Example School Reduction Plan
M. Example - March 2025

1. Introduction

Climate change is the defining challenge of our time, demanding immediate and decisive action from all sectors of society. The overwhelming scientific consensus points to human-induced greenhouse gas emissions, particularly carbon dioxide, as the primary driver of global warming and its far-reaching consequences. As we witness increasingly frequent extreme weather events, rising sea levels, and threats to biodiversity, the need for urgent climate action has never been more apparent.

Our School recognises its responsibility to do its fair share of climate action to reduce carbon emissions while also seizing a variety of co-benefits such as ensuring students and others we engage with are given the opportunity to learn, shape our action and build skills for the future.

By implementing this plan, we will work to reduce our environmental impact and set an example for other schools and those in the community to follow.

2. Executive Summary

The school's baseline year (2022/23) carbon footprint was measured at 410.53 tCO$_2$e, with a significant portion coming from building gas use for heating. The second calculation for the 2023/24 period saw a reduction of 5.4% reflecting on a number of early actions adopted by the school.

The school is committed to reducing its emissions by following the action plan stated in this document which includes improving building efficiency, behaviour of students and employees, and addressing our fleet.

3. Example School, Scope & Methodology

Our School has 1000 students who are taught across two buildings heated by natural gas and has solar installations on both roofs. The school also owns two minibuses for the use of transporting small groups of students to local areas.

Our school supports Welsh Government's public sector ambition to become Net Zero Carbon by 2030. Using the carbon calculator provided by Flintshire County Council, we will measure and work to reduce the greenhouse gas emissions from the following sources:

- Building Electricity, Gas, Water Use and Water Treatment
- Waste and Recycling
- Fleet minibuses
- School Travel (provided by a service provider)
- Employee Business Travel
- Employee Commute
- Supply Chain

The spend related to electricity, gas, water use and treatment, waste management and school trips will not be included in the Supply Chain calculation to avoid double counting of emissions.

4. Baseline Emissions

Our first measurement of greenhouse gas emissions was taken for the period 1st April 2022 – 31st March 2023, with a total carbon footprint of 410.53 tCO_2e.

Emission Source	Baseline Emissions (tCO_2e)
Building: Electricity	97.7
Building: Heating	189.21
Building: Water Use and Treatment	0.097
Waste	0.59
Fleet and Equipment	3.0
Business Travel and School Trips	0.39
Employee Commute	44.28
Supply Chain	75.27

Table 1 Example school baseline (2022/23) emissions by source

When collated into each theme, **Buildings** was the largest contributor to the school's carbon footprint at 287 tCO_2e, **Supply Chain** second with 75.27 tCO_2e, and **Transport** last with 47.67 tCO_2e.

As a result, this Carbon Reduction Plan will primarily focus efforts to reduce energy use in buildings to reduce emissions.
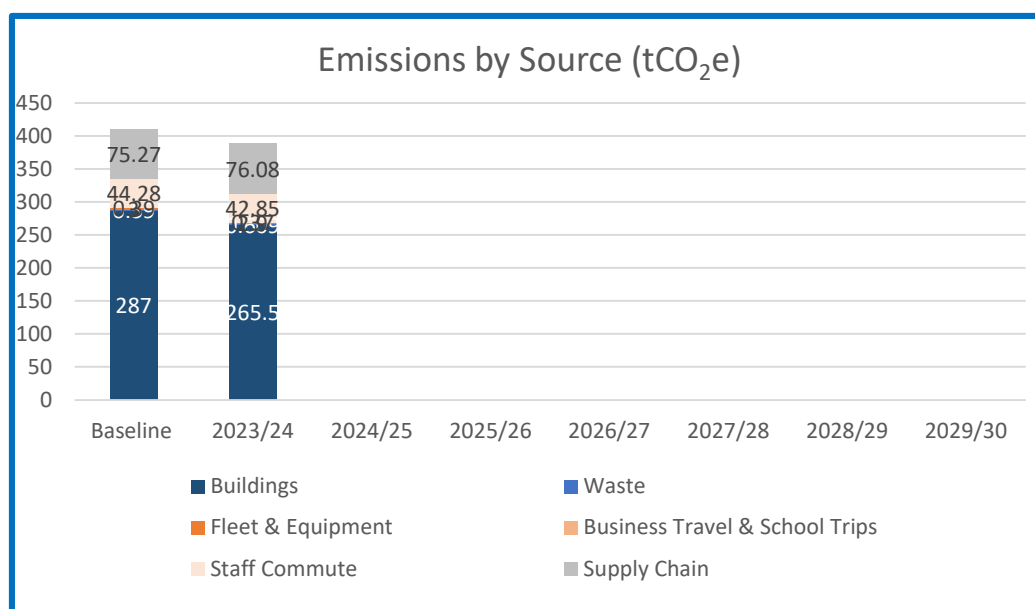
5. Data & Graphs

Figure 1 graph showing annual emissions by source

Example School Reduction Plan
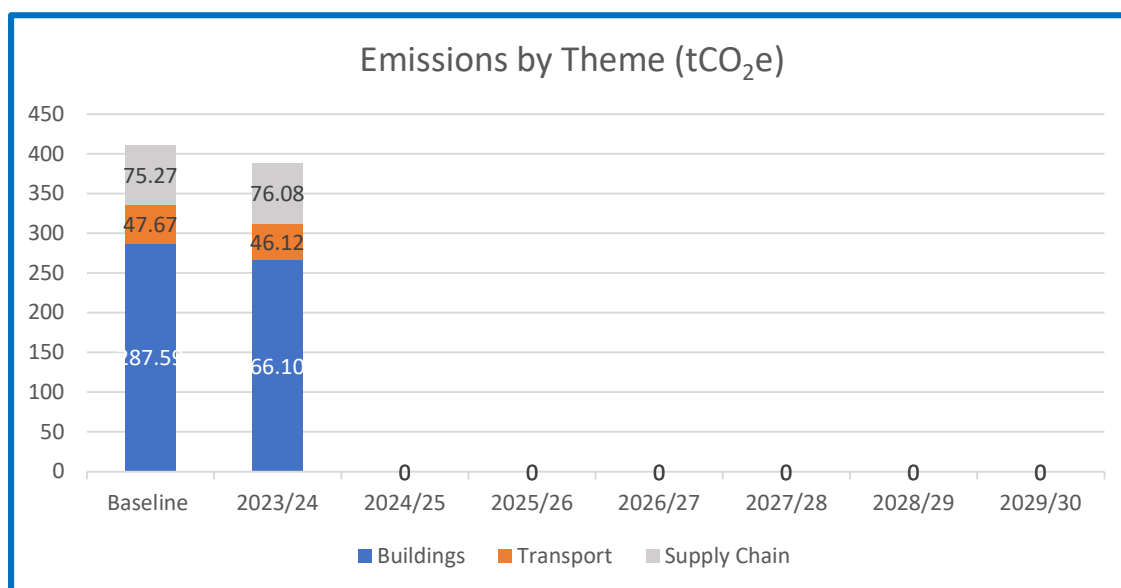## M. Example - March 2025

Figure 2 *graph showing annual emissions by theme*

6. Carbon Emissions & Reduction Progress

2023/24 is the most recent measurement of the school's greenhouse gas emissions and shows a total reduction of 5.4% compared to the baseline year with emissions at 388.3tCO$_2$e.

Buildings: 7.5% Reduction
Transport: 3.3% Reduction
Supply Chain: 1.1% Increase

The reductions seen have been achieved through a number of actions led by the school, focussing on both building upgrades and behaviour change.

Building Upgrades
Working with Flintshire County Council's Non-Domestic Energy Team, a new Building Management System was installed helping to closely monitor energy use and see where in the school energy might be wasted. This allows to tailor approaches to improve other efficiency measures and improve behaviour change where needed.

Also with the Non-Domestic Energy Team, LED Lighting has been installed throughout, supported with light sensors to reduce electricity demand from our lighting.

Behaviour Change
Our students carried out a School Environmental Assessment to identify where the school is doing well on environmental practices and where there are opportunities for improvement. Our students gave the school a good score of 85%, highlighting improvements with regards to ensuring our heating systems (e.g., radiators are working efficiently) and equipment is always switched off when not in use.

As we are a school that demands high standards, we will work with our students to address the opportunities found, and ensure strong performance is maintained by inviting more students to carry out regular assessments.

Our science curriculum has also increased the content related to Climate Change ensuring our students are involved with the school's carbon footprint calculation and can see the effects of climate change using hand-on experiments. With this improvement, our students are becoming more aware of the career opportunities available to them while ensuring they are growing skills for the future.

Transport

Fleet emissions reduced this year due to less distance being covered by school minibuses. However, when these vehicles come to the end of their life, the school will investigate the use of electric or hybrid minibuses.

Our students conduct employee travel surveys each year as part of their carbon footprint work, helping them to understand and process data. For the 2023/24 carbon footprint, it was found that more employees are walking or cycling to school more regularly instead of using their cars. This has been a result of in-school events celebrating sustainable travel days and similar.

7. Renewables

In the 2023/24 period, the school generated 31,015 kWh of electricity from its roof mounted solar panels. This is a 0.1% increase from the previous year which reflects variation in weather.

The school uses this renewable generation where possible, and any excess is fed back into the National Grid to support further decarbonisation.

8. Action Plan

This section introduces the school's Action Plan. This action plan has been created by investigating the emissions in our baseline year, completing Environmental Assessments, and working with our students to ensure what we do is appropriate for the school, ambitious and aligns with our values.

We have chosen 10 actions in total using the examples in the Toolkit's Carbon Tracker tool, and these will be implemented and maintained over the next five years.

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Theme (buildings, etc.)	Carbon Reduction Action (state actions to reduce emissions and any targets)	Lead (employee)	Resource (funding, time, expertise)	Start Date (planned start)	Finish Date (once completed)
Building	Conduct an Environmental Assessment.	Mrs. Example	Student Time	May 2023	Annual
Building	Install a Building Management System.	Mrs. Example	Grant Funding and Non-Domestic Energy team	July 2023	August 2023
Building	Install LED Lighting.	Mr. Example	Grant Funding and Non-Domestic Energy team	July 2023	August 2023
Building	Implement a share scheme for books and other materials, promoting reuse and circular economy.	Mr. Example	Employee Time	Feb 2025	Ongoing
Building	Improve building fabric (insulation of walls and pipes, draft exclusion, etc) to retain heat and minimise energy demand for heating.	Mrs. Example	Grant Funding	July 2025	To be started
Transport	Create an Active Travel Plan to encourage employees and children to make sustainable travel choices when they can.	Mr. Example	Employee Time and Climate Change Team	September 2025	Ongoing
Transport	Investigate and purchase low-emission minibuses to reduce or remove use of petrol/diesel.	Mrs. Example	Grant Funding	April 2026	To be started
Procurement	Produce a sustainable procurement guide to advise employees on how to purchase goods with carbon, waste, and ethics in mind.	Mr. Example	Climate Change Team	April 2026	To be started
Behaviour	Request Flintshire's Climate Change Team to train Employees and students on climate change.	Mr. Example	Climate Change Team	June 2025	To be started
Behaviour	Celebrate Wales Climate Week each year within the school and the community.	Mr. Example	Core funding for materials	November 2024	Annual
Land	Plant new fruit trees on the school grounds to absorb carbon dioxide and boost biodiversity	Miss. Example	Grant Funding – Orchards for Schools	January 2025	February 2025
Land	Invite Wildlife charities to engage with students	Mr. Example	Employee Time	April 2025	Continuous

9. Glossary

Biodiversity: The variety of plant and animal life that make up our natural world or a particular habitat.

Carbon Dioxide Equivalent (CO2 e): the equivalent amount of carbon dioxide that would produce the same amount of global warming over a 100 year timescale.

Greenhouse Gas: a gas that retains the earth's heat when warmed by the sun. Greenhouse gases include carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).

Net Zero Carbon: Emissions of greenhouse gases are balanced by the removal of greenhouse gases from the atmosphere such as by trees, peatland and carbon capture and storage technologies.

Renewable Generation: Producing electricity through the use of solar panels which does not require the use of finite resources to produce energy (e.g., fossil fuels).

Welsh Public Sector Net Zero Carbon reporting guide: In response to Welsh Government's target of a carbon neutral public sector by 2030 a new Welsh GHG emissions reporting system has been developed whereby public sector organisations will report their GHG emissions annually to Welsh Government. Detailed guidance has been provided to support organisations in their calculations.