

**Surrey's
Greener
Future**



e 121

SURREY COUNTY COUNCIL'S 2030 NET ZERO CARBON PROGRAMME

ABOUT THE COUNCIL'S CARBON EMISSIONS

In order to reduce the threat of climate change to our residents and landscapes, Surrey County Council and partners across the county have committed to reduce the county's carbon emissions to net zero by 2050. Surrey's Greener Futures Climate Change Delivery Plan is the first phase of a 30-year plan to realise the ambitions set out in [Surrey's Climate Change Strategy](#).

Although the Council's carbon emissions are a relatively small part of the county's overall emissions (less than 1%), the Council must lead in efforts to reduce carbon and contribute towards creating a net zero carbon county and, as such, it has committed to be a **net zero council by 2030**.

The carbon emissions within the scope of the 2030 target are those that we can measure accurately and are in the Council's direct control in accordance with the Greenhouse Gas Protocol.¹ These include gas and electricity used in approximately 220 buildings, fuel used in approximately 700 vehicles that the Council own and operate, and electricity used to power our 89,000 streetlights.

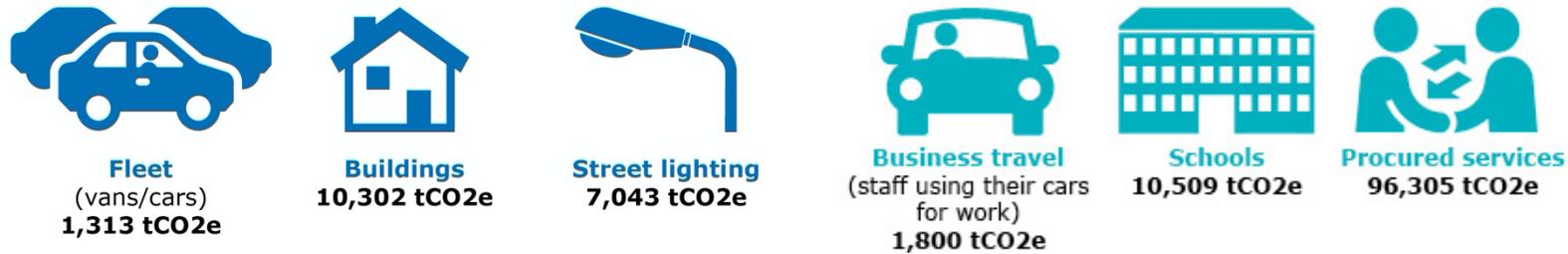
Carbon emissions can also be generated indirectly through buildings and land that the Council owns but over which it has little control in respect of their operation and maintenance (such as schools); the procurement of goods and services (supply chain emissions); and actions carried out on behalf of the Council by their staff (business travel and staff commuting). These emissions are estimated to be up to 4 time greater than the Council's direct emissions.

¹ The Greenhouse Gas Protocol supplies the world's most widely used carbon accounting methodology used to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions.
<https://ghgprotocol.org>

Figure 1 - Infographic setting out direct emissions and indirect emissions

Direct emissions

Indirect emissions



Page 123

Although indirect emissions fall outside of the 2030 target, because they are not directly within the Council’s direct control, the Council is still responsible for them and can influence a reduction. Therefore the Council has committed to set a net zero reduction target for each of its indirect emission sources. Further information about the Council’s indirect emissions is included in Figure 7 below.

Reducing the Council’s direct emissions and indirect emissions falls under the **One Net Zero Public Estate programme** in the Greener Future Climate Change Delivery Plan 2021-25.

WHERE DOES CHANGE NEED TO HAPPEN?

In order to reduce the emissions produced directly and indirectly by the Council it will be **necessary for everyone to act**, see Figure 2 below. The impact of how we travel to and for work, the energy we use for power and heating offices and our homes when we work from home as well as the work we carry out on behalf of the Council or school will have a carbon impact. In order for staff and members to make changes to reduce carbon from their own activities, we need to support them by providing clear policies, guidance and incentives. Information and training needs to be available to all to ensure a consistent level of carbon literacy and we need to give staff and members the opportunity to influence and drive this agenda, through programmes such as **Greener Futures Champions** (see Figure 3 below).

Creating a Greener Future in Surrey is one of the **Council's four strategic priorities** and is therefore built into the refreshed organisation strategy. Carbon impacts of decisions are also included in Cabinet reports. There is more that we must do to ensure that carbon reduction and/or minimisation is built into the Council's decision making processes at every level and we must **understand the opportunities and challenges that each directorate faces** in achieving this aim.

Figure 2 - Key groups within the Council to affect change

<p>Decision makers</p> <ul style="list-style-type: none"> • Build our Greener Future ambitions into organisational and service design. • Champion carbon reduction in all internal (and external) communications. • Ensure that carbon reduction is embedded into decision making e.g. commissioning, procurement and strategy development and challenging when this does not happen. • Ensure that HR policies encourage modal shift from driving to active and public transport. • Ensure that policies do not penalise vulnerable staff and residents including those on lower incomes. 	<p>Members</p> <ul style="list-style-type: none"> • Champion carbon reduction in all internal (and external) communications. • Lead by example in decarbonisation behaviours (i.e. working virtually as a first resort, travelling to and for work using active and public transport etc. • Sign up to the Greener Futures Member Charter which demonstrates their support for the Greener Futures Programme, including pledges such as to champion carbon reduction in all decision-making. 	<p>Staff</p> <ul style="list-style-type: none"> • Supported to prioritise travel to and for work using public transport, active transport, car-pooling or electric pool cars. • Ensure emissions are not increased by working from home (i.e. only heating room they are working in as opposed to whole house). • Become a Greener Futures Champion and seek opportunities to reduce carbon emissions and make environmental improvements within the Council, with partnership work and within the wider county. • Consider the carbon impacts of the work they do for the Council or schools and seek opportunities to reduce these. • Commissioners will stay abreast of market opportunities to decarbonise, build carbon reduction into new and re-procured contracts, focus on the biggest emitting providers and ensure that carbon reduction KPIs are met.
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Figure 3 - Description of the Greener Futures Champions Network

Greener Futures Champions Network (GFCN)

The Greener Futures Champions Network – launching late 2021 – will embed the carbon reduction and wider environmental principles across all departments within the Council, ensuring that a greener future is at the heart of decision-making processes. It will be a voluntary network empowering staff to reduce the environmental impact and carbon emissions of their service through equipping them with necessary tools, training and support. The GFCN will link in with the organisational design work which is being developed through the Workforce for the Future programme, looking at how we create skills and development opportunities for staff.

Sponsored by the Executive Director of Environment, Transport and Infrastructure, GFCN will report into the Climate Change Board which will ensure that its success is frequently monitored with key performance indicators.

WHAT DO WE NEED TO DO?

Achieving the required reduction in the Council's direct and indirect emissions will require a step change in activity, which will have knock on impacts on resource and investment requirements along with the way we engage with staff and members, as set out above.

The following principles will guide our approach to delivery and will reduce the risk that decarbonisation activity falls short of the necessary targets through a fragmented approach.

Figure 4 - Principles guiding the Council's approach to emission reduction

- Being evidence-led by improving our data, ensuring it is accurate and robust
- Positioning ourselves to be 'investment ready' in order to obtain grant funding where available, and utilising secured budgets to act as match funding to bring in additional funding – making our money work harder
- Ensuring that we consider cost per tonne of carbon reduced so that our investment decisions deliver the best result for the money spent with regards to carbon reduction (this is set out in the Greener Futures Finance Strategy)
- Taking a whole building approach, for example ensuring that we reduce energy demand through retrofit insulation prior to switching to electric powered heating (heat pumps) and/or installation of electric vehicle charging, increased electricity consumption is then offset by renewable energy generated through roof mounted solar
- Recycling operational energy savings resulting from the installation of decarbonisation measures in order to fund the wider net zero carbon programme
- Recognising that investment now into measure which reduce operational energy use will reduce longer term risks resulting from future rises in energy as well as possible future carbon pricing

- Where uncertainties lie with future corporate estate – prioritise decarbonisation efforts on buildings that we are most likely to retain
- Pushing for new builds to be as close to net zero carbon as possible to avoid future costs (retrofitting is more expensive and complex than designing in)
- Ensuring that our investments and the investment drawn into the county for the purposes of decarbonisation are used to develop green supply chains within the county
- Where offsetting is necessary, we will prioritise investment in local offset opportunities, such as woodland planting and/or landscape change to increase sequestered carbon

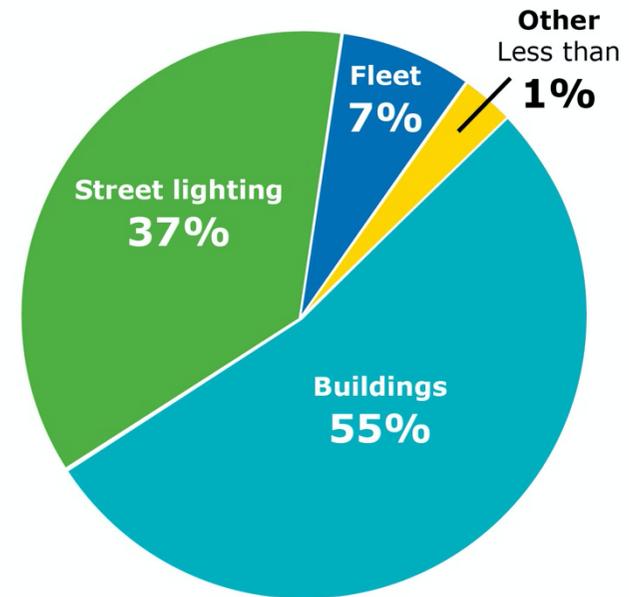
Reducing the Council's direct emissions by 2030

The Council's total carbon emissions in 2019/20 – i.e. its carbon emission baseline – was 18,833 tCO₂. This is set out in Figure 5 below.

Figure 5 - Council's 2019/20 emissions baseline

In order to achieve net zero carbon by 2030 it is necessary to put in place a number of decarbonisation initiatives, which are set out in Figure 7 below. This includes LED lighting, energy efficiency measures, heat pumps and roof mounted solar PV in the corporate estate, decarbonising the fleet, installing LED streetlights and generating renewable electricity through ground mounted solar PV. The table sets out the emission reduction which will be achieved by each of these initiatives by 2025 and 2030.

This approach has been influenced by a number of considerations including:



- Existing opportunities to reduce carbon (i.e. the street lighting LED programme)
- Factoring in the impact of the estate rationalisation programme
- Opportunity to install solar photovoltaics on the Council's land and buildings (informed by the Buro Happold assessment)
- Considering the cost per tonne of carbon saved and identifying the package of measures with the greatest return on investment (informed by the Greener Futures Finance Strategy and work by Atkins)
- Considering when the investment needs to be made in order to secure the highest amount of carbon (for example front loading renewable energy measures is preferable as the national electricity grid is decarbonising)

The emission reduction that we are projected to achieve by 2025 against the baseline year is 69%. This exceeds the 40% emission reduction target for local authorities set out in the One Net Zero Public Estate programme.

By 2030 it is projected that 90% emission reduction will be achieved. This is because there will be some buildings where it is difficult and costly to decarbonise and some vehicles (for example fire engines) where the low carbon technology may not yet be available to the market. Where it is not possible to fully decarbonise, the Council will offset. We currently estimate a need to offset 10% of the Council's carbon emissions from 2030, however efforts will be made to reduce this. Figure 6 on the next page sets out the offset requirement from 2030 will be 1809 tonnes of carbon.

Figure 6 - Reducing the Council's direct emissions to net zero by 2030

Emission scope	Emissions baseline in 2019 (tCO2e)	% of baseline	Number in scope	Decarbonisation initiatives	Means of implementation	Emissions saved in 2025 (p/a, tCO2e)	Emissions saved in 2030 (p/a, tCO2e)	Emissions generated in 2025 (p/a, tCO2e)	Emissions generated in 2030 (p/a, tCO2e)	% reduction in 2025 vs 2019	% reduction in 2030 vs 2019
Business as usual savings						739	1302			4%	9%
Corporate estate (heating and electricity)	10,302	55%	220 buildings	LED lighting in buildings	<ul style="list-style-type: none"> - £285k Grant funding for feasibility assessments of schools and corporate estate - £200k revenue feasibility funding for corporate estate - £1.6M capital government grant funding to decarbonise 5 SCC buildings - Further external funding opportunities and internal funding - Greener Futures Champion programme 	285	269	4,484	2,694	69%	89%
				Estate rationalisation		961	1,821				
				Retrofit energy efficiency measures in buildings		1,083	2,349				
				Heat pumps in buildings		888	1,437				
				Rooftop PV installation		383	357				
Ground-mounted solar PV				3 solar farms with an estimated total installed capacity of 29.5 MWp	<ul style="list-style-type: none"> - Internal funding - Community energy groups - Community Municipal Bonds 	2,218	1,375				

Fleet	1,313	7%	770 vehicle s	Decarbonising Council's fleet	- Assessment of SCC fleet by EST - Green Fleet Manager recruitment - Development of a Green Fleet strategy, including switching fleet for EV and installing charging stations in SCC buildings	464	1,044	849	269		
Street lighting	7,043	37 %	89,000 lights	LED streetlighting	Ongoing programme to replace 89,000 streetlights, to be completed in spring 2023	6085	6642	958	401		
Total before offsetting						13,106	16,771	5,552	2,062		
Total	18,833²	100 %	Offsetting requirement from 2030 (p/a, tCO ₂ e)			2,062					100%

² This figure includes fugitive emissions which make up less than 1% of the Council's baseline and therefore aren't included in the table.

The assessment of the Council's direct emissions does not yet include the emissions from future builds in the capital programme; rather, further work is required to assess the impact of these future developments, and to assess the cost and return on investment of developing these to be as close to net zero carbon as possible. This work is currently in train and will be completed by early 2022.

Reducing the Council's indirect emissions

The Council's indirect emissions fall outside of the scope of the 2030 net zero target; however these emissions are included within the scope of the One Net Zero Public Estate Programme in the Climate Change Delivery Plan. It is important that we set net zero carbon emission reduction targets to these emissions once the evidence base and opportunities for reduction are better understood. These are set out in Figure 7 below.

Figure 7. SCC's indirect carbon emissions

ONZPE objective	Decarbonisation of community schools
Baseline emissions (2019/20)	10,509 tCO ₂ e
KPI by 2025	Carbon reduction programmes in place
Description	Reducing carbon emissions through electrification of heat, energy efficiency, renewable energy and EV charge point instillation, and support school travel plans
Measures and activity	<ul style="list-style-type: none"> • Grant funding obtained to conduct decarbonisation feasibility assessments and investment grade assessments of 36 school sites - Sep 21 • Recruiting an Energy Engineer to support schools - Sep 21 • Explore setting up an interest free decarbonisation loan fund for schools (now Salix funding has terminated) • Conducting focus groups with schools to determine appetite for decarbonising sites and taking loan from SCC - Oct/Nov 21 • Recruited an FTE Eco Schools officer to support schools to embed environmental issues into the curriculum and influence behaviour change – Aug 21
Funding opportunities	<ul style="list-style-type: none"> • Supporting schools to access grant funding (YFS, Public Sector Decarbonisation (PSDF) funding (Dawney school has obtained £370k) • SCC to explore establishing a low/zero interest loan scheme for schools
Next steps and recommendations	Establish carbon reduction target for community schools following engagement and analysis of financial business case

ONZPE objective	Reducing Surrey LAs supply chain emissions
Baseline emissions (2019/20)	96,305 tCO ₂ e ³
KPI by 2025	Green procurement policy in place and decarbonisation commitments embedded into all new and re-procured contracts
Description	Reducing emissions from procured goods and services by driving efficiencies, actively working with existing suppliers, and putting in place ambitious green procurement policies.
Measures and activity	<ul style="list-style-type: none"> • Green procurement working group established with B&Ds, successful bid to participate in LGA Design Challenge to develop Green Procurement framework - spring 21 • Green Procurement Manager recruited to lead on embedding carbon reduction and environmental benefits into contracts – June 21 • Carbon Trust quantify supply chain emissions based on spend data and identify categories with greatest carbon impact -Aug 21 • Questionnaires sent to top 25 suppliers with highest carbon impact requesting emission data – Sep 21 • Carbon reduction (aligning to SCC targets) embedded into Highway services re-procurement - Aug 21 • Green procurement policy developed and adopted by Surrey Local Authorities - 2022
Funding opportunities	Included within BAU
Next steps and recommendations	<ul style="list-style-type: none"> • Work with Surrey’s highest emitting providers to generate an accurate carbon baseline and set emission reduction targets for each contract • Develop a category approach to carbon reduction for all new and re-procured contracts • Produce a Green Procurement policy which will include carbon emission reduction targets for the Council’s supply chain emissions

³ This figure is an estimate based upon best available data, officers will continue to work with the Council’s supply chain to refine this.

ONZPE objective	Agile work force
Baseline emissions (2019/20)	Business travel – 1,800 tCO ₂ e Staff commuting – data not available
KPI by 2025	Carbon reduction targets for business travel and staff commuting are approved, sustainable travel policy in place
Description	Supporting staff to reduce workplace emissions such as staff commuting, business travel and energy savings
Measures and activity	<ul style="list-style-type: none"> • Atkins commissioned to produce Green Staff Travel Plan Policy (with focus on business travel and commuting) - April 21 • Workshops with officers in HR and FM to discuss opportunities and incentives – June 21 • Parking policy launched – late 21 • Greener Futures Champions Network (see Figure 3) launched to align with the Workforce for the Future Programme - late 2021 • Necessary infrastructure installed - TBC
Funding opportunities	
Next steps and recommendations	Green Staff Travel Plan policy to be launched with carbon reduction targets for business travel and staff commuting

HOW WILL WE KNOW THAT WE'VE SUCCEEDED?

Through regular monitoring: compared with carbon emissions estimates in 2019/2020, the Council's progress in reducing its direct and indirect carbon emissions will be reported to Council Leadership Team quarterly and publicly on an annual basis to align with the progress reports for the Climate Change Delivery Plan. The Council will continue to report direct emission reductions to Government. The 2030 target will be assessed by Internal Audit.

The Greener Futures Board: progress in reducing the Council's direct and indirect emissions will be overseen by the internal Greener Futures Board. The Executive Director for ETI sits on the Surrey Greener Futures Board to ensure that the connection exists between carbon reduction activities and opportunities at the Council and county level.

Two way communication: we will continue to seek input from the directorates through the Internal Greener Futures Board and attendance at Directorate Leadership Teams. We will also ensure the views of staff are gathered through surveys and webinars and that opportunities for staff to support and develop this agenda are created through the Greener Futures Champions programme.

Managing and minimising risk

There are a number of risks which could result in the Council being unable to achieve its carbon reduction targets. These include risks around funding and finance mechanisms and policies from Government. Risks have been identified and have been included in a programme level risk register. Risk owners have been identified as well as mitigation strategies. Risks will be reported to the Surrey Greener Futures Board.