



Southampton

Low Carbon City 2011 - 2020

Part 2: The Strategy

Document guide

Part 1 – The Story

This sets out the story so far and a summary of the key priorities listed in the strategy.

Part 2 – The Strategy

The Low Carbon City Strategy sets out our ambition for Southampton to be a world-leading low carbon city. We've identified eight key priorities to deliver this ambition.

Part 3 – The Delivery Plan

This document lists the specific actions that we are going to undertake to deliver the vision set out in the strategy. It will be updated every 3 years to the end of the Low Carbon City Strategy period (2020). We will report on our progress annually.

Part 4 – The Facts

This gives a snapshot of what we're doing and gives an idea of the progress we're making.

You can get involved by contacting us at: sustainability@southampton.gov.uk
To get hold of all the documents and to find out more go to our web pages at www.southampton.gov.uk/sustainability

Endorsement:

This strategy was developed in partnership with the Southampton Low Carbon Group, which includes representatives of the Hampshire Chamber of Commerce, University of Southampton, Cofely District Energy and Business Southampton.



Foreword

Southampton City Council has a clear role to play in rising to the challenges climate change will present to the local area.

We must continue to adjust our own operational practices and mobilise action across the city as a whole. This strategy, and the underpinning delivery plans that will follow, articulates the next 10 year phase in our plan to reduce our own greenhouse gas emissions ahead of national targets, adapt to the effects of climate change and re-assert our leading-edge low carbon credentials. It marks the next phase in our transition to a low carbon future where we will work with businesses to strengthen our local economy and address climate change.

Across the country, there is a growing drive to change the way we generate energy, the way we heat our homes and workplaces and the way we travel in response to the Government's carbon budgets. Southampton strives to be one of the frontrunners in this emerging low carbon economy using our existing assets and low carbon infrastructure as a catalyst for development, inward investment, business growth, energy security and new jobs. We will work with partners to make Southampton a location of choice for environmental technology and service firms and new and cleaner investment; a city which is learning and developing new technologies, generating new wealth and creating jobs for all. We recognise that good environmental sense means good business sense.

But while we seek all these benefits we do know that we have a number of challenges that need to be addressed. Sea level rise will increasingly threaten activity in the city, scarcity of fossil-fuel supply will raise energy prices and impact the most disadvantaged and those not committed to environmental responsibility will struggle, losing out to more resource-efficient competitors and unable to take advantage of all the opportunities that exist.

There are two fierce realities that face us: on the one hand the needs of the environment and the impact of climate change are growing; on the other, there will be a greater demand on resources to help us meet the challenge. We also recognise that there will be costs in changing the way we do things along the way. But these are far outweighed by the costs of not acting and facing the expense of price fluctuations from diminishing fossil-fuel supply and coping with dangerous climate change. The recession throws into sharp focus the need to exploit synergies between environmental goals and economic aspirations. We do not need to make a trade-off between becoming more sustainable and delivering economic growth. Rather we can ensure that the emerging low carbon economy strengthens our recovery from the current global slowdown and becomes a key part of Southampton's future.

In delivering the priorities in this strategy we can address the challenges we face as a city and realise the benefits that a low carbon future brings.



A handwritten signature in blue ink that reads "Dan Fitzhenry".

Cllr Dan Fitzhenry, Cabinet Member for the Environment and Transport, Southampton City Council

* The Climate Change Act 2008 requires that emissions are reduced by at least 80% by 2050, compared to 1990 levels.
** The Climate Change Act 2008 requires that emissions are reduced by at least 80% by 2050, compared to 1990 levels.
*** Stern Review on the economics of climate change 2006



Image: Solar photovoltaic cells on top of Southampton City Depot

Southampton: Low Carbon City Strategy

Contents

<u>Foreword</u>	<u>01</u>
<u>Vision</u>	<u>03</u>
<u>Context</u>	<u>04</u>
<u>Headline Objectives</u>	<u>05</u>
<u>Low Carbon Economy</u>	<u>06</u>
<u>Sustainable City Energy</u>	<u>09</u>
<u>Carbon Reduction</u>	<u>11</u>
<u>Flood Risk Management</u>	<u>13</u>
<u>Sustainable Spending</u>	<u>15</u>
<u>Biodiversity</u>	<u>17</u>
<u>Towards low carbon transport</u>	<u>19</u>
<u>Waste and resource management</u>	<u>21</u>
<u>Delivery</u>	<u>23</u>
<u>Charter</u>	<u>26</u>

Vision

Southampton will thrive in a new low carbon economy. By galvanising local action we will be competitive and prosperous; a focal point for green business as we move swiftly to low carbon energy, low carbon transport and a low carbon built environment.

The future can be greener, healthier and safer as we adapt to climate change and promote the health of the environment. There can be more green spaces, gardens and green roofs which carpet the cityscape creating an attractive, vibrant and multifunctional urban environment. The city can create jobs as a leading area for green energy technology as we build our low carbon infrastructure.

New jobs in the city will improve the economic prospects for local people, and there is a proven link between higher income levels and better health. Low carbon makeovers to future-proof our homes will reduce fuel poverty, and people who can stay warm will have better health. We can begin to change high consumption, high stress, and high heart disease lifestyle. Walking and cycling will increase the physical activity undertaken by people in the city with beneficial effects on obesity levels, and on long-term conditions such as diabetes. Improved air quality delivered through green technology and low carbon transport will reduce the incidence of asthma and related illnesses.

There can be closer-knit communities as neighbours have more opportunities to interact with each other as they walk from place to place and meet in local shops and recreation facilities and we can have secure, local, low carbon energy supply replacing the old and dirty with the new and green.

We'll achieve this by concentrating on eight key priorities:

- 1 We will invest in, strengthen and grow the city's low carbon economy**
Southampton will be a magnet for innovation and talent as a centre for high value green jobs and low carbon business opportunities. The city will be a leading location and growth hub for green business, capitalising on the sectoral strengths of the area.
- 2 We will generate and use energy in a sustainable way**
Southampton will be a city where carbon-intensive living will be 'powered down' by reducing energy demand and diverse low-carbon energy supply will be 'powered up' by new technologies through efficient design and a diverse low-carbon energy supply mix.
- 3 We will reduce the carbon footprint of the city**
Southampton will be a city with a low carbon culture - low carbon intensity and high standards of living. We will continue to reduce the carbon output of our local economy.
- 4 We will minimise the impact from flooding for the city**
Southampton will be a city that is resilient to all but the most extreme floods and has robust emergency plans to respond to, and recover from, flooding.
- 5 We will incorporate sustainability into all of our buying decisions**
We will measure the value of a product or service by more than just the price on the label. We will buy goods and services that have social, economic and environmental benefits.
- 6 We will strengthen biodiversity in the city**
We will improve the way we link together the rich patchwork of diverse, living green spaces and tree-lined streets in the city.
- 7 We will increase low carbon travel and transport**
Southampton will be an accessible city with a reduced reliance on oil and less dependent on the car.
- 8 We will use less, waste less and recycle more**
Southampton will reduce unnecessary consumption and production. Resource efficiency will be a hallmark of the city.

Context

The world is getting warmer and mankind's activities are the cause.

This warming is expected to have profoundly negative impacts on many people and ecosystems, particularly those that are already vulnerable. It will affect how we work, travel, shop and eat, our education, our homes, and our social lives, our leisure pursuits, and our holidays whatever action we take, or don't take, to reduce carbon emissions.

The UK (and particularly the South East) will increasingly become a climate of extremes and the impact of weather events will be more pronounced. There will be more intense and frequent episodes of extreme weather such as storms and floods. While the causes of these extremes may or may not be attributable to climate change, the effect is that climate change will make events like these increasingly severe and frequent. This will bring with it disruption and damage.

Summers in Southampton will become hotter and drier with sustained periods of heat. This will be amplified by the Urban Heat Island (UHI) effect and the rise in temperature will bring health risks to the elderly, young and the vulnerable.

The longer growing period associated with a mild winter could increase landscape maintenance costs, the increased use of air conditioning will put pressure on power demand and there is the potential for an increase in parasites and infestations. Rainfall will no longer be consistent and prolonged dry periods will put additional strain on water supply. With less rainfall in summer, droughts will be the trend. When the rain does come we will see flash floods as drainage systems will not be able to cope; there will be more disruption and damage to our transport network and water rationing and hose pipe bans will need to be enforced. The inconsistency in rainfall will leave us short in summer and inundated in winter.

We will become increasingly constrained by the physical systems that we live and work within. This will include existing buildings and streets, utility pipes and wires, and the hardware of provision of local services, from bins to bus stops. This local infrastructure will increasingly impair people's quality of life and will ill-equip us for the increasing priority of living sustainably. Adapting to climate change is therefore a key impetus for a move to a low carbon economy and will require major changes in our homes, streets and workplaces.

Image: Green wall at One Guildhall Square

Headline objectives

This strategy has two headline objectives:

Mitigation

To reduce the city of Southampton's carbon dioxide emissions by 34% by 2020 from 1990 levels in line with national policy but to reduce the council's CO2 emissions by 40% from 2010/2011 levels by 2020 using CRC baseline data.

We can lower these emissions by reducing our demand for and use of energy; altering the technologies used for energy generation; and changing the sources of the fuels we use from fossil fuels to renewables. This strategy sets out ways of adopting and applying these three approaches.

Adaptation

To engage all individuals and organisations in Southampton in the process of adapting to climate change in order to improve health and quality of life for everyone.

Every one of the actions in this strategy and delivery plan will contribute in some way to achieving a new 'low carbon' culture - where the lifestyles and operations of the city have improved in light of the onset of climate change.

Commitments to meet these targets are set out in eight chapters that follow whilst specific actions are included in the Delivery Plan. Each chapter makes it clear what Southampton is going to do to achieve our low carbon ambitions.

We will invest in, strengthen and grow the city's low carbon economy

Southampton will be a magnet for innovation and talent as a centre for high value green jobs and low carbon business opportunities. The city will be a leading location and growth hub for green business, capitalising on the sectoral strengths of the area.

The issue

The government's carbon reduction targets will change the way the economy is driven. Economic growth will have to be decoupled from greenhouse gas emissions – a 'low carbon economy'. Southampton will be at the centre of this low carbon economy. We will accelerate change by creating the right framework for investment through progressive policies, low carbon infrastructure and low carbon expertise. We will create a better environment where an enterprise culture can flourish to position Southampton at the forefront of exploiting the commercial and social opportunities the low carbon agenda presents. It's about creating the best environment for business success in the city and creating business success that is best for the environment.

Outcomes

- By 2020 Southampton is a centre of excellence for skills, training, green jobs and enterprise for a low carbon economy and the destination of choice for investment from forward thinking firms
- Low Carbon Business hub utilising space concentrated at western gateway (within the MDQ) to accommodate growth of a low carbon business cluster
- There is a highly skilled workforce to service all commercial environmental sectors and deliver a low carbon economy. Skills are broad based and will make the city resilient
- Universities and colleges in the city are at the forefront of research and development, new product development and commercialisation of products.

We will:

- Articulate and implement the city's low carbon ambitions through robust planning policy to stimulate innovation hubs which identify local economic strengths and give clarity regarding the required balance between public and private funding for infrastructure items
- Work with partners to jointly understand the skills gaps and new skills required to achieve a low carbon, resilient economy
- Investigate incentive measures, such as business rate relief to encourage low carbon green business into the city
- Seek to retain the city's low carbon skills and expertise to resource business activities focused on; reducing carbon emissions through the implementation of existing and developing technologies, export orientated low carbon activities based on manufacturing and export orientated low carbon activities based on business, financial and technical services
- Work with the higher education sector to grow talent and foster technological innovation to build on the world class science and research base we already have and create the skills needed to re-fit and re-kit Britain
- Continue to develop the city's low carbon infrastructure; including transport, telecommunications, housing, green network and open space, waste management, as well as energy supply to provide the right environment for low carbon business as a tool for inward investment

We will have energy sourced and used in a sustainable way

Southampton will be a city where carbon-intensive living will be 'powered down' by reducing energy demand and diverse low-carbon energy supply will be 'powered up' by new technologies, through efficient design and a diverse low-carbon energy supply mix.

The issue

We need to make deep cuts in carbon dioxide emissions while still meeting our energy needs for electricity, heating and transport. This will require future energy sources to be cleaner and sustainable. There can be no single best solution – an integrated approach making best use of all the available technologies is required and some of these may have short term implications. To reduce carbon emissions from energy production we must shift towards lower-carbon forms of energy production. We need to 'green the grid'. This will impact individual houses as well as commercial and public buildings in every street and in every neighbourhood in the city. It will include encouraging greater use of renewable energy and exploring further opportunities for local energy production and distribution building on our 25 year

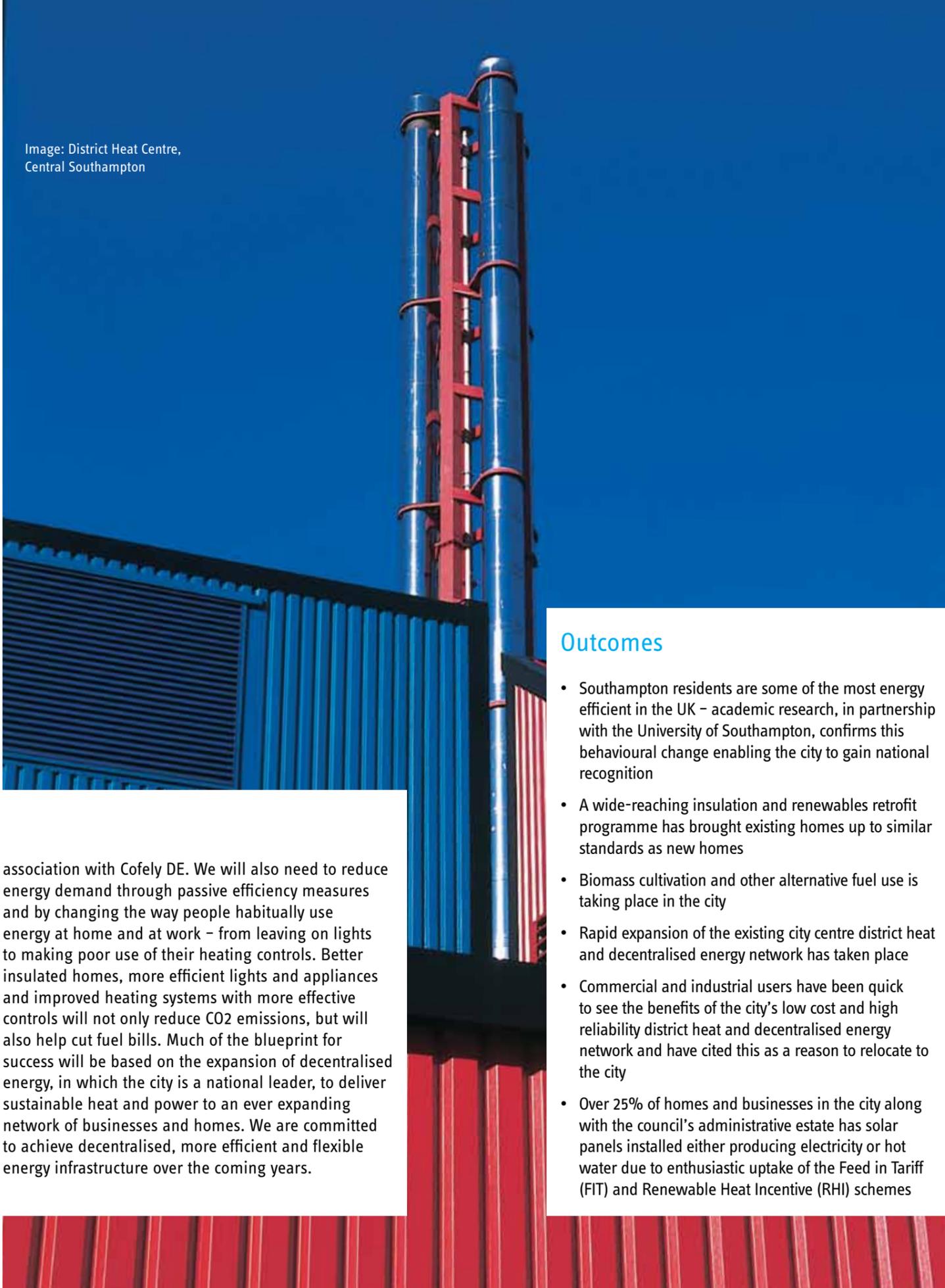


Image: District Heat Centre, Central Southampton

association with Cofely DE. We will also need to reduce energy demand through passive efficiency measures and by changing the way people habitually use energy at home and at work – from leaving on lights to making poor use of their heating controls. Better insulated homes, more efficient lights and appliances and improved heating systems with more effective controls will not only reduce CO2 emissions, but will also help cut fuel bills. Much of the blueprint for success will be based on the expansion of decentralised energy, in which the city is a national leader, to deliver sustainable heat and power to an ever expanding network of businesses and homes. We are committed to achieve decentralised, more efficient and flexible energy infrastructure over the coming years.

Outcomes

- Southampton residents are some of the most energy efficient in the UK – academic research, in partnership with the University of Southampton, confirms this behavioural change enabling the city to gain national recognition
- A wide-reaching insulation and renewables retrofit programme has brought existing homes up to similar standards as new homes
- Biomass cultivation and other alternative fuel use is taking place in the city
- Rapid expansion of the existing city centre district heat and decentralised energy network has taken place
- Commercial and industrial users have been quick to see the benefits of the city's low cost and high reliability district heat and decentralised energy network and have cited this as a reason to relocate to the city
- Over 25% of homes and businesses in the city along with the council's administrative estate has solar panels installed either producing electricity or hot water due to enthusiastic uptake of the Feed in Tariff (FIT) and Renewable Heat Incentive (RHI) schemes

We will

- Maintain and develop local low carbon and sustainable energy networks.
- Build and operate more energy efficient homes, businesses, and public sector buildings
- Obtain national recognition for sustainable energy use
- Expand the existing District Energy Scheme in partnership with Cofely DE.
- Fully exploit Feed in Tariff opportunities
- Seek opportunities for new sustainable energy networks in the city
- Create a local ESCo or special purpose vehicle to drive the energy market locally
- Prioritise work taking forward energy efficiency in our administrative estate in addition to exploring the application of renewables on our buildings
- Promote a diverse range of renewable energy supply technologies in the city to deliver stability and resilience
- Continue to put into effect the requirements in the Local Development Framework Core Strategy for carbon reduction in developments through renewable or low carbon sources in the form of percentage improvements on top of the current Building Regulations requirements
- Direct investment from the city's Carbon Offset Fund towards a range of renewable energy projects across the city.

We will reduce the carbon footprint of the city

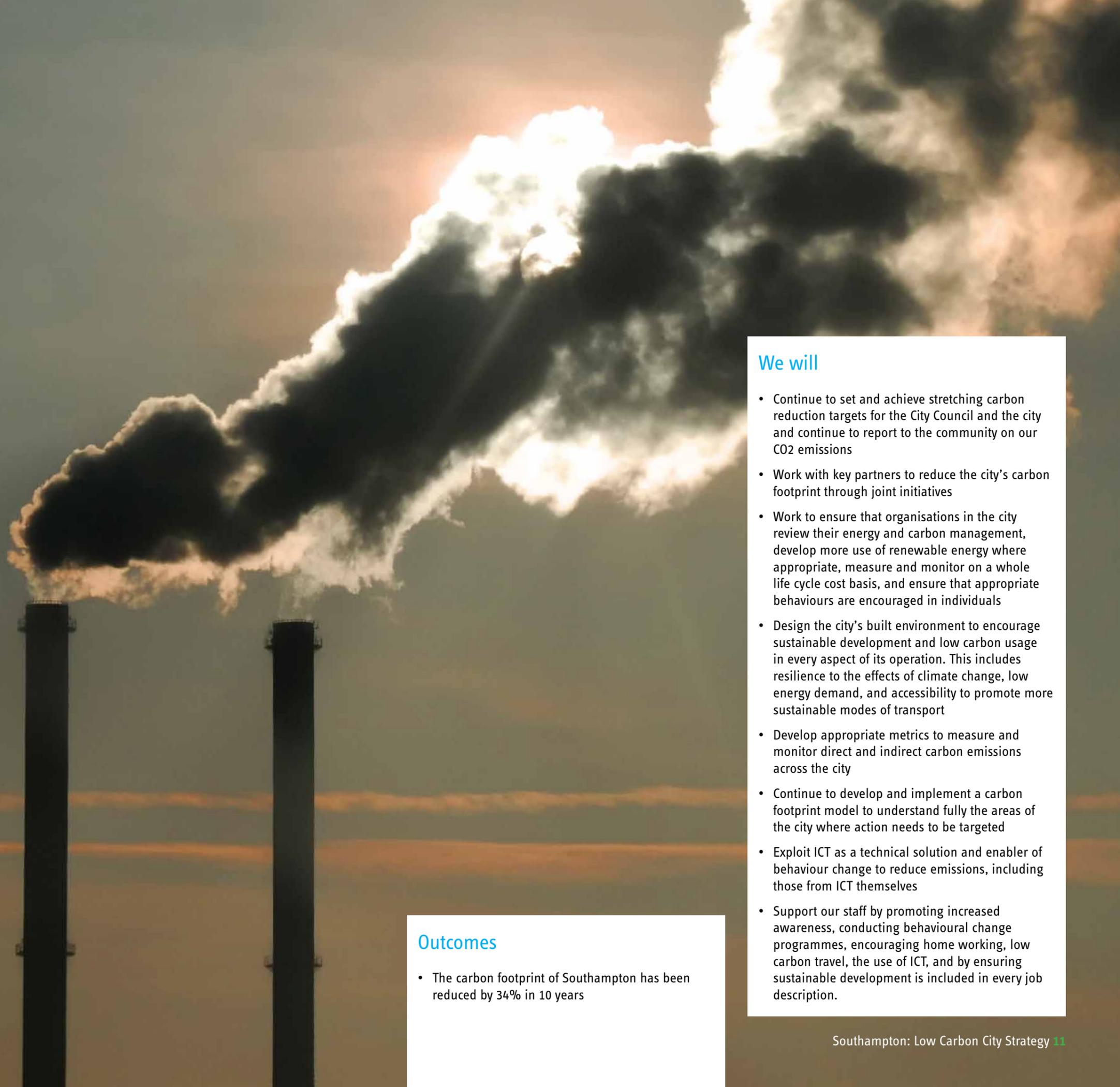
Southampton will be a city with a low carbon culture - low carbon intensity and high standards of living. We will continue to reduce the carbon output of our local economy.

The issue

Human-caused release of CO2 into the atmosphere has been adding to the greenhouse gas blanket that surrounds the earth. This is raising the temperature of the earth's surface and is expected to have a profoundly negative impact on people and ecosystems, particularly those that are already vulnerable. All the activity that takes place in Southampton adds to this gas blanket.

Our emissions of CO2 derive mostly from our use of fossil fuels and are directly related to the use of buildings, products, transport and industrial activities. We are committed to meet the governments target to reduce carbon emissions by 80% by 2050 (compared to 1990 levels) with an interim target to reduce CO2 emissions by 34% by 2020. These are big targets. This means cutting nearly 510,000 tonnes of CO2 by 2020.

This transition will transform our whole economy. It will change the city's industrial landscape, our supply chain, and the way in which we all work and consume. As well as being an environmental and economic imperative, this shift is also an economic opportunity. Businesses and consumers can benefit from significant savings through energy and resource efficiency measures. And supplying the demands of the low carbon economy offers a significant potential contribution to economic growth and job creation, not only as part of the short term economic recovery, but also through sustainable growth over the decades to come.



We will

- Continue to set and achieve stretching carbon reduction targets for the City Council and the city and continue to report to the community on our CO2 emissions
- Work with key partners to reduce the city's carbon footprint through joint initiatives
- Work to ensure that organisations in the city review their energy and carbon management, develop more use of renewable energy where appropriate, measure and monitor on a whole life cycle cost basis, and ensure that appropriate behaviours are encouraged in individuals
- Design the city's built environment to encourage sustainable development and low carbon usage in every aspect of its operation. This includes resilience to the effects of climate change, low energy demand, and accessibility to promote more sustainable modes of transport
- Develop appropriate metrics to measure and monitor direct and indirect carbon emissions across the city
- Continue to develop and implement a carbon footprint model to understand fully the areas of the city where action needs to be targeted
- Exploit ICT as a technical solution and enabler of behaviour change to reduce emissions, including those from ICT themselves
- Support our staff by promoting increased awareness, conducting behavioural change programmes, encouraging home working, low carbon travel, the use of ICT, and by ensuring sustainable development is included in every job description.

Outcomes

- The carbon footprint of Southampton has been reduced by 34% in 10 years

We will minimise the impact from flooding for the city

Southampton will be a city that is resilient to all but the most extreme floods and has robust emergency plans to respond to, and recover from, flooding.

The issue

In recent years the UK has seen an increase in the number of flood events and flood risk warnings in many areas. This is of increasing concern, to home owners, developers and insurers. Flooding is one of the most significant challenges for Southampton. The onset of climate change will make us even more vulnerable to its impacts and we need to prepare ourselves and plan for the worst. The city is susceptible to flooding from a number of sources:

- From the sea (tidal flooding)
- From the rivers (fluvial flooding)
- From heavy rainfall overcoming the drainage system (surface water flooding)
- From the sewers (sewer flooding)
- From rising groundwater (groundwater flooding)

Loss of life, personal injury, direct damage to property, infrastructure and utilities, contamination and disease, loss of income and delayed economic development, break-up of communities, increased costs of insurance and the blight of land and development are the very real consequences that flooding can bring, not to mention the intangible impacts of flooding; the loss of irreplaceable personal items, the stress of living in temporary accommodation, dealing with the insurance claims process, and the repair of homes. We need to adapt to the rising threat of climate change to reduce the prospect of these consequences being realised. The emergence of adaptive responses will give us the scope to investigate and identify those in the city who are most at risk from climate change and tailor our services appropriately.

Outcomes

- Appropriate plans and partnership arrangements are in place to ensure the city and its communities are protected and continue to thrive.
- Develop and implement our role as a Lead Local Flood Authority.
- There are innovative approaches for identifying flood risk management solutions, including sustainable urban drainage measures, as part of proposals for development within flood risk areas.
- There is raised public awareness of flooding with individual and community capacity to respond to and recover from a flood.
- There is reduced flood risk to the city's most critical assets and vulnerable communities.

We will

- Implement an innovative, cost effective and user-friendly Climate Change Risks and Vulnerabilities Assessment Tool.
- Develop a surface water management plan for Southampton which identifies and prioritises areas at risk and develops more detailed plans for the priority areas.
- Develop an adaptation action plan which will underpin this strategy.
- Raise individual and community level awareness of flooding and the measures they can undertake to reduce risks and manage the consequences of flooding.
- Work with the Environment Agency, the private utilities and other bodies to co-ordinate investment in flood alleviation and flood storage measures as part of an integrated approach to urban drainage.
- Ensure new development uses sustainable urban drainage systems (SUDS) to minimise and slow the rate of runoff.
- Ensure that developments within areas of higher flood risk will safeguard access routes and incorporate flood resilience measures and materials as part of the design of new buildings.

We will reduce the impact of our spending

We will measure the value of a product or service by more than just the price on the label. We will buy goods and services that have social, economic and environmental benefits.



Why is this a priority?

The resources on which we rely are being depleted at accelerating rates. Essential services such as clean air and water, a stable climate and viable forests and fisheries are in long-term decline. This is in no small part down to our high consumption lifestyles which are supplied by take-make-and-waste industry. All products and services create social and environmental impacts throughout their lifecycles, from employment and waste to emissions and changing land use.

These impacts are costs. In the past the cost of a product or service would have been seen as just the price on the label. But we now need to factor in the environmental and social impacts of the goods and services we are buying into our spending decisions. This is about redefining cost. Cost includes the amount of money you pay for an item, as well as what the environment and society pay for that item. This includes the costs for the extraction of the materials and its subsequent damage to ecosystem services, and the manufacture, operation and disposal of a product. Whole-life costing is about doing exactly this. As a local authority we are a major consumer, spending over £240m each year. This budget brings with it the power to transform local markets and make a major contribution to driving the way in which local markets develop.

What and how we buy goods, services and capital can therefore make a big difference. Whether it is through buying organic food for school canteens, office equipment made from sustainably sourced timber, recyclable paper or energy efficient air conditioning systems there is a huge opportunity to enhance the environment and quality of life through the purchasing choices we make. It can also serve to provide industry with real incentives for the development and diffusion of environmentally sound goods and services. Suppliers can be motivated to offer more sustainable products and services through the choices we make. We can buy our way to a better future.



Outcomes

- We have achieved sustainable outcomes through the City Council's procurement activity and met our Flexible Framework targets
- A joint public sector approach to influencing the supply chain is in place
- The council's needs for goods, services, works and utilities have been met in a way that achieves value for money and ensures benefits to the economy and society whilst minimizing damage to the environment
- Sustainability is recognised as more than just the environmental considerations in procurement, but as an overarching ethos which pulls together economic efficiency and environmental protection in pursuit of social and corporate objectives

We make choices every time we decide what we're going to buy and those choices reflect what we value. As a Council we have a duty to spend public money in the long-term public interest - in ways that avoid undermining people's health, opportunities and the environment. To make sure this happens:

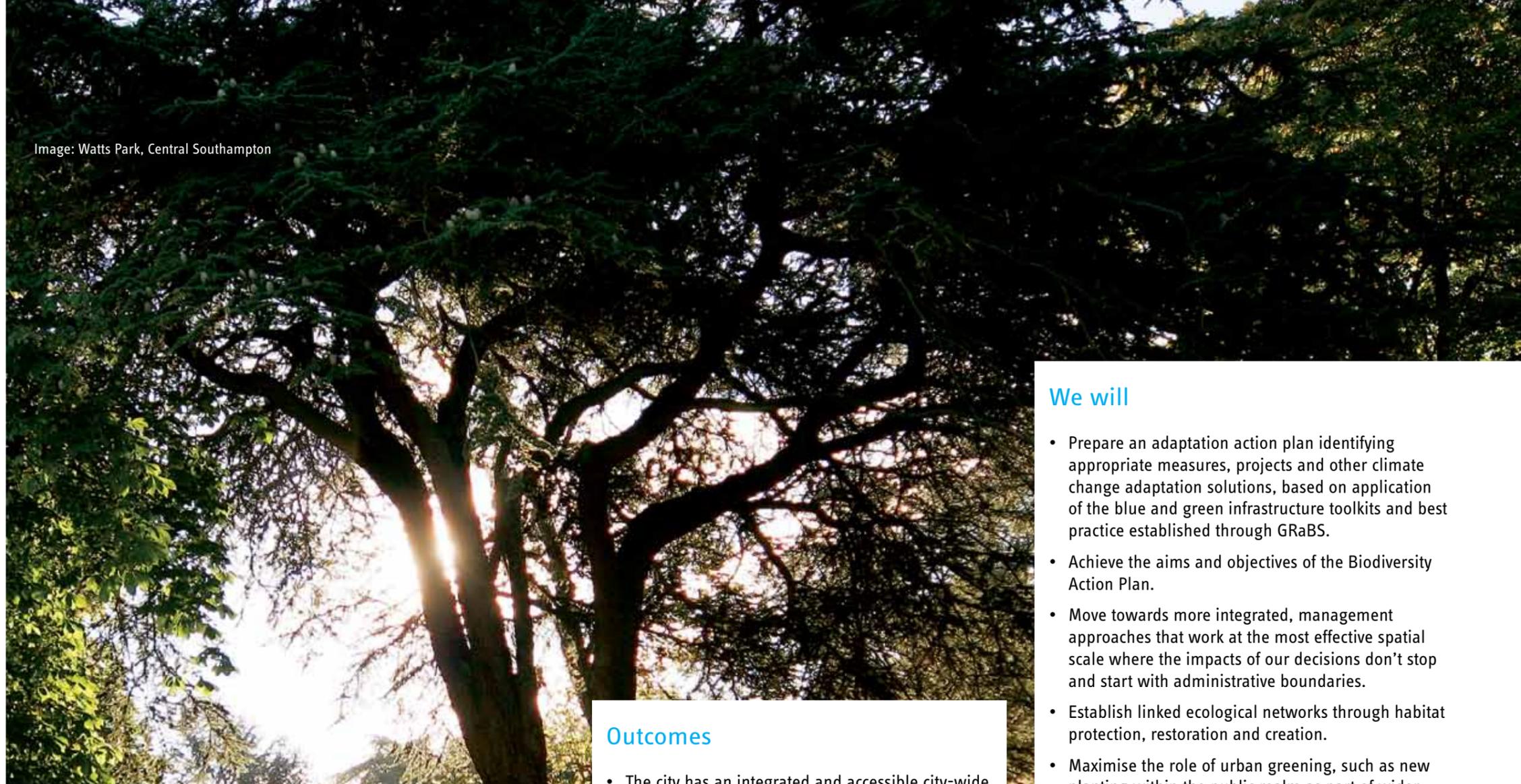
We will

- Establish minimum standards for priority areas of spend e.g. energy, food, waste, transport, paper etc.
- Minimise wastage at the buying stage; work in partnership with suppliers to lower the carbon impact of all aspects of procurement; make decisions based on whole life cycle costs; and promote sustainable options through all areas of the councils business.
- Integrate whole life costing to identify the lower operating and disposal costs of sustainable alternatives through a recognised assessment tool where appropriate.
- Buy products and services that minimise the impacts of the supply chain.
- Engage scrutiny in the search for more sustainable solutions.
- Mainstream sustainable procurement and asset management into all of our activities including those carried out at arm's length and through our strategic partnerships.
- Work in partnership locally, sub-regionally, and nationally, using our purchasing power to stimulate key markets for sustainable resources and demonstrate that consumers and business will save money and resources by doing more with less.

We will strengthen biodiversity in the city

We will improve the way we link together the rich patchwork of diverse, living green spaces and tree-lined streets in the city.

Image: Watts Park, Central Southampton



The issue

The more we understand about the natural environment, the more we realize that it supports us with 'ecosystem services' which may not be visible but which are fundamental for life; be it provision of food, water, good air quality, fuel, or building materials. Biodiversity provides us with many of these benefits - it is not a luxury item we can do without. Beyond laying the foundation for life it also enhances life by providing us with places to play, relax and enjoy; quiet, attractive and safe transport corridors for cyclists and walkers; and natural functions that help the city to operate effectively and ensure economic security.

In the past we have largely operated on the basis that the natural resources and services that the planet provides are infinite. But of course they are not. And only when the value of protecting them, and in some cases replacing them, is calculated, does their vital role in the local economy become clear.

We will have to pay to protect or replace services that nature has historically provided for free. Then there is the cost of paying for damage, resulting in part from more extreme and unstable weather conditions caused by rising temperatures due to greenhouse gases. So we need adaptation for biodiversity but we also need biodiversity for adaptation.

Gardens, woodlands, parks, and waterways have an integral part to play in adapting to these changes: they can soak up rainwater through natural drainage, improve the air quality by trapping particles, cool the city down through providing shade and moisture evaporation and provide habitat for wildlife. Added to the health benefits for our communities and residents and the role it plays in making Southampton an attractive place to live, the wide network of open green spaces that already exist throughout the heart of Southampton are the city's most important asset - its green lungs.

Outcomes

- The city has an integrated and accessible city-wide green network
- The city's biodiversity is enhanced and contributes to improving quality of life for the people of Southampton
- Residents have healthier lifestyles through access to and use of diverse open spaces for a range of activities
- There is more green and blue infrastructure and urban tree cover and established habitat corridors
- The true value of our natural resources is embedded into decision making at all levels

Nationally environmental goals have often suffered from a poverty of ambition. The misconception is that we must choose between a healthy natural environment and economic growth. But the evidence shows that our future financial security requires consumers, businesses and the economy as a whole to work with, rather than against, the grain of nature. To do all this, we need to reflect the true value of nature's services in the way we do business. We cannot take it for granted or for free.

We will

- Prepare an adaptation action plan identifying appropriate measures, projects and other climate change adaptation solutions, based on application of the blue and green infrastructure toolkits and best practice established through GRaBS.
- Achieve the aims and objectives of the Biodiversity Action Plan.
- Move towards more integrated, management approaches that work at the most effective spatial scale where the impacts of our decisions don't stop and start with administrative boundaries.
- Establish linked ecological networks through habitat protection, restoration and creation.
- Maximise the role of urban greening, such as new planting within the public realm as part of wider green infrastructure networks, in urban cooling and in achieving a number of additional recreational, ecological and flood storage benefits, by creating linked networks of well-irrigated open spaces ('green grid') including open spaces, parks, wildlife corridors, tree planting, communal and private gardens and green roofs and walls.
- Maximise the role of blue infrastructure in urban cooling and achieving a number of additional recreational, ecological, sustainable transport and flood storage benefits, including river corridors, natural floodplains, ponds and other water features.
- Minimise overheating and contribution to the Urban Heat Island effect at the neighbourhood scale by incorporating green roofs or walls, tree planting, reducing the ratio between the height and spacing of buildings and using light coloured materials to increase the surface reflectivity of large surface areas such as roads, car parks and paving.
- Direct investment from the city's Carbon Offset Fund towards a range of green infrastructure projects across the city.

We will increase low carbon travel and transport

Southampton will be an accessible city with a reduced reliance on oil and less dependent on the car.

Outcomes

- Reduced congestion and emissions through investment in the transport network, particularly public transport, coupled with appropriate demand management.
- The choice of reasonable alternatives to the private car for everyday journeys is better.
- Remote access and teleconferencing facilities have allowed greater flexible working reducing business trips across the city.
- The existing transport network is managed to ensure that journey time reliability is improved.
- City centre redevelopment has encouraged walking and cycling over car use.
- Quality bus services now include interactive real time information (RTI), are integrated with our traffic management centre and have smartcard ticketing.
- The improved public lighting across the city, through our PFI contract, has boosted walking and cycling through increasing perceived safety – this has helped obesity levels start to fall.
- Many more pupils now walk and cycle to school due to school travel plans, safer routes to school and a huge increase in the number of **walking buses**.

The issue

Transport underpins everything we do, from getting us to work and school, to taking us on holiday and distributing food and clothes for us to buy. As Southampton moves into a low carbon future, we will lead by example and show that cities can grow and prosper without more congestion, pollution and CO2. We aim to make travel and transport more sustainable. As part of our offer for investors having a low carbon, modern and fully integrated public transport system will be a prerequisite. We will provide a range of transport options rather than the one-size-fits-all approach that the versatility of the internal combustion engine has allowed us. It's about encouraging smarter travel through a more efficient, intelligent and better organised transport system.

We will

- Promote smarter choices and sustainable modes including walking and cycling as an alternative to driving.
- Promote travel planning, flexible working, car sharing and cycling initiatives as viable options to all organisations in the city and, crucially, link them to explore where joint benefits can be realised.
- Work with employers to incentivise sustainable transport and to make sustainable transport information more accessible.
- Work with key partners, environmental health professionals and transport operators to mitigate the impacts of traffic on air quality.
- Ensure development is located where it will be easily accessible and accommodate additional trips through sustainable modes wherever possible.
- Use social marketing techniques to make low carbon means of travel fun and engaging.
- Implement residential and workplace travel planning to effectively manage the journeys created with development.
- Invest in public transport in advance of new developments where possible.
- Pursue joint-procurement of low carbon fleet vehicles, including electric and electric-hybrid vehicles, as a means of accelerating uptake and driving down cost.
- Gather and disseminate real-time traffic and travel information through a variety of sources and systems in a timely, efficient manner to enable people to make informed decisions about their travel choices.
- Implement the recommendations set out in the council's travel and transport efficiencies assessment.
- Encourage home-working and video-conferencing to reduce the need to travel.
- Encourage organisations and communities to reduce their number of car journeys through advice and guidance.



We will use less, waste less and recycle more

Southampton will reduce unnecessary consumption and production. Resource efficiency will be a hallmark of the city.

The issue

Landfill space in the country is fast running out and landfill tax continues to rise. The carbon cost of waste is significant in the production of materials, their transport and subsequent processing. It's clear that we need to change our perception of waste to see it as a valuable resource and that we move up the waste hierarchy of reduce, re use, recycle, recovery and disposal. Resource efficiency will be a key driver for our local economy. New ways to cut energy, the use of virgin materials and to save money by reducing waste will birth opportunity for research, innovation and new products and services.

Take-make-and-waste will become a system of the past. Jobs will be created as we choose to value rather than dispose of resources. The competitive firms and economies of the future will be the ones that make most efficient use of energy and resources themselves and develop and export the technologies and techniques to enable other to do so. They will be those that embrace the changes and work to stay ahead of, rather than within the bounds of, new and stricter energy, waste and carbon regulations.

Outcomes

- Southampton is a city where resource efficiency comes first, businesses routinely use advanced design tools to minimise their environmental impact and eliminate waste.
- The diversion of waste from disposal into re use, recycling and composting is seen as a key economic opportunity supporting local businesses and jobs.
- Waste from the construction sector is now minimal. Planning guidance and procurement specifications were successful in driving huge reductions.

We will

- Prevent waste through existing initiatives and motivating behaviour change.
- Promote industrial symbiosis as a vehicle for carbon reduction in partnership with local business.
- Divert waste from landfill to other treatment methods.
- Attract investment in reprocessing and recycling.
- Cut the use of virgin materials within Council activity.
- Reduce water usage across our estate.
- Produce a map of the city identifying opportunities for closed loop recycling and the provision of the necessary recycling infrastructure.
- Collaborate with education and training providers to ensure that pupils/students of all ages learn about resource efficiency and recovery principles.
- Monitor, report and set targets on our management of waste and the reduction of waste sent to landfill.
- Encourage reduction and reuse initiatives, both in business and domestically through public education and community action programmes.
- Create more partnerships to help residents reuse or recycle. We also aim to produce less operational and construction waste in the first place – and send none of it to landfill. We'll work with our suppliers to help them reduce waste and achieve zero landfill rates too.
- To work in partnership with residents to help them reuse or recycle more reducing their impact on the local environment.

Delivery

This strategy is about setting firm and immediate priorities for action, promoting low carbon growth whilst safeguarding the environment.

To deliver the commitments we have made we will need the resource to make them happen. At the core of this strategy is an emphasis on building the capacity of the city to respond to climate change - not only the challenges that confront us now but also those that will arise as new information and technologies become available over the years ahead. We will seek to build capacity and resource the commitments stated in this strategy in three key ways:



Delivering the strategy through people

The City Council remains the central body for promoting development, is the statutory planning and highway authority, is a major land owner and has responsibility for other services such as education.

We will

- Ensure that these functions are closely aligned to the delivery of this strategy and that there is clear engagement and devoted staff resource across all directorates to prepare council services and partners for the inevitable changes that climate change will bring.
- Increase sustainable practices in order to increase competitiveness, reduce costs and diminish the detrimental impacts of the council's activity on the local environment.
- Continue to apply an evidence-led approach to sustainability, identifying the potential for cost savings wherever possible and commit to environmental policies and standards in our decisions, estate, travel and transport, procurement, construction and workforce.
- Promote collaborative, joined-up working and information sharing across Council departments in order to co-ordinate the delivery of climate adaptation and mitigation actions.
- Lead the response to climate change within the city, in order to improve the capacity of residents, partner organisations and their respective communities to adapt to changing climate risks and vulnerabilities.
- Raise awareness of climate change and the need to adapt to its potential impacts within the city amongst the local community and other key stakeholders.

Delivering the strategy through partnership

The commitments in this strategy relate specifically to the City Council but they form the basis for a much wider engagement with local communities, residents, public agencies and the local business community, all of whom will have an integral part to play if the city is to be successful in delivering a low carbon future.

We will

- Strengthen links with and between local businesses through the Low Carbon City Group and the Energy Partnership, bringing together the Council and business organisations to discuss progress on the strategy and develop, implement and monitor our plans for CO2 reduction.
- Work with sub-regional bodies such as Transport for South Hampshire and the newly created Solent LEP and its partners to link the strategy to the objectives and implementation framework of the partnership recognising the economic, transport and wider infrastructural dependencies we have that stretch beyond the city boundaries.
- Launch a programme of engagement with strategic stakeholders to be able to develop the delivery plans that will supplement this strategy and achieve the delivery of our priorities. This will enable individuals, associations and organisations to demonstrate the ways in which they are contributing to a low-carbon future and to be able to examine our collective progress in meeting the climate challenge.
- Work with neighbouring authorities, statutory agencies, city-partners, sub-regional stakeholders, and a range of other public and private organisations to deliver our strategic aims.
- Work with residents, community groups, environmental networks and businesses, with local knowledge and interest to develop locally appropriate solutions to future climate change impacts.
- Encourage organisations in the city to endorse the principles and priorities of the strategy and to discuss and agree what their contributions to delivering it can be, specifically in relation to reducing carbon emissions.
- Establish a strengthened Southampton Environment Partnership to ensure delivery of our strategic priorities on a city-wide basis and take part in overseeing progress.



Delivering the strategy through policy

Each chapter in this strategy sets out clear outcomes that the Council will reach to meet the challenges posed by climate change. Actions to achieve the outcomes set out in this strategy will be set out in a series of detailed delivery plans over the lifetime of the strategy.

We will

- Create a supplementary rolling 3 year Delivery Plan of measurable, accountable and deliverable actions to achieve the commitments and outcomes outlined in this strategy. The first Delivery Plan will cover the period 2011 - 2014. The second will cover the period 2014 - 2017 and the third will cover the period 2017 - 2020.
- Keep the Low Carbon City Strategy, Area Action Plans, planning policies and other strategic documents under regular review, taking account of new and improved knowledge about climate change and learning from experience and best practice.

There are a number of other documents that are required to support the delivery of specific objectives in this strategy that either already exist or are under development. These include:

- LDF Core Strategy
- Economic Development Strategy
- Local Transport Plan
- Housing Strategy
- Health and Wellbeing Strategy
- Carbon Reduction Policy and Action Plan
- Biodiversity Action Plan
- Open Spaces Strategy
- Sustainable Procurement Policy
- City Centre Masterplan and City Centre Action Plan
- Southampton Development Plan DPD
- Air Quality Action Plan
- Surface Water Management Plan
- North Solent Shoreline Management Plan
- Southampton Coastal Flood and Erosion Risk Management Strategy
- Itchen to Hamble Coastal Defence Strategy



Southampton Low Carbon City Charter

This Strategy and Delivery Plan for Southampton is a plan for the entire city. Now it's over to you. It is the responsibility of all of us to reduce our CO2 emissions, spend our carbon more carefully, and take decisive action to prepare for climate change to achieve our vision of a city that is competitive, greener, healthier and safer.

Pledge your support*

We pledge our support to uphold the principles outlined in the Southampton Low Carbon City Strategy and work in partnership with the council to deliver the vision of a low carbon city. We will do so by reducing the carbon footprint of our organisation**



*In return, you will receive:

- a low carbon champion certificate, for you to display which recognises your carbon reduction commitment
- web banners for you to display on any web-pages
- a listing on the Southampton Low Carbon City web-pages, with space for a organisation logo and 200-word case study on how you are cutting carbon emissions

**The information needed about your organisation's energy consumption and carbon emissions is as follows:

- the percentage reduction you have, or are planning, to make
- consumption data is required for one full year (either calendar or financial) from 2006 onwards
- data for gas and electricity consumption should be supplied in kWh (kilowatt hours), and any other fuels used (wood, coal, oil) with relevant amounts and units (e.g. tonnes, litres, kWh)
- if you are part way towards your carbon reduction target, we require an estimate of the remainder of carbon savings still to be made to your target year
- fuel used by transport activities is not required
- all consumption data supplied will be held in confidence, and only reported collectively, in tonnes of carbon dioxide, to represent the emissions from all organisations registered to the Low Carbon City Charter.

