Carbon Reduction Plan
&
SME Recommendation Report

ABC TPC Ltd / Trading as ABC Service

https://abcservice.co.uk/

22nd November 2024

ABC Service is an eco-conscious printing and media production company based in Tavistock town centre, West Devon serving Plymouth, Exeter and Oakhampton.

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1.0 Executive Summary & Document Rationale

This report is part of a larger project intended to guide SMEs through the early stages of the decarbonisation process, with council grant funding becoming available for engaged SMEs to benefit from. The wider project has been formulated to assist two local authorities of South Hams & West Devon to reach their Net Zero targets across their council areas.

The purpose of this document is to provide a Carbon Footprint of the small/medium-sized Enterprise (SME) taken to date on its decarbonisation journey.[1] It also provides information about particular 'carbon hotspots' found within the business and indicates potential pathways to decarbonisation via a range of recommendations. This is intended to be used as a reference tool for the SME to generate their own resources (e.g. a Carbon Reduction Plan). [2]

2.0 Overview

ABC Service is an ece-conscious printing and media production company based in Tavistock, West Devon dedicated to doing their part to create a more sustainable future for all. The staff are all local so car miles are minimal. The shop is on a typical high street setting with no adjacent parking, and there are four full time members of staff. There is a focus on sustainability in the business and the owner has implemented a number of initiatives to reduce carbon emissions and recycle where possible.

ABC Service have taken the following steps to promote sustainability on site:

- Energy is with Octopus energy a 100% Green energy supplier.
- All of their lighting is LED based lighting.
- All media is Carbon Captured and or recycled media. FSC Approved.
- The off-cuts from print paper are packaged up and sold, ideal for kids arts and crafts projects.
- Toners are all environmentally friendly. The toner bottles are made of recycled milk bottles.
- Wide format inks are environmentally friendly and come with GreenGuard Gold Certification. The inks are virtually odourless and do not require any special ventilation or environmental equipment.
- Paper supplier works with Woodland trust for carbon credits.
- They also ask local businesses to drop their old used, clean boxes into us and we use these for shipping the print in. This means they save on the packaging they are genuinely recycling and it gets the community involved too.

[1] As requested by West Devon and South Hams Councils.

[2] This document should be reviewed in conjunction with aforementioned companies' other relevant documents (if available), such as: Carbon Policy, Company Environmental Policy, Carbon Reduction Plan (or Statement). The document should also be read with the SME Workbook, which provides: Additional context, abbreviations & definitions, additional company details.

We will revisit potential long, medium & short term options for enhancement later in this report, once the carbon intensity of the business is better understood.

3.0 Baseline Emissions Footprint

Baseline emissions are a record of greenhouse gases (GHG) that have been produced in a particular identified year. Baseline emissions are the reference point against which future emissions reduction can be measured, so ideally a baseline carbon footprint would be undertaken prior to the introduction of any strategies to reduce emissions. This is so effects can be tracked & progress recorded.

Carbon Baseline
Limited information supplied for footprinting purposes. No energy bills which makes calculations difficult.

Baseline Year: 2023/4	
Period type:	*Year to date (Oct 2023-Sept 2024)*
Scope 1	**Gas Use (from bills)** 5468kWh annual use x 0.20264 natural gas conversion factor = 1,108.157104 $kgCO_2e$ (/1000) = 1.108tCO_2e **Total Scope 1 emissions: 1.108tCO_2e**
Scope 2	**Purchased Electricity** 11,163.3kWh annual use on a renewal plan **Total Scope 2 emissions: 0tCO_2e as its from 100% renewable sources.**

Scope 3 (Included Sources)	**Water** Water use marginal and allocated to above flat. **Staff Travel** 2 cars travelling 3 miles per day 5 days a week (assume mid-size petrol vehicle for unknown car) Mini Cooper: 720 miles per year x emissions factor 0.23153 = 166.7016kgCO_2e (/1000 = **0.16 tCO_2e**) Mid Size Petrol Car: 720 miles per year x 0.28526 = 205.39kgCO_2e (/1000**= 0.205 tCO_2e**) **Deliveries** Paper deliveries - once a week from Newton Abbot to Oakhampton. 98mile round trip. Based on a 50 'working' week year = 4900 miles per year to deliver the paper. Emissions factor 0.30309 for Class II Van (4900x0.30309 = 1486.141 (/1000 = **1.485tCO_2e**) **Total Scope 3 emissions: 1.850tCO_2e**
Total Emissions (with Scope 3)	**2.93 tCO_2e**

4.0 Carbon Hotspots & progressing to Net Zero

The following 'Hot Spots' have been identified as areas where potential carbon reductions could be achieved:

- *Decrease Scope 2 Emissions by improving the energy efficiency of the building fabric.*
- *Potential to investigate solar power or air source heat pump to reduce energy bills.*
- *Voluntarily Decrease Scope 3 Emissions by providing encouraging staff to switch to alternatives to car for commute - incentivising active travel or public travel options.*

In order to commit to achieving reductions around carbon (or equivalent) organisations should incorporate a programme of decarbonisation. Section 5.0 of this document sets out a suite of short, medium & long-term decarbonisation actions to address the carbon hot spots listed above.

No smart targets or Key Performance Indicators (KPI's) were observed as part of the consulting process with the business. In order to achieve Carbon Net Zero in line with Devon Council's climate commitments, smart targets should be set , to the maximum date of 31/12/2030.

The general mantra for increasing environmental performance is "if you don't measure it, you can't manage it'. In order to continue progress toward achieving Net Zero, the business could consider establishing a set of SMART carbon reduction targets. SMART targets are:

S – Specific
M – Measurable
A – Attainable
R – Realistic
T – Time Bound

5.0 Recommendations (Short, Mid, Long Term)

The overarching aim of undertaking this work is to reduce the emissions (carbon) from the business operation. The following recommends future actions to facilitate this process.

Future Emission Reduction Actions - Recommended

Through the process of assessing the current business operation as well as undertaking a carbon footprint of the aforementioned business, the following potential short, medium and long-term initiatives are suggested. These have been further split out by those most suitable for incorporation for the business, along with an indicative time & cost to implement.

Further ideas on decarbonising your business are listed in Appendix 1 of the SME Project Workbook. These are generic for all SMEs. The focus of this report was to recommend the most suitable, innovative and impactful carbon reduction methods specific to the SME and these are noted in the sections below.

The following recommendations are broken down by this rough guide:

- Short Term
    - Low cost (generally £0-£1000 per initiative) unless it's a priority
    - Easier to implement (not requiring complex systems & processes or business changes) and quick to implement (0-6 months)
- Medium Term
    - Some more substantial costs involved (generally £1,000-£10,000 per implementation)
    - Generally 6-24 months in terms of priority or implementation
- Long Term
    - More strategic (likely to require significant procedural updates, organisational changes &/or senior level sign off)+
    - Longer term (taking 24 months to fully implement) and costing £10,000+

Short Term

Implementation	Indicative Cost (£)	Indicative Time to Implement	Other Considerations	Potential Emission saving (CO_2e)
Undertake an air leakage test (air tightness test)	£170-£300	2-4 weeks (dependent on contractor availability)	Data will enable the building to target areas of poor performance and enhance its overall energy use & resultant carbon emissions Likely to be advised on any EPC test report	30-50% heat loss reduction (when combined with other factors) – aiding energy reduction & resultant carbon emissions
Cycle to work scheme	Costs associated e.g. purchasing a bike Involved staff will save money on fuel	Instant	Only feasible for staff that live in proximity to the business Reduced greenhouse emissions and environmental impacts Improved community health and wellbeing Low-cost activity.	Dependent on staff engagement.
Improve air tightness inside the property	No more than £50 per product	Instant	Utilising silicone-based sealants, & airtight non-shrink foam, to reduce small air gaps within the building, particularly around the external envelope is an effective way to reduce drafts. This keeps the cost to procure & install low & aids thermal comfort for occupants. Air flow in a property is a delicate balance between ventilation (to prevent mould & poor air quality) & air tightness (& thermal comfort)	Air leakage can account for up to 50% of heat loss (thereby increasing energy & carbon emissions by the same degree (if electricity supply is non-renewable)

			Products such as MAPEI MAPESIL AC 100 SOLVENT-FREE SILICONE SEALANT are solvent free & high performing on sustainability	
Internal Insulation	£500 -£ 5,000 (cheaper if install is undertaken without the use of a contractor: recommended)	2-8 weeks	Roof/loft insulation (roll & board) is a cost-effective way of increasing thermal comfort in a building. This can be installed at low cost as this is relatively easy to do without specialist training. Materials such as Knauf Eko & Xtratherm PIR boards Roll (other products available) perform well with the BRE Green Guide rating system.	Up to 40% reduction in energy used from heating. (decreasing carbon emissions by the same degree (if electricity supply is non-renewable)
EV salary sacrifice for employees	Free employer set up Employee savings of up to 30 - 60 % on EV's	Dependent on employee takeup	Reduced fuel costs for employees Employees save money on National Insurance and Income Tax (not taxed on sacrificed portion of salary)	

Medium Term

Implementation	Indicative Cost (£)	Indicative Time to Implement	Other Considerations	Potential Emission saving (CO_2e)
Investigate the viability of secondary glazing on shop front windows	£1000 per window	1 day installation by contractor (e.g. Clearview	A secondary panel creates an airtight barrier between the interior of the property and exterior window increasing heat retention. Adheres to restrictions and requirements set out by legislation	Increased thermal efficiency up to 60%, reducing energy usage and carbon footprint

		Secondary Glazing)	Thermal comfort of staff and customers	
Investigate Infrared Heating Panels	£400-600 per panel (60 x 120cm)	1-4 months (dependent on product & supplier availability)	A newer technology with less studies demonstrating in real life use data. Suggested to be more energy efficient than other low/no emission heating options Easy install (only minor refurbishment required) One panel required per small, enclosed room	Like for like heat vs energy use efficiency when compared with conventional space heaters

Long Term

Implementation	Indicative Cost (£)	Indicative Time to Implement	Other Considerations	Potential Emission saving (CO_2e)
Install solar PV panel with associated battery storage & inverter	£15,000 -30,000 (depending on the size of the array - price per accommodation unit)	2-4 months (dependent on supply chain)	Less dependence on grid electricity, Eventually become energy independent (no need for energy provider), Ability of the business to utilise electricity for heating & equipment use more freely.	900 kgCO_2e per panel per year

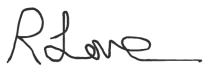
Install an Air Source Heat Pump (if other heating systems haven't been installed)	£8,000-£15,000 (dependent on size of unit and mounting requirements)	2-9 months (dependent on supply chain for manufacturing & contractor availability for install)	Air source heat pumps are around three times more expensive to purchase and install compared to conventional gas boilers, but they are generally twice as efficient. Other electric heating methods may be more appropriate on a budget. Significant insulation & air tightness enhancements to the property should precede installation. Current gas boiler is towards end of life & a key carbon source	Unknown (No current heating in place)
Analyse year 1 data	Free	1 year from start of operation	Will provide a clear marketing message with verifiable data for external justification	Analysis will identify potential future savings

6.0 Declaration and Sign Off

This report has been completed in accordance with a standardised format for carbon reporting.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting.

Scope 1 and Scope 2 emissions have been reported in accordance with the UK Government's Streamlined Energy and Carbon Reporting requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the GHG protocol.



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Appendix 1 – Detailed Decarbonisation Actions

A detailed list of general decarbonisation actions (additional to those specific to the SME noted in this report) are available in Appendix 3 of the SME Workbook.

Appendix 2 – Key Terminology & Abbreviations

Please refer to Appendix 1 of the SME Workbook provided as part of this project.

Appendix 3 – Useful Links, Guidance & Resources

Please refer to Appendix 2 of the SME Workbook provided as part of this project.

Appendix 4 – Carbon Reporting Methodology & Disclaimer

This report is focussed on the organisational carbon footprint (Scopes 1 & 2) only. It is not focussed on the products produced by SMEs involved. Some additional reporting relating to Scope 3 emissions may be provided.

Any inclusions or omissions have been clearly stipulated in the body of this report.

UK Government standardised emission factors have been applied where required as provided below

https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

This report has been provided with use best information available (either as evidence collected from the SME noted at the top of this report or by the use of up to date, best practice industry information & guidance on carbon reporting & decarbonisation). Any advisory recommendations are to be utilised at the SME discretion based upon the organisation and particulars of the business. Please refer to the corresponding disclaimer issued with this report.

End of Report