

Arun District Council

REPORT TO:	Policy and Finance Committee – 20 October 2022
SUBJECT:	Carbon Emission update – 2021-2022 financial year
LEAD OFFICER:	Joe Russell-Wells, Group head of Environment and Climate Change
LEAD MEMBER:	Councillor Gunner, Committee Chair
WARDS:	All

CORPORATE PRIORITY / POLICY CONTEXT / CORPORATE VISION:

This work supports one of the key areas within the Council's vision 2022-2026 by: supporting our environment to support us

- Develop and implement the Carbon Neutral Strategy and Climate Change and Biodiversity Strategies for the council and the wider district through Planning Policy
- Review the council's estate and seek to maximise the use of renewable or alternative energy generation, including the installation of Electric Vehicle (EV) chargepoints
- Engage and incentivise business to commit to working practices which minimise their impact on the environment
- Support information campaigns that promote carbon reductions and funding opportunities
- Working with our community improve waste reduction and recycling to meet future targets of 55% recycling by 2025 and 60% by 2030
- Ensuring that climate change and sustainability is at the heart of all council services
- Support Sussex bay project to restore marine, coastal and intertidal habitats to improve the biodiversity and carbon footprints of the district

DIRECTORATE POLICY CONTEXT:

Improve and support the Council's target to become carbon neutral by 2030.

FINANCIAL SUMMARY:

A budget of £200,000 was given for the 2022-2023 financial year in order to help support activities which reduce the Council's carbon emissions. Of this £5,000 was used for consultants to undertake this work.

1. PURPOSE OF REPORT

- 1.1. This report provides an update on the emissions (Scope 1, 2 and 3) of the Council for the 2021-2022 financial year.

2. RECOMMENDATIONS

- 1.2. As this report is an information paper, there are no recommendations for the Committee to consider. This report is to be taken as read only with Members having the opportunity to ask questions at the meeting on the update provided.

2. EXECUTIVE SUMMARY

- 2.1. The Council recently adopted a new vision document with one of the four key themes being 'supporting our environment to support us'. This showcases that climate change and sustainability is at the forefront of activities going on within the Council. To support this vision and the work going on with the Climate Change and Biodiversity Action plan this report will provide an update on the Council's Scope 1, 2 and 3 emissions for the 2021-2022 financial year; when compared to the Baseline emissions taken to this committee on 14th October 2021.

3. DETAIL

- 3.1. In January 2020 Full Council declared a Climate Emergency and announced its ambition for Arun District Council to be carbon neutral by 2030 (Decision Notice C/029/091219). A Climate Change and Sustainability Manager was appointed in February 2021. Following this the first carbon audit was undertaken for the 2020-2021 financial year which was used to inform the Carbon Neutral Strategy 2022-2030 (adopted in October 2021) and the Climate Action and Biodiversity Work Plan 2022-2023 (adopted in February 2022). The Council has also recently adopted a new vision document which showcases its four key priorities. One of these areas is ensuring that we 'support our environment to support us'. This showcases that climate change and biodiversity is at the forefront of the Council's activities.
- 3.2. Within this Action Plan there was a commitment to undertake yearly monitoring of emissions to ensure that the Council can effectively monitor how its activities are impacting these emissions and to ensure it stays on track to the 2030 carbon neutral target. This included:
- 3.3. Scope 1 - emissions directly attributed to burning of fuels
- 3.4. Scope 2 - indirect emissions from the generation of purchased electricity and directly controlled by the Council
- 3.5. Scope 3 emissions - from the activities of the Council but occur from sources not owned or controlled by the Council.

3.6. It is important to note that Scope 3 is incredibly difficult to quantify with exact results, for this reason it is often not included within carbon neutral/net zero targets. CO2 Analysis was commissioned to undertake a carbon audit for the 2021-2022 financial year. Results showcased the following changes:

3.7. **Scope 1 and 2**

3.8. Please note that due to the additional provision of data and additional cost details our original baseline (as set out in the Carbon Neutral Strategy and Climate Action and Biodiversity Action Plan) has increased. The below numbers reflect these new baseline figures. The mentioned documents will be updated accordingly.

3.9. Gas (Scope 1) results show an increase in tons of Carbon dioxide equivalent (tCo2e) from 132.42 tCo2e in 2020-2021 to 164.21 tCo2e in 2021-2022. This is likely due to changes in heating occurring within the Council's buildings. Improvements to building fabric and transitioning to heat pumps (towards electric heating) will be required to reduce emissions associated with gas heating. The Council is currently looking to undertake building audits to its estate to determine the most effective and efficient path forward.

3.10. Petrol/diesel (Scope 1) shows a reduction in tCo2e, decreasing from 43.3 tCo2e to 41.19 tCo2e. The Council is currently working to transition its vehicle fleet to electric. Of the current 16, 14 are expected to be electric over the next twelve months, with two remaining diesel fuelled. As technology evolves and suitable vehicles become available the remaining diesel vehicles will be replaced by fully electric ones. This will help continue to reduce emissions associated with the vehicle fleet.

3.11. Electricity (Scope 2) has seen a 100% reduction in emissions, from 216.3 tCo2e to 0 as all electricity is 100% REGO (Renewable Energy Guarantees of Origin) certified. However, the Council will continue to look for more reliable sources of locally produced renewable energy where its origins can be confirmed. The installation of more PV arrays within Arun will also help the Council move away from grid dependency and protect it from sharp increases of electricity costs.

3.12. Overall, Scope 1/2 emissions have reduced from 392.02 tCo2e in 2020-2021 to 205.4 tCo2e in 2021-2022 and has seen a fall in total emissions to 0.75% of the Council's total emissions in 2021-2022 when compared to 1.42% in 2020-2021. By following actions within the Biodiversity and Action plan there is potential for these to be even further reduced.

3.13. **Scope 3**

3.14. Purchased goods (Scope 3) have seen a reduction in emissions, from 25,066.10 tCo2e in 2020-2021 to 24,771.49 tCo2e in 2021-2022. This remains Arun's largest emitter now sitting at 91.20% of total emissions, from 90.25% in 2020-2021. Though this shows reduction this is an area which needs to continue to be looked at with increasing urgency and commitment. Work has started to review the Council's procurement process to look at ways to reduce carbon through procurement. Climate change should be considered by all officers who

are procuring goods and/or services. However due to the complexity of this, progress has been slow.

- 3.15. As our largest contract BIFFA is also the largest emission contributor. The recently agreed 3 year short term extension is very much a holding position pending strategic clarity being provided by Government through the national Resource & Waste Strategy. Therefore, at this stage is a difficult to explore or fully commit to a full suite of environmental initiatives for the contract. This opportunity will be best explored when considering options for service delivery beyond 2026. However, in the meantime as part of the three year extension Biffa will provide a full fleet of electric supervisor vehicles and will provide a 26 ton electric refuse collection vehicle for the collection of Dry Recycling throughout the extension period.
- 3.16. Fuel/energy outside of Scope 1/2 (Scope 3) has seen a fall of emissions, from 35.82 tCo2e in 2020-2021 to 28.11 tCo2e in 2021-2022. These are the emissions associated with transmission losses for purchased electricity and the transport of gas (well to tank) and are standard values.
- 3.17. Water/sewage (Scope 3) has also seen an increase in emissions. The rise from 80.02 tCo2e in 2020-2021 to 103.53 tCo2e is likely attributed to an increase in public facilities usage by members of the public. The planned building audits undertaken within 4.4 will look to reduce flow rates of taps/showers and flush rates of WCs (in offices) to help reduce wastage.
- 3.18. Council waste (scope 3) is another emitter where there has seen an increase in emissions, rising from 16 tCo2e in 2020-2021 to 20.71 tCo2e in 2021-2022. Similarly to the above, this could be linked to more people making use of Council offices, bringing with them more waste. To help reduce waste emissions it will be important to follow the waste hierarchy by reducing waste produced, reusing where possible and recycling when this cannot be done. Providing educational training to members and officers could help further these messages. Additionally reducing the amount of paper/printing taking place will also be important.
- 3.19. Business Travel (Scope 3) has seen a reduction in emissions. In 2020-2021 this produced 36.11 tCo2e, compared to just 11.50 tCo2e in 2021-2022. Similarly, to employee commuting (Scope 3) (which saw no change between the two years) the continued standard of working from home and meeting virtually has meant that there is less travel between: home and the office and the office and external meeting locations. By encouraging this to continue emissions in this area will remain low. Additionally, this will help improve air quality within the District as well as helping reduce congestion on the roads. However, as the world continues to rebound from COVID 19 there is potential for in person meetings and office work to increase. The Council will need to encourage alternative transport measures to help minimise this impact.
- 3.20. The Council's Leisure Centres (Scope 3) have seen a drop in emissions, falling from 1,051.52 tCo2e in 2020-2021 to 995.46 tCo2e in 2021-2022. Freedom Leisure has continued to improve the energy efficiency of the leisure facilities. Over the summer months the flood lighting for the Arun Leisure Centre synthetic turf pitch was converted to LED lamps. Freedom Leisure has

also reduced the temperature in its buildings and closely managing the use of air-conditioned spaces through improved Building Management Systems (BMS) to ensure that the temperatures are appropriate for the activities taking place. It is also monitoring swimming pool water and pool hall air temperatures closely to maintain recommended temperatures and use energy in an efficient and minimised way.

- 3.21. Freedom Leisure is also promoting energy saving energy saving and lean measures to reduce energy demand and boost energy efficiency throughout its facilities and on its website: [Your local community leisure centre & the energy crisis](#) and it is closely monitoring customer feedback.
- 3.22. Additionally, the Council is working with Freedom Leisure by commissioning energy saving audits at the Wave and Arun Leisure Centre (similar to details within 4.4); and we will ensure that energy saving features will be incorporated into the wet changing remodeling at the Arun Leisure Centre. This includes reducing the volume of air that needs to be heated/cooled by installing false ceilings and upgrading systems for the installation of photovoltaic cells. All of these will continue to introduce low and zero carbon technology and help reduce the emissions released from our leisure centers.
- 3.23. Finally, the Council's investments (Scope 3) have also seen a slight reduction in associated emissions, falling to 628.96 tCo2e in 2021-2022 from 700 tCo2e in 2020-2021. Emissions associated with investments are linked to where these investments lie and how much is invested. Additional review is needed in this area.
- 3.24. Scope 3 continues to be the largest source of emissions for the Council sitting at 99.24%, with the two largest single emitters continuing to be: purchased goods and services (91.20%) and leisure centres (3.66%). It will be important to ensure emissions are reduced across all Scopes to reach the 2030 Carbon Neutral target.
- 3.25. **Conclusion**
- 4.26 Overall total emissions have been reduced across the Council, from 27,774.59 tCo2e in 2020-2021 to 27,162.16 tCo2e. Please see appendix A for the full set of results for the 2020-2021 and 2021-2022 financial years. Appendix B shows the results from the original baseline to the updated baseline. The results show a step in the right direction, but not at a fast enough rate. If this reduction does not see a sharp increase in the coming years, the 2030 Carbon Neutral target is unlikely to be reached.

- 4.27 Members will be aware that the threat of climate change continues to grow, and therefore it is important that the Council continues to work to reduce its emissions and impact on the environment, and where possible, support those within the wider District to do so as well. Continued work will be undertaken to ensure that Scope 1, 2 and 3 emissions are reduced, with a particular focus on purchased goods and services along with the leisure centres as these are currently the two largest emitters for the Council.
- 4.28 To help make emissions tangible, according to the WWF carbon footprint calculator ([WWF Footprint Calculator](#)) the average UK citizen footprint for 2022 is roughly 9.5 tCo2e, compared to the world average at 6.3 tCo2e. 1 tCo2e is equal to: using 5,171 kWh of electricity which could power the average mid-terrace house or flat for roughly a year and 10 months, 500 CO2 fire extinguishers or driving a small petrol car for 9,234km. In turn to remove just 1 tCo2e you would need 50 trees growing for a year ([What is 1 Ton of Carbon Dioxide and how it relates to daily life? - EMSmastery](#))
- 4.29 The Climate Change and Biodiversity Action plan will be revised in accordance with these updated results along with updates to specific actions. This will be brought to the Policy and Finance committee in March 2023. Some updates include the commissioning of building audits for some of the Council's buildings and training for officers, with an aim to expand this to members in the near future.

4. CONSULTATION

- 4.1. No consultation has been required at this stage.

5. OPTIONS / ALTERNATIVES CONSIDERED

- 5.1. There are no alternative options to be considered.

6. COMMENTS BY THE INTERIM GROUP HEAD OF FINANCE/SECTION 151 OFFICER

- 6.1. As stated in the Financial Summary, a budget of £200,000 was allocated for the 2022-2023 financial year in order to help support activities which reduce the Council's carbon emissions.

7. RISK ASSESSMENT CONSIDERATIONS

- 7.1. There is no direct impact on the above areas arising from this report.

8. COMMENTS OF THE GROUP HEAD OF LAW AND GOVERNANCE & MONITORING OFFICER

8.1. No comments have been received.

9. HUMAN RESOURCES IMPACT, HEALTH & SAFETY IMPACTS, PROPERTY & ESTATES IMPACT, EQUALITIES IMPACT ASSESSMENT (EIA) / SOCIAL VALUE, CRIME AND DISORDER REDUCTION IMPACT, HUMAN RIGHTS IMPACT, FREEDOM OF INFORMATION / DATA PROTECTION CONSIDERATIONS

9.1. There are no direct impacts on the above arising from this report.

10. CLIMATE CHANGE & ENVIRONMENTAL IMPACT/SOCIAL VALUE

10.1. Though there will be no direct reduction from this report the results from this analysis will provide the Council with vital information around sources of emissions. This will, in turn, be used to inform next steps and ensure that the Council remains on track to hit the 2030 carbon neutral targets.

10.2. Impacts will be seen across the Council in all areas and departments.

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BACKGROUND DOCUMENTS:

Officer report Carbon Neutral Strategy 2022-2030 - [AGENDA ITEM NO \(arun.gov.uk\)](#)

ADC Carbon Neutral Strategy 2022-2030 - [Item 7 - Carbon Neutral Strategy - Appendix.pdf \(arun.gov.uk\)](#)

Officer report Climate Action and Biodiversity Work Plan 2022 – 2023 - [AGENDA ITEM NO \(arun.gov.uk\)](#)

ADC Climate Action and Biodiversity Work Plan 2022 – 2023 - [Item 6 - Appendix - Climate Action and Biodiversity Work Plan 2022 - 2023.pdf \(arun.gov.uk\)](#)

Appendix A

Scope	Service Area	Year (financial)	Carbon (tonnes of CO2e)	Spend (£)	% Emissions	% spend in £	
One and two	Gas	20-21	132.42	15,188	0.48	0.03	
		21-22	164.21	24,921	0.60	0.05	
	Petrol/diesel	20-21	43.3	22,113	0.16	0.04	
		21-22	41.19	24,592	0.15	0.05	
	Electricity	20-21	216.3	195,828	0.78	0.39	
		21-22	0	201,795	0	0.43	
SCOPE 1/2 TOTAL		20-21	392.02	233,130	1.4	0.46	
		21-22	205.4	251,308	0.75	0.53	
Three	Purchased goods	20-21	25,066.10	49,429,017	90.25	99.18	
		21-22	24,771.49	46,326,837	91.20	99.02	
	Fuel & energy outside Scope 1/2	20-21	35.82	-	0.13	-	
		21-22	28.11	-	0.10	-	
	Water/Sewage	20-21	80.02	103,250	0.29	0.21	
		21-22	103.53	133,584	0.38	0.29	
	Council Waste	20-21	16	20,650	0.06	0.04	
		21-22	20.71	26,717	0.08	0.06	
	Business Travel	20-21	36.11	51,582.76	0.13	0.10	
		21-22	11.50	46,709	0.04	0.10	
	Employee commuting	20-21	397	-	1.43	-	
		21-22	397	-	1.46	-	
	Leisure centers	20-21	1,051	-	3.79	-	
		21-22	995.46	-	3.66	-	
	Investments	20-21	700	-	2.52	-	
		21-22	628.96	-	2.32	-	
	SCOPE 3 TOTAL		20-21	27,382.57	49,604,500	98.6	99.53
			21-22	26,956.76	46,533,847	99.2	99.47
COUNCIL TOTAL		20-21	27,774.59	49,837,631	-	-	
		21-22	27,162.16	46,785,155	-	-	

Figure 1 shows the results from the 2020-2021 and 2021-2022 financial year analysis.

Appendix B

Scope	Service Area	Year (financial)	Carbon (tonnes of CO2e)	Spend (£)	% Emissions	% spend in £	
One and two	Gas	Updated	132.42	161,944	0.48	0.32	
		Original	132.42	161,944	0.64	0.32	
	Petrol/diesel	Updated	43.3	22,113.74	0.16	0.04	
		Original	43.3	22,114	0.21	0.044	
	Electricity	Updated	216.3	542,057	0.78	1.09	
		Original	216.30	542,057	1.05	1.08	
SCOPE 1/2 TOTAL		Updated	392.02	726,114.74	1.4	1.4	
		Original	392.02	726,115	1.9	1.4	
Three	Purchased goods	Updated	25,066.10	48,936,033	90.25	98.19	
		Original	17,942.98	48,936,033	86.88	98.19	
	Fuel & energy outside Scope 1/2	Updated	35.82	-	0.13	-	
		Original	35.82	-	0.17	-	
	Water/Sewage	Updated	80.02	103,250	0.29	0.21	
		Original	80.02	103,250	0.39	0.21	
	Council Waste	Updated	16	20,650	0.06	0.04	
		Original	16	20,650	0.08	0.04	
	Business Travel	Updated	36.11	51,582.76	0.13	0.10	
		Original	36.11	51,583.76	0.17	0.10	
	Employee commuting	Updated	397	-	1.43	-	
		Original	397	-	1.92	-	
	Leisure centers	Updated	1,051	-	3.79	-	
		Original	1,051	-	5.09	-	
	Investments	Updated	700	-	2.52	-	
		Original	700	-	3.39	-	
	SCOPE 3 TOTAL		Updated	27,382.57	49,111,516	98.6	98.6
			Original	20,259.45	49,111,516	98.1	98.5
COUNCIL TOTAL		Updated	27,774.59	49,837,631	-	-	
		Original	20,651.47	49,837,631	-	-	

Figure 2 shows the updated and original results for the 2020-2021 baseline year