesses to change their behaviours to achieve these policies' goals.

There are a number of steps that Isle of Wight Council can take to encourage its employees to become more engaged with tackling climate change, as outlined in

[27] Hoppner, C. and Whitmarsh, L., 2011. Public engagement in climate action: policy and public expectations. *Engaging the public with climate change. Behaviour change and Communication*, pp.47-65.

[28] Peeters, W., Diependaele, L. and Sterckx, S., 2019. Moral disengagement and the motivational gap in climate change. *Ethical Theory and Moral Practice*, *22*(2), pp.425-447.

Table 4. The overall aim of these actions is to embed climate action and circular economy thinking in our corporate DNA to ensure climate change is considered from the outset of all decision-making.

While behavioural changes will be an important step in tackling climate change, it is important to remember that change will take place more slowly in some areas than others for various reasons (such as, for example, the cost of introducing new programmes) and the programme of behaviour change should be viewed as a series of long-term actions, rather than something that can be changed entirely in the space of a few months.

Table 4. Council outcomes: behaviour

Outcome	Council action(s)	Date
Encourage climate awareness and ensure climate change is a factor in all decision-making		
Develop and deliver a comprehensive training programme to support all staff and Councillors to embed Climate Change and Environmental considerations into all decisions	Develop training programme with L&D Explore programmes offered externally (Carbon Literacy, Jump, IEMA, Sulietist)	From 2021
Engaging all our staff in the climate change conversation to facilitate behavioural change and thinking sustainably as part of the corporate DNA	Develop an internal comms plan outlining: • Progress made towards net zero • Team and individual actions that can help	From 2021
Ensure that climate change is considered as a part of all council decision-making processes	Create series of questions/factors for councillors/decision-makers to consider when making decisions on council activity	From 2022
Highlight the links of climate action to wider benefits within decision-making processes		
Ensure all Council events are net carbon neutral	Publish new guidelines for Council events Use the green impact calculator for events Publish carbon footprints with minutes	From 2022
Update all procurement processes to consider climate and environment issues in the evaluation criteria and conditions of contract, where relevant	Work with Procurement to update processes in line with decision-making processes	From 2022
Engage communities in the Council's climate plan		
Refresh the IWC website's climate change section. Create a climate emergency microsite as a one stop location for information about council actions and advice for locals/businesses	Relaunch website covering: • Climate science and impacts on the island • Current and proposed council actions • Links to all reports / meeting minutes • Details on funding received and how spent • Updates on available grants	From 2021, alongside publication of this strategy
Promote activities via social media – Instagram or similar	Create a social media account (probably Instagram) to engage with locals and provide updates on progress	From 2021
Review the Climate and Environment strategy at least every two years	Review and re-publish the strategy in line with any climate research or policy updates Ensure it is in line with UK legislation Publish action plan updates outlining completed, changed, or cancelled actions	First review due Q1 2023
Promote the Green Impact Programme		
Facilitate all buildings and Service Areas to participate in the Green Impact Programme	Audit, report and improve the council green impact Discuss the Programme with all areas and T&PC Set up a quarterly Steering Group meeting	From 2021
Establish Green Champions in each service area		
Encourage Town and Parish Councils to sign up to the Green Impact Programme to analyse their current performance		
Divest from fossil fuel funds		
Explore the possibility of divesting funds, such as pensions, from any fossil fuel-based funds	Discuss options with the Finance team before making a recommendation (they can proviode more information from January 2021)	Review in 2021

Energy

Around the world, energy use remains one of the largest sources of emissions. However, the transition to renewable energy is beginning to speed up, with renewables (40% of electricity generation) outpacing fossil fuels (39%) in the UK's energy mix for the first time in the third quarter of 2019[29]. During the second quarter of 2020, this increased to 44.6% of electricity in the UK being produced by renewables[30]. As the technology behind renewable energy develops, these sources of energy become cheaper, with solar and wind now being the cheapest sources of energy in the UK[31].

The Council can help the switch to renewables through the actions outlined in Table 5, which focus on both the type of energy used and energy efficiency in buildings. These actions focus solely on energy use in the Council's operations and estate. Energy actions that the Council can take in the wider community will be outlined later in this document.

Isle of Wight Council will publish a new Carbon Management Plan in 2021, which will cover the 2021-2030 period and will provide further detail around many of the actions in this section of this report.

Table 5. Council outcomes: energy

Outcome	Council action(s)	Date
Ensure only renewable energy is procured for all buildings		
Change procurement of energy with a policy to only purchase from green energy schemes	Discuss options with Energy Manager and Procurement to agree a new plan Publish proposed options as part of the Carbon Management Plan	By 2023
Work with suppliers to understand income/savings from • Use of power on site • Power Purchase Agreements (PPA) • Private wire/private power sales (Corporate PPA) • Sleeving: the role of a Licensed Supplier • Energy Storage: day ahead, intraday, BM trading & FFR • EV Charging hubs		
Ensure energy efficiency is improved in all buildings		
Consider timer plugs to switch off all monitors on standby overnight	Discuss with Facilities and Procurement to decide which options are feasible	Review in 2021 Introduce changes from 2022, wherever possible
Replace hand dryers with more energy efficient models as they age out and require replacing		
Consider introducing tap attachments to reduce water use		

[29] Analysis: UK renewables generate more electricity than fossil fuels for first time

[30] Renewables_September_2020.pdf

[31] Wind and solar are 30-50% cheaper than thought, admits UK government

Consider introducing push button / motion sensor taps where not already in use		
Review the need for on site server farm in corporate buildings	Discuss with Energy Manager and IT to agree a strategy	By 2024
Decarbonise buildings through use of alternative technologies for heat and power		
Reduce carbon impact and cost of cremations. Maximise emissions abated through technological advancements in the crematorium	Write and publish a new Heat Decarbonisation Plan Update the existing Carbon Management plan to cover non-heating energy use Cover the full Council estate (non-domestic) in both plans Work to a target date of 2030 for full decarbonisation in Council buildings	Publish both plans by the end of 2021 Target full decarbonisation of the Council estate no later than 2030
Produce plan to decarbonise heat in all Council-owned domestic and non-domestic properties by 2030		
Energy Audit all civic buildings to develop costed plan to reduce carbon impacts of buildings and create savings, possibly through Salix loans for capital		
Review the estate's energy performance and identify capital works to decarbonise as part of 2020-2030 Carbon Management Plan		
Move to on-site solar PV generation for Council-owned properties wherever possible		
Introduce battery storage for any buildings that use on-site solar PV		
Work with Housing Associations to decarbonise homes, and ensure residents understand the necessary actions for decarbonisation and energy efficiency	Review grants and other funding options Introduce a pilot scheme for a small number of tenants Create a low carbon housing plan Introduce planning changes for any new build properties	Target full decarbonisation of HA housing by 2030
Ensure environmental monitoring standards are met		
Introduce Energy Management software for straightforward energy use monitoring and to assist with carbon footprinting for the Council's estate	Review software options and select provider	From 2021
Include all scope 1, 2, and 3 emissions in the council carbon footprint calculations[32]	Review current Council carbon footprint and ensure all emissions are included from FY 2021/22 onwards	From 2022
Meet ISO 140001 accreditation	Follow 'Plan, Do, Check. Act' and establish baseline of environmental measures Mitigate against measures that have not been achieved to meet accreditation	By 2025
Increase renewable energy generation across the Isle of Wight		
Battery storage feasibility study for a network across the Island to smooth capacity issues in the grid allowing increase in solar farms on unused agricultural land	Research external bodies that can provide feasibility studies or work with UK universities to develop the studies Include outlines of studies in Carbon Management / Heat Decarbonisation plan(s) in 2021	Outline studies in 2021 plans Publish full studies by end of 2023
Review the tidal energy development feasibility study for the western Solent and south coast of the Island to see if it is a feasible option for the Island		

[32] While this is not currently a formal environmental monitoring standard, organisations are increasingly focusing on all emissions throughout their value chain to ensure they are working towards truly becoming net zero organisations.

Develop feasibility study examining anaerobic digestion (household and commercial food) or in-vessel composting (food and garden) to generate electricity		
Conduct a Private Wire Network and Public Energy Company feasibility study, utilising wind, tidal, and energy from waste to power either a civic network or electric vehicle charging hubs		
Set up Public Estate Heat Network utilising heat from the Energy from Waste Plant at Forest Park	Review potential when plant begins firing in 2021 Identify partner to create plan for heat network	By 2025
Seek to install at least 3 solar farms on council-owned brownfield sites and on unused sites	Identify potential sites for solar farms Seek funding for development of sites	By 2030

Transport

Transport is the largest source of emissions in the UK, accounting for 34% of UK emissions in 2019[33]. It is essential that travel by car is reduced where possible, petrol and diesel vehicles are switched to electric vehicles at the earliest opportunity, and active transport is encouraged. These are many options available to reduce vehicle use, as well as to encourage people to travel by bike or on foot, as outlined in Table 6.

The UK government has recently announced that sales of new petrol and diesel vehicles will no longer be permitted after 2030[34]. Action will therefore be required to ensure that enough electric vehicle charging points are available and that a plan is in place to replace the current fleet of Council vehicles with electric vehicles as petrol and diesel vehicles approach the end of their life cycles.

Currently, the Isle of Wight has 26 electric vehicle chargers. It will need at least 72 by 2030, and possibly more to meet growing demands from tourism

According to Zap-Map, the Isle of Wight area has 26 public electric vehicle charging points (EV chargers)[35]. The Climate Change Committee, which advises the government, says there should be one EV charger for every thousand cars by 2030[36]. This suggests that on the Isle of Wight there should be at least 72 EV charger points by the end of the decade.

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[33] 2019 UK greenhouse gas emissions, provisional figures

[34] Government takes historic step towards net-zero with end of sale of new petrol and diesel cars by 2030

[35] Zap-Map

[36] Plugging the gap: An assessment of future demand for Britain's electric vehicle public charging network - Climate Change Committee

The IWC also needs to consider the tourism vehicle influx and ensure there is adequate charging available for visitors.

Table 6. Council outcomes: transport

Outcome	Council action(s)	Date
Encourage active travel for Council employees wherever possible		
Ensure that s106 agreements are ringfenced into sustainable or active travel schemes specific to the development location	Ensure that s106 money is utilised for specific development locations Develop a new Planning policy	From 2021
Increase uptake of the Cycle to Work scheme to all Council employees by 50%	Encourage wider participation in the scheme through HR (for new employees) and Comms (for existing employees)	By 2030
Increase number of Council employees walking to work by 50%	Develop comms plan to encourage staff to walk to work wherever possible	By 2030
Ensure sufficient bike storage and changing facilities are available across the Council estate	Review existing facilities and introduce new ones in line with changes in travel to work methods, particularly in line with any increased uptake of Cycle to Work scheme Seek funding to create new facilities if there is a shortage	Ongoing from 2021
Reduce vehicle use across all Council activities		
Increase use of public transport among council staff	Promote staff discounts for public transport with communications plan via C&E or HR A 20% Council discount is available on Southern Vectis for season tickets	From 2021
Promote lift share to all staff	Encourage use of a national service like LiftShare with comms plan via C&E or set up a local scheme	From 2022 (Covid-dependent)
Ensure efficient route planning to reduce mileage for business travel		
Use vehicle tracking data to analyse efficiencies of journeys	Discuss with Fleet Manager and include points as part of the Council's Sustainable Transport plan	Publish plan by 2022 (may be a lot of changes through 2021 owing to Covid)
Review services policies for fleet management and journey/route planning		
Review the need for 'return to base' activities against new agile working practices		
Review the need to drive to work to collect fleet vehicles used on consecutive days		
Introduce new procurement processes to electrify the Council's fleet of vehicles		
Install EV chargers at all Council offices where parking is available	Ensure Council non-domestic buildings have sufficient EV charging spots for fleet vehicles, council employee vehicles, and visitor vehicles. Review every two years as part of the Sustainable Transport Plan	From 2021 onwards
Develop a Sustainable Fleet and Fleet Management Plan	Discuss with Fleet Manager and Procurement and include points as part of the Council's Sustainable Transport plan	Publish plan by 2022 (may be a lot of changes through 2021 owing to Covid)
Plan the phased switch from fossil fuel fleet to electric fleet		
Consider electronic bicycle fleet for staff use for short journeys		

Reduce vehicle use across the Island		
~~Review of car parking charges~~	~~Review current car parking charges to assess value of bus fares compared to cost of parking~~	~~By 2022~~
Introduce vehicle free streets / pedestrianised zones	Consider holding a trial period (like 'summer streets' in Edinburgh) to see how well it works and if closing some streets will increase traffic flows in other areas Consult with residents and businesses to review feasibility	Hold trial in summer 2022
Promote and encourage active travel across the Isdand		
Introduce bike and/or scooter hire scheme, like Boris Bikes	Scooter scheme is currently being trialled in Newport and Ryde Reiew success of scooter scheme Research the possibility of working with a promotional partner to introduce a bike hire scheme (e.g. Just Eat bikes in Edinburgh), depending on success of scooter scheme	Review scooter scheme in 2021
Create separate cycle lanes on busiest roads	Review busiest roads on the Island and see where cycle lanes are feasible Conduct public research to find out where cyclists feel the least safe and whether separate cycle lanes in town centres would encourage more people to cycle Work with Highways to trial separate cycle lanes over a summer period	Hold trial in summer 2022
Ensure the Island is capable of supporting increasing use of electric vehicles		
Increase the number of rapid charging and fast charging electric vehicle charge points across the island to ensure there is sufficient EV charging available for both residents and tourists	Seek transformation funding or matched grant funding for further installation of on street and car park EV charge points Contact Island supermarkets to find out their plans for installing chargers in car parks Work with Planning to ensure any new car parks have a minimum amount of EV chargers per parking spaces	Ensure at least 72 EV chargers are available by 2030

Waste

Making the items that we buy, using them, and throwing them away all contribute to climate change. Buying less is an important step in cutting greenhouse gases. For the items we do buy, we should reuse, recycle or compost them wherever possible. The Isle of Wight currently reuses, recycles and composts 55.7% of its household waste. This compares to the best figure of 65% in similar local authorities[37].

English local authorities should aspire to the same figure, and all local authorities must aim even higher on a path to achieve zero waste (e.g. aiming for net zero waste by 2030).

[37] Statistics on waste managed by local authorities in England in 2018/19

Table 7. Council outcomes: waste

Outcome	Council action(s)	Date
Reduce waste across all Council activities, particularly from single-use plastics		
Promote use of reuseable items over any form of single use items (e.g. even if single use says compostable)	Create a communications plan with C&E to ensure Council employees are aware of the impacts of single use items Tie in with climate education strategy	From 2021
Deliver a plan to removing or reducing single use office and facilities products wherever possible by utilising reusable or digital alternatives as appropriate (e.g. paper, stationary, envelopes, cups etc)	Plan already delivered to CMT Review and enact plan Ensure regular reviews take place	Publish both plans by 2022
Deliver a plan to removing or reducing single use Sales activities (gift shops, vending machines, ticketing, permits, etc) through alternative product or digital by default solutions	Change in project initiation process and inclusion on highlight reporting	
Ensure that waste and the circular economy are considered as a part of all council decision-making processes. Highlight wider benefits of circularity within decision-making processes	Create series of questions/factors for councillors/decision-makers to consider when making decisions on council activity	From 2022
Increase recycling rates across all Council functions		
Work with T&P councils to ensure that the areas of public land they maintain have recycling opportunities	Encourage T&PC to review facilities currently available Increase facilities in line with recycling targets over the coming decade	From 2021 onwards
Increase recycling and composting rate to 65 per cent[38]	Develop a communications plan with the C&E team Review progress annually	By 2030
Meet 90 per cent diversion of waste from landfill[3838]		
Target 10 per cent reuse[38]		
Waste collection and island-wide services		
Ensure sufficient recycling facilities are available to all residents and visitors through increased numbers of recycling points	Work with Amey to increase number of recycling bins as recycling targets increase	From 2021 onwards
New Energy from Waste plant operational to eliminate putrescible waste being sent to landfill	New EFW plant to begin firing in 2021 Putrescible waste sent to landfill to reach 0% by 2030	Begin firing in 2021 - date TBC
Introduce 'nudging' campaign to reduce littering through behaviour change	Review what other councils have introduced 'Voting' via putting litter into marked bins (e.g. cigarette butts) Messages linking town drains to ocean plastics painted by drains	Run pilot scheme by 2022
Enhance shorelines and waterways		
Ensure through our contracted services that: 1. there are recycling locations available on public beaches 2. there are places to take waste and recycling from litter picking	Engage with T&PC to ensure 'dual' bins are consistently available in the beach areas that they manage Agree designated litter pick-ups with T&P Councils Create a Litter Reduction Plan	From 2021 onwards

[38] Resources and waste strategy for England

Environment and Biosphere

Looking after our natural environment will require action from both the Council and residents and communities across the Island. While there are many actions that the Council can take to look after the land that falls under its remit, most of the land on the Isle of Wight is privately owned. Much of the environmental work that will fall under this Strategy involves reforestation and rewilding, and the maintenance and protection of existing woodland.

As a Biosphere Reserve, it is essential to protect this status. Again, while the Council can take some actions here, much of the environmental protection of the Island will fall to the behaviour of the public.

Table 8. Council outcomes: environment and biosphere

Outcome	Council action(s)	Date
Offset carbon emissions through reforestation, afforestation, and rewilding		
Review land and countryside estate to identify land for community woodland schemes	Develop a Forest Management Plan Review grants available for forest planting and forest management and seek community partners to operate and manage woodland Aim to begin tree planting in 2021 to ensure carbon offsets are sufficient to meet 2030 net zero target	Review in 2021 Offset 15% of emissions by 2030
Sustainable forests delivered through re-purposing the countryside estate		
Plant at least five hectares of new wildflower areas	Introduce increased wildflower areas across our parks, verges and open spaces to increase biodiversity	By 2030
Introduce new planning conditions to protect the natural environment		
Monitor ecological mitigation actions from new developments by reviewing funding made available through planning conditions, including ensuring that it can allow the commissioning of monitoring of planning applications as a condition of approval.	Through updated Island Plan Core Strategy Ensure planning conditions can allow the commissioning of monitoring of planning applications as a condition of approval	Review current policies in 2021 Introduce changes from 2022
Review the core strategy polices on waste and minerals to encourage sustainable extraction and disincentivise exploratory oil extraction		
Introduce urban rewilding and green schemes to town centres		
Encourage tree planting to line streets in town centres to help reduce pollution and increase cooling in summer months	Work with Planning and Regeneration to examine feasibility - won't be possible everywhere Investigate planting fruit trees along streets to encourage community growing Seek external funding for tree planting and urban rewilding schemes Examine possibility of including schemes in local community plans, i.e. if community gardens are available would gardeners consider including these schemes as part of the gardens?	Review options in 2021 Introduce changes from 2022
Introduce 'mini urban forests' to allow small areas of town centres to have fully biodiverse spaces		
Plant green roofs on civic buildings where possible		
Investigate moss walls as an option at bus stops or on civic buildings to offset carbon and reduce pollution in town centres		
Investigate planting of vertical gardens on civic buildings to offset carbon and reduce pollution in town centres		

Protect the Island's Biosphere status		
Conserve biodiversity in the Biosphere area	Ensure planning and environmental regulations are sufficient to protect the natural environment	Ongoing
Ensure locals and visitors understand the meaning and importance of the Island's Biosphere status	Introduce information points about the UNESCO biosphere at popular visitor locations Work with Visit Isle of Wight to include information about the Biosphere in promotional materials Introduce activities in schools to educate students about the Biosphere and the Island's natural environment	Ongoing

Business

Although the majority of business actions are not within the scope of Council activities, there are still some steps the Council can take to support businesses in any pathway to net zero, as outlined in Table 9. As climate change policy and regulation changes across the UK, the activities that the Council supports for local businesses may need to be reviewed as additional support and advice could be required.

Table 9. Council outcomes: business

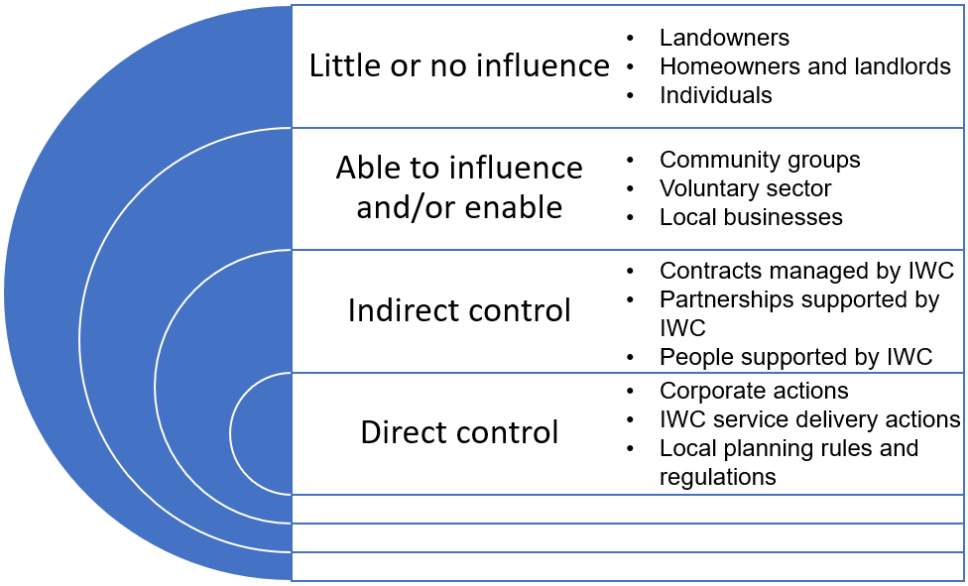
Outcome	Council action(s)	Date
Promote sustainable tourism		
Help T&P councils develop a green tourism offer through looking at how their areas are sustainably managed with local businesses and community groups	Develop a 'green tourism' plan with T&P councils	From 2022 (Covid-dependent)
Promote IoW cycling and walking routes to tourists, partnered with local businesses (e.g. bike rental, local tourism companies)	Work with local tourism body, e.g. Visit Isle of Wight, to promote cycling and walking routes and bike hire options, as well as public transport, across the Island	From 2022 (Covid-dependent)
Introduce a tourists' bus pass or promote 7-day bus passes to tourists		
Promote the Island's products and tourism offerings through its Biosphere status		
Utilise the Biosphere Status to promote the Islands produce and products	Work with the Chamber of Commerce to help businesses promote local produce using biosphere branding	From 2021
Work with the AONB and T&P councils to get local plans developed that promote and enhance the Biosphere	Create an Island-wide plan, with consultation with T&P councils, to encourage promotion of the Island's biosphere status as a unique selling point within the UK. Work with a local tourism partner to communicate the message.	From 2022 (Covid-dependent)

Island outcomes

As outlined in the previous section, Isle of Wight Council can create an action plan for activities that take place within its own operations. However, for the wider island, many actions are outside the Council's scope. In this section, we outline the outcomes we would ideally like the Isle of Wight to achieve by 2030 to reach net zero emissions, and state some of the Council actions that can be taken to help the Island to meet these outcomes.

To outline how the Council can influence the Island's outcomes through a series of these actions, please refer to Figure 10.

Figure 10. Isle of Wight Council sphere of influence



Enabling outcomes

Enabling communities and Town and Parish Councils to support the Island journey towards net zero of carbon emissions

The Isle of Wight Council can work with Town & Parish Councils, individuals, and businesses to ensure that residents across the Island have enough information and knowledge to be able to act against climate change and to protect the Island's environment. In line with the Council's plan to provide training and information about climate change to its employees from 2021 onwards, some of this information can be shared with the Island's residents via the Council's website and potentially in other areas, such as local museums, libraries, and schools.

Table 10. Island outcomes: enabling

Outcome	Council action(s)	Date
Encourage island-wide learning about climate change		
Provide Town & Parish Councils with information and regular updates about climate change, net zero strategy, and available funding and initiatives	Continue with Environment and Sustainability forums Regularly update Council website with relevant information	From 2021
Individuals, communities, and businesses to have access to learn about climate change and sustainability	Regularly update Council website with relevant information Work with libraries and museums to explore options	From 2021
Introduce climate assemblies in schools	Liaise with schools and climate education charities to explore possibilities	From 2022 (Covid-dependent)

Energy outcomes

Developing opportunities and energy resilience for the Island

In the UK the proportion of electricity produced by renewable energy has increased over the last ten years to around a third, and the cost of energy produced by solar panels and wind farms has decreased[39]. If the UK is to decarbonise the energy industry, much of the additional renewable energy will come from offshore wind, but there's also a need to significantly increase onshore wind, tidal, and solar power.

In 2019, the Isle of Wight area had capacity to generate 94.7 megawatts (million watts, expressed as MW) of electricity from renewable sources, and generated 115,000 megawatt hours (million watts per hour, or MWh)[40]. Given the Isle of Wight area's location and natural resources it has potential to generate much more renewable energy, both to decarbonise the area and to ensure energy security in the future.

To give an indication of what this means in practice, one average onshore wind turbine in Europe produces 2.7MW and a 25-acre solar farm produces about 5MW of electricity. On average, 1MW of renewable energy can provide power for approximately 150 homes[41].

Table 11. Island outcomes: energy

Outcome	Council action(s)	Date
Increase alternative and renewable energy provision across the Island		
Achieve at least 25 micro-generation wind turbine locations in urban areas	Work with T&P councils, homeowners, and landowners to identify potential sites Identify and promote grants and	By 2030
Achieve at least 10MW of energy generation from Solar Farms for community power networks		

[39] How the UK transformed its electricity supply in just a decade | Carbon Brief

[40] Renewable electricity by local authority, 2014 to 2019

[41] Explainer: Solar Farms - Solar Trade Association (solar-trade.org.uk)

Make at least 2MW of battery storage available across the Island to store energy generated locally	other funding for alternative local energy provision	
Reduce business use of fossil fuels		
Encourage businesses to switch from fossil fuel based heating and hot water systems to alternative energy and electric solutions	Promote alternative energy options via the Chamber of Commerce	Ongoing
Encourage heat and energy decarbonisation across Town & Parish Council estates		
Procure all energy in Town & Parish Council buildings from green suppliers	Share information about IWC procurement plans	By 2025
Decarbonise a minimum of 75% of heating systems in Town & Parish Council buildings	Promote grant schemes to T&P councils Share information about IWC heat decarbonisation plans	By 2030
25% of energy in Town & Parish Council buildings to come from onsite energy generation from PV and micro-turbines	Promote grant schemes to T&P councils Share information about IWC energy generation plans	By 2040

Transport outcomes

Ensuring that transport options on the Isle of Wight are in line with net zero targets

While reductions in emissions have taken place across the UK in recent years, these reductions have not been equal across sectors, with transport generally being among the slowest sectors to decarbonise. Although emissions intensity per vehicle has decreased over time (e.g. from improved fuel efficiency in new cars, although this has recently risen slightly owing to increased numbers of SUVs on the roads)[42], the increasing number of vehicles on the roads means that emissions from transport remain high. Recent legislation states that no new petrol or diesel vehicles may be sold in the UK beyond 2032[34], which will lead to a rapid transition to electric vehicles and a steep decline in emissions in the transport sector regardless of Council activity on the Island.

In the UK, transport is the largest source of greenhouse gases. Research suggests that to deliver the greenhouse gas reductions needed, simply switching to electric vehicles will not be enough. Car use will need to be reduced by between 20% and 60% by 2030, depending on factors such as the speed of the switch to electric vehicles and the pace of energy decarbonisation to power electric vehicles[43]. This means that the UK should more than double the proportion of journeys taken by public transport, cycling, and walking.

Sustainable travel to work is key to reducing emissions on the Isle of Wight. Data from the Office for National Statistics' (ONS) 2011 census[44] indicate that only 7% of commuters on

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[42] CCC-2019-Progress-in-reducing-UK-emissions.pdf (theccc.org.uk)

[43] More than electric cars | Policy and insight (friendsoftheearth.uk)

[44] 2011 Census - Office for National Statistics (ons.gov.uk)

the island travel by public transport, 3% cycle, and 18% walk. In the best performing similar local authority area, the proportions are 18%**,** 21% and 38% respectively.

Much more is possible. Research shows that 23% of commuter journeys on the Isle of Wight could be by bike (assuming good cycling infrastructure, such as segregated cycleways and the uptake of e-bikes), better walking routes can encourage more journeys on foot and improve health, and 6 in 10 drivers would shift to public transport if its quality improved. The Isle of Wight should target 40% of people commuting by public transport, cycling, and walking by 2030[45]. When cars are needed, they should be electric and shared wherever possible. Only 8% of commuters share their car when commuting in the Isle of Wight area. According to social enterprise Liftshare[46], best in class employers have 40% of their staff sharing journeys to work.

Table 12. Island outcomes: transport

Outcome	Council action(s)	Date
Reduce vehicle use wherever possible		
Ensure the cycle path network is well-signposted and mapped to improve ease of use	Comms campaign Create bike route app or map	From 2022
Promote IoW cycling and walking routes to residents and tourists	Comms campaign Work with Visit Isle of Wight on tourism promotions	
Increase frequency of bus links in rural areas	Work with Southern Vectis to identify areas for improvements	
Increase park and ride options from ferries		
Add and/or refresh at least 100 miles to/of the Island's cycle, walking, and bridleway path network	Work with landowners to identify potential new routes	By 2030
Promote and encourage active travel across the Island		
At least 40% of people on the Island commuting by public transport, cycling, and walking	Work with Hampshire councils to reduce number of people driving to/from ferry Promote the health and financial benefits of cycling Promote central government bicycle purchase incentives for employees	By 2030
Increase bicycle purchase incentives uptake across the Island by 25%		

[45] Island Transport Plan - Strategy (iow.gov.uk)

[46] Car share with trusted, reviewed and rated Liftshare.com members

Housing outcomes

Ensuring that private homeowners and landlords can retrofit housing to meet net zero standards wherever possible

Efficient buildings that maintain a steady temperature and do not allow heat to escape easily can significantly reduce the footprint of our homes and our office buildings. The Isle of Wight Baseline, from the Regen study, indicates that heating, hot water, and building efficiency for both households and commercial properties is attributable for most carbon emissions, with:

- Domestic Heating accounting for 23%
- Domestic non-heating accounting for 9%
- Commercial and industrial building accounting for 25%

Sufficiently insulating residential properties on the Island will significantly reduce greenhouse gas emissions and help homeowners to reduce their energy bills. Additionally, fuel poverty affects 11%[47] of households in the island area, which means homeowners cannot afford to heat their homes properly.

Alternative energy, heating, and hot water systems are already beginning to phase out those powered by fossil fuels, such as gas boilers[48]. This is an opportunity for the Isle of Wight Council to encourage use of alternative energy power and heating systems, such as solar PV and heat pumps, in homes and businesses.

Private homes, nursing and care homes will need to consider adaptations to ensure that as weather patterns become more extreme they are able to stay cool in the summer and warm in the winter with minimal reliance on energy consumption. This both reduces carbon impact and supports the health and wellbeing of our communty.

Table 13. Island outcomes: housing

Outcome	Council action(s)	Date
Promote energy efficiency schemes to homeowners and landlords		
Ensure all Island homes have information available about how to use energy efficiently	Comms campaign	From 2021
At least 30% of Island homes to uptake insulation via the Warm Up Wight scheme	Comms campaign Planning rule changes	By 2030
No more than 5% fuel poverty across the Island		
Cheapest green energy tariffs to be promoted across the island, particularly to those in non-retrofittable housing stock	Comms campaign	From 2021
Affordable and social housing delivery to demonstrate that homes are affordable to heat	Planning rule changes	From 2023
Investigate public energy management company options to supply lower cost energy to residents	Work with community groups to investigate options	From 2023

[47] Public Health Outcomes Framework - at a glance summary

[48] PM outlines his Ten Point Plan for a Green Industrial Revolution for 250,000 jobs

All long-term private care and nursing homes to be well-insulated	Comms campaign Planning rule changes	By 2030
All new and at least 60% of existing homes to meet net zero emissions		
Housing developers to include offsetting activities within planning permission applications	Planning rule changes	From 2023
New housing developments to achieve net zero emissions		By 2030
All new housing to use renewable heating and energy		By 2030
At least 60% of existing homes to remove gas and oil boilers and switch to heat pumps[49]	Comms campaign Promote Green Home Grants (or similar future schemes)	By 2030
At least 25% of existing homes to install solar PV[49]		By 2030

Environment outcomes

Protecting and enhancing the Island's natural environment and UNESCO Biosphere by managing land sustainably and connecting people with the environment

As an area that has received a UNESCO Biosphere designation[50], the Isle of Wight has a unique opportunity to not only protect and preserve our ecology and natural environment, but also a unique selling point for the island. Through supporting the biosphere and growing sustainable products the island can use this USP in marketing its products and as a destination. There are numerous opportunities available to protect and enhance the Isle of Wight's natural environment. Tree planting and rewilding schemes should be a key part of any measures. These schemes will not only encourage biodiversity, but also make up a large portion of the Isle of Wight's carbon offsetting.

Table 14. Island outcomes: environment

Outcome	Council action(s)	Date
Offest carbon emissions through reforestation and afforestation		
Aim for 3% year-on-year increase of tree cover on unused agricultural land	Promote available grant schemes to landowners Create Council incentives for woodland creation on unused agricultural land	From 2022
Encourage the development of timber woodland for the building industry	Review need for timber on Island Work with local partners to create a plan, if feasible	Review by 2024
Each school and college to offer a tree planting scheme for pupils	Work with schools to identify suitable schemes and funding	By 2027
Number of woodland burials to increase by 25%	Partner with local funeral homes to improve availability of woodland burials	By 2028

[49] It is important to note that not all housing on the Isle of Wight can convert to heat pumps or install solar PV. This is because the existing housing on the Isle of Wight has a large proportion of listed and traditional buildings which cannot be altered in this way.

[50] Isle of Wight Biosphere Reserve, United Kingdom

Encourage biodiversity and rewilding across the Island		
Encourage increased biodiversity by ensuring all new woodland contains an approporiate mix of trees and plants for local flora and fauna to thrive	Ensure any tree planting is appropriately mixed for local wildlife	From 2021
Ensure all new woodland is connected by green corridors	To be required as part of all tree planting plans	From 2021
Encourage at least one grant application per T&P council for new woodland and woodland management on their owned land	Promote grants to T&P councils at monthly E&S forums	From 2022
Encourage T&P councils to develop community gardens in 'scrub' areas in towns	Discuss options with T&P councils at monthly E&S forums	From 2022
Ensure all existing woodland on the Island is connected by green corridors	Review existing green corridors and identify areas where they are needed	From 2023
Engage with community groups to manage IWC woodland that is currently unmanaged	Work with community groups and schools to investigate options	From 2023
Convert at least one hectare per T&P council area into wildflower areas	Help T&P councils identify suitable land to convert	By 2030
Enhance shorelines and waterways		
Ensure all Island waterways are clear of litter and fly tip	Engage with community groups	Ongoing
Apply for environmental certifications in public areas		
Achieve Blue Flag status on 3 beaches	Review requirements to meet accreditations Work with T&P councils /Parks team to meet required standards	By 2030
Achieve Green Flag status in 3 parks		

Resilience outcomes

Ensuring that the Island can meet future challenges presented by a changing climate

As well as actions to prevent climate change, the Isle of Wight also needs to take action to ensure it is prepared for changes to the climate and environment that are already underway. Temperatures have already begun to increase, glaciers and sea ice are melting, which is causing sea levels to rise, and more rain is falling with storms becoming more frequent and intense. While it may not be possible to prevent all these issues, there are several actions that can be taken on the Isle of Wight to ‘future-proof’ residents and the environment.

Table 15. Island outcomes: resilience

Outcome	Council action(s)	Date
Review the need for resilience and adaptation on the Island		
Review the expected impacts of climate change on the Isle of Wight	Review the IPCC's next Assessment Report, due in 2022 Highlight any expected changes to currently known impacts Ensure residents are aware of the key outcomes of the report that are likely to impact them	From 2023
Manage the Island's water resources		
Aim for the Isle of Wight to become more self-sufficient in its water provision and reduce reliance on water from the mainland	Comms campaign to educate about water scarcity Promote use of valves on taps to decrease water use Change planning conditions for buildings to improve water use	Ongoing
Increase food resilience and ensure the Island's agriculture is sustainable		
Encourage sustainable hedgerow planting on all rural land to encourage biodiversity and increase carbon offsetting	Work with landowners to identify suitable land Advise landowners of available grant funding	From 2021
Work with the Hampshire and Wight Wildlife Trust to promote the catchment sensitive faming projects[51]	Investigate options and promote to local farmers	From 2022
Introduce community orchards where land is available	Work with T&P councils to identify suitable land Promote schemes via local community groups	From 2023
Develop a community food growing plan to maximise allotment use and land use change for community farming with an aim to provide 10% of produce direct to food banks		
Identify land for increased allotments via the T&P councils		
Review the shoreline management plan to ensure it is still suitable		
Ensure Island shoreline is resilient against potential future impacts of climate change	Review current shoreline management plan against next IPCC Assessment Report	From 2023 (depending on report)
Review sea defences in line with expected climate change impacts	Add any expected requirements for new sea defences to national register	From 2023 (depending on report)
Ensure residents have sufficient cooling in homes and workplaces for hotter summers		
Ensure domestic and non-domestic buildings across the Island, particularly residential properties and care homes, are habitable in hotter summers	Review planning conditions for new homes Ensure homeowners and landlords are aware of warming via comms campaign	Ongoing
Review current employment laws around working in extreme heat and ensure Island businesses are up-to-date	Discuss with businesses via Chamber of Commerce	Ongoing

[51] Catchment Sensitive Farming | Hampshire and Isle of Wight Wildlife Trust

Summary

The Council recognises that the Isle of Wight is only a small area and as such can only have so much impact on the wider global issues associated with climate change. However, as an Area of Outstanding Natural Beauty and a UNESCO Biosphere Reserve it is particularly important to reduce the impacts of climate change and preserve the natural environment in any way possible.

It is not yet clear which emissions pathway the Council and the wider Island area should follow. However, whichever pathway is selected, offsetting is expected to be required for an absolute minimum of 3% of 2030's emissions as some sectors are hard to decarbonise. This offsetting will largely take place through rewilding and reforestation schemes and it is essential that these begin as soon as possible to see the full benefit of these offsets by 2030's net zero target date.

The net zero target dates will be submitted to the full Council for review in early 2021. Currently, both the Council and the Island have a net zero aim of 2030. Many councils are setting different target dates for Council operations and local areas to meet net zero. A popular option is setting 2030 as a Council net zero target date and 2040 as a local area target date.

It is important to recognise that this Climate and Environment Strategy is an outline and will require further detailed plans for different sectors and service areas. The rapidly evolving national and international policy landscape around climate and environment (see Appendix III for examples of current national policy) means that this plan is highly likely to require regular reviews to make changes and amendments in line with these changing policies.

The Council expects to review and update this strategy every other year, with a list of completed, cancelled, or changed actions from the Action Plan published alongside the updated plan in the form of a progress report.

Glossary

Abatement	The act or process of reducing something. In the context of climate change, reducing emissions or pollution.
Afforestation	Planting new forests on land where there have not previously been forests.
Anthropogenic	Produced, created, or caused by human activities.
Area of Outstanding Natural Beauty (AONB)	An area of countryside in England, Wales or Northern Ireland that has been designated for conservation due to its significant landscape value.
Baseline	Scenarios that assume that no mitigation policies or measures will be implemented, beyond those that are already in force.
Biosphere reserve	Biosphere reserves include terrestrial, marine and coastal ecosystems. Each site promotes solutions reconciling the conservation of biodiversity with its sustainable use.
Carbon budget	An estimated cumulative amount of emissions that is permissible in line with limiting global average temperature increases to a certain point.
Carbon footprint	The total greenhouse gas emissions caused directly and indirectly by a person, organisation, event, process, or product.
Carbon insetting	Direct investment by a company within its own value chain to reduce its carbon footprint.
Carbon intensity	Amount of emissions released per unit, e.g. per vehicle or per megawatt of energy.
Carbon offsetting	Taking action to ensure that any carbon emissions released are matched by an equal or greater amount of activity to remove emissions from the atmosphere. For example, planting enough trees to absorb each ton of emissions.
Carbon sequestration	The process of storing carbon in a carbon pool.
Climate	A statistical description of the average variability of weather over a fixed time.
Climate adaptation	Adjusting to the actual or expected impacts of climate change.
Climate change	Changes in the state of the climate over a period of 30 years, which persist for extended periods of time, usually decades or longer.
Climate resilience	Management of change to reduce disruptions and enhance opportunities associated with climate change.
Decarbonisation	Reducing emissions associated with human activity to zero.
Fossil fuels	Carbon-based fuels from fossil deposits. Oil, gas, and coal.
Global average (or mean) temperature	The average temperature around the world. This is usually expressed as either surface or air temperature.

Global warming	The estimated increase in global mean surface temperature averaged over a 30-year period. This is expressed relative to pre-industrial temperature.
Greenhouse gas (GHG)	Gases in the atmosphere that absorb and emit radiation and cause warming or cooling depending on the level at which they are present in the atmospahere. The primary GHGs in the Earth's atmosphere are water vapour (H2O), carbon dioxide (CO_2), nitrous oxide (N2O), methane (CH4) and ozone (O3).
IPCC	Intergovernmental Panel on Climate Change.
Mitigation	In climate change terms, mitigation refers to human interventions to reduce emissions.
Net zero emissions	When anthropogenic CO_2 emissions are balanced globally by anthropogenic CO_2 removals over a specified period. Also referred to as *carbon neutrality*.
Paris Agreement	An international climate agreement to keep global warming to less than 2c.
Pathways	The evolution of natural or human systems to a future state.
Renewable energy	Energy produced by natural resources, such as wind, solar, or tidal energy.

Appendix

Appendix I: What is Climate Change?

The Industrial Revolution led to widespread changes in the way people lived and worked with the growth of industry and manufacturing, and the use of fossil fuels to power this change. Burning fossil fuels, and other industrial processes, release gases into the atmosphere. This causes a layer of gases that act like a blanket and trap heat within the atmosphere. This is known as the greenhouse effect, which keeps the Earth warm. However, increased levels of greenhouse gas emissions have caused this layer to trap more heat, which is leading to increased global temperatures.

It is important to note that this layer of greenhouse gases is essential to sustain life on Earth. If all greenhouse gases in the atmosphere were to disappear, the layer of heat trapped around the earth would also vanish and the planet would become too cold to inhabit for humans as well as most plant and animal species.

Global warming will have far-reaching impacts as it causes the climate to change. Some, although not all, of the impacts will be:

- Sea level rise
    - Coastal flooding
    - Coastal erosion
    - Landmass loss as areas ‘sink’
- Weather pattern changes
    - Extreme heat
    - Longer summers
    - Shorter winters
    - Heavy rain
    - Snow and ice loss
- Increased risk of natural disasters
    - More regular, more intense wildfires
    - More regular more intense hurricanes
    - Increased risk of severe droughts
- Ocean warming and acidification
    - Coral reef bleaching
    - Marine life loss

The case for tackling climate change, biodiversity loss, and environmental risks is clear. The accelerating impact of climate change in this country and around the world is of profound public concern. The climate crisis will not only severely affect humans, but is also contributing to species loss, habitat erosion and the disappearance of cherished wildlife both on land and in the oceans.

The Intergovernmental Panel on Climate Change's 2018 report[52] looked at the effects of global heating in excess of 1.5ºC above pre-industrial levels. The report highlighted the importance of taking more urgent action on tackling climate change mitigation measures than those declared in the Paris Agreement[53].

The global temperature is 1ºC higher than it was in 1850, and the effects of climate change are already apparent. The MET Office has reported that the United Kingdom's ten hottest years on record have all happened since 2002, the mean sea level around the UK has risen by approximately 16cm since 1900, and days of extreme heat in South East England have risen from once every 1000 days to as often as once every 200 days[54]. Extreme weather events will continue to worsen as the Earth's temperature increases.

The Climate Change Act 2008[55] introduced legally binding carbon budgets, with the aim of achieving net zero emissions across England and Wales by 2050 (initially stated as a reduction of 80% by 2050 but updated to a net zero target in 2019) via several interim targets. Local authorities do not have a statutory duty to implement the carbon budgets but are expected to contribute. It is important to note that climate emergency campaigners and many climate scientists argue that these targets are not enough, and that we should be aiming for net zero emissions as soon as 2030 in order to avoid the worst impacts of climate change.

Appendix II: Motion to Full Council

In June 2019 the Council took the view that the award of UNESCO Biosphere status has the potential to create and access major opportunities to support and develop a sustainable economy on the Island, particularly by supporting and protecting key elements of the Island landscape and environment[56].

In order to maximise these opportunities Council therefore recommended that the Administration now take the following actions:

1. Direct the maintenance and preservation of the Biosphere status to the now appropriate body of the Environment and Sustainability Forum (ESF)
2. To recognise the status of the Isle of Wight as a UNESCO Biosphere in the Island Plan and link this status to the mechanism of the ESF to manage it going forward.

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[52] Global Warming of 1.5 ºC

[53] The Paris Agreement | UNFCCC

[54] UNCP 2018 Headline Findings

[55] Climate Change Act 2008

[56] Full Council - 18th September 2019

3. The ESF is to be Chaired by the relevant officer and attended by Relevant Cabinet Members, Members, Town and Parish Councillors, representatives of the AONB, Environmental Groups and other outside bodies.
4. To encourage and develop awareness of the Biosphere amongst businesses, residents and other relevant agencies and interested parties.
5. Make links and liaise with any potential partners through the ESF, including other relevant Biosphere areas, in order to access information and assistance that may harness and help maximise the benefits of biosphere status[57].

In July 2019 the full Council voted to support a motion that the Isle of Wight Council will continue to take all reasonable steps to minimise its environmental impact and to maintain the beauty of our Island. In line with the Motion, the Council will:

1. Declare and acknowledge a Climate Emergency
2. Aim to achieve net zero carbon emissions on the Island by 2030
3. Establish a Task & Finish Group to develop a costed action plan, recommending how the Council could work with partners and central government to ensure that the Islands net carbon emissions can be reduced to zero by 2030
4. Develop and implement a community engagement plan via the IW Council's Environment and Sustainability Forum
5. Liaise with other local authorities that have declared a Climate Emergency[58]

Appendix III: The national context

Several national policy and legal structures have been developed by the Government that set out key principles and the governance for monitoring environmental compliance. These are changing continuously as the political landscape changes around climate and environment. The most up-to-date and relevant (as of December 2020) policies and legislation are outlined below.

The 25-year Environment Plan

The 25-year Environment Plan[59] was published in January 2018 and sets out a framework of 10 Strategic Goals to support the achievement of an improved environment by 2043. The

[57] Biosphere FAQs - UK Man and the Biosphere Committee

[58] Declare a Climate Emergency | Go Zero Carbon by 2030

[59] 25 Year Environment Plan

Plan also contains 230 actions that Central Government will take to help deliver progress towards these goals.

The 10 Strategic Goals are:

1. Clean air
2. Clean and plentiful water
3. Thriving plants and wildlife
4. A reduced risk of harm from environmental hazards such as flooding and drought
5. Using resources from nature more sustainably and efficiently
6. Enhanced beauty, heritage and engagement with the natural environment. In addition, we will manage pressures on the environment by:
7. Mitigating and adapting to climate change
8. Minimising waste
9. Managing exposure to chemicals
10. Enhancing biosecurity

The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting

The National Adaptation Programme (NAP)[60] was published in July 2018 and sets the actions that government and other bodies will take to adapt to the challenges of climate change in the UK, both those that are already taking place and those that we expect to see in the future. It sets out key actions to be delivered by government agencies and partners such as Defra, the Environment Agency, the Forestry Commission, Natural England, the Marine Management Organisation, Public Health England, the Department for Business, Energy, and Industrial Strategy, the Department for Transport, and the Water Services Regulation Authority (OFWAT) by 2023. The Programme looks across the natural environment, energy, wellbeing and social care, planning and local government to identify risks and actions.

Our Waste, Our Resources: a strategy for England

Supporting the 25-year Environment Plan, the government published the Resources and Waste Strategy[61] in December 2018, which sets out a new direction for the management of our waste as a resource with emphasis on how England will work toward becoming a circular resource economy. The Strategy establishes how England will become a world

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[60] Climate change: second national adaptation programme (2018 to 2023)

[61] Resources and waste strategy for England

leader in using resources efficiently and outlines how we will reduce the amount of waste we create as a society.

The Environment Bill

The Environment Bill[62] is currently (as of December 2020) in review with the House of Commons. The associated Policy paper indicates the introduction of:

National Environmental Governance

The Bill will legally oblige policymakers to have due regard to the environmental principles policy statement when choosing policy options. The principles are:

1. Environmental protection should be integrated into policy-making principle;
2. The preventative action to avert environmental damage principle;
3. The precautionary principle;
4. The environmental damage should as a priority be rectified at source principle; and
5. The 'polluter pays' principle

A new statutory cycle of target setting, monitoring, planning and reporting will help deliver significant, long term environmental improvement and ensure government can be held to account for its actions. Statutory Environmental Improvement Plans (EIPs; the first being the 25-year Environment Plan) and a new framework for setting long term legally binding targets will be integral to this cycle. The Government will set out new legally binding targets in four priority areas of the natural environment: air quality; waste and resource efficiency; water and nature. The EIPs and legally binding targets will be reviewed on a five-yearly basis.

The Environment Bill will establish a new public body—the Office for Environmental Protection (OEP)—as our own independent, domestic watchdog. Through its scrutiny and advice functions, the OEP will monitor progress in improving the natural environment in accordance with the government's domestic environmental improvement plans and targets.

Delivery through Local Government

Local authorities—as local experts, place-shapers, and conveners of their communities—will be empowered to play a fundamental role in delivering environmental action in local areas. The Bill bolsters the role of local leaders on tackling environmental issues by providing additional powers and flexibilities to deliver action. This Bill will deliver this through:

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[62] The Environment Bill 2019-21

1. Improved and increased powers to take more effective action to tackle the challenges in each local area;
2. Greater certainty through the planning system on how to plan effectively for the local environment;
3. Providing more certainty and simplicity for developers by mandating biodiversity net gain, and ensuring that all new developments enhance biodiversity and help deliver thriving natural spaces for communities;
4. Ensuring that producers can be held responsible for the full net costs of managing products at end of life, reducing local authorities' financial burdens from waste management, including litter collection;
5. Stronger abilities to improve health and social outcomes for local citizens; and
6. Supporting local authorities as place shapers through new tools and data for effective spatial planning.

Funding for Local Government:

Central Government state they will fully fund all new burdens arising on local authorities as a result of the Bill and will work in partnership with local government, businesses, and wider stakeholders on the implementation of these measures to identify and secure the capacity and skills to deliver a cleaner, greener and healthier environment.

2020 10-point plan

In November 2020, Prime Minister Boris Johnson published a new ten-point plan for a Green Industrial Revolution for the UK[63]. The plan is intended to create up to 250,000 jobs and revolutionise energy and transport, leading to the UK achieving its target of net zero emissions by 2050.

The ten points making up the plan are:

1. **Offshore wind**: Producing enough offshore wind to power every home, quadrupling how much we produce to 40GW by 2030, supporting up to 60,000 jobs
2. **Hydrogen**: Working with industry aiming to generate 5GW of low carbon hydrogen production capacity by 2030 for industry, transport, power and homes, and aiming to develop the first town heated entirely by hydrogen by the end of the decade
3. **Nuclear**: Advancing nuclear as a clean energy source, across large scale nuclear and developing the next generation of small and advanced reactors, which could support 10,000 jobs

[63] PM outlines his Ten Point Plan for a Green Industrial Revolution for 250,000 jobs

4. **Electric vehicles**: Backing our world-leading car manufacturing bases including in the West Midlands, North East and North Wales to accelerate the transition to electric vehicles, and transforming our national infrastructure to better support electric vehicles
5. **Public transport**, cycling and walking: Making cycling and walking more attractive ways to travel and investing in zero-emission public transport of the future
6. **Jet Zero and greener maritime**: Supporting difficult-to-decarbonise industries to become greener through research projects for zero-emission planes and ships
7. **Homes and public buildings**: Making our homes, schools and hospitals greener, warmer and more energy efficient, whilst creating 50,000 jobs by 2030, and a target to install 600,000 heat pumps every year by 2028
8. **Carbon capture**: Becoming a world-leader in technology to capture and store harmful emissions away from the atmosphere, with a target to remove 10MT of carbon dioxide by 2030, equivalent to all emissions of the industrial Humber today
9. **Nature**: Protecting and restoring our natural environment, planting 30,000 hectares of trees every year, whilst creating and retaining thousands of jobs
10. **Innovation and finance**: Developing the cutting-edge technologies needed to reach these new energy ambitions and make the City of London the global centre of green finance

Some funding has already been announced to support this plan and it is expected that further funding will be made available as more details of the plan are announced. Isle of Wight Council will carefully monitor any funding announcements and will consider applying for any funding made available to local authorities to support the plan, wherever it is feasible for the Council to deliver against this funding.