Achieving Net Zero Carbon by 2030

West Sussex County Council's Carbon Management Plan

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1. Introduction

The 2018 report from the United Nations Intergovernmental Panel on Climate Change concluded that without substantial efforts to curb greenhouse gas emissions over the next decade we are likely to face severe, widespread, and irreversible impacts on societies. Human activity has already led to 1°C of global warming from pre-industrial levels, which is resulting in damaging impacts on lives, infrastructure and ecosystems that are apparent today. As a result, we need to both mitigate and adapt to climate change

The predicted impacts of climate change in West Sussex include more frequent and intense flooding, drought, episodes of extreme heat and stormier conditions. These impacts are expected to lead to an increase in heat-related deaths, particularly amongst the elderly, damage to essential infrastructure, reduced availability of drinking water, increased cost of food, disruption to supply chains and service provision, sea level rises, greater coastal erosion and impact on coastal habitats and wetlands. Today, we are already seeing some of these changes.

This plan focuses on our plans to mitigate climate change. The Climate Change Strategy and Delivery Plan sets out how we plan to adapt to a changing climate.

In April 2019, Council acknowledged the threat of climate change and passed a motion pledging to try to reach net zero carbon emissions by 2030. As part of this commitment we have developed this plan to set out the baseline of our own carbon emissions and identify the key actions and intervention measures required to meet this commitment.

The plan is based on a long record of work to reduce our emissions. We were one of the first local authorities to set a carbon reduction target, and in 2011 pledged to reduce our emissions by 50%. We introduced a corporate wide energy and water management programme that assessed the energy performance of our estate, identifying areas where we could improve efficiency and operating costs. We rolled out comprehensive programmes to improve our building management systems, improve insulation and upgrade lighting both in our own buildings but also in streetlights across the County.

We have also invested in renewable energy, both in on-site locations such as administration hubs and libraries, but also making significant investment on off-site renewables including two operational solar farms.

As result of this work, and a general reduction in the size of our corporate estate we have successfully reduced our corporate carbon emissions by 51% (as of 19/20). Despite these successes we understand that we need to lead by example and do more, faster. This plan acknowledges this.

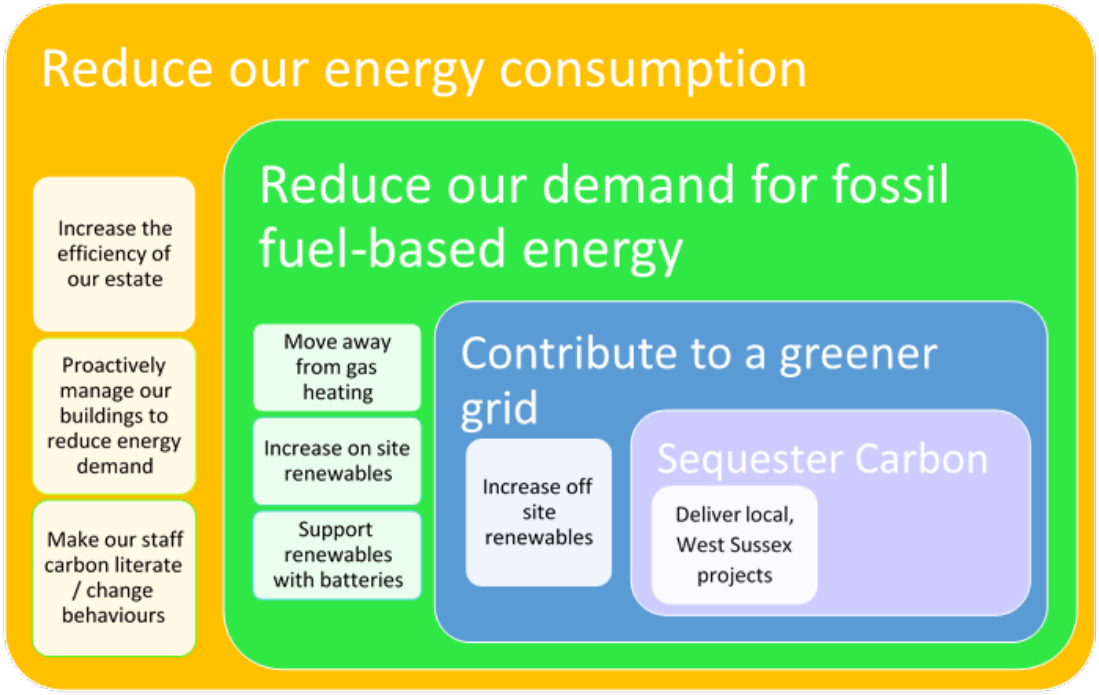
We have widened the range of assets included “in scope”. Emissions, from additional areas of responsibility such as our school estate are now included. We have also greatly accelerated the pace of delivery to ensure we can meet our new net zero target.

This plan is therefore not a starting point but nor is it definitive and comprehensive in defining all future action. It concentrates on those emissions we can measure and have direct control over. In time, as our ability to measure and quantify emissions in wider areas of activity increase, so will the scope of our strategic approach.

2. Carbon Management Strategy

2.1. Principles for action

There are four core principles which underpin the actions within this plan and are critical to our successful delivery of the goal of us mitigating climate change. These principles, which echo the established energy hierarchy, should be considered as an overarching hierarchy for action, and will set the direction for future work, and determine which actions are bought forward first.



1. Reduce our overall energy consumption

The most effective and simplest action to reduce our carbon emissions is to be to reduce our energy consumption. Not only will this save us carbon, but also generate revenue savings from a reduction in our energy bills.

There are 3 ways we can achieve this:

a) Increase the efficiency of our estate;
When applying this principle, we will seek to tackle the least efficient first.
b) Proactively manage our buildings to reduce energy demand;
c) Train staff to be carbon literate so they change their behaviours.

2. Reduce our demand for fossil fuel based energy

a) Move away from gas heating

Decarbonising heating will be one of the key challenges we have to overcome to meet our net carbon zero target. Conversion of the existing gas network to hydrogen, or green gas is not considered likely to occur within our 2030 timeframe, (although a wider UK Government strategy for heat is expected this year). Reducing our gas demand will be key to achieving our target.

b) Increase on site renewables

Moving away from gas for our heating, and also a shift towards electric for our transport will mean an increase in our reliance on electricity. Although decarbonisation of the national electricity grid has increased rapidly in recent years, with 2019 being the first year that renewable energy sources provided more electricity to UK homes and businesses than fossil fuels, the electricity grid is not predicted to be 100% renewable, and net carbon zero by 2030.

Generating renewable energy on site will not only help us reach our target, but will also help us reduce our operating costs over the longer term.

c) Support renewables with batteries

Much of our power demand will inevitably take place when renewable sources cannot be guaranteed (during the evening, or on cloudy days). Batteries can help us maximise the use of energy that we generate ourselves, and save money by reducing the amount of energy we have to buy from the grid.

With the added option of selling excess energy back to the National Grid, combing solar panel installations with battery storage also has the potential to generate revenue, and contribute to our third principle

3. Contribute to a greener grid

a) Increase off-site renewables

As buildings and vehicles switch away from the use of fossil fuels and towards electricity, it becomes increasingly important to ensure that electricity is supplied from renewable sources. This is important for several reasons, including reducing pressure on grid infrastructure, ensuring security of supply, and protecting West Sussex consumers from rising electricity prices.

Contributing to a greener grid through our continued investment in solar farms will also help us to reduce the carbon associated with any electricity we buy from the grid.

Using off site renewables to offset our emissions

It's widely recognised that emissions should be reduced as much as possible before any residual emissions are compensated using off-setting, and the Tyndall Centre in their Carbon Budget Tool for local authorities advise against using offsetting in setting carbon budgets.

We anticipate that the actions we take to implement the first three principles will leave a limited amount of carbon to offset, but we do have the option of purchasing any energy we generate on off-site renewables through a power purchase agreement, enabling us to use energy we have generated to offset our emissions.

At this time, we will continue to seek to maximise the value we can accrue from the energy we generate, which is likely to mean selling the energy back to the Grid. However, we acknowledge that me need to take a pragmatic approach, and as Power Purchasing Agreements are a rapidly evolving area we may take a different approach in future.

4. Take positive action to sequester carbon in the natural environment

a) Investing in local projects that also deliver wider social and environmental benefits

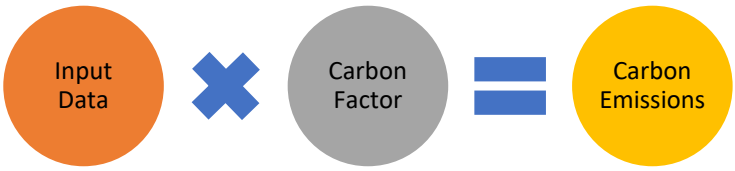
As stated above, our preference is not to rely on offsetting to achieve our target but to reduce our emissions so that offsetting is only required for a small proportion of our emissions.

When considering offsetting projects, we want to secure the widest benefit for West Sussex. We are a member of the Sussex Local Nature Partnership Board and are currently working with them to explore land use sequestration and the opportunity to invest in local natural capital projects to realise multiple benefits.

Our Environment and Climate Change strategy sets out how we will interact with this Partnership, and we will continue to explore how we can accurately capture the carbon impact of any projects we are involved in.

2.2. Methodology

The carbon footprint has been built from numerous data sources, with a specified calculation methodology applied to each.



We have and will continue to use the UK Government GHG Conversion Factors for Company Reporting, which are issued jointly by the Department for Business, Energy and Industrial Strategy and the Department for Rural Affairs.

To establish the baseline, conversion factors for 2010/11 were used except for the conversion factor for sewerage, where data was not available, and the 2011/12 conversion factor was used.

Conversion factors will be updated annually in August, following the release of new data sets from UK Government.

If at any future point in time, additional data becomes available to us, we will include this within our reporting, but we must ensure that only robust data which is derived from an accurate and credible source is used to support our emissions calculations. If the quality of data deteriorates over time; or if it becomes unavailable, it will be reviewed, and a decision made on whether to exclude it from the baseline and future emissions targets.

Where possible emissions will be reported on a quarterly basis over the course of each financial year (April – March). A commentary to explain the data and provide an indication of progress on specific project elements will also be provided.

Where emissions data is not available on this frequency, then data will be reported annually, but a commentary with qualitative data will be provided on a quarterly basis.

3. Our carbon emissions

3.1. Our target

The Council will achieve net zero carbon emissions across our own estate by 2030.

3.2. Scope

The scope of the County Council's carbon reporting includes areas where carbon emissions are significant, where there is the ability to control and direct influence to deliver change, and where there is robust data to demonstrate progress.

This includes the:

- School estate
- Corporate estate
- Energy for Street Lights, Traffic Lights and Signs
- Business Transport

Across these areas of our operations emissions relating to the following sources have been included:

- Power (Electricity)
- Heat (Gas, Oil and Propane)
- Water (Water and Sewerage)
- Mileage

School Estate

All maintained schools and academies in the County have the option of making use of the County Council's Energy Purchasing and Management Service. This includes nursery, primary, special, secondary and colleges.

Currently 74% of maintained schools and academies have entered into a Service Level Agreement (SLA) with the County Council to receive this service.

The County Council has visibility of all the utility bills for the schools that use the service, but not for any schools outside of the SLA. Therefore, the scope includes all schools within the SLA.

Managing future changes

If the schools using the SLA change, the baseline will be adjusted to reflect these changes.
If new schools join the SLA and there is no historic data, the schools usage will be added to the carbon footprint at the time they join, and this will be explained in the appropriate year's commentary.

Corporate Estate

All buildings which we operate council services from, or which we lease, but retain responsibility for the bill management and payment are included within the scope.
This includes:

- Administration Buildings
- Adults Services Buildings
- Caravan Parks including Gypsy and Traveller sites
- Children's Services Buildings

- Highway Depots
- Fire Stations
- Children and Family Centres
- Youth Centres
- Landfill Sites
- Libraries and Records
- Leased buildings where we retain responsibility for bill management and payment

Managing future changes

If the corporate estate changes during the reporting period new emissions will be added or removed at that point. The baseline will not be adjusted. Any changes will be explained in the appropriate years commentary

Street Lights, Traffic Lights and Signs

Although primarily consisting of the energy to power street lights across the County, this category also includes power to light bridges and subways, operate signs and signals, and to power other fixed highway electrical equipment such as subway pumps.

Managing future changes

If the powered assets across our highway changes during the reporting period new emissions will be added or removed at that point. The baseline will not be adjusted. Any changes will be explained in the appropriate year's commentary.

Business Mileage

Business mileage is made up of data related to:

- Grey Fleet – miles travelled by staff in their own car for council purposes
- Corporate Fleet – miles travelled by staff in allocated and pool cars, buses and minibuses owned by the Council, providing services to residents, and other vehicles such as mobile libraries.

Currently excluded from this baseline is miles undertaken by contractors or suppliers, public transport, air and ferry, and all mileage from the fire fleet, including operational fire vehicles, and all other wider fire fleet vehicles required and used to perform their operational duties.

Managing future changes

Due to the introduction of new systems we will have access to new data in relation to business travel during the reporting period. A new public transport booking system now provides access to information to mileage for journeys made by train, bus or plane.
From April 2020 we will also be implementing a new system to record the fire fleet mileage.
It will not be possible to add this data to the baseline year, but qualitative data will be reported from 2020/21 onwards.

Renewables

Renewable generation will be reported alongside our carbon emissions.

Where the County Council has solar panels on a County Council owned and used building, energy is directly taken and used from this renewable source. This reduces the overall grid energy consumed, and therefore the Council sees a reduction in carbon emissions

For renewables generated on non-operational sites (solar farms), or on sites not owned and operated by the us, energy goes into the grid, and does not make a direct impact on our carbon emissions as currently reported.

We will report the amount of renewable energy generated across all our assets alongside our carbon emissions.

3.3. Out of scope

Emissions from the following sources are excluded from reporting due to lack of data, and based on benchmarking with comparable organisations they are also unlikely to be significant:

- Commuting
- Disposal of waste from county buildings

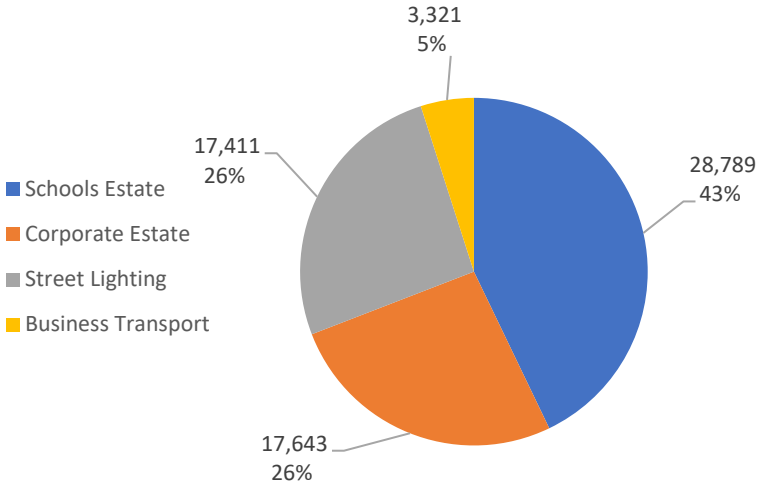
Emissions from procured goods and services however are likely to be significant, but we lack the data to include emissions within the report. Therefore, we will report on a qualitative basis, any actions that have been taken by WSCC to achieve carbon reductions against these areas.

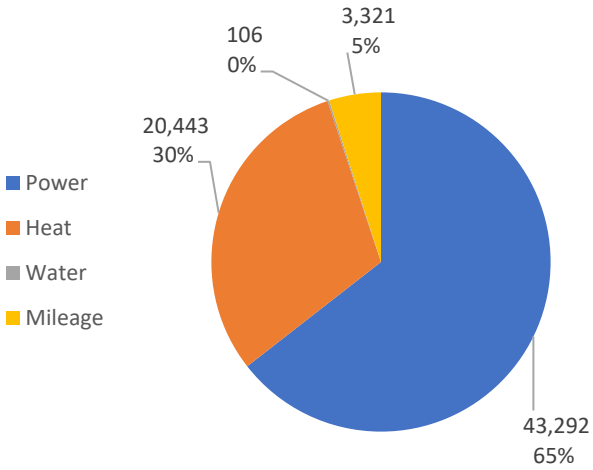
3.4. Data Ownership and Management

Element	Data Type	WSCC Source	Frequency of collection	Responsible Team
Built Estate	Billing Data (Gas and Electricity: kWh Water: m3)	Utility consumption data and costs	Monthly with one month's lag	Energy
Street Lighting	Largely unmetered supply so usage is estimated by inventory and usage pattern (kWh)	Street Lighting Supplier	Quarterly	Traffic Signals and Street Lighting
Fleet	Distance and mode of transport (miles)	Mileage collected from MOT records	Annual data (data is recorded on a calendar year but will be reported as if it were a financial year).	Fleet Management
Business Travel	Distance travelled (miles)	Grey Fleet Mileage collected via SAP system	Monthly	SAP
	Distance and mode of transport (miles)	In future: bus, rail and air and ferry mileage made bookings via our corporate travel hub	Monthly	Procurement and Contract Management
Renewables	Generation Data (kWh)	Generation reports	Monthly	Energy
Procured Goods and Services	Qualitative reporting	Procurement and contract management information from contracts	Quarterly	Procurement and Contract Management

3.5. Baseline

For 2010/11 our baseline is 67,163 tonnes CO2e.
The emissions are attributed across these categories as follows:





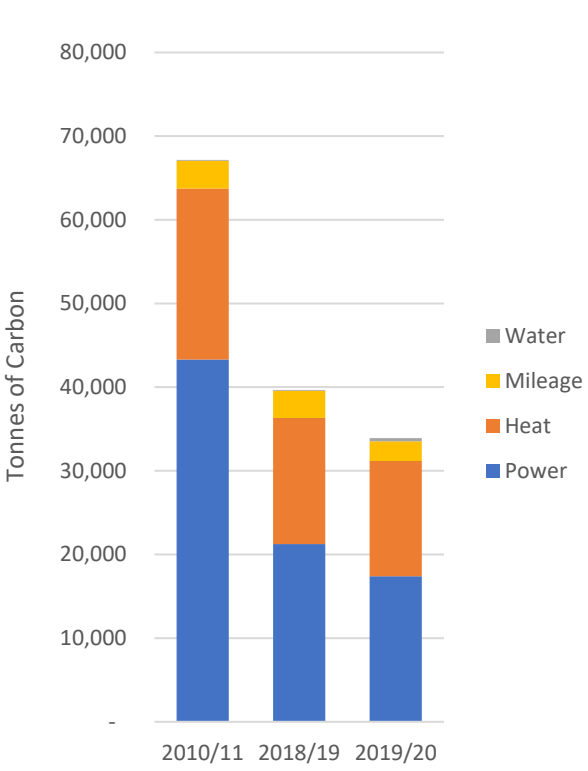
Renewable Energy Generated:

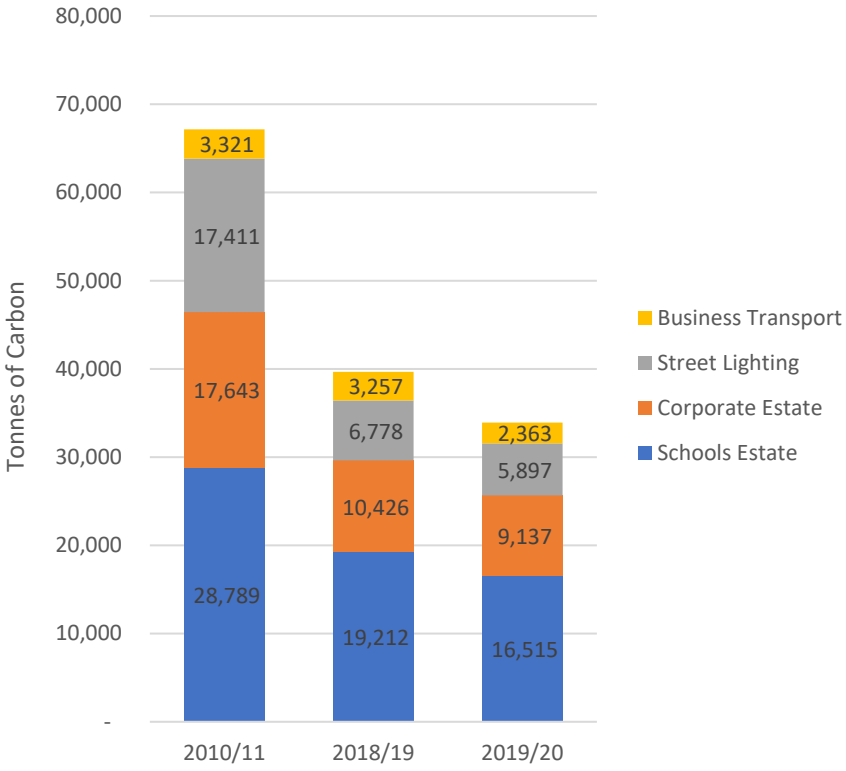
- 0Kwh
- 0 tonnes of C02e

See Appendix 1 to see the carbon footprint represented as Scopes 1, 2 and 3.

3.6. Progress to date

By the end of 2019/20 our carbon footprint is 33,912 tonnes CO2e.

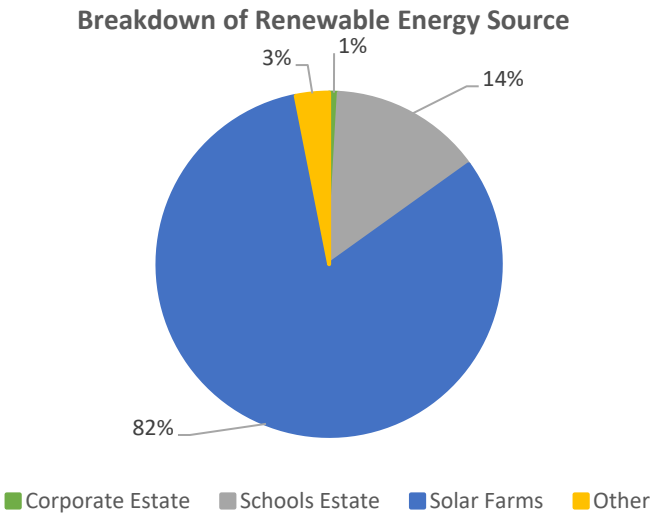


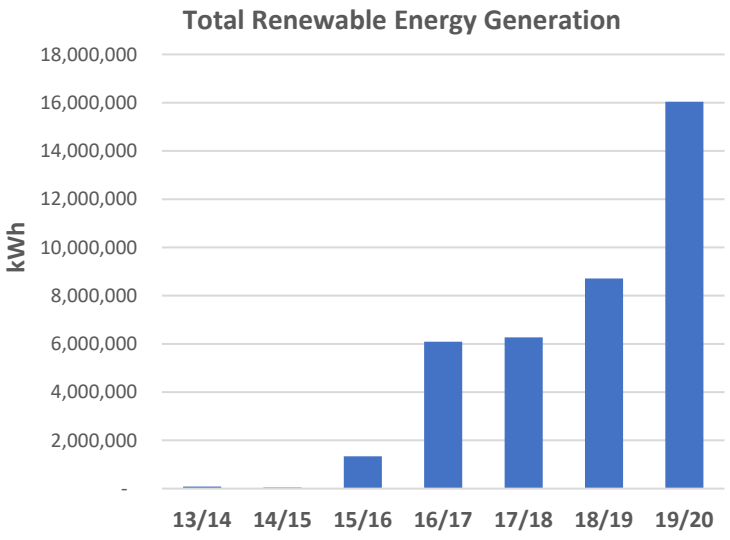


This is a **50% reduction on the 2010/11 baseline.**

Renewables: 16,035,443 kwh of renewable energy has been generated by WSCC installed solar PV

This is 84% annual increase on the previous year, and is equivalent to 5,355 tonnes of carbon





As these figures testify, we have already taken significant action to reduce our emissions. Some particular areas to highlight are:

Incremental estate energy improvement works

The corporate Facilities Management team use their existing maintenance (planned and reactive) programme to replace all defective lighting with LED as standard. The team also specifies above average efficiency boilers when replacing end-of-life equipment. These incremental improvements are undertaken in a 'Business As Usual' setting rather than as a separate project but constrained by the upfront capital costs and potential risks associated with introducing novel technologies in the corporate estate.

Invest to Save' Energy Capital programme

We have over 10 years' experience of delivering energy efficiency improvements. We have used a government supported scheme delivered by Salix Finance, with technical support from Atkins, to deliver energy efficiency and renewable energy improvements in the public sector. To date we have commissioned £1.3m of works through this scheme.

Renewables

We have two operational solar farms and have installed solar panels on 80 corporate buildings and schools. In addition, 49 schools across the county have funded their own solar installations.

Electric Vehicles

In the spring of 2018, we replaced four of our petrol pool vehicles with four electric cars. In mid-2019 two of the vans used by our couriers were replaced with electric equivalents.
We have installed two fast chargers and one rapid charger at County Hall, Chichester, to support these vehicles

Service Level Agreements to schools & academies

Both Property Services and Energy Services provide 'paid for' Service Level Agreements (SLA) to schools and academies across the county. While the Energy Services SLA provides access to low cost energy tariffs and management information regarding utilities

Procured Goods and Services

We have integrated sustainability criteria, including carbon emissions considerations into our tendering process for many years. Some of our existing contracts include requirements for carbon monitoring and reporting, others will focus on specific elements that generate carbon, for example transport associated with the delivering the contract.

3.7. Projections to 2030

The graph below illustrates the potential change in carbon emissions that would occur in a business as usual scenario, in which we only deliver projects that already have funding allocated, primarily these consist of SALIX funded energy efficiency schemes, and LED replacement of street lights.

The reduction that this graph shows is primarily driven by Government's commitments and policies to further decarbonise the national electricity grid. If the decarbonisation occurs in line with this then we can reduce our emissions by 35% without any action from us. However, this level of decrease, particularly in 2020 is a dramatic acceleration on previous decarbonisation factors and we need to be prepared that this rate of predicted change is not achieved. Despite this, all numbers quoted within this report are using these factors when calculating the impact of change.

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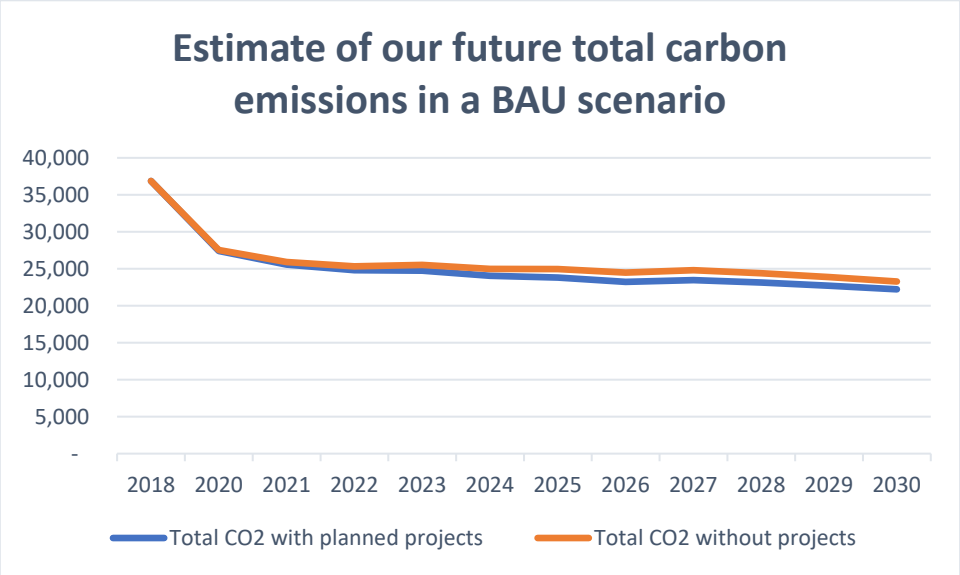
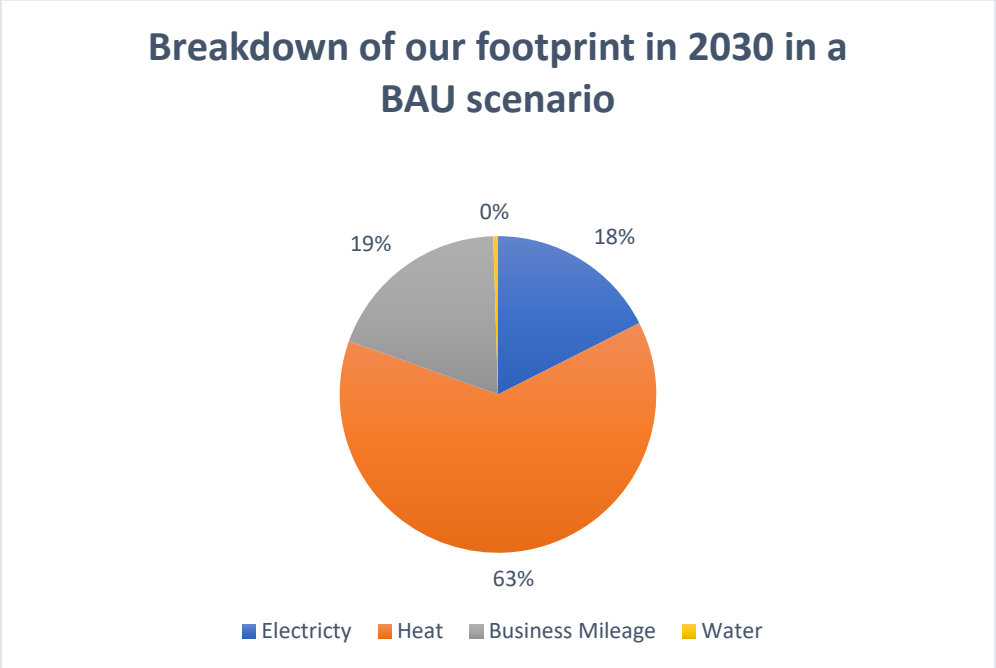


The predicted changes also are particularly significant when considering what are our primary carbon sources are. The following graph illustrates the forecast for 2030, where 63% of carbon is due to heat, 18% electricity, 19% business mileage and less than 0% water:



The council therefore needs to achieve a further 22,220 tonnes reduction in the carbon we emit. Under this scenario our projected energy costs are expected to increase by 11% in 2030 (£10,566,000).

Please note: These figures do not include any school expansion programmes or any reduction in our overall asset portfolio, which will change the size of our estate, and impact our carbon emissions accordingly.

4. Carbon Reduction approaches / work packages

4.1. Existing Built Estate

Emissions from our built estate makes up 75% of our emissions. Tackling this is critical to us achieving our target.

Approach Summary

Faithful and Gould completed a desktop analysis of the current WSCC estate to understand the scale of the improvements required to meet WSCC's net zero carbon commitment by 2030. The WSCC asset list was reviewed and segmented into building "archetypes". Utility cost data was reviewed and analysed to derive energy benchmarks for the selected building archetypes.

The principles for action (Page 5) were applied to derive a set of implementation measures. Measures were restricted to established technologies that would improve building fabric and services performance. These are summarised below:

Energy Efficiency

- LED lighting
- Loft insulation
- Cavity wall insulation
- Roof insulation
- External wall insulation and replacement windows
- Replace windows
- Reduce need for fossil fuels
- Hybrid heat pumps
- Heating system controls
- Variable speed pumping
- Building Energy Management Systems
- Renewable Installations (this is explored in greater detail in a separate section)

Hybrid heat pumps involves installing heat pumps and a controller alongside existing gas boilers. The controller operates both the heat pump(s) and boiler(s), with the heat pump(s) serving most of the load.

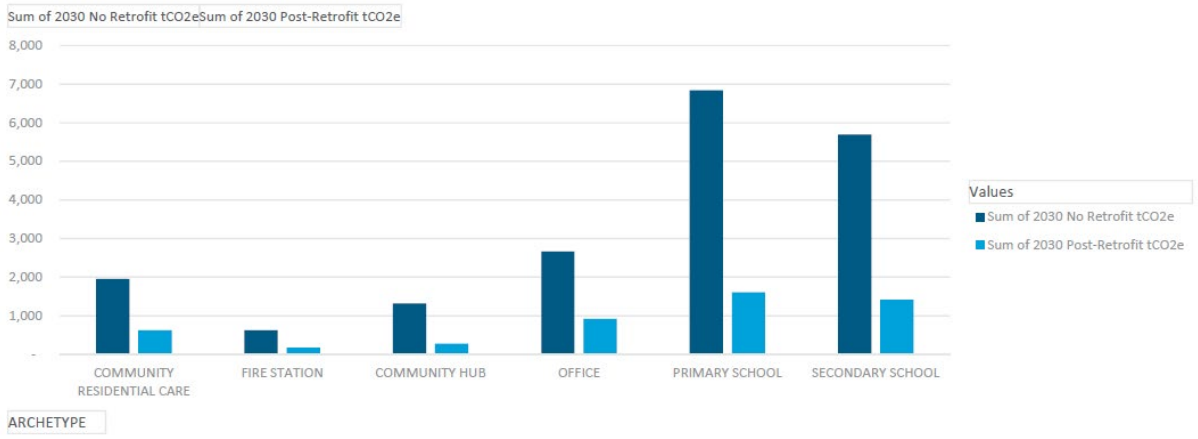
Heating projects are programmed to follow energy efficiency measures to ensure that any new heating requirement is specified against efficient working environments, and to minimise the upgrade spend required.

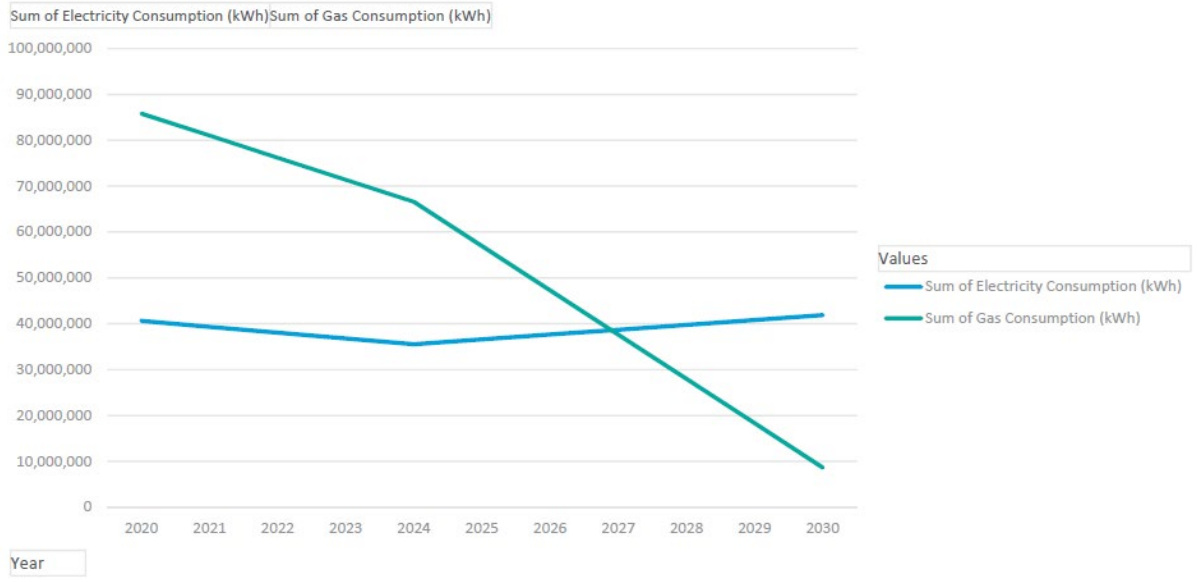
Before investing in any improvements consideration needs to be given on the value of the asset for improvement and the whether a preferable route would be to move our services out of building completely.

Predicted savings

Delivering these projects is predicted to achieve a 74% reduction in carbon emissions.

Building Type	Sum of 2030 No retrofit tCO2e	Sum of 2030 Post-Retrofit	% Carbon Savings
Community Residential Care	1957	617	68%
Fire Station	617	168	73%
Community Hub	1	277	79%
Office	2658	915	66%
Primary School	6834	1606	76%
Secondary School	5697	1409	75%
Grand Total	**19074**	**4992**	**74%**





Actions

1. An Energy Efficiency Programme is developed and rolled out across our estate, with priority and urgency in the first five years of this plan.
2. Hybrid heat pumps or where possible and appropriate heat pumps will be installed in WSCC properties as standard from now, unless more carbon efficient technologies become available, with a wider roll out of "reducing need for fossil fuel" measures in the last five years.
3. A low carbon response to reactive problems is developed as a priority, which fully takes into account of the whole life costs and available financial support initiatives when selecting materials and technology used.
4. Budget is allocated across two budgets:
    a. Capital building maintenance
    to upgrade the carbon saving from planned and identified maintenance work.
    b. A new work stream dedicated to delivery of the carbon implementation measures outline above to ensure a pace of delivery that aligns with our target

    This budget is in addition to any current understanding of current and future maintenance requirements.
5. Additional FTE's are recruited to project manage and deliver this programme.
6. Additional maintenance budget is allocated to ensure that new measures can be maintained at the recommended schedules, ensuring they deliver the savings predicted over their /lifetime.
7. Action will be taken to facilitate improved cross departmental engagement in respect of delivering the Energy Efficiency Programme.
8. We will address the risk that there is likely to be a national shortage of skills and resources available to deliver a programme of this scale, particularly when seen alongside similar ambition and demand from other local authorities and business.
9. Enact provisions within the current water provision contract to deliver better oversight of water use, and delivery of efficiency measures.

4.2. New Build

It is vital we do not invest in technologies now that leave us with a carbon legacy. Ambitious new build targets need to be central to our approach for meeting our target.

Our approach to new build various whether the building is a school or a corporately owned asset.

4.2.1. Schools

When building and extending schools, WSCC cannot act unilaterally. New schools are largely funded from central government, who also set the standards that they are prepared to pay for. These standards reflect current building regulations and fall short of net carbon zero. Any costs to upgrade to building standards specified by government must be found by either the school or us.

In 2019/20 schools represented 48% of our overall emissions and are a key area for us to tackle.

To date we haven't explored either the likely cost increases, or the revenue impact for the schools of making any additional investment.

Actions

1. Lobby Government to set the standard for schools' design at net carbon zero and provide adequate funding to meet this requirement.
2. For every new project conduct a gap analysis to understand the capital and revenue implications of achieving net carbon zero design and assess how any additional measures could be delivered.
3. Additional maintenance budget is allocated to ensure that the new buildings are maintained to a high build standard, to ensure they deliver the operational energy savings predicted over their lifetime.

4.2.2. Corporate Estate

Although we build relatively few new corporate buildings, history dictates that we operate services from buildings for a long time. The climate motion passed in April acknowledge the role of local authorities to lead the way and committed us to stepping up our efforts. New build corporate estate presents a unique opportunity to do this.

Actions

1. We design and build net carbon zero buildings.
2. We require and analysis whole life costing during the building design process.
3. Set a clear and consistent policy so that the prioritisation of carbon reduction is maintained throughout the building design and build process.
4. Revise our corporate building standards to ensure they reflect and deliver the processes within this plan.
5. Buildings that are currently designed but pre-construction are reviewed to ensure the principles in this plan are applied.
6. Additional maintenance budget is allocated to ensure that the building can be maintained to a high build standard, ensuring they deliver the operational energy savings predicted over their lifetime.

4.3. Street Lighting

In July 2019 the County Council committed to converting 64,000 street lights across the County to LED lamps over the next 6 years. We estimate that this will save over 3,000 tonnes of carbon, reducing the emissions from Highways, Streets and Signs by 61%.
During the delivery phase of the LED lamp project we will seek further ways to deliver savings.

Actions

1. Deliver the programmed LED lamp replacement programme
2. Seek additional ways to reduce demand and emissions.

4.4. Renewables

The primary focus of our work to date to deliver renewable energy has, and we predict will continue to focus on solar PV.
Alternative renewable technologies to solar PV are, on the whole, discounted on the following basis:

- Biomass boilers: air quality considerations in urban areas, additional space required for delivery and storage of fuel, the CCC recommend better uses for biomass e.g. use of timber for manufacture of construction products.
- Solar thermal: maximum hot water generation occurs in the summer period outside of school term dates. Therefore, technology not well matched to use in schools, which represents the largest proportion of WSCC buildings.
- Wind turbines: there are significant planning issues that would need to be overcome which don't make this practical scalable solution on-shore.

We currently run a solar programme to retrofit solar panels across our school and corporate estate, and to deliver solar farm projects on council owned brownfield sites. When this programme of works was agreed, it was seen primarily as a revenue generator and a stipulation was introduced that any scheme, or group of schemes had to be cash positive in year one and will have an internal rate of return of at least 6 %.

To meet the net zero carbon target however increasing the amount of renewable energy that we generate is paramount

To deliver at this scale required there not only needs to sufficient funding, but also a presumption in favour of renewables that significantly reduces or eliminates the current rate of return, recognising that the carbon reduction we can accrue from solar is of significant additional value, and is required to meet the carbon neutral target.

Alongside this project we also need to be ensuring that we maximise the use of any renewable energy we generate through the use of complimentary battery technology systems. We need to be integrating renewables with batteries and other SMART control systems, having a whole systems approach to delivering low carbon implementation measures.

Actions

1. We adopt a presumption in favour of renewables and batteries across our whole estate, integrating these technologies as standard in all relatable capital projects.
2. The current required rate of return threshold for solar projects is revised.
3. An additional budget is allocated and ring fenced to deliver solar projects.
4. Our building design process takes a whole system approach to low carbon technologies.
5. Additional FTE's are recruited to plan and deliver this programme.

4.5. Utilities Management

Delivering the principles and actions outlined above will mean an ever increasing reliance on electricity as our sole power source. Electricity is already more expensive that gas to buy, and we predict that electric will rise by 5.3% next year, then 2.6% for each year thereafter.

To protect us from any future expose to cost it is essential that we remain proactive in our approach to utility purchasing to secure the very best rates that we can.

We also need not to be constrained by the work packages set out in this plan today. The energy sector, particularly at the moment, is experiencing rapid and significant innovation, and we need to continue to be aware of, testing and benefiting from any new advances made.

Actions

1. Proactively manage utility purchasing to reduce the Council's exposure to risk
2. Look for innovative solutions to help us reach our target.
3. Utility cost guidance for prospective projects, where able, will account for anticipated future changes in non-commodity rates to support whole life cost analysis.

4.6.Our Fleet

Although emissions from our fleet currently represent only a small proportion of our entire emissions, as we gain better data and include the fire fleet and public transport into the calculations, transport will make up a larger proportion of our footprint. Therefore, it is important that we take action to address these emissions if we are to meet our net carbon zero target.

Our Electric Vehicle Strategy already commits us to develop a phased fleet transition plan to move our fleet to electric in line with the ambition of at least 70% of all new registered cars in the County are electric by 2030.

It is likely that due to the nature of our fleet, with several specialist, heavy duty vehicles particularly in our fire fleet, that electric is unlikely to provide a viable option within the timeframe. For these vehicles, we will explore alternative fuels.

Actions

1. Develop and deliver a fleet transition plan to move the Councils fleet to electric.
2. Explore alternative fuels for any vehicles not suitable to transition to electric.

4.7.Staff Transport

Although staff transport, particularly grey mileage has been identified as an area for potential efficiency savings in the past, no project to address this has come forward, and resources that were originally allocated to this were redirected to manage parking programmes.

Actions

1. Review the corporate business travel policy and ensure that low carbon methods of travel are given priority.
2. Ensure there are appropriate mechanisms in place to oversee and if necessary, enforce this policy.

4.8.Training & Staff Awareness

Every member of staff across the Council can contribute to achieving the net carbon zero target. By changing day to day decisions and behaviours we can reduce the amount of energy we consume and the carbon we emit from travel. The impact of simple actions of switching off lights and equipment,

choosing to have an online meeting rather than travelling, or walking or taking the train rather than driving can, when done by everyone have a big difference.

We need to ensure that all our staff recognise the opportunity, understand the importance of change, and act to make a difference.

Actions

1. Develop a staff engagement programme that focuses on developing the knowledge and skills of our staff so that they can develop their own actions to reducing carbon emissions.
2. Ensure that this training is part of the essential skills training for all staff.

4.9. Procured Goods and Services

We spend approximately £600 million in the private and voluntary sector. This value of spend presents a significant opportunity and responsibility to influence and catalyse change within our supply chain.

For existing contracts, we need to understand where the carbon currently sits within our supply chain and how this is currently being managed. We need to identify the contracts that have high carbon emissions, and seek continual improvements in areas of high risk.

When conducting new procurements, we will raise the standards that we expect from our suppliers in relation to carbon performance, building in robust criteria to our tender assessment and contract management processes, assigning more importance to this key area when evaluation.

We take a collaborative and pragmatic approach using tools such as performance standards and incentives, supplier development and collaborative problem-solving to work with our current and future suppliers.

Action

1. Conduct a carbon risk assessment on our existing contracts, and seek improvements in areas of high risk
2. Review contract management processes to ensure that we continue to scrutinise the suppliers carbon performance.
3. Review the current criteria for carbon in the procurement process, including reviewing of the weighting assigned to carbon during the evaluation process.

5. Financing Carbon Reduction

We need to develop a realistic and viable funding route to deliver this programme, whilst still funding key services facing the most demand and which serve to protect those most in need.

Historically we have made use of invest to save funds, such as SALIX to support energy efficiency programmes. Although we will continue to do this, the fund available is limited, and would not be sufficient to fund the works set out in this programme.

There are new funding streams becoming available, in particular Climate Finance[1], which may offer a funding route, but we also must accept that we will need to invest our own capital funds.

In practice this will mean that we deliver fewer, but better projects.

Action

1. Develop a funding solution to support the workstreams outlined in the programme.
2. Ensure funding solutions available are fully understood and considered for projects under the capital programme.

6. Reporting

We will publish a full public report outlining the progress made against our net carbon zero target on an annual basis. The key performance indicator will be total tonnes of carbon.

We will publish quarterly update reports highlighting particular achievements against work packages.

7. Governance

Establishing a strong and robust governance framework to this work is another critical success factor.

The scale and magnitude of the change required to deliver this target means that overall responsibility needs to sit at the Executive Leadership Team level or above. However, a variety of key services need to own and drive forward this agenda.

Existing Governance Arrangements

Within the Council there are robust governance arrangements, both at an officer and member level, to oversee both key decisions, but also significant actions for example, procurement and capital expenditure.

These existing mechanisms present an opportunity to ensure that alignment with the ambition and actions within this plan are being realised.

Action

1. A Climate Change Board will be established to oversee the delivery of this management plan, and actions.
2. Ensure that existing governance arrangements ask for and provide an opportunity to scrutinise net carbon zero ambitions

[1] Climate Finance refers to local, national or transnational financing, drawn from public, private and alternative sources of financing, that seeks to support mitigation and adaptation actions that will address climate change.

8. Summary of Actions

Item	Action	Additional Resource Requirement	Predicted Impact on our Carbon Emissions
1	An Energy Efficiency Programme is rolled out across our estate with priority and urgency in the first five years of this plan.	HIGH	HIGH
2	Hybrid heat pumps or where possible and appropriate heat pumps will be installed in WSCC properties as standard from now, unless more carbon efficient technologies become available, with a wider roll out of "reducing need for fossil fuel" measures in the last five years.	HIGH	HIGH
3	A low carbon response to reactive problems is developed as a priority, which fully takes into account of the whole life costs and available financial support initiatives when selecting materials and technology used.	LOW	MEDIUM
4	Additional FTE's are recruited to project manage and deliver this programme.	MEDIUM	HIGH
5	Additional maintenance budget is allocated to ensure that new measures can be maintained at the recommended schedules to ensure they deliver the savings predicted over their lifetime.	MEDIUM	MEDIUM
6	Action will be taken to facilitate improved cross departmental engagement in respect of delivering the Energy Efficiency Programme.	LOW	MEDIUM
7	We will address the risk that there is likely to be a national shortage of skills and resources available to deliver a programme of this scale, particularly when seen alongside similar ambition and demand from other local authorities and business.	unknown	MEDIUM
8	Enact provisions within the current water provision contract to deliver better oversight of water use, and delivery of efficiency measures	LOW	LOW
9	Lobby Government to set the standard for schools' design at net carbon zero and provide adequate funding to meet this requirement.	LOW	HIGH

10	For every new project conduct a gap analysis to understand the capital and revenue implications of achieving net carbon zero design and assess how any additional measures could be delivered.	LOW	MEDIUM
11	Additional maintenance budget is allocated to ensure that the new buildings are maintained to a high build standard, to ensure they deliver the operational energy savings predicted over their lifetime.	MEDIUM	MEDIUM
12	We design and build net carbon zero buildings.	MEDIUM	MEDIUM
13	We require and analysis whole life costing during the building design process.	LOW	MEDIUM
14	Set a clear and consistent policy so that the prioritisation of carbon reduction is maintained throughout the building design and build process.	LOW	MEDIUM
15	Revise our corporate building standards to ensure they reflect and deliver the processes within this plan.	LOW	MEDIUM
16	Buildings that are currently designed but pre-construction are reviewed to ensure the principles in this plan are applied.	MEDIUM	MEDIUM
17	Additional maintenance budget is allocated to ensure that the building can be maintained to a high build standard, to ensure they deliver the operational energy savings predicted over their lifetime.	MEDIUM	MEDIUM
18	Deliver the programmed LED lamp replacement programme	LOW	MEDIUM
19	Seek additional ways to reduce demand and emissions.	LOW	unknown
20	We adopt a presumption in favour of renewables and batteries across our whole estate, integrating these technologies as standard in all relatable capital projects.	HIGH	HIGH
21	Our building design process takes a whole system approach to low carbon technologies.	LOW	MEDIUM
22	Additional FTE's are recruited to plan and deliver this programme	MEDIUM	HIGH
23	Proactively manage utility purchasing to reduce the Council's exposure to risk	LOW	LOW
24	Look for innovative solutions to help us reach our target.	LOW	LOW
25	Utility cost guidance for prospective projects, where able, will account for anticipated future changes in non-commodity rates to support whole life cost analysis.	LOW	LOW

26	Explore; define and implement a power management policy for all staff issued laptops.	LOW	LOW
27	Develop and deliver a fleet transition plan to move the Councils fleet to electric	LOW	MEDIUM
28	Explore alternative fuels for any vehicles not suitable to transition to electric	LOW	MEDIUM
29	Review the corporate business travel policy and ensure that low carbon methods of travel are given priority.	MEDIUM	MEDIUM
30	Ensure there are appropriate mechanisms in place to oversee and if necessary, enforce this policy.	MEDIUM /HIGH	MEDIUM
31	Develop a staff engagement programme that focuses on developing the knowledge and skills of our staff so that they can develop their own actions to reducing carbon emissions.	MEDIUM	LOW
32	Ensure that this training is part of the essential skills training for all staff.	LOW	LOW
33	Conduct a carbon risk assessment on our existing contracts, and seek improvements in areas of high risk	MEDIUM	n/a (out of scope)
34	Review contract management processes to ensure that we continue to scrutinise the suppliers carbon performance.	LOW	n/a (out of scope)
35	Review the current criteria for carbon in the procurement process, including reviewing of the weighting assigned to carbon during the evaluation process.	LOW	n/a (out of scope)
36	Develop a funding solution to support the workstreams outlined in the programme.	HIGH	HIGH
37	Ensure funding solutions available are fully understood and considered for projects under the capital programme.	MEDIUM	MEDIUM

Appendix 1: Representation of WSCC's baseline carbon emissions within Scopes 1,2 and 3

In accordance with the Greenhouse Gas (GHG) Protocol for the purpose of greenhouse gas reporting, emissions are divided into three categories, referred to as Scope 1, 2 and 3.

Scope 1 includes natural gas use and emissions from fleet vehicles.
Scope 2 includes electricity.
Scope 3 includes water, business travel via vehicles other than fleet vehicles and any upstream emissions from scope 1 and 2 activities.