

Southampton City Council Net Zero Strategy Consultation Document



Executive Summary

This strategy is Southampton City Council's response to the climate emergency and provides the framework for actions to deliver net zero carbon. The strategy explores why net zero carbon is important; the principles for achieving net zero; what needs to be considered to achieve that goal; if net zero is reached what it will achieve; and finally highlight key timescales and projects for delivery.

Southampton is a bustling multi-cultural city with a growing prosperous economy and population. With continually evolving attractive investment opportunities bringing more people and businesses into the region, it is essential that social, economic, and environmental sustainability (sustainable development) is not lost for the sake of economic growth without the consideration of climate risk and sustainable processes, such as the circular economy.

Net zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere. The scientific consensus is that human induced climate change has already started. Our world is warming causing more extreme weather events, and sea level rise. The consequences include increased flooding, more frequent and severe heat waves, water scarcity, more pollution, and loss of biodiversity. There will be a detrimental impact on people's lives including health, and damage to homes and businesses. Climate change is already having an impact, with parts of the UK reaching over 40°C in July 2022.

The UK Government has set a legally binding target to reach net zero by 2050. This is enshrined in the Climate Change Act 2008. To avoid the worst damages of climate change, most of the carbon emissions reduction needs to happen within the next 10 years.

Southampton City Council declared a climate emergency in 2019 and soon after set itself the challenge of being a net zero organisation by 2030. More recently, the Southampton City Council Corporate Plan (2022-2030) sets a vision for a zero carbon city by 2035, so that they can be part of the solution to tackling climate change.

The council has identified three goals to achieve this target:

- Goal 1: achieve net zero for the council's scope 1 and 2 emissions
- Goal 2: reduce the council's scope 3 emissions and establish a practical solution to achieving net zero
- Goal 3: social housing stock to be net zero by 2035
- Goal 4: apply authority and use influence to support the city in becoming net zero by 2035

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Our Vision

Our Net Zero Strategy

This Net Zero Strategy details how Southampton City Council will approach its net zero ambitions, by focussing on key priorities and ambitions that align with these four goals. The council as a corporate entity acknowledges that it has a role to play in contributing toward the Southampton 2035 goal. The council has set its net zero target to be achieved by 2030.

The goals are as follows:

- **Goal 1: achieve net zero for the council's scope 1 and 2 emissions**
- **Goal 2: reduce the council's scope 3 emissions and establish a practical solution to achieving net zero**
- **Goal 3: social housing stock to be net zero by 2035**
- **Goal 4: apply authority and use influence to support the city in becoming net zero by 2035**

These goals will be presented in this strategy alongside set deliverables that have also been set as priorities by the council. Some ambitions that have been set will also complement city-wide ambitions and deliverables set by the Green City Plan 2030.

Despite the focus of this document being Council priorities, the council acknowledges that the work set out in the Green City Plan 2030 is also a priority and will continue to work and develop this continuously alongside the Net Zero Strategy. Citywide targets have also been set in this piece of work to help evolve and develop the Green City Plan to ensure that the council are setting the best targets possible to achieve the overall goal.

Our Focus

The council delivers a wide range of services, including planning, economic development, investment, waste services, procurement and has statutory duties and powers that can be used to directly change and influence the city environment. Because the council has a significant influence in the decision making of how the city operates, it has a responsibility and public duty to become an enabler for positive change and a responsibility to set an example for other businesses and organisations. Working with other key influencers and organisations is key to making the net zero target in becoming a reality.

Southampton City Council's 2022-2030 Corporate Plan outlines the councils key values and ambitions for a cleaner, healthier, and prosperous city.

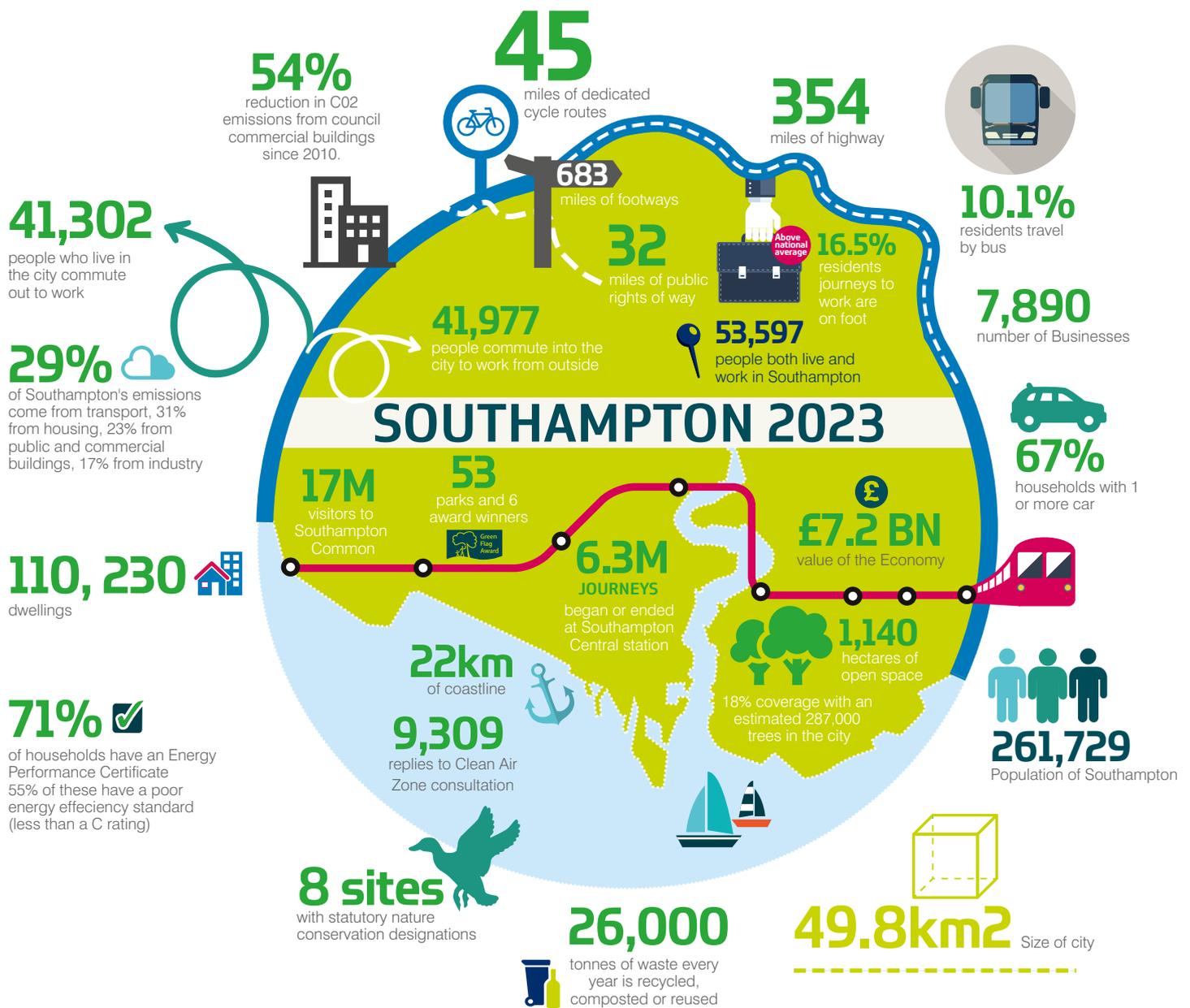
These are:

- Strong foundations for life
- A city to be proud of
- A prosperous city
- A successful sustainable organisation

It is through this policy that Southampton City Council has committed to a sustainable city and organisation, promoting social value, environmental enhancement, and clean economic growth. To boost sustainable development implementation throughout the city the council will need to address the direct effects of climate change and put measures in place to become more resilient and adaptive. Without this commitment the council will be unable to achieve the net zero goal.

The council will need to reduce carbon emissions to mitigate the effects of global climate change and help ensure cleaner air and improve public health and a green economy. This involves the commitment to net zero, targets and offsetting/insetting and opportunities to support biodiversity. Adaptation is a necessary part of this process, and the council will need to put measures in place to influence and adjust the environment, behaviours, and practices to withstand the effects that climate change is likely to present and, benefit from opportunities. These outcomes rely on the council in becoming resilient and must anticipate any shocks that climate change might bring to everyone's daily lives and should be prepared to recover from their impacts in a timely and efficient manner.

Our City



Our Services

Southampton City Council is responsible for the delivery of a wide range of services dedicated to the Southampton community and are responsible for a large portfolio of buildings with mixed use. These buildings include housing, leisure centres, schools, libraries, children's centres, the civic centre and the council offices. The council is also responsible for several car parks, street lighting and parks. Southampton has a key part to play and a crucial responsibility to manage these buildings sustainably. The council has already adopted some sustainable practices and is looking to develop this body of work further.

The Council is a landlord for nearly 18,000 properties and while they're not in direct control of these emissions, they are responsible for them. The council will not always have control over the sources of housing emissions, so it will need to consider carefully what it can account for. There are likely to be certain areas that the local authority has control over, and other tenanted areas where it has limited ability to manage emissions. The local authority as landlord will be responsible for both the selection of the boiler/fuel and the standard of insulation. Whilst the Council cannot control the thermostat settings of how electricity is used it does have some control over a significant area of emissions. We anticipate development in this area in future years.

This includes solutions such as double glazing and insulation, improvements to enhance energy efficiency will also include projects focusing on energy generation, for example, solar panels, air source heat pumps, or boiler replacement. Interventions like this will help reduce scope 3 emissions drastically. Taking responsibility for areas that the Council is responsible for, for example communal areas; will also help to reduce emissions if energy management is carried out effectively, by for instance installing light sensors, or putting efficient timers on heating. Communication with residents surrounding smart energy choices and tips to reduce bills in their homes, or tips on how to be more energy efficient is likely to also have a positive impact.

Other buildings such as council offices, leisure centres or libraries the council is also responsible for with scope 1 and 2 emissions being the main focus. Again, improvements to the building fabric and efficiency is likely to have a dramatic impact alongside behaviour change programmes, such as Green Champions, and communication plans.

To achieve the net zero goal, the council must set achievable targets against its services and deliverables. By doing this the council will be able to monitor and track its Net Zero Strategy goals effectively. A renewed programme of energy efficiency and decarbonisation measures will reduce this level over the decade and is currently in redevelopment. This includes an already committed spend of £30M of energy saving measures in social housing stock over the next five years. This will save 3,000 tonnes of carbon emissions and £2.5M off tenants heating bills per year.

Considering the above the council has set out four key goals to tackle these key issues:

The council has identified three goals to achieve this target:

- **Goal 1: achieve net zero for the council's scope 1 and 2 emissions**
- **Goal 2: reduce the council's scope 3 emissions and establish a practical solution to achieving net zero**
- **Goal 3: social housing stock to be net zero by 2035**
- **Goal 4: apply authority and use influence to support the city in becoming net zero by 2035**

Setting the Scene

The climate crisis is the most significant global issue to face humanity for hundreds, if not thousands, of years. Scientific evidence, gathered over many years, shows that the planet is warming, and that human activity is the main contributor to this warming. Carbon dioxide levels have increased by about 45% since before the industrial revolution. All evidence shows that this increase in greenhouse gases is almost entirely due to human activity and our reliance on fossil fuels.

The UK is already affected by long-term rising temperatures, with parts of the UK reaching over 40°C in July 2022. The most recent decade (2008-2017) has been on average 1-1.2 °C warmer than the 1961-1990 average. All ten of the warmest years in the UK have occurred since 1990 with the nine warmest occurring since 2002. Along with warming at the Earth's surface, many other changes in the climate are occurring including rising sea levels and more extreme weather events.

At the UN Climate Change conference (COP21) in December 2015, 195 countries adopted the first-ever universal global climate deal that is due to come into force in 2020. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C above pre-industrial levels and pursue efforts towards limiting to 1.5°C. To do this we need to reach net zero carbon emissions by 2050 to have chance at limiting temperature increase and avoiding the worst effects of climate change. The UK government was the first nation to set a legally binding target to be net zero by 2050. The council recognises the urgency of the climate change crisis, and the benefit of action as soon as possible.

Net zero means reducing emissions as close to zero as possible and to balance any remaining emissions by removing them from the atmosphere, and 'offsetting' residual emissions with carbon sequestration nature-based actions such as planting trees, or technology-based actions such as carbon capture.

When the word 'emissions', is used we're talking about greenhouse gas emissions (GHG) which increase climate warming. Greenhouse gases are mostly carbon dioxide (also known as CO₂) and methane (CH₄) from burning fossil fuels for energy (in 2018, 89% of global CO₂ emissions came from fossil fuels and industry) and refrigerants (cooling and fridges account for 10% of global emissions). Throughout the strategy carbon dioxide equivalent (CO₂e) is referred to when talking about tonnes which account for all greenhouse gasses in a single unit.

The further warming of the atmosphere threatens our planet including our natural environment, but also human health and wellbeing. **Net Zero will have many environmental, social, and economic benefits such as job creation, equity and social cohesion, health and wellbeing, resilience, and citizen engagement.** The council must commit to this target to ensure that future generations will be able to live sustainably. The target for the council, as an organisation, is more ambitious still. The council is aiming to be net zero by 2030 so that it can take advantage of the benefits of reaching net zero carbon sooner. The council will prioritise effort where it has most control, ensuring the council is able to deliver large improvements cost-effectively.

Governance

To support the council's vision, it is crucial that processes and mechanisms are put in place to ensure that there is democratic support from the current administration and the employees of the council. Below are key pieces of policy that will support the vision for net zero.

City Strategy

This [Green City Plan 2030](#) refers to the council's own operations, buildings, and services. However, the council also have an important role to play in leading by example across the city and further afield, working together with others, and sharing approaches to reducing emissions. The council has proposed setting a Climate Commission, an independent forum that will develop and deliver coordinated action to reduce emissions in Southampton. The council is committed to developing the right communications and activities to support residents and local organisations and businesses to reduce emissions

Homes

In July 2021, the council published energy requirements for [new build developments between 2021-2025](#). This will guide the highlight the appropriate specifications for energy conservation, carbon reduction and use of renewables. The council is leading by example in council new builds, using their preferred approach of [LETI](#) (Low Energy Transformation Initiative) to achieve energy efficient homes. [Healthy Homes](#) is an established partnership for delivering efficiencies in homes to address fuel poverty and reducing carbon emissions.

Transport

The [Local Transport Plan](#) outlines the strategic direction for local transport infrastructure to make it fairer, better and more sustainable. Supported taxi fleet transition to >50% low emission vehicles within 2 years.

Business

[LoCASE](#) provides grants to SMEs for carbon reduction projects and the [Green Growth Economic Development Strategy](#) ensures we have the skills and jobs locally for the green economy.

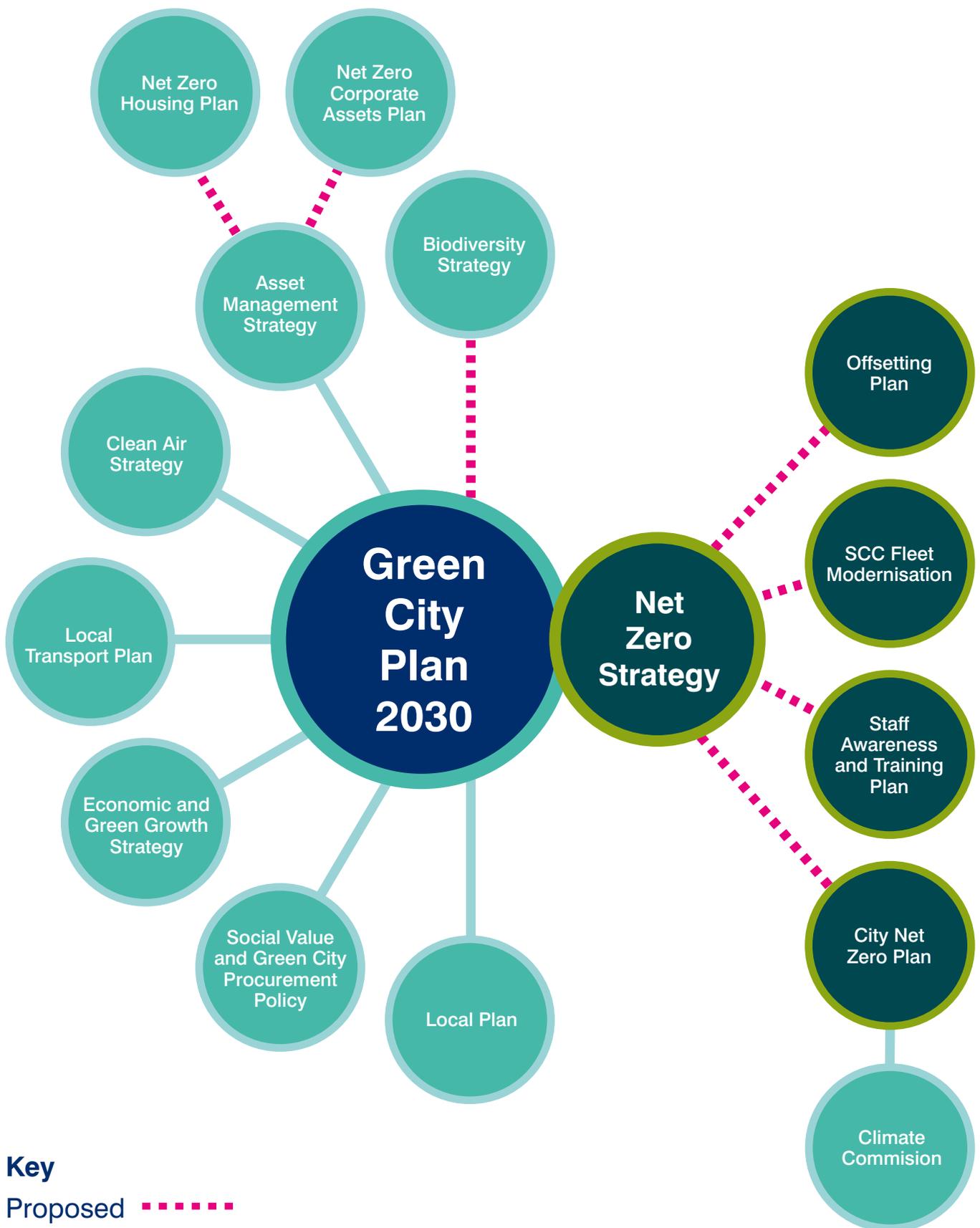
Energy

The council are taking part in the Department of Business, Energy and Industrial Strategy's (BEIS) [Heat Network Zones pilot](#) which will inform future use of heat networks (heat from a central system that goes to more than one user), including expanding and de-carbonising the network in Southampton. They are working with partners across the city to increase locally generated energy and to encourage local power purchase agreements.

Air Quality

The council's [Air Quality Strategy](#) sets out how we will reduce the impact of air quality in the city. Measures to improve air quality are based around the aims and principles set out in The Strategy. As part of the strategy, the council want to prioritise measures which can deliver on both air quality and climate change agendas. The Strategy sits above the Air Quality Action Plan which sets out over 50 measures the council will implement over the next few years to continue to reduce the impact of poor air quality, while also helping deliver on the aims of this Net Zero strategy.

This diagram shows where there are relevant links with other strategies and plans:



Our Approach

Southampton City Council's 2022-2030 Corporate Plan sets out their commitment to create cleaner, greener neighbourhoods that give everyone a sense of pride. The Green City Plan describes how the council will deliver their environmental commitments, including reaching net zero emissions by 2030 across Council buildings and operations. As a key stakeholder and service provider for the Southampton community it is crucial that the council leads by example and leads the way in supporting and delivering the net zero goal. In considering this role the council have identified 8 underlying principles that they must adhere to as part of this journey.

Underlying Principles

Lead by example

Southampton City Council will lead by example, setting themselves challenging goals and influencing others to act.

Visibility

The council will routinely provide information on efforts being made and progress achieved in a clear, transparent, and accessible manner.

Seek out and prioritise actions with co-benefits

Actions that deliver co-benefits will be prioritised. Many actions to reduce emissions and build resilience if carried out well can deliver multiple benefits for the Southampton community such as reducing congestion, improving air quality, improved health, and economic growth.

Flexible and Reactive

It is important to state that any opportunity to accelerate delivery will be taken in line with the other key principles set out in the Strategy, in particular the availability of resources and funding

Proportionate, affordable, and equitable

As a local authority it is important to recognise the wider role to society in delivering public services for the public good. Any actions taken on climate change must be in line with this and would therefore have to adhere to the principles of proportionality, affordability and be equitable.

Support the green economy, innovation, and green finance solutions

The council has identified digital transformation as a key driver for change in Southampton. Technology is an enabler that could deliver a significant step change towards a low carbon, resilient Southampton. It is therefore recognised as a key principle in this Strategy and that the council will actively prioritise the development and delivery of technology and innovation to support the climate change agenda.

Embed in Policy

The council will recognise the need to embed principles across all council functions and services. Ensure policy frameworks, decision making processes and funding mechanisms support their goals. It is recognised that there are significant challenges to Southampton achieving its targets. Achieving these targets will require National Government Action and changes to the national policy landscape. It will require a clear funded roadmap to support action at local level.

Awareness

Ensuring that staff, businesses, and communities understand the role they play and how to support our goals.

Our Methodology

Net zero refers to the balance between the amount of greenhouse gases produced and the amount removed from the atmosphere. To achieve net zero carbon, Southampton must mitigate as much carbon as possible before considering offsetting its residual emissions. To measure and monitor this effectively, the council must set an accurate baseline. This is achieved through the collection of activity data from scopes 1, 2 and 3 emissions.

Scope 1 emissions are classed as direct emissions generated by council and city activity and are controlled or owned resources. Scope 2 emissions are classed as indirect emissions and cover criteria such as from the generation from purchased electricity. Scope 3 emissions are classed as indirect emissions and are caused by activity because of activities of the council, or city activity from businesses and organisations but occur from sources not owned or controlled by the city or the council. Although scope 2 & 3 emissions cannot be controlled necessarily, they can be influenced by positive decision making that moves away from less sustainable processes and actions, for example, using a green energy mix over brown energy mix or adopting sustainable procurement practices.

Our Emissions

The council gathered a baseline of its carbon emissions data and developed a tool that could accurately calculate carbon emissions. This tool uses the greenhouse gas reporting conversion factors from the UK Government to calculate the activity data supplied. Scopes 1 & 2 have only been included at this stage, with an estimate of those emissions being scope 3 at 70% of the overall total. With the council's heavy portfolio of housing stock scope 3 emissions are key to an accurate baseline.

To set ambitious carbon reduction targets the council must develop an accurate methodology of measuring all scope 3 emissions. Although some scope 3 emissions are measurable with the UK Government's GHG conversion factors, others based particularly around procurement are more difficult to quantify and can at present only estimate this total. This tool for scope 3 emissions is currently in development. The council has not measured or devised a baseline of the city's emissions at this stage but will endeavour to include this as the programme of carbon management work develops.

It is acknowledged that net zero is not achievable without mitigation of emissions alone. The process of offsetting residual emissions will be a necessity to get to the net zero goal as there will be emissions that cannot be reduced or mitigated despite the council's best efforts. The council's priority is to create an offsetting scheme that ensures that the benefits of carbon sequestration are retained in Southampton. These activities could include enhancing the city's biodiversity and green space with planting e.g., tree planting or enhancing existing buildings with green roofs. To understand how much offsetting will need to take place the council will need to monitor and report carbon emissions accurately and closely and budget and plan accordingly to fulfil the need.

Council carbon emissions data will be published on a routine basis to ensure the council remains transparent and accountable. The data will be independently audited by an external body to verify and confirm the data so that the council remains impartial.

Historical Data

This graph shows the historic emissions of Southampton City Council using Government methodology for the CRC (Carbon Reduction Commitment), which has been discontinued. Our new calculation tool provides a more accurate and transparent method for calculating the council's carbon emissions. However, the use of this new methodology means that there is some discrepancy between the historic calculations and more recent calculations we have taken from the new 2019/2020 baseline.

Southampton City Council Gas and Electricity CO₂ emissions vs target

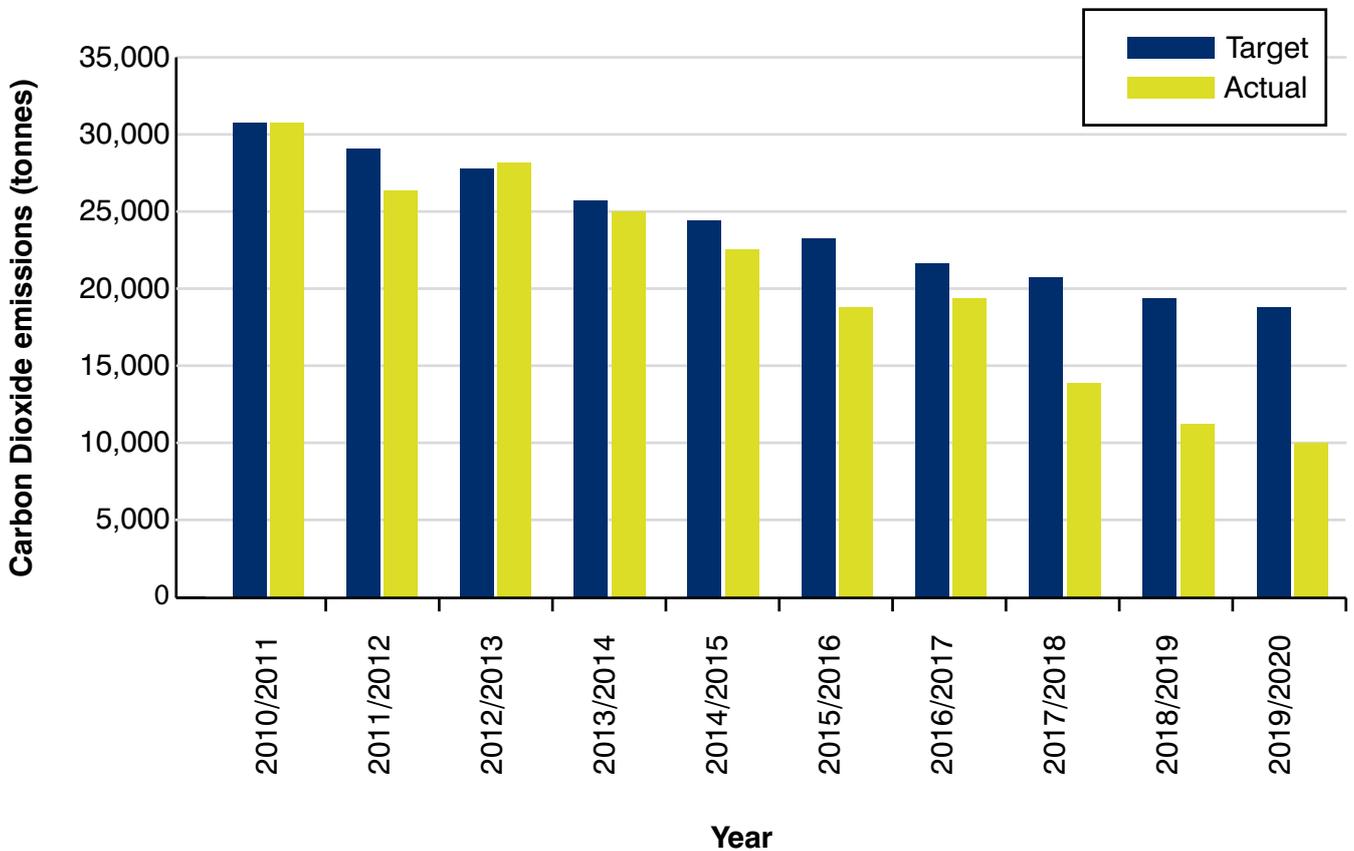


Figure 1: Southampton City Council gas and electricity vs target.

Our Baseline Emissions

Southampton City Council's emissions baseline year was set at 2019. The 2019 greenhouse gas conversion factors from the UK Government were used as the chosen dataset to convert the data into carbon emissions equivalent. See Figure 2.

A baseline from the year 2019 was chosen to gain a realistic grasp on the Council's average 'business as usual' emissions instead of a 2020 or 2021 baseline due to the pandemic. See Appendix 2 for further information. Amongst the data sets that were generated, it was identified that energy and the use of Council owned fleet vehicles were among the biggest polluters with controlled energy emissions totalling at 9697.21 tonnes of CO₂e, with fleet emissions emitting a total of 1,688.41 of CO₂e.

The biggest polluter was procurement activity, at an estimate of 30,846.71 tonnes of CO₂e. Current carbon calculations for procurement are based on spend rather than the emissions of the lifecycle of the product or service purchased. Spend based calculations do not take into consideration the carbon emissions generated because of the purchase of that product, the activity that takes place to produce the product, or how a service is delivered e.g., Supply chain. To reduce emissions, the council needs to adopt sustainable procurement practices, and needs to understand how to measure its impact. Steps have already been taken to make this reality with a [Social Value Procurement and Green City Policy](#) now in place.

For a full breakdown of Southampton City Council's emissions, please see Appendix 1.

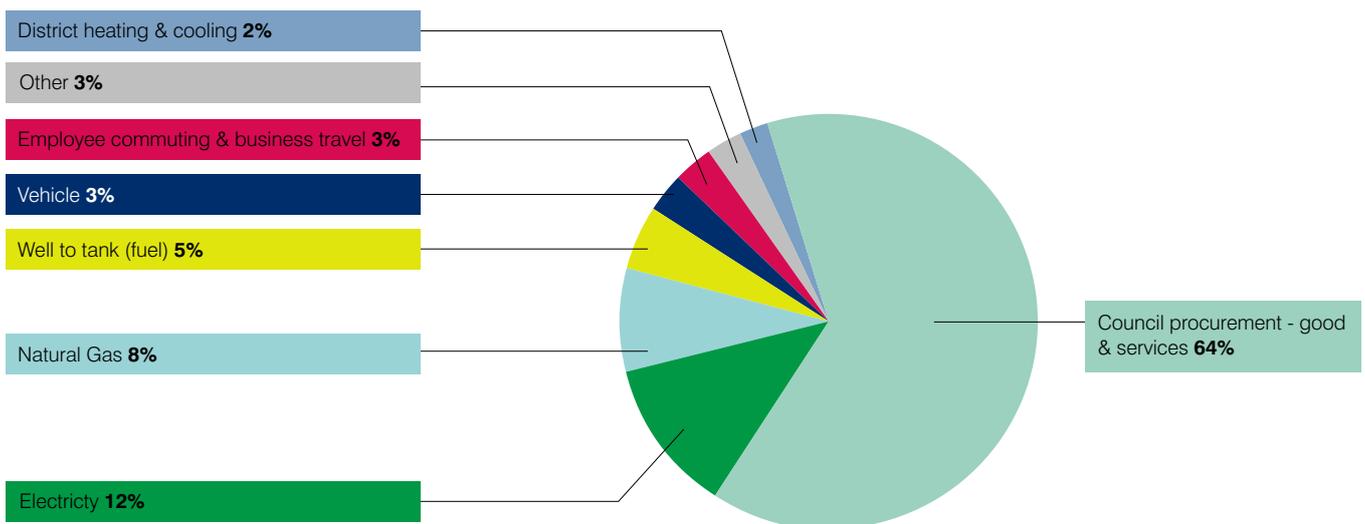


Figure 2: SCC Emission sources by % 2019 baseline year.

Our Future

Figure 3 demonstrates the emissions trajectory for Southampton City Council property. The council needs to pursue this model for Scope 1 and 2 emissions to reach net zero by 2030.

Any gap between emissions and net zero will need to be offset.

It is projected that 90% of the fleet will be electric by this date, moving approximately 1500 tonnes of CO₂ to a grid-based emission factor.

This shows that following business as usual shows a reduction due to expected changes in technology and decarbonisation of the electricity grid, but this alone will not get the council to net zero by 2030. This strategy demonstrates how the council will overcome these challenges.

As a council it is appreciated that there will be challenges on the road to net zero. In response to this the council have highlighted several priorities with actions to coincide with their four goals within this document.

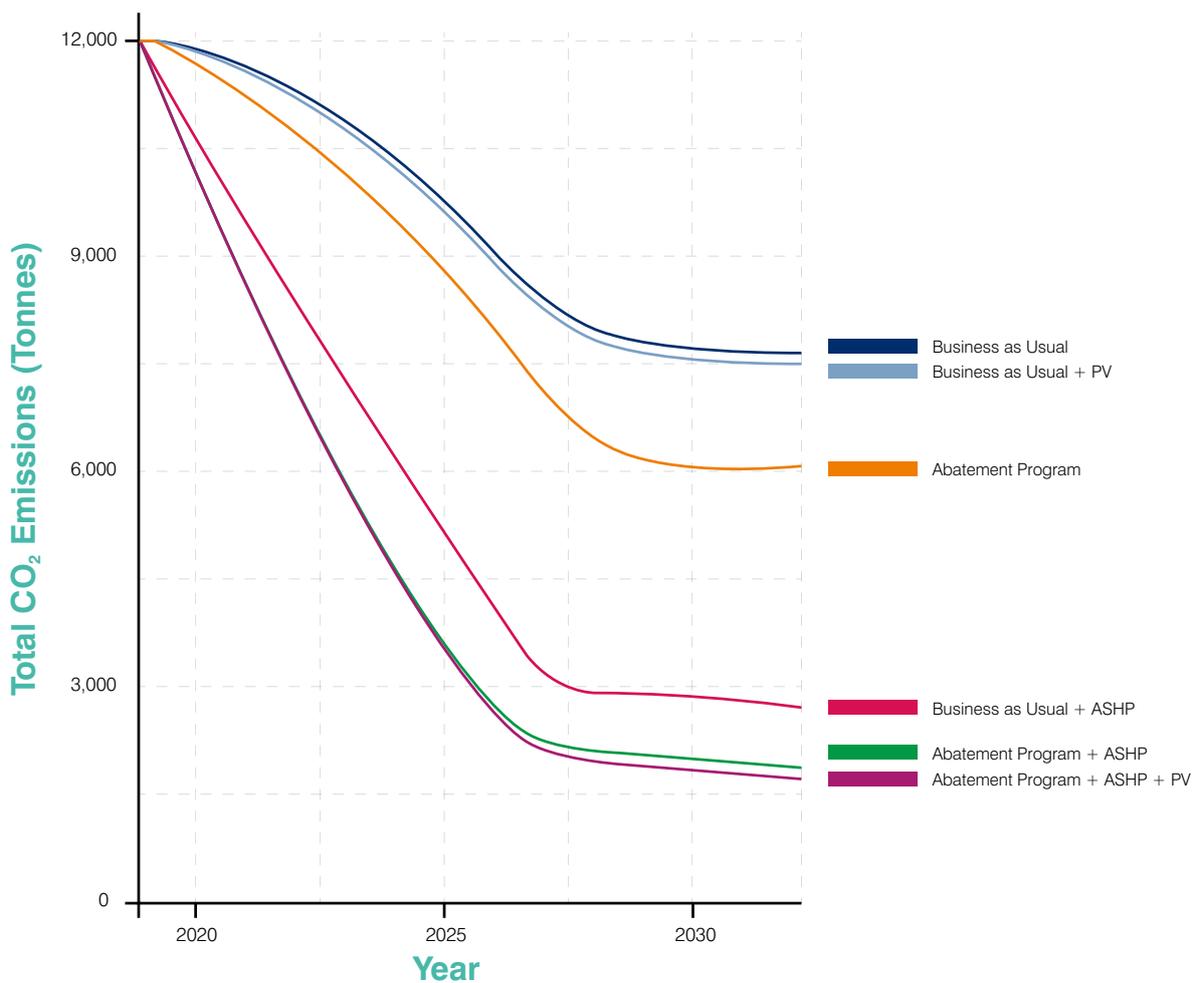


Fig. 3 Emissions trajectory

Our Priorities

Goal 1: achieve net zero for the council’s scope 1 & 2 emissions

The council has identified two main priorities that will help us to achieve Goal 1:

- Minimise fleet emissions. There are currently 444 vehicles in the council’s fleet, responsible for an estimated 1,668.41 tonnes of CO₂e annually.
- Mitigate emissions from all Council owned buildings and infrastructure. This includes all buildings, schools, libraries, depots, the Civic Centre, other council offices, leisure centres, children’s centres, parks, car parks, and street lighting (a total of 130 sites). These emissions are currently responsible for and estimated 10,836.59 CO₂e tonnes (per year)

Together, these emissions are responsible for a total of 12,505 CO₂e tonnes (per year).

Priority	What will the council do?
To minimize fleet emissions.	<ul style="list-style-type: none"> • Introduce a corporate wide telematics scheme (data on vehicle location and mileage) to ensure council fleet is being used appropriately to contribute to council outcomes and provide information for EV transition. • Introduce eco-safe driver training to ensure staff have the right education and awareness for driving in a way to minimise emissions as much as possible, during the transition to an all-electric fleet • Develop a transition plan covering immediate opportunities and a strategic programme for fully transitioning the council fleet to electric. There are more immediate opportunities to switch our smaller, return to base vehicles to electric. Tackling larger vehicles and specific service areas presents significant challenges for us to address. As part of the transition, we will continue to explore alternative fuels to reduce fleet emissions. This could also include use of e-bikes and e-cargo bikes. • As part of the transition, we will continue to explore alternative fuels to reduce fleet emissions. This could also include use of e-bikes and e-cargo bikes. • Develop a financial model that makes the savings visible and drives the opportunity for investment in high capital costs that deliver revenue savings. This finance model will enable us to put in place and invest in the appropriate EV charging infrastructure to meet the needs of service areas. • Balance home base and workplace EV charging with appropriate infrastructure across the city and a solution for those vehicles without a base. • Develop an HR policy for introduction of telematics and infrastructure. • Develop a Travel Plan to identify employee commuter habits alongside an action plan to help facilitate and encourage sustainable transport and travel choices amongst employees.

Priority	What will the council do?
<p>To minimize emissions from all council owned buildings and infrastructure.</p>	<ul style="list-style-type: none"> • Review how we use and manage our buildings to find attainable, non-technical solution that will deliver reductions in carbon and energy costs. Aim to employ fabric first approach (insulation, repairs, draught proofing, ventilation) to reduce demand for energy and heating and to maximise energy efficiency. • Define delivery needs to 2030 by identifying measures (such as high efficiency LED lighting, solar electricity generation, heat pumps, insulation and improving the control of equipment) that can be installed to enable the council to minimise demand for energy. • Continue to drive forward with the Corporate Asset Decarbonisation Scheme (CADS) and 'invest to save' finance model to deliver reduced carbon emissions and to develop the businesses cases to secure investment as needed, while also securing grants where possible, particularly through central government's Public Sector Decarbonisation Scheme (PSDS). • Develop and deliver Phase 2 of CADS to reduce emissions and energy cost savings within financial year 2023/24. • Set up an annual CO2 and cost reporting process managed under a transparent measurement and verification process. • Continued assessment of council assets and new technical information so that CADS work programme has the right priorities. • Develop the right approach for the disposal of assets, to prioritise resources in the CADS work programme. • Continue effective procurement and management of energy contracts to ensure best value renewable energy is purchased and billing is accurate.

Goal 2: Set targets and reduce scope 3 emissions and establish a practical solution to achieving net zero

The council has identified three priorities that will help them to achieve this goal:

- Embed sustainability into the council's procurement processes. Based on spend and national carbon conversion factors, it is estimated that carbon emissions from procurement are currently 30,846.71 CO₂e tonnes (per year)
- Minimise emissions from waste. Emissions from the disposal of waste from council buildings is responsible for an estimated 40.15 tonnes of CO₂e (per year)
- Reduce emissions from business travel. The council has over 3,000 employees. Emissions from staff and business travel is estimated at 2,207.91 tonnes of CO₂e (per year)

Together, these are responsible for a total of 33,094.77 CO₂e tonnes (per year)

Priority	What will the council do?
Embed sustainability into the council's procurement processes.	<ul style="list-style-type: none"> • Deliver the Social Value and Green City Procurement Policy. • Effectively measure through standard questions to suppliers on emissions, waste and air quality in tendering and contract monitoring with strategic and current suppliers and continue to monitor with annual updates. • Minimise demand by ensuring that existing assets are used effectively and question if buying is necessary, ensure volumes requested are accurate to avoid waste. • Embed sustainable outcomes as key consideration into the procurement process. • Seek goods and services that are designed to be reused and recycled, reduce and reuse resources, use sustainable materials, demonstrate a high standard of energy efficiency, use renewable energy, minimise use of single use plastics, minimise unnecessary resource use, protect and enhance ecosystems and the natural environment and minimise emissions of greenhouse gases and other pollutants. • Encourage innovative solutions to sustainability issues. • Forward plan for changes to Procurement Bill and align processes with embedding sustainability into how we procure. • Carbon Literacy Training sessions for staff to help decision making.
Minimise emissions from waste.	<ul style="list-style-type: none"> • Improve how we measure emissions from waste across council operations and buildings, so it is more accurate and can monitor progress. • Adopt Single Use Plastic guidance to remove and reduce across council building and services. • Utilise Social Value and Green City Procurement Policy to reduce waste through suppliers. • Follow the waste hierarchy of reduce, reuse, recycle to ensure we manage our waste, and look to develop circular economy. • Provide information, including bin labelling, to staff on best environmental practice through guidance, education sessions and communications so staff are engaged and knowledgeable. • Review contacts with waste partners to help ensure unnecessary emissions from refuse collection vehicles and waste recovery are minimised as far as is feasible.

Priority	What will the council do?
<p>To reduce emissions from business travel.</p>	<ul style="list-style-type: none"> • The results from the 2022 staff travel survey will be used to identify priorities and develop proposals for renewing the Staff Travel Plan. • Continue to offer a range of options for sustainable staff travel including walking, cycling, and public transport. Look into ways to finance a dedicated travel officer role (or part role) to look at driving this work forward. • Continue to support the development of school travel plans looking at pupil, staff and visitor's trips. School travel commuting will fall under both the corporate Staff Travel Plan and individual school travel plans. • Encourage staff to consider a travel decision hierarchy, ie Do you need to travel? What are the travel options? And have you considered more sustainable options first?... before using your own car. • Encourage staff who need a car to undertake their work to travel by sustainable travel modes into Southampton and use Car Club vehicles based in the city centre, reducing the need for private car use and drop off/collection fees when using car hire suppliers. • The council will ensure that employees will only get charged for the miles they travel and this will result in cost savings to the business. • Continue to develop MAAS platform, the Breeze Journey Planner to enable people to plan journeys in real time and buy all tickets in one app for seamless travel options. • Explore more options for encouraging sustainable travel through salary sacrifice schemes, Solent Go and rail discounts. • Pilot an internal Lift Share Scheme for council staff, for those where public transport is not an alternative option. • The council are investing in smart working. Genuine carbon savings for the increase in home working need to be measured, considering reduced commuting but also electricity and heating costs in the home. • Encourage active or more sustainable travel in communities such as council housing estates

Goal 3: Social housing stock to be net zero by 2035

The council has identified one main priority that will help us to achieve this goal:

Minimise emissions from housing stock and communal areas. The council is a landlord for nearly 18,000 homes, 17% of all dwellings in the city. We estimate these homes are currently responsible for emitting 42,000 CO₂e tonnes (per year).

The definition of net zero for housing covers regulated energy (heating, hot water, and fixed lighting).

Priority	What will the council do?
<p>To minimize emissions from housing stock and communal areas.</p>	<ul style="list-style-type: none"> • Complete a data assessment which will assign Energy Performance Certificate (EPC) rating bands to all properties and identify properties of concern. A detailed retrofit strategy for SCC housing stock will be developed to prioritise properties and measures to identify the best opportunities and timescales (2022). • The council will achieve an average EPC rating of C by 2030 (the current average EPC rating is D). There will be an ambition to go further than this where possible with targets of space heating demand for 25 kWh/m²/yr for existing stock and 15 kWh/m²/yr for new housing (building to Passivhaus levels). Two of the council's architects are being trained up to become Passivhaus certified. • Use a fabric first approach to reduce energy demand to address fuel poverty and future proof against low renewable energy capacity in the electricity network. • Will adopt zero carbon technologies that will be phased in where there are appropriate opportunities, with a need to identify a target date for no new gas installations, to ensure net zero by 2035 is achievable. • Will explore and determine a model for solar electricity generation and how this works for tenants. Use CAPT and Absolar to identify opportunities and develop a scheme for delivering the energy to households, using any surplus to cover investment by selling back to the grid. The council will use the export tariffs to share equitably across tenants to ensure those in properties not suitable for solar panels will not be left out of savings on their energy bills. Consideration of a strategic partner to deliver this scheme but will ensure the council benefits from insulating carbon reductions. • The council will engage with tenants to agree on the new approach and offer guidance on using new systems. • Properties will be assessed and a hierarchical approach to heating systems applied, using existing heating networks, new heating networks and large-scale Air Source Heat Pump/ Ground Source Heat Pump solutions. • The council will ensure that all net zero carbon works coordinate with ongoing, new or existing repairs and maintenance or new build programmes. This will include, but won't be limited to, roof replacement and boiler replacement programmes. • The council will develop training to help upskill the workforce that will aid the transformation of the local economy at the scale and pace needed • Pursue the Social Housing Decarbonisation Fund and other appropriate grant opportunities to support the Housing Revenue Account and facilitate the delivery of measures at an appropriate scale.

Goal 4: Apply authority and use influence to support the city in becoming net zero by 2035

Currently, 29% of Southampton's emissions come from the transport sector, with housing then responsible for 31% of emissions, public and commercial buildings for 23% and industry 17%.

Some of what needs to be done will happen outside Southampton – for example through the on-going decarbonisation of electricity or the development of electric vehicles. However, numerous options could also be adopted within Southampton to reduce energy use and carbon emissions in homes, buildings, transport and industry.

All of the evidence suggests that there are unlikely to be many 'silver bullets' that lead to dramatic step changes in a city or area's carbon footprint, but that instead multiple options have to be adopted across all sectors.

Priority	Why is this important?	What will the council do?
Buildings	<ul style="list-style-type: none"> Currently, in the City of Southampton, housing is responsible for 31% of emissions, with public and commercial buildings 23% To meet both national and local climate change targets all new buildings must operate at net zero carbon by 2030 and all buildings (i.e., including existing) must operate at net zero carbon by 2050. Carbon Neutrality is not going to be achieved in the timelines if new developments which are being designed and approved now are not of the highest possible standards. 	<ul style="list-style-type: none"> In July 2021 Southampton City Council published energy requirements for new build development 2021-2025 to guide appropriate specifications for energy conservation, carbon reduction and use of renewables. This will be developed to be incorporated into the Local Plan (City Vision). Introduce new policies within the Southampton Local Development Plan to support design and performance of new building stock Pursue funding to offer local homeowners, low-income households and the fuel poor with financial support to retrofit energy efficiency and decarbonisation measures in their property. Maintain and enhance the council's Warmer Homes Service and collaboration with the local charity, the Environment Centre (tEC), to offer advice to households and distribute grants to make safer, warmer, more energy efficient, low carbon homes, prioritising the vulnerable and fuel poor. The Designer's Manual – the Southampton Home requires proposals to be informed by UK Green Building council's Net Zero Carbon Buildings: A Framework Definition. The council will take this forward. Improve the performance of properties within the private rental sector by; <ul style="list-style-type: none"> - Assessing the stock to identify priorities and opportunities, - raising awareness amongst landlords and enforcing standards, - encouraging and incentivising energy efficient, low carbon homes, - identifying opportunities for landlords to use grants and other means to support the delivery of retrofit measures.

Priority	Why is this important?	What will the council do?
Transport	<ul style="list-style-type: none"> Nearly a third of the city's carbon emissions come from the transport sector. Transport emissions have remained relatively persistent. Whilst the cities emissions have generally fallen by 50% since 2005, transport emissions have decreased by 25%. By 2040 another 30,000 people are predicted to be living in the city and more homes are planned in the Solent-area. This could generate another 74,000 trips in the city per day. The city is also a maritime hub and the volume of goods and cruise ships passing through the port and city expected to double in the next 20 years. The transport network is already strained and congestion is estimated to cost the economy more than £100M a year. As the city grows congestion could increase. We need to find solutions that deliver co-benefits including reduced emissions, cleaner air, and more active lifestyles. 	<ul style="list-style-type: none"> Continue to deliver the Local Transport Plan, including the Big Ideas to deliver a Southampton Mass Transit System, A 'Liveable' City Centre, Active Travel Zones, Park and Ride Sites, The Southampton Cycle Network and the overarching goals of working towards a zero emission city and improving connectivity. The council will align their Local Transport Plan with emerging government policy and complete a review in 2024 that will offer additional clarity on how the city can achieve net zero targets in relation to transport emissions. Introduce an Electric Vehicle Charging Strategy in 2023 demonstrating how SCC will support EV users with a public charging infrastructure the capable of meeting future demand. Introduce new policies within the Southampton Local Development Plan to support sustainable travel choices including a focus on high density developments with low/zero car ownership; creation of 20-minute neighbourhoods; safeguarding land for key transport improvements, including the Southampton Mass Transit System and Park and Ride. Deliver the Air Quality Action Plan, working towards continual improvement in the city's air quality while securing large co-benefits for decarbonisation.
Energy and Heat	<ul style="list-style-type: none"> Heat networks are one of the most cost-effective ways of reducing carbon emissions from heating, and their efficiency and carbon-saving potential increases as they grow and connect to each other. They also offer financial savings for domestic and commercial customers. It is estimated by the UK Climate Change Committee that around 18% of UK heat will need to come from heat networks by 2050 if the UK is to meet its carbon targets cost effectively. The city centre has had an operational heat network since 1986, part powered by geothermal heat but currently reliant on gas. This connects many of the large energy users, including the Civic Centre, West Quay Shopping Centre and Ikea. The cities electric supply infrastructure is constrained. Customers steering away from fossil fuels and seeking additional capacity to charge vehicles and heat buildings may find options limited. 	<ul style="list-style-type: none"> The council will work with energy, heat and fuel suppliers, the Distribution Network Operator, Southern Gas Network and city stakeholders to develop a city-wide Heat and Energy Strategy, seeking to support decarbonisation whilst ensuring a balanced approach to managing supply. The council will work with the operating company, the Government Department of Business, Energy and Industrial Strategy (BEIS) and other large energy consumers in the city to look at options for expanding and decarbonising the heat network. The council will explore opportunities to work with property owners and suppliers on solar energy panels to maximise the cities roof top capacity.

Priority	Why is this important?	What will the council do?
Energy and Heat	<ul style="list-style-type: none"> • Scope to generate renewable energy within the city is limited by demands on space. • Hydrogen offers a versatile opportunity to replace fossil fuels and reduce emissions but is not readily available and costs are currently high. 	<ul style="list-style-type: none"> • Efforts will be increased to maximise energy efficiency measures across all city sectors • Explore opportunities to improve the efficiency of the Heat Network by working with the operator and the council's own buildings, utilising the Government's Heat Network Efficiency Scheme where appropriate • The council will support the Solent Cluster in pursuing opportunities to introduce low carbon fuel options, including hydrogen, across the region and to benefit the city.
Business and Economy	<ul style="list-style-type: none"> • Southampton is a city of opportunity, a regional hub of economic activity and a global gateway. Together with our vibrant, diverse population we are a city of many cultures and a leading hub of research and innovation. However, despite being an economic centre for the region, Southampton has high levels of deprivation, inequality, and disadvantage. 	<ul style="list-style-type: none"> • The Southampton Economic & Green Growth Strategy 2020 – 2030 aims to build the economy for and with communities so that everyone benefits from improved opportunities and outcomes. This strategy builds on Southampton's ongoing economic growth and Green City agendas and sets out the plan to restore and renew our economy as a greener, fairer, and healthier city. • Supporting LoCASE (Low Carbon Across the South East) providing support and funding for small and medium-sized enterprises (SMEs) to reduce emissions
Consumption and Waste	<ul style="list-style-type: none"> • Government's Resources and Waste Strategy (2018) aims to eliminate avoidable wastes of all types by 2050 in England. • Reducing waste would help to prevent the need for the manufacture of new products. This is key to achieving net zero. • Furthermore, efficient recycling of waste places less demands on natural and virgin resources, thereby conserving environments. • A circular economy is defined as materials that are retained in use at their highest value for as long as possible and are then reused or repurposed, leaving a minimum of residual waste. 	<ul style="list-style-type: none"> • Introduce a new policy 'Waste and the Circular Economy' into the new Local Plan • Promote initiatives to reduce consumption of materials and products • Promote local production of materials and products to reduce transport distances • Promote measures to increase re-use or recycle of materials, and reduce wastes • The council will seek to understand the climate change risks to the waste service industry and work to reduce their overall consumption.

Priority	Why is this important?	What will the council do?
Natural Environment	<ul style="list-style-type: none"> • Southampton is a city with a large amount of green space, with 49 parks and 1,140 hectares of open space, including Southampton Common which host over 17 million visitors a year. • Although Southampton appears to have a lot of public green space, the high population density means that there is a significant deficit of accessible green space per person, particularly in the West of the City where there are no Local Nature Reserves (green spaces for people and nature). • Despite best efforts there will be a need to 'offset' some of our current carbon emissions and there is an opportunity to achieve this at a local level through habitat creation. • Southampton is a densely developed city with little opportunity to create new green space. The council therefore need to adopt a broader approach to green infrastructure by trying to green up built development using landscape planting, street trees, green roofs, and green walls. This has been incorporated into the existing City Centre Action Plan which requires all developments, and especially the key sites, to assess the potential of the site for appropriate green infrastructure and provide suitable qualitative improvements. 	<ul style="list-style-type: none"> • Include policies covering biodiversity, green infrastructure and open space in the Local Plan Review and any Supplementary Planning Documents. • Develop a Biodiversity Strategy that sets out how the council will halt the decline of biodiversity, protect, and re-connect Southampton habitats, restore species populations, and plan to undertake an external consultation on this in 2023. • A Green Grid Map has already been drafted, and already features in the new draft Local Plan. The council is now working on a Green Grid Delivery Plan to accompany this. The Plan will outline how the council will extend and connect the green and blue infrastructure across the city, including linking into neighbouring land, with combined actions and effort from the council, residents, businesses, and developers • Formal partnership with the Hampshire & Isle of Wight Wildlife Trust has been established and the council is supporting the Trust to introduce a City Wilder Officer project to help households and businesses bring nature into the city and to also support the Waste of Space campaign alongside the Green Grid Action Plan. • The target of introducing 25 new urban meadows (by 2025) will be achieved and the council will continue to increase the extent and quality of their wildflower grasslands. • In the last two years The council has planted nearly 4,000 trees This year the council will employ the findings of the Tree Capacity Study to ensure the urban canopy continues to grow at pace and enhances every part of the city. • The council are also supporting the Southampton National Park City Project, working with the community-based project team to build and deliver a plan to achieve National Park City status by 2025.

Priority	Why is this important?	What will the council do?
Adaptation and resilience	<ul style="list-style-type: none"> • Adapt – Look to adjust our environment, behaviours, and practices to withstand the effects that climate change is likely to present and, even benefit from opportunities. • Be resilient – anticipate those shocks that climate change might bring to our daily lives and prepared to recover from their impacts in a timely and efficient manner • Water supply in the south east is a major issue. The area is one of the driest regions in the UK and has the highest (and increasing) level of demand on water resources. • Southampton is a low-lying coastal city and is therefore susceptible to flood risk not only from tidal inundation, but also surface water, groundwater, and possible wastewater infrastructure overflows during extreme weather events. In addition, there is a risk of fluvial flooding from the City's Main Rivers which are the River Itchen, River Test, Holly Brook, Tanners Brook, Rolles Brook and Monks Brook, along with several other unnamed open channel and culverted watercourses. • The impact of climate change will mean more areas of the city become at risk of flooding. Rising sea levels will increase both the extent of tidal flooding, with the changing climate increasing the likelihood of surface water flooding where water is either unable to soak into the dry ground, or through in exceedance of capacity provided by watercourses or underground sewer infrastructure due to increased rate of runoff. 	<ul style="list-style-type: none"> • Water Resource & Quality, Flood Risk and Sustainable Drainage policies in the new Local Plan • Continue to work with Southern Water to promote their 'Target 100' campaign to reduce water use across the city. • Flood defence infrastructure is critical to achieving sustainable growth in Southampton. The council will work with the Government, Environment Agency, developers, and individual landowners to manage the risk of flooding. • Where there is present day or future tidal flood risk, this will include implementation of a strategic flood defence as set out within the Southampton Coastal Flood and Erosion Risk Management Strategy (2012) or any future reiterations of this Strategy. This defence will be designed to integrate successfully into the wider cityscape, including improved public access to and along the waterfront. • Flood defence search zones will be mapped to support delivery of the city's flood defence needs.

Priority	Why is this important?	What will the council do?
Collaboration	<ul style="list-style-type: none"> The first meeting of the Southampton Climate Commission took place in November 2022, with key representatives from public sector, businesses, and residents' groups. The Commission will help build capacity in the city to address the challenges of climate change and provide a platform for deliberation and democracy. The Commission will seek to: <ul style="list-style-type: none"> Create shared responsibility and mobilise local action with meaningful representation of different groups Demonstrate how climate action can be an opportunity to deliver co-benefits Strengthen the evidence base and promote the adoption and delivery of appropriate climate action plans across sectors Inform, guide, support, and track progress towards appropriate local climate targets, promote transparency and encourage the replication/scaling up of best practice 	<ul style="list-style-type: none"> This independent forum, or Climate Commission, could help in achieving delivering these goals. It is a model other UK cities have introduced, bringing together representation from a range of stakeholders to develop ownership and oversight and establish agreed targets and positive action. <p>Progress to Date</p> <ul style="list-style-type: none"> 2021: High level assessment of emissions in Southampton was undertaken by Leeds University using projections based on a carbon budget assigned by population Jan – June 2022: Consultation with the Chamber of Commerce, Local Enterprise Partnership (LEP), Workplace Travel Network, key partners and a survey open to the public with overall support for a climate commission July 2022: Workshop on Climate Commission development including review of Terms of Reference Nov 2022: First meeting of Commission Jan 2023: Second meeting of the Commission <p>Citizens Climate Assembly – The University of Southampton are currently engaged in setting up a Citizens Assembly focussed on climate change. It is expected to be launched this year (2023).</p>

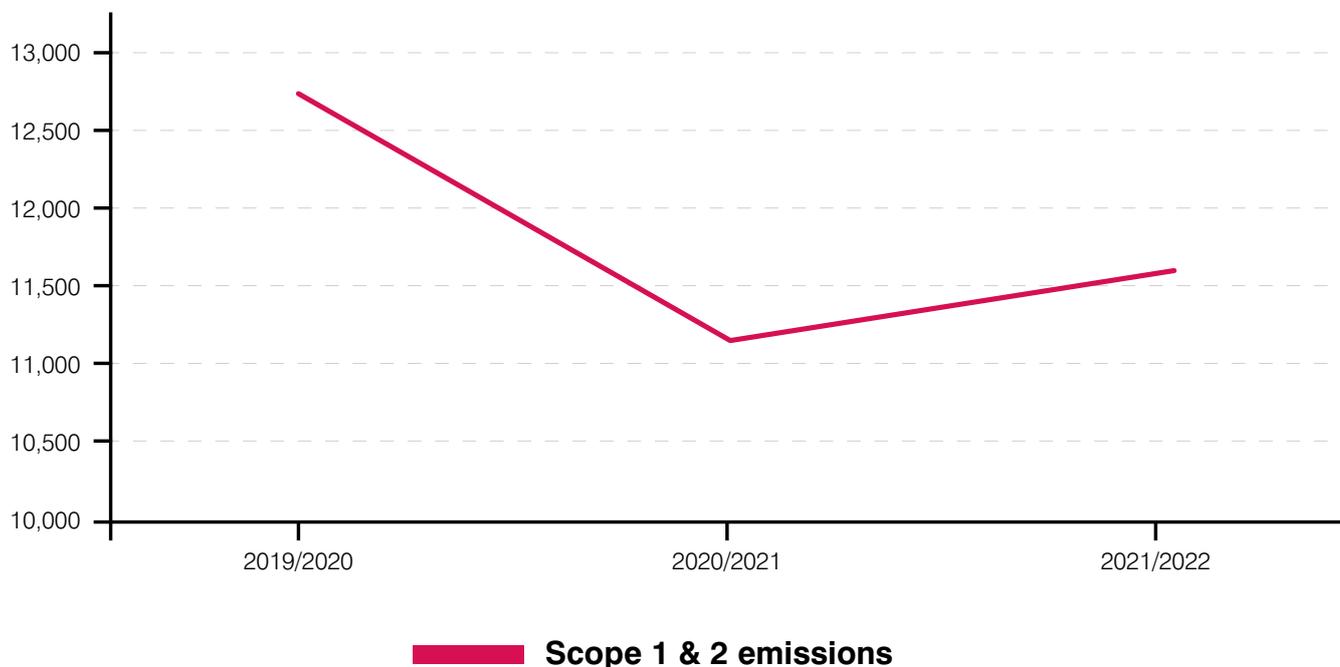
Appendix 1

Council emissions 2019-2020 (baseline year)

Source	Scope	Total Emissions (tonnes CO2e)	% of Total GHG Emissions
Natural Gas - Corporate	Scope 1	4,069.93	8.5%
Vehicles - Council fleet	Scope 1	1,688.41	3.5%
Fugitive GHG Emissions - Refrigerants	Scope 1	0.00	0.0%
Scope 1 sub-total		5,758.34	
Electricity - Corporate	Scope 2	5,627.28	11.8%
District Heating - Corporate	Scope 2	732.90	1.5%
District Cooling - Corporate Portfolio	Scope 2	406.48	0.9%
Scope 2 sub-total		6,766.66	
Council Procurement - Goods & Services	Scope 3	30,846.71	64.6%
Well-to-Tank - Utilities	Scope 3	1,520.52	3.2%
Employee Commuting	Scope 3	1,133.17	2.4%
Electricity T&D - Corporate Portfolio	Scope 3	477.75	1.0%
Well-to-Tank - Council Vehicles	Scope 3	401.93	0.8%
Well-to-Tank - Employee Commuting	Scope 3	422.87	0.9%
Business Travel	Scope 3	201.00	0.4%
Water (Supply & Treatment) - Corporate Portfolio	Scope 3	66.61	0.1%
Waste (SCC only)	Scope 3	41.26	0.1%
District Heating Distribution - Corporate Portfolio	Scope 3	36.64	0.1%
Well-to-Tank - Business Travel	Scope 3	48.94	0.1%
District Cooling Distribution - Corporate Portfolio	Scope 3	20.32	0.0%
Scope 3 sub-total		35,217.72	
Total GHG Emissions (tonnes CO2e)		47,742.73	

Appendix 2

Scope 1 and 2 emissions since baseline year



Year	Scope 1 & 2 emissions
2019/2020	12740.11
2020/2021	11122.65
2021/2022	11574.06

Appendix 2 shows scope 1 and 2 emissions since the baseline year 2019. Emissions fell by 1617 tCO₂ in 2020 however there was a slight rise in emissions in 2021/2022 due to the unusual circumstances in 2020/2021 owing to the coronavirus pandemic. This is why 2019/2020 has been taken as a baseline to show a more business as usual scenario. Overall emissions have fallen by 1166 tCO₂ since the baseline year.

Appendix 3

Strategy adoption timeframe

	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	April 23	May 23	June 23	July 23	Aug 23	Sept 23
Finalise Draft	→					Pre-election period						
Internal Consultation			→									
Cabinet Member (CM) Briefing			→									
Review and Update			→									
External Consultation				→								
Review and finalise				→								
Leadership & CM Briefing									→			
Cabinet										→		
Adopt											→	



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