

Arun District Council

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| REPORT TO: | Policy and Finance Committee – 8 February 2023 |
| SUBJECT: | Carbon Emission update – 2022-2023 financial year |
| LEAD OFFICER: | Joe Russell-Wells, Group head of Environment and Climate Change, (presenting) Will page, Climate Change and Sustainability Officer |
| LEAD MEMBER: | Councillor Matt Stanley, 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) changepoints
- 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 allocated for the 2023-2024 financial year to help support activities which reduce the Council's carbon emissions. Of this £25,798 was used for consultants to undertake work around emission monitoring. This also included additional work around undertaking a deep dive into scope 3 emissions, a review of top suppliers, a review of current procurement process and policy and the support of next steps. The budget has been spent accordingly:

Consultant fees: £38,073 (including £25,789 for emission monitoring and deep dive)

Training fees: £11,069

Internal support initiatives: £91,625

Current predicted underspend: £54,270

There will be a continued need for investments to support emission reduction projects in future financial years.

1. PURPOSE OF REPORT

- 1.1. This report provides an update on the emissions (Scope 1, 2 and 3) of the Council for the 2022-2023 financial year.

2. RECOMMENDATIONS

- 1.2. That the Policy and Finance Committee note the contents of the report.

2. EXECUTIVE SUMMARY

- 2.1. The Council's current vision document has one of its 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 Work Plan, this report will provide an update on the Council's Scope 1, 2 and 3 emissions for the 2022-2023 financial year, when compared to baseline emissions.
- 2.2. Emission reporting is not an exact science, but the greenhouse gas protocol ([Homepage | GHG Protocol](#)) has been followed to ensure as accurate results as possible. It should be noted that a new consultant was appointed to undertake this work for the 22-23 year, therefore some differences in the methodology has given some variation in results. Officers have worked to ensure results with previous years are as clear and comparable as possible.

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's current vision document also showcases one of its four key pillars as ensuring 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 the Climate Change and Biodiversity Work 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. 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. Examples of emitters include purchased goods and services (procurement), staff commuting, business travel and waste (generated by the Council).
- 3.6. The Council's housing stock and residential waste has not been included within the 2030 carbon neutral target, but these emissions are still tracked within this work. There has also been no district wide or area-based target set, therefore these results are not displayed.
- 3.7. Scope 3 is extremely difficult to quantify, for this reason it is often not included within organisations carbon neutral/net zero targets. This year a new consultant was used to undertake this work for the Council, a decision made due to the difficulty we face with reducing procurement emissions. The new consultancy was able to offer additional services specifically looking at procurement related emissions and aiding the Council in positively impacting this emitter. Because of this change and the different methodologies used there have been changes with how emissions are calculated and displayed. There have also been some minor changes in how emission has been split into emitters. Where possible emitters have been combined and included to ensure comparisons can more easily be made. The greenhouse gas protocol has been followed throughout this process.
- 3.8. Results showcased the following changes, these have been compared against our baseline year (2020-2021).
- 3.9. **Scope 1 and 2**
- 3.10. Gas (Scope 1) results show a minor increase in tons of Carbon dioxide equivalent (tCo2e) from 132.42 tCo2e in 2020-2021 to 134 tCo2e in 2022-2023. Improvements to building fabric and transitioning to heat pumps (towards electric heating) will be required to reduce emissions associated with gas heating. Reductions within this area will be extremely costly as they revolve around building improvements. There were also some refrigerants included in this year's analysis, something that was not included in previous years. Streamlining how bills and usage are provided will also help ensure that this is as accurate as possible.

- 3.11. Petrol/diesel (Scope 1) shows a reduction in tCo2e, decreasing from 43.3 tCo2e to 36 tCo2e. The Council is also currently working to transition its vehicle fleet to all electric. Of the current 16, 14 are now electric, with two remaining being diesel fuelled, this was delivered in Autumn 2023 – therefore do not feature in these results. As technology evolves and suitable vehicles become available the remaining diesel vehicles will be replaced with more environmentally friendly alternatives. This transition will help to reduce emissions associated with the vehicle fleet. HVO fuel is being considered as a more sustainable fuel for these vehicles.
- 3.12. Electricity (Scope 2) continues to be sourced from 100% REGO (Renewable Energy Guarantees of Origin) certified supplies. Therefore Scope 2 emissions remain at 0 as the energy has been generated using renewable means. 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 help the Council move away from grid dependency and protect it from sharp increases of electricity costs. Recently a bid was made with sports England for additional PV to be installed at the Littlehampton Wave. Additionally, a feasibility study is underway for a solar car port to be installed at Mewsbrook car park. Depending on the results of this additional car parks could be considered for solar car ports (agreed in the Environment Committee November 2023).
- 3.13. Overall, Scope 1/2 emissions have decreased from 392.02 tCo2e in 2021-2022 to 170 tCo2e in 2022-2023 and so have seen an decrease in total emissions to 1% of the Council's total emissions in 2022-2023 when compared to 1.42% in 2021-2022 (baseline year). By following actions within the Climate Change and Biodiversity Work Plan there is potential for these to be even further reduced, though as noted in paragraph 4.10 it will be expensive to reduce emissions in connection to building fuel usage, and by ensuring that accurate usage is easily available will also ensure accurate reporting in the future.
- 3.14. Actions that would help further reduce these emissions include reducing energy usage within our offices, transitioning to heat pumps (and away from gas boilers), and ensuring that electricity remains 100% REGO certified.
- 3.15. **Scope 3**
- 3.16. Purchased goods (Scope 3) have seen a reduction in emissions, from 25,066.10 tCo2e in 2021-2022 to 16,462 tCo2e in 2022-2023. This remains Arun's largest emitter now sitting at 91% of total emissions, up from 90.25% in 2020-2021. The total tCo2e has seen a significant reduction, but is still an area which needs to continue to be looked at with increasing urgency and commitment. This level of reduction is likely linked to the changes in methodology used by the consultants and the general inaccuracy of using spend data to monitor supplier emissions. Emission monitoring is not an exact science and results will be used to give a general direction of travel and highlight the hot spots that the Council will need to address.

- 3.17. As part of this year's work the consultant appointed has also undertaken a deep dive into our procurement emissions. This will hopefully allow the council to start to make more significant reductions within procurement. This includes several bits of work, one being the review of our top suppliers and starting to engage with them more around climate action and their impacts on the environment. It is hoped that by engaging with suppliers more we can start to request emission data from them directly to ensure procurement emissions are not reliant on just spend data. Another aspect of this work includes reviewing the council's current procurement process, documents, and strategy, including undertaking officer interviews around procurement to better understand the processes Arun undertakes. As our procurement advisor Hampshire County Council was also involved with this work. Results from this have not yet been provided, but due to the complexity of this, progress will be challenging. It is hoped that more details will be included within the Climate Change and Biodiversity Work Plan coming to this committee in March 2024. Work is also being undertaken in partnership with other D&Bs within West Sussex.
- 3.18. As our largest contract Biffa is also the largest emission contributor. The 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. Under the new emerging contract a full suite of environmental initiatives will be considered, 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 continue to 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. The central governmental change to require food waste collection from 2026 will also be considered within contract negotiations with Biffa. As mentioned above, current procurement emissions are based on spend data, therefore another important consideration to include within contract negotiations will be for Biffa (and other Council suppliers) to provide Arun with specific emission data to include within our yearly carbon audit. This will reflect more accurately how the Council's suppliers are contributing to Scope 3 emissions.
- 3.19. Fuel and Energy (upstream) (Scope 3) has seen an increase of emissions, from 35.82 tCo2e in 2020-2021 to 203 tCo2e in 2022-2023. These are the emissions associated with transmission losses for purchased electricity and the transport of gas (well to tank) and are standard values based on usage. The Council could reduce part of these by ensuring renewable energy is generated on site. This emitter is directly linked to our gas and electric purchasing.
- 3.20. There has been a slight change in how Council waste and water/sewage emissions will be displayed going forward as these will now be reported together. When comparing this emitter, the baseline year (2020-2021) showed this generate 96.02 tCo2e, this has decreased to 16 tCo2e during the 2022-2023 financial year. This can be split to 11.47 tCo2e being with water usage and treatment and the remaining being attributed to Council produced waste. Exact waste weights were used to calculate emissions for the 22-23 financial year.

- 3.21. Business Travel (Scope 3) has seen a reduction in emissions. In 2020-2021 this produced 36.11 tCo2e, compared to just 1 tCo2e in 2022-2023. Similarly, to employee commuting (Scope 3) (which saw a reduction between the two years from 397 tCo2e to 145.14 tCo2e) the continued standard of working from home and the majority of meetings being undertaken 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. Alternative transportation to meetings via public transport and active transport could also be encouraged to keep these emitters low.
- 3.22. The Council's Leisure Centres (Scope 3) have seen a reduction in emissions, from 1,051.52 tCo2e in 2021-2022 to 1,008 tCo2e in 2022-2023. Freedom Leisure has continued to improve the energy efficiency of the leisure facilities.
- 3.23. 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.
- 3.24. Additionally, the Council has worked with Freedom Leisure to commission energy saving audits at the Littlehampton Wave and Arun Leisure Centre and have recently ensured that energy saving features have been 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. Additionally solar panels are in the process of being installed on the south elevation of the pool side roof at Arun Leisure Centre. This process has been delayed due to a fire that took place earlier in 2023.
- 3.25. Finally, it was deemed by the consultant that Arun's investments are low enough that these can reasonably be excluded from the emission monitoring. As per guidelines from the Greenhouse Gas protocol (as per reference in 3.2). Therefore, going forward investments will not be included within emission totals.
- 3.26. Scope 3 continues to be the largest source of emissions for the Council sitting at 99%, with the two largest single emitters being: purchased goods and services (91%) and leisure centres (6%). It will be important to ensure emissions are reduced across all Scopes to reach the 2030 Carbon Neutral target.

3.27. **Conclusion**

- 3.28. Overall total emissions have been reduced across the Council, from 27,162 tCo2e in 2021-2022 to 18,007 tCo2e, this is reflective of a 35% reduction. This reduction has likely been due, in part, to the change in methodology used by the consultants who have undertaken the emission audit for the 22-23 financial year, especially when it comes to calculating procurement related emissions. However as per the Climate Change and Biodiversity Action plan the council has also undertaken numerous projects which are also supporting reducing emission reduction and Arun's impact on the environment.
- 3.29. Please see appendix A for the full set of results for the 2020-2021 (baseline) and 2022-2023 financial years, and appendix B for the comparisons across all 3 years. **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.
- 3.30. 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.
- 3.31. 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. Additionally, according to the Impact Community Carbon Calculator [Impact | Community carbon calculator \(impact-tool.org.uk\)](#), the average household in Arun District is responsible to 15.1 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](#)).
- 3.32. 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 2024.

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

9. HEALTH AND SAFETY IMPACTS

- 9.1. There are no direct health and safety impacts, however emissions contribute to climate change which can impact health and safety, including due to increase frequency of extreme weather events, and flooding, which can disproportionately affect the most vulnerable.

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

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

11. CLIMATE CHANGE & ENVIRONMENTAL IMPACT/SOCIAL VALUE

- 11.1. 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.

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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 | Emitter | Financial year | Carbon (tonnes of CO2e) | % emissions |
|------------------------|----------------------------|----------------|--------------------------------------|-------------|
| One and two | Gas | 20-21 | 132 | 0.48 |
| | | 22-23 | 134 | 1 |
| | Petrol/diesel | 20-21 | 43 | 0.16 |
| | | 22-23 | 36 | 0.19 |
| | Electricity | 20-21 | 216 | 0.78 |
| | | 22-23 | 0 | 0 |
| SCOPE 1/2 TOTAL | | 20-21 | 392 | 1.4 |
| | | 22-23 | 170 | 1 |
| Three | Purchased goods | 20-21 | 25,066 | 90.25 |
| | | 22-23 | 16,463 | 91 |
| | Fuel And Energy (upstream) | 20-21 | 35.82 | 0.13 |
| | | 22-23 | 203 | 1 |
| | Water/Sewage | 20-21 | 80 | 0.29 |
| | | 22-23 | Now included within Council Waste | |
| | Council Waste | 20-21 | 96 | 0.35 |
| | | 22-23 | 16 | 0.09 |
| | Business Travel | 20-21 | 36 | 0.13 |
| | | 22-23 | 1 | 0.01 |
| | Employee commuting | 20-21 | 397 | 1.43 |
| | | 22-23 | 145 | 1 |
| | Leisure centers | 20-21 | 1,051 | 3.79 |
| | | 22-23 | 1009 | 6 |
| | Investments | 20-21 | 700 | 2.52 |
| | | 22-23 | No longer reporting as insignificant | |
| SCOPE 3 TOTAL | | 20-21 | 27,382 | 98.6 |
| | | 22-23 | 17,837 | 99.1 |
| COUNCIL TOTAL | | 20-21 | 27,774 | - |
| | | 22-23 | 18,007 | - |

Table 1 shows the results from the 2020-2021 (baseline) and 2022-2023 financial year.

Appendix B

| Scope | Emitter | Financial year | Carbon (tonnes of CO2e) | % emissions | |
|------------------------|----------------------------|----------------|--------------------------------------|-------------|------|
| One and two | Gas | 20-21 | 132 | 0.48 | |
| | | 21-22 | 164 | 0.60 | |
| | | 22-23 | 134 | 1 | |
| | Petrol/diesel | 20-21 | 43 | 0.16 | |
| | | 21-22 | 41 | 0.05 | |
| | | 22-23 | 36 | 0.19 | |
| | Electricity | 20-21 | 216 | 0.78 | |
| | | 21-22 | 0 | 0 | |
| | | 22-23 | 0 | 0 | |
| SCOPE 1/2 TOTAL | | 20-21 | 392 | 1.4 | |
| | | 21-22 | 205 | 0.75 | |
| | | 22-23 | 170 | 1 | |
| Three | Purchased goods | 20-21 | 25,066 | 90.25 | |
| | | 21-22 | 24,771 | 91.20 | |
| | | 22-23 | 16,463 | 91 | |
| | Fuel And Energy (upstream) | 20-21 | 35.82 | 0.13 | |
| | | 21-22 | 28.11 | 0.10 | |
| | | 22-23 | 203 | 1 | |
| | Water/Sewage | 20-21 | 80 | 0.29 | |
| | | 21-22 | 103.53 | 0.38 | |
| | | 22-23 | Now included within Council Waste | | |
| | Council Waste | 20-21 | 96 | 0.35 | |
| | | 21-22 | 124 | 0.46 | |
| | | 22-23 | 16 | 0.09 | |
| | Business Travel | 20-21 | 36 | 0.13 | |
| | | 21-22 | 11 | 0.04 | |
| | | 22-23 | 1 | 0.01 | |
| | Employee commuting | 20-21 | 397 | 1.43 | |
| | | 21-22 | 397 | 1.46 | |
| | | 22-23 | 145 | 1 | |
| | Leisure centers | 20-21 | 1,051 | 3.79 | |
| | | 21-22 | 995 | 3.66 | |
| | | 22-23 | 1,009 | 6 | |
| | Investments | 20-21 | 700 | 2.52 | |
| | | 21-22 | 628.96 | 2.32 | |
| | | 22-23 | No longer reporting as insignificant | | |
| | SCOPE 3 TOTAL | | 20-21 | 27,382 | 98.6 |
| | | | 21-22 | 26,956 | 99.2 |
| | | | 22-23 | 17,837 | 99.1 |
| COUNCIL TOTAL | | 20-21 | 27,774 | - | |
| | | 21-22 | 27,162 | - | |
| | | 22-23 | 18,007 | - | |

Table 2 shows the results from all three years, the 20-21 financial year is the council's baseline.