School Climate
Toolkit

CYNGOR
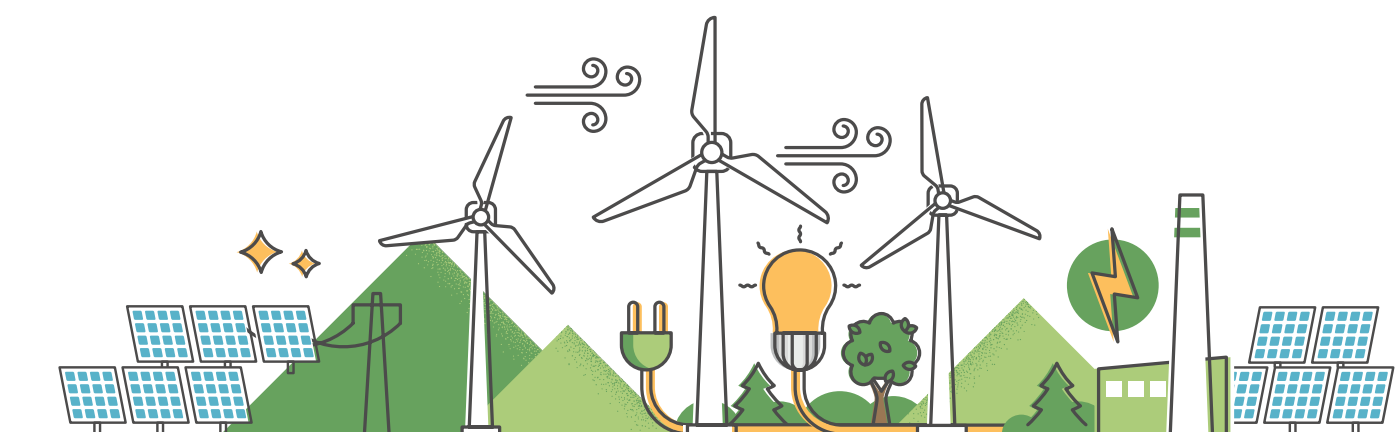**Sir y Fflint**
Flintshire
COUNTY COUNCIL

Contents

1. Introduction

1.1 Welcome

Welcome to the School Climate Toolkit. This is the first of its kind in Flintshire County Council and has been created by the Climate Change team.

Throughout this toolkit are links to supporting webpages, content, and e-mails. These are provided in images, videos, and **blue underlined text**. Flintshire County Council is not responsible for the content in external links provided in this document and supporting tools.

1.2 Targets

In 2015, at the United Nations COP 21 in Paris, the world came together to set temperature targets to limit global warming and resulting climate change. It was agreed that the global average temperature would be kept well below 2.0°C warmer than the late 1800s, with ambition to limit to 1.5°C. Currently, temperatures on average are 1.1°C higher.

Paris Climate Agreement

To help achieve this target, Welsh Government committed to Wales and its regions becoming Net Zero Carbon by 2050, with an ambition for the Public Sector to achieve this by 2030.

Net Zero Carbon 2030 Route Map

1.3 Flintshire County Council Action

In response to Welsh government's public sector targets, the council launched its **Climate Change Strategy** in 2022, stating how the council intends to reduce its own carbon emissions and improve carbon absorption from its land.

The Strategy is split into five key themes where climate actions are categorised, these are:

- **Buildings:** Heating, Electricity, Water Use, Waste and supporting various services
- **Mobility and Transport:** Fleet Travel, Business Mileage, Staff Commute and Public Transport
- **Procurement:** Materials, Products and Services in the Council's Supply Chain
- **Behaviour:** Decision Making, Efficient Behaviours, Engagement
- **Land Use:** Tree Planting, nature and how the land can help protect from climate change.

The council measures its carbon emissions annually to monitor progress and direct actions towards Net Zero Carbon by 2030. Each year's emissions are measured against its baseline year of 2018/19, and has since reduced carbon emissions by over 30% through investing in renewable energy, improving building efficiency, supporting staff with flexible working, optimising fleet travel and methodology improvements.
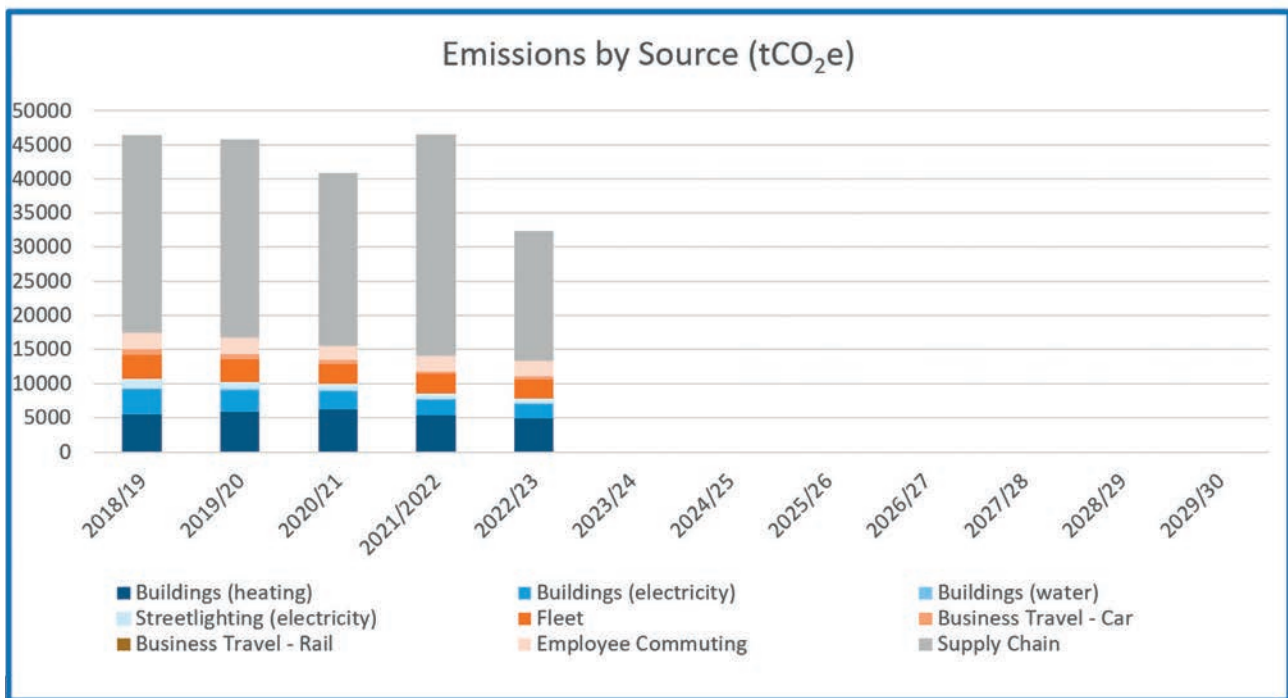
Image 1 *Flintshire County Council carbon emissions*

1.4 Why a Climate Toolkit for Schools?

There are approximately 80 schools in Flintshire and thousands of staff and learners within them, so there is a significant opportunity to reduce carbon emissions and engage individuals. Because of this, the Climate Change Strategy identifies the action 'CCBu10'.

> ***"Support Schools and Town & Community Councils to reduce operation's emissions and engage with our building users to encourage positive behaviour change".***

By the school calculating its carbon footprint, it allows a clearer and more accurate collation of data and more effective allocation of actions to reduce the school's footprint, where the school staff and learners can lead on the behavioural change.

The **Well-being of Future Generations** (Wales) Act is to improve the social, economic, environmental, and cultural well-being of Wales. It requires public bodies like Flintshire County Council to think long term, look to prevent problems and take a more joined up approach. This law is key to addressing challenges that Wales faces - like climate change. This climate toolkit incorporates multiple well-being goals. The focus on climate action is to leave behind a world for our future generations, so engaging them throughout this process is key.

1.5 Toolkit Ownership

It is the responsibility of a school's Senior Leadership Team to nominate a suitable member of staff as the Toolkit Lead and ensure the toolkit is implemented and supported. The leadership team must also ensure that implementation and climate actions identified within the carbon reduction plan are aligned to school policies and values and do not result in problems elsewhere.

Go to section 3.2 for Toolkit Lead

1.6 Toolkit Contents

The toolkit is a collection of documents, spreadsheets, and resources to help understand climate change and the risks presented, measure carbon emissions and reduce them by creating a carbon reduction plan, all the while engaging learners through the process and in class.

Learner Involvement

Step 2
Envirnomental
Assessment

Step 6
Engagement
& Lesson
Plans

Data
Collection
Guides

Central Document

Step 5
Carbon
Reduction Plan
& Climate
Actions

Step 3
Carbon
Footprint
Calculators

Step 4
Carbon
Tracker
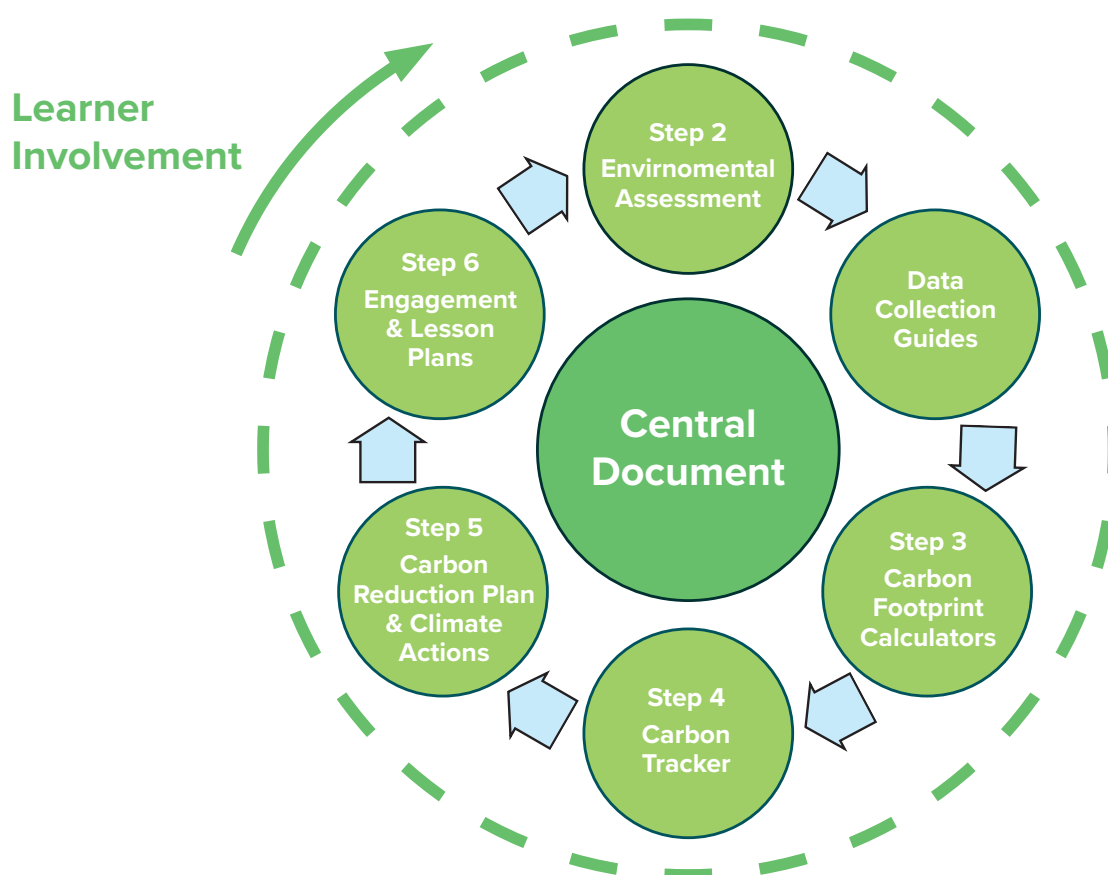
Image 2 Toolkit tools and process to implement the toolkit.

- **Central Document** (this document): Schools should always refer to this document as it contains all information required to implement the toolkit and 3rd party lesson plans.

- **Environmental Assessment:** Learner-led audit of the school's environmental practices.

- **Carbon Footprint Calculator:** Excel-based calculator where schools input data (e.g., electricity consumption) to measure its carbon emissions.

- **Staff Commute Calculator:** Excel-based calculator to determine staff commute emissions.

- **Carbon Tracker:** Excel-based tool where schools record year-on-year carbon emissions showing where progress is being made.

- **Carbon Reduction Plan:** The school creates this plan to report on carbon emissions and identify actions to reduce them. This is available in both Microsoft Word and Excel.

- **Climate Actions:** A list of actions that schools may wish to adopt to reduce carbon emissions.

- **Lesson Plans:** Two lesson plans created by the climate team in addition to those in the main toolkit document. The first is for primary settings covering transport, and the second lesson plan is for secondary schools with a focus on energy sources.

- **Data Collection and Input Guidance:** Simple instructions on how to use the carbon calculator and tracker correctly, and survey templates to collect data that is not already available.

- **Digital Energy User Guide:** Instructs how to use the Digital Energy platform that records school utility consumption.

1.7 Toolkit Benefits

As well as reducing carbon emissions to address climate change, the toolkit brings other benefits such as cost savings from reduced energy consumption, improved climate knowledge and skills, involvement in local action, improved well-being, evidence for funding applications and direct support from the council. Additionally, the following laws and goals from governing bodies have helped to shape this toolkit, where in turn the toolkit supports their delivery.

The **Curriculum for Wales** is supported by engaging learners with the science on climate change, calculation and reporting tools, and encouraging schools to ensure there is a platform for learners to provide a voice on school climate action.

Areas of learning that the toolkit can support are.

- Humanities
- Language, Literature and Communication
- Mathematics and Numeracy
- Science and Technology

The **Well-being of Future Generations Act** consists of 7 connected well-being goals for Wales.

They are:

- A prosperous Wales
- A resilient Wales
- A healthier Wales
- A more equal Wales
- A Wales of more cohesive communities
- A Wales of vibrant culture and thriving Welsh language
- A globally responsible Wales

The toolkit supports these goals by:

Prosperous Wales

Reducing the Council's carbon emissions enables strategic investment in projects and ways of working that can deliver savings/generate new income streams. Action also supports the development of a low carbon economy through infrastructure projects, tree planting and land management.

Resilient Wales

Decarbonisation of the Council's services promotes resilience through action such as investment in renewable energy infrastructure and increasing ecological resilience through enhancing biodiversity. By planning for climate change adaptations, the council's services and its communities will become more resilient.

Healthier Wales

Decarbonisation promotes a shift to active travel, investment in green infrastructure, support locally sustained food sources and development of renewable energy. This promotes healthier lifestyles, improved well-being, and reduced health impacts.

Globally responsible Wales

By reducing emissions to net zero, the council contributes to climate change mitigation, leading locally to help achieve Welsh Government, and international climate goals.

Some articles of the **UNICEF Rights of the Child** can also be supported by the toolkit by building learner skills through direct engagement with the tools and learner voice through Eco-Committees and the Carbon Reduction Plan.

Article 12: Respect the Views of the Child

Article 13: Freedom of Expression

Article 24: Health and Health Services (clean environment)

Article 29: Goals of Education

unicef
for every child

2. Climate Change

2.1 What is Climate Change?

Climate and weather are very closely related terms but with one very different factor: Time. Weather tends to last few hours to a few days, whereas Climate is the average of that weather over long periods of time (tens to thousands of years). This can be further elaborated as.

Climate is what you expect, weather is what you get!

Climate change is the shift in those average weather conditions, and for the UK we typically expect that summers will become hotter and drier, while winters become milder and wetter with extreme weather events happening more often and worsening.

2.2 What causes Climate Change?

Over the last couple of centuries, industrial activity has grown significantly as has demand for energy, products, food, travel, and land. As a result, burning of fossil fuels and the removal of natural habitats and forest have caused an imbalance of carbon dioxide (CO_2) in the atmosphere, where more carbon is being emitted than is being absorbed by trees, oceans, etc.

Levels of carbon dioxide in the atmosphere are almost 40% higher than what has naturally occurred over the last 650,000 years!

Carbon dioxide is a greenhouse gas meaning it can absorb the sun's infrared radiation and act as a blanket warming our atmosphere. Globally on average our atmosphere has warmed by 1.1°C since the mid-1800s and is resulting in Climate Change.

Other greenhouse gases exist such as Methane (CH_4) and Nitrous Oxide (N_2O) which contribute to global warming, but Carbon Dioxide is the focus of climate action.
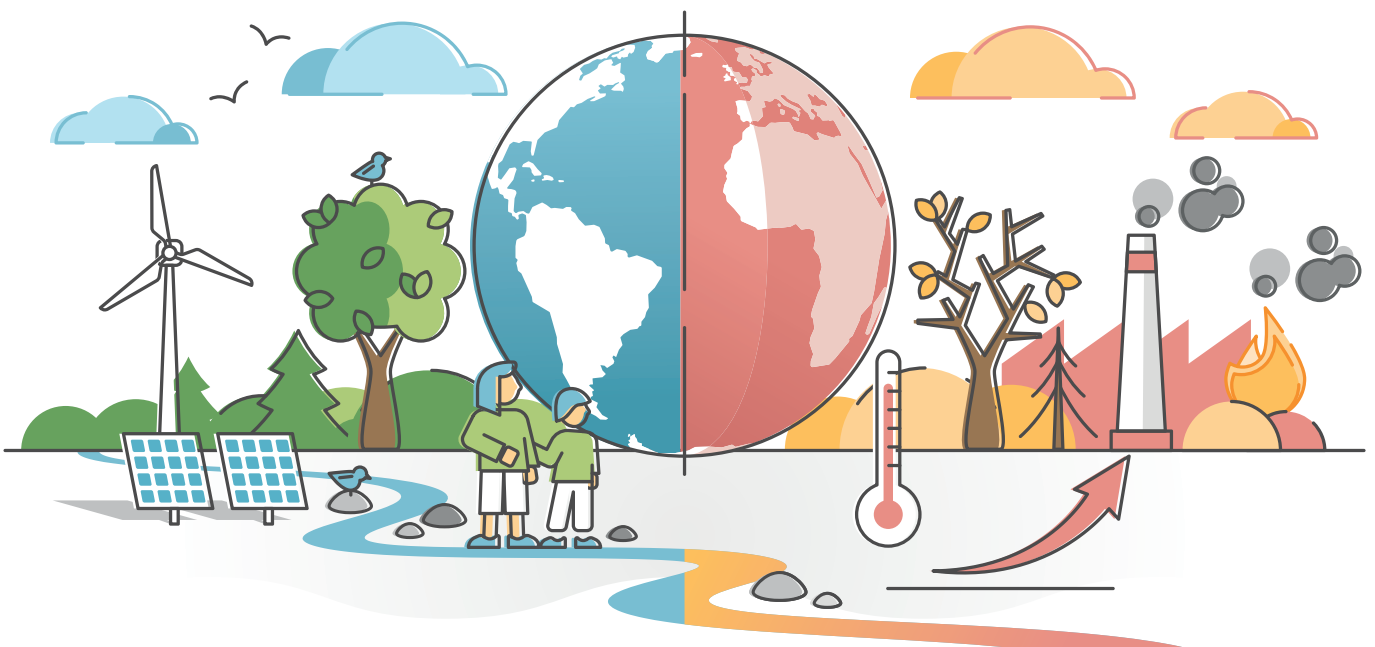
2.3 Impacts of Climate Change

These shifts in temperatures affect weather events around the world and can vary from region to region. This can increase the frequency and severity of extreme weather events and has impacts such as forest fires, severe droughts, flooding, food scarcity, poor health and well-being, declining biodiversity, and rising sea levels due to melting ice caps and glaciers.

In the UK it is expected that summers will become warmer and drier, with winters milder and wetter.

2.4 Who is impacted by Climate Change?

Ultimately everyone is being impacted by Climate Change, but certainly not equally. People on lower incomes, from minority groups and living in less developed and/or low-lying countries, are typically impacted more greatly.

And it is not just people who are feeling the effects - there are many species of wildlife and plants which are also impacted, some of which at risk of extinction as a result. Click **here** for more information.

3. Implementing the Toolkit (Step 1)

3.1 Introduction

This section will explain processes and some key considerations to make in order for the school to successfully use the toolkit.

3.2 Toolkit Lead

The first step of implementing the School Climate Toolkit is appointing a Toolkit Lead. The Toolkit Lead is the member of staff who will be responsible for the use of the toolkit, calculating carbon emissions, collaborating with teachers, and ensure it is well-engaged with.

This member of staff can be agreed upon by the school but ultimately should have the knowledge and resources in which to take this role. Many schools already have Eco-school or Sustainability Leads and would make an ideal Toolkit Lead.

Once a Lead has been identified, they should notify the Council's Climate Change Team and introduce themselves ensuring full support can be provided.

climatechange@flintshire.gov.uk

3.3 Eco-Committees

Learners should be fully involved with this climate toolkit, supporting their education, apply learning in a real-life example, be a part of decision making and ultimately make a success of decarbonisation.

Many schools as part of the Eco-Schools programme will already have an Eco-Committee in place made up of learners and staff. These Committees are an excellent opportunity for learners to become involved with the Toolkit and support the school in its implementation.

Where a school does not have an existing Eco-Committee, it can easily create one following the advice set out in this link from **Keep Wales Tidy**

3.4 The Process

The toolkit involves a simple process that should be followed and, in most part, conducted annually. This is shown below starting with the nomination of a Toolkit Lead, ensuring an Eco-Committee is formed for learners to express their voice, and informing the council's climate change team of the toolkit's use.

1 Identify Toolkit Lead Form Eco-Committee Inform Council

2 Environmental Assessment

3 School Carbon Calculator

4 Update Carbon Tracker

5 Create/ Review Carbon Reduction Plan

6 Take Action & Engage Learners

7 Communicate Progress
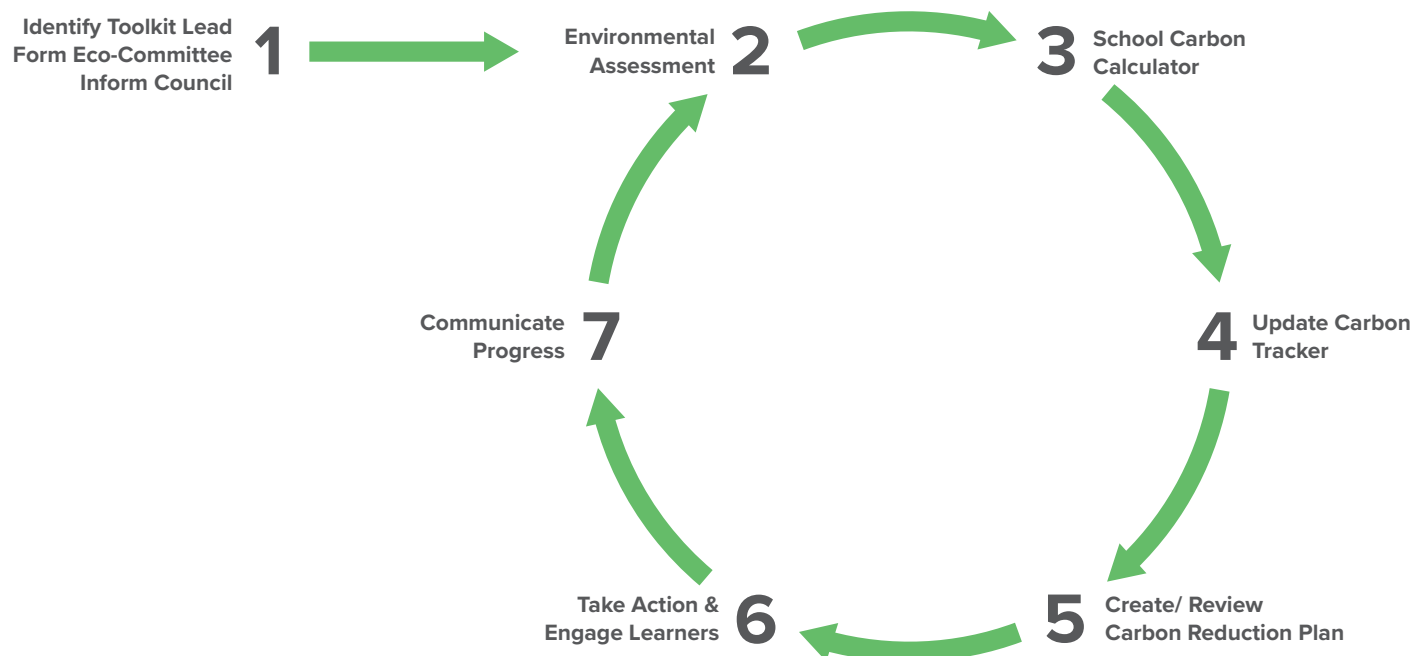
Image 3 Process Cycle to implement toolkit.

Although it is recommended that schools should go through the process annually on a formal basis, aspects of the toolkit can be used informally throughout the academic year, especially in classrooms to develop skills (e.g., environmental assessment, carbon footprint calculations, etc.).

3.5 Limitations

Although unlikely, schools should always be aware of any new risks introduced when selecting climate actions in the carbon reduction plan. Always ensure decisions are made collectively as a school so to safeguard its main purpose - to educate learners.

3.6 Engagement

There is significant opportunity for learners to be involved in the implementation of the toolkit and many features will help deliver the Curriculum for Wales. Throughout this document there will be prompters where it is felt learners can be involved with a particular activity.

Engagement Opportunity

3.7 Toolkit Access and Updates

The toolkit is accessible on Flintshire County Council's Climate Change webpage.

https://flintshire.gov.uk/en/Resident/Climate-Change/Climate-Toolkits.aspx

The toolkit will be reviewed and updated periodically or where issues arise. Toolkit Leads will be informed when these updates become available.

3.8 Key Contacts

If you need any support with using the toolkit, data collection or taking action, then please contact the teams in the table below.

Enquiry	Contact
Toolkit Issues & General Enquiries	**climatechange@flintshire.gov.uk**
Digital Energy Platform & Renewables	**energy.unit@flintshire.gov.uk**
Water Use Data	**energy.unit@flintshire.gov.uk**
Council Services Waste Data	**WasteData@flintshire.gov.uk**
Staff Business Mileage Data	**climatechange@flintshire.gov.uk**
Supply Chain Data	School's Business Manager, SLA in Council Accounts Team or **AP&ARTeam@flintshire.gov.uk** to run a spend report.
Tree Planting and Nature	**biodiversity@flintshire.gov.uk**
Keep Wales Tidy: Eco-Schools	**catrin.hughes@keepwalestidy.cymru**
Keep Britain Tidy: Count Your Carbon	**Enquiries@keepbritaintidy.org**

4. Environmental Assessment (Step 2)

4.1 Introduction

Step 2 introduces the Environmental Assessment which is a simple to use learner-led audit of a school's environmental behaviours and practices. It covers the topics of energy usage, biodiversity, transport, and water usage.

This activity can be conducted before a school begins its carbon footprint calculation and serves as a simple introduction to the toolkit for both staff and learners as well as information gathering.

Engagement Opportunity

4.2 Engagement

Learners can do this assessment formally (contributing to the Carbon Reduction Plan) or as part of lessons.

Learners should walk the school in small groups (either self-led or accompanied by a teacher for support), looking for evidence of good practice and areas for improvement. Good practice is given a point and a total is applied at the end.

At the end, Learners can be given the opportunity to present their findings to the Toolkit Lead or their classroom with recommendations for improvements.

4.3 Outcomes

This activity helps learners to understand good examples of environmental practice and be put in a position where they can test the school (a changing of roles).

Learners should be encouraged to apply their new understanding in their day-to-day life in school and at home, looking to promote positive behaviours. Schools can use the findings of the assessments to support the Carbon Reduction Plan.
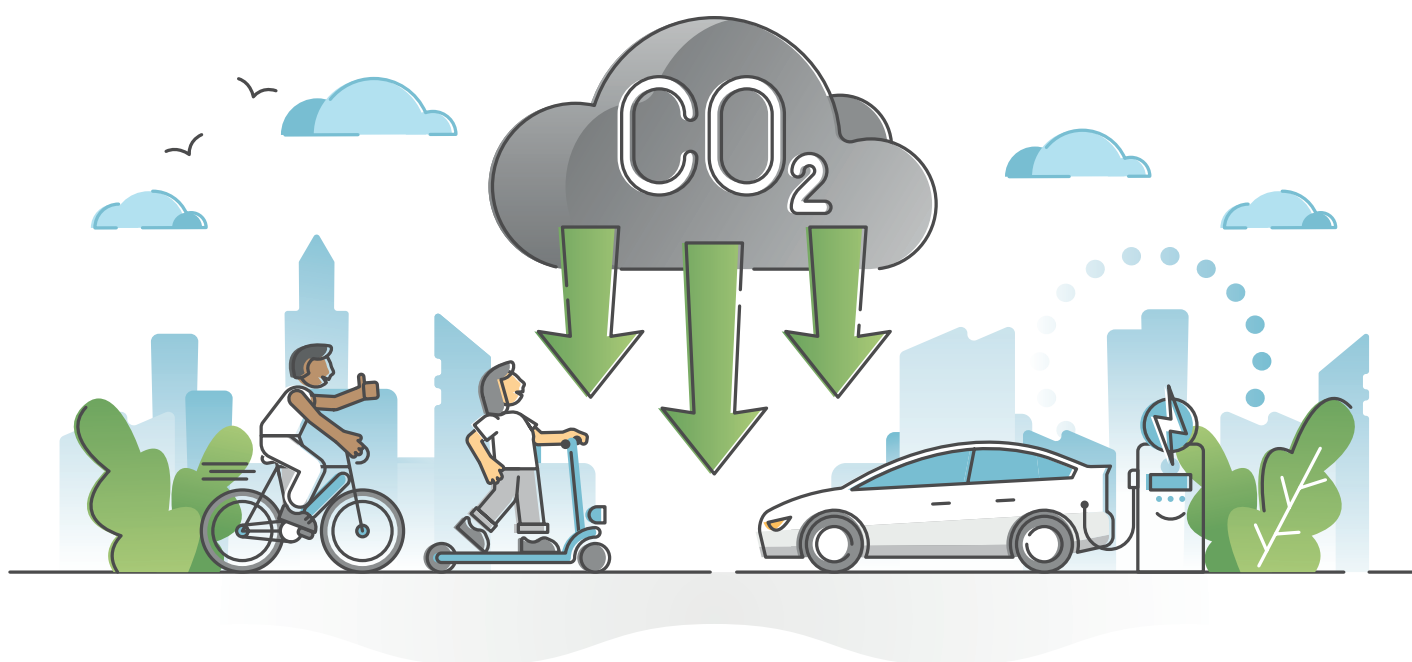
5. Carbon Management

5.1 Introduction

The main driver of climate change is the emission of greenhouse gases into the atmosphere related to the burning of fossil fuels and other activities. Reducing those emissions where possible are key to meeting public sector Net Zero Carbon by 2030 and limiting the impacts of climate change.

This section provides information on the tools available to help measure, monitor, manage and reduce school carbon emissions. The carbon management tools are.

- School Carbon Calculator
- Carbon Reduction Plan
- Digital Energy User Guide
- Carbon Tracker (with Reduction Plan and Actions)
- Data Collection Guidance

5.2 Keep Britain Tidy Carbon Calculator

Keep Britain Tidy (operator of the Eco-Schools Programme in England) has developed an online tool for schools to calculate their carbon footprint, select carbon reduction actions and monitor progress. This can be used alongside this Climate Toolkit as an alternative to this toolkit's School Carbon Calculator.

Click on the links below to access each website.

If you choose to use "Count Your Carbon", please inform the Council's Climate Change Team at **climatechange@flintshire.gov.uk** so we understand how schools are calculating their footprints.

5.3 When are these tools used?

Schools should measure their carbon footprint and update the carbon reduction plan annually, measuring emissions from a set period of time (e.g. financial year April to March). This will ensure emissions are monitored routinely helping carbon reduction efforts as well as ensuring learners have equal opportunity to engage with the process.

5.4 Emission Themes

Carbon emissions are categorised into themes, aligning to Flintshire County Council's (themes) approach.
These are defined as.

Theme	Emission Sources
Buildings	Building Electricity and Heating (gas, heating oil, etc.)
	Water Use and Treatment
	Waste/Recycling
Mobility & Transport	Fleet Travel
	Business Mileage
	Staff Commute
	School Trips
Supply Chain	Supply Chain

5.5 School Carbon Calculator (Step 3)

Step 3 is the first step to reduce carbon emissions by calculating the quantity (kg or tonnes) and understanding where they come from (emission source such as electricity use). Doing so will help identify and prioritise the right actions to reduce emissions.

<div align="center">

Engagement Opportunity

</div>

The first year a carbon footprint is calculated is called the **'Baseline'** and is what all targets and future calculations are compared against. The baseline and all future calculations are set within a 12-month reporting period (typically the financial year). For the purposes of the toolkit, this has been set at 1st April 2022 - 31st March 2023.

The School Carbon Calculator is an excel-based tool issued by Welsh Government for Public Sector use. However, the Climate Change team has simplified the calculator ensuring it is relevant to schools. Each emission source can be selected in the relevant category (buildings: electricity) using built in drop-down options in the **orange cells.** Once selected, the relevant data is added into the **blue cells** (e.g., kWh of electricity consumption) and the tool calculates this into carbon emissions.

Buildings

Ownership structure	Fuel/emission source	Category 1	Data	Units
Buildings we own and occupy	Grid electricity	Consumption based	25,000	kWh
Buildings we own and occupy	Natural gas	All natural gas	40,000	kWh

Image 4 Example of School Carbon Calculator layout

The emission sources included in the carbon calculator include.

Emission Source	Description
Building Energy	Electricity, Natural Gas, Heating Oil, LPG, Biomass
Building Water	School Use and Treatment by Utility Companies
Waste	Types of Recycling, quantity, and end use
Fleet Travel	Distance travelled using vehicles owned by the school
Business Travel & School Trips	Mileage claims from staff using own vehicles for work tasks and distance travelled for out of school activities
Staff Commute	The travel school staff do to get to work and back home
Supply Chain	All the goods and services the school procures

5.6 Renewables

The School Carbon Calculator also has a section in which to record the amount of energy generated by on-site renewables such as solar panels.

On-site renewables reduce carbon emissions by reducing how much electricity the school will be using from the UK grid supply which uses a mixture of fossil fuels and renewables (gas, nuclear, wind, etc.).

5.7 Land & Nature

The council's own carbon reporting takes into consideration the amount of land which is owned and the amount of carbon dioxide which can be absorbed by the trees and vegetation within that land.

However, as most schools don't have significant areas of land this figure would be minor yet require additional investigation. Because of this, the School Carbon Calculator does not measure any carbon absorption from school land.

However, schools will be encouraged to identify and implement activities that promote nature as part of the Carbon Reduction Plan since the climate emergency cannot be solved without acting for nature, and vice versa.

5.8 Carbon Tracker (Step 4)

Step 4 is use of the carbon tracker which is an excel spreadsheet for schools to add their carbon emissions once calculations are completed. The tracker calculates changes in emissions and displays the results as graphs, including a carbon reduction target that provides an emissions reduction pathway. This is based on the annual emissions reduction targets for the council.

Engagement Opportunity

The tracker aids comparison against the baseline year and previous years, showing where progress is being made and helps to identify and prioritise future actions.

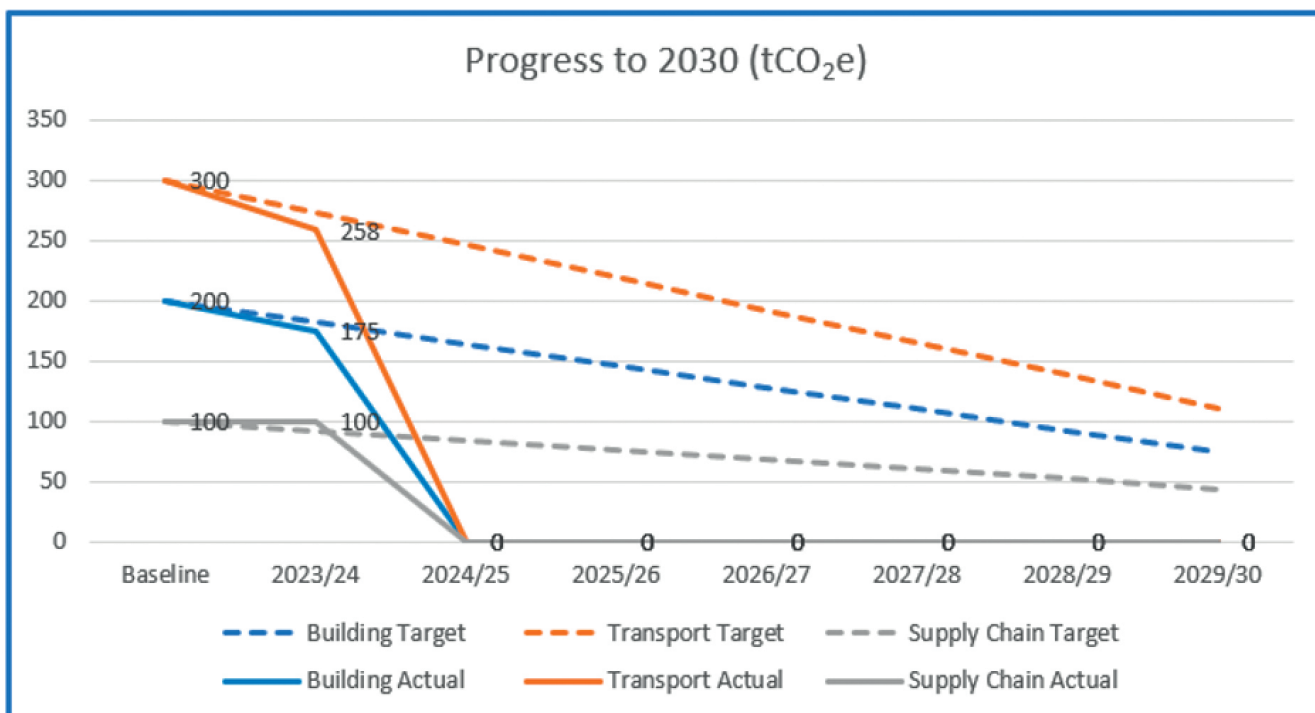|	Baseline	2023/24	% Change	2024/25	% Change	2025/26	% Change
						Emissions by Source (tCO$_2$e)	
Buildings			#DIV/0!		#DIV/0!		#DIV/0!
Waste			#DIV/0!		#DIV/0!		#DIV/0!
Fleet & Equipment			#DIV/0!		#DIV/0!		#DIV/0!
Business Travel & School Trips			#DIV/0!		#DIV/0!		#DIV/0!
Staff Commute			#DIV/0!		#DIV/0!		#DIV/0!
Supply Chain			#DIV/0!		#DIV/0!		#DIV/0!
Total GHG Emissions	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!

Image 5 Carbon Tracker and example of reduction pathway based on baseline data.

5.9 Carbon Reduction Plan (Step 5)

When a school calculates its first carbon footprint (baseline year) and understands the sources of emissions and quantities, the Carbon Reduction Plan can then be written, this is Step 5 of the process.

Engagement Opportunity

The Carbon Reduction Plan reports on the school's carbon emissions, describing what they are, how and why they are changing from year to year and the various actions the school will adopt to reduce them. This tool is presented as a template in two formats; built within the Carbon Tracker in Excel (with automatically updated graphs) or a Word document. Please only use one format.

Schools are strongly encouraged to involve their learners in bringing the Carbon Reduction Plan together. It provides learners with the opportunity to analyse data and trends, describe their findings and most importantly discuss potential ways to act on climate change, providing the school with a list of recommendations.

The Carbon Reduction Plan should be formally agreed by the School's Head Teacher and/or Senior Leadership Team and then communicated to governors, learners, and anyone else through the school's preferred and varied methods.

The plan should be updated after each carbon footprint calculation has been completed, and actions only changed where it is found they are no longer viable, or improved actions become available. The school can track when actions are completed in the Action Plan table.

5.10 Climate Actions

Within the Carbon Tracker is a list of climate actions that schools could adopt in their Carbon Reduction Plan, and covers all five themes of Buildings, Mobility & Transport, Procurement, Land and Behaviour.

Schools should select a number (e.g., 10) of impactful and relevant climate actions it wishes to complete in the years to come (e.g., up to 2030), aiming to engage with learners where possible. Schools are only expected to complete a few actions per year ensuring they are manageable and implemented well.

Schools are welcome to add further relevant actions that are not suggested in the toolkit.

5.11 School Condition Survey Programme

In late 2023, Welsh Government launched its **School Condition Survey Programme** through the Sustainable Communities for Learning team.

The programme will provide a baseline assessment of the condition of the education state in Wales including all state funded schools and further education colleges and enable Welsh Government to develop a net zero carbon route map for each asset. This will assist local authorities and colleges in the decarbonisation of the education estate across Wales.

For each element that can contribute to decarbonisation the survey will assess:

- Building condition
- Building performance
- Building lifespan

The results will form a high-level investment grade proposal on how to achieve a phased (elemental), value for money low carbon solution. This will be available for each school on a building-by-building level.

It is expected surveys will be completed by Autumn 2024, with schools who complete surveys early receiving their proposals sooner. The opportunities identified under this programme could support schools in developing their Carbon Reduction Plans under the Buildings theme.

5.12 Data Collection

Collecting quality and complete data is typically the more difficult part of bringing together a carbon footprint.

Firstly, a school must agree on the reporting period they wish to collect data and determine a carbon footprint baseline for. The Carbon Tracker has set this to the financial year (1st April to 31st March) aligning to Flintshire County Council's own reporting period. However, schools can decide on the reporting period they wish to use and adjust the tracker accordingly.

The document 'Data Collection and Input Guidance' provides all the key information required for a school to source the correct data for the carbon calculator and input that data following a simple step-by-step guide. It is essentially a summarised version of Welsh Government's **Public Sector Net Zero Reporting Guide**. Additionally, this document provides the key contacts for data, and survey and audit templates to collect information on staff commute and waste.

6. Learner Engagement (Step 6)

6.1 Introduction

Throughout this toolkit, key sections have been highlighted where your learners can be engaged in the process of calculating emissions, analysing the data, and creating a carbon reduction plan. Having this detailed engagement provides learners with a working example found in many workplaces.

Step 6 introduces content selected by the council's climate change team to help schools introduce climate change into lessons, covering KS2 to KS4 and facilitate the Welsh curriculum.

The lesson plans cover activities that help understand vocabulary, how climate change has come about and the use of trees to help address the climate emergency.

6.2 Lesson Plans

The lesson plans that follow are from Flintshire County Council and Natural Resources Wales and have been selected by the council's Climate Change team since they provide activities that are engaging and fundamental to understanding climate change.

Flintshire County Council

Flintshire County Council's Climate Change team have created two lesson plans - one each for Primary & Secondary settings, covering transport and energy sources which are both significant contributors to climate change.

Lesson Plan: KS1 & KS2	
To consider the impacts of climate change. While understanding how transportation affects the climate and ways learners can take action.	
Lesson Plan	This file is located under the Engagement section of the Climate Toolkit webpage.
Resources	This file is located under the Engagement section of the Climate Toolkit webpage.

Lesson Plan: KS3 & KS4	
To consider the impacts of climate change, and to understand how energy usage affects the climate & discuss how learners can take action.	
Lesson Plan	This file is located under the Engagement section of the Climate Toolkit webpage.
Resources	This file is located under the Engagement section of the Climate Toolkit webpage.

Natural Resources Wales

Natural Resources Wales is the enforcing authority on environmental legislation for Wales. They work to sustainably manage the natural resources of Wales and their three main missions are:

- Minimising pollution
- Nature's recovery
- Resilience to climate change

Some ways they will be restoring nature through the coming years is by:

- Scaling up nature-based solutions in urban & rural areas to connect habitats together.
- Accelerating action at a landscape scale by sharing evidence of best practice.
- Building resilience in freshwater, marine & terrestrial protected sites, this will be done through better connectivity & undertaking monitoring.

They also provide some very valuable education material which is linked to the Welsh Curriculum, we have gathered 5 of their key resources, which we believe will help to educate your learners on the topics surrounding carbon calculating and climate change.

Lesson Plan 1: Sustainable Glossary Game	
Basic introduction into sustainable development and key vocabulary which will help aid the following lessons plans, this can be aimed at KS2 & KS3.	
Lesson Plan 1	https://cdn.cyfoethnaturiol.cymru/media/688980/activity-plan-sustainable-development-glossary-game.pdf
Resources	https://cdn.cyfoethnaturiol.cymru/media/688982/resource-cards-sustainable-development-glossary-game.pdf

Lesson Plan 2: Climate Emergency	
This lesson plan looks into the way humans have impacted the planet through human activity and also consider natural processes, this can be aimed at KS2 & KS3.	
Lesson Plan 2	https://naturalresources.wales/media/694668/activity-plan-climate-emergency.pdf
Resources	https://www.youtube.com/watch?v=9m0hFk6b13Q https://naturalresources.wales/media/694681/information-note-climate-emergency-film.pdf

Lesson Plan 3: 3c's Of Climate Change
This lesson plan looks into the causes and consequences of climate change and what we can do to combat them, this can be aimed at KS3.

Lesson Plan 3	https://naturalresources.wales/media/694692/activity-plan-3c-s-of-climate-change.pdf
Resources	https://naturalresources.wales/media/694689/information-note-3c-s-of-climate-change.pdf https://naturalresources.wales/media/694687/resource-cards-3cs-of-climate-change.pdf

Lesson Plan 4: Carbon Storage Calculator
Looks into the crucial role trees play in absorbing large amounts of carbon from our atmosphere through photosynthesis and storing it in the form of wood. This lesson can be used with KS2 & KS3.

Lesson Plan 4	https://cdn.cyfoethnaturiol.cymru/media/687147/eng-activi-ty-plan-ks23carbon-footprint.pdf https://naturalresources.wales/media/687148/eng-informa-tion-note-carbon.pdf
Resources	https://cdn.cyfoethnaturiol.cymru/media/687150/eng-work-sheet-carbon-footprint.pdf https://naturalresources.wales/media/687189/eng-re-source-cards-carbon-equivalents.pdf https://naturalresources.wales/media/686742/resource-cards-car-bon-footprint.pdf

Lesson Plan 5: Carbon Storage Calculator
Looking at the crucial role trees play and the carbon they store, this lesson has been created for KS3 & KS4.

Lesson Plan 5	https://cdn.cyfoethnaturiol.cymru/media/686740/activity-plan-car-bon-storage-calculator.pdf
Resources	https://naturalresources.wales/media/687148/eng-informa-tion-note-carbon.pdf https://cdn.cyfoethnaturiol.cymru/media/687190/eng-work-sheet-carbon-storage-calculator.pdf

6.3 Further Engagement Content

The organisations listed below have produced content to engage learners in climate change and related topics, some of which have been included in this toolkit as a recommended introduction.

If school staff wish to diversify their lessons or add more content, then please follow the links below.

Organisation	Link
BBC Bitesize	KS2 Sustainability Wales Regenerators
Keep Wales Tidy/Eco Schools	Cut Your Carbon - Eco Schools (eco-schools.org.uk)
Natural Resources Wales	Resources for Educators and Teachers
Sustrans	Education
Welsh Water	Education

7. Communication (Step 7)

7.1 Introduction

It's well known that communication is key, and it is no different for Climate Change. Whether it is to provide news, promote behaviour change or provide knowledge, schools are encouraged to inform learners, staff, parents, and governors on climate action and ultimately celebrate success.

Following Step 7 will encourage support, insight and ultimately promote further action.

7.2 Communication in School

Schools will each have their own means of communicating news to their learners, parents, staff, and governors and it's important that they are all considered when the school has any news on its climate action, reports or decision making.

Continue using your forms of communication that work for your school but do consider and agree what should be communicated to your stakeholders and when.

7.3 Communication to Flintshire County Council

The Climate Change team are always available to provide schools with support, so please don't hesitate to make contact.

Schools are asked to inform the Climate Change team when they adopt the School Climate Toolkit or Keep Britain Tidy's Count Your Carbon, so it is possible to understand which schools are actively working to reduce emissions.

Additionally, any feedback to improve the toolkit will always be helpful in ensuring it can continuously be developed.

Please contact the team directly at **climatechange@flintshire.gov.uk**
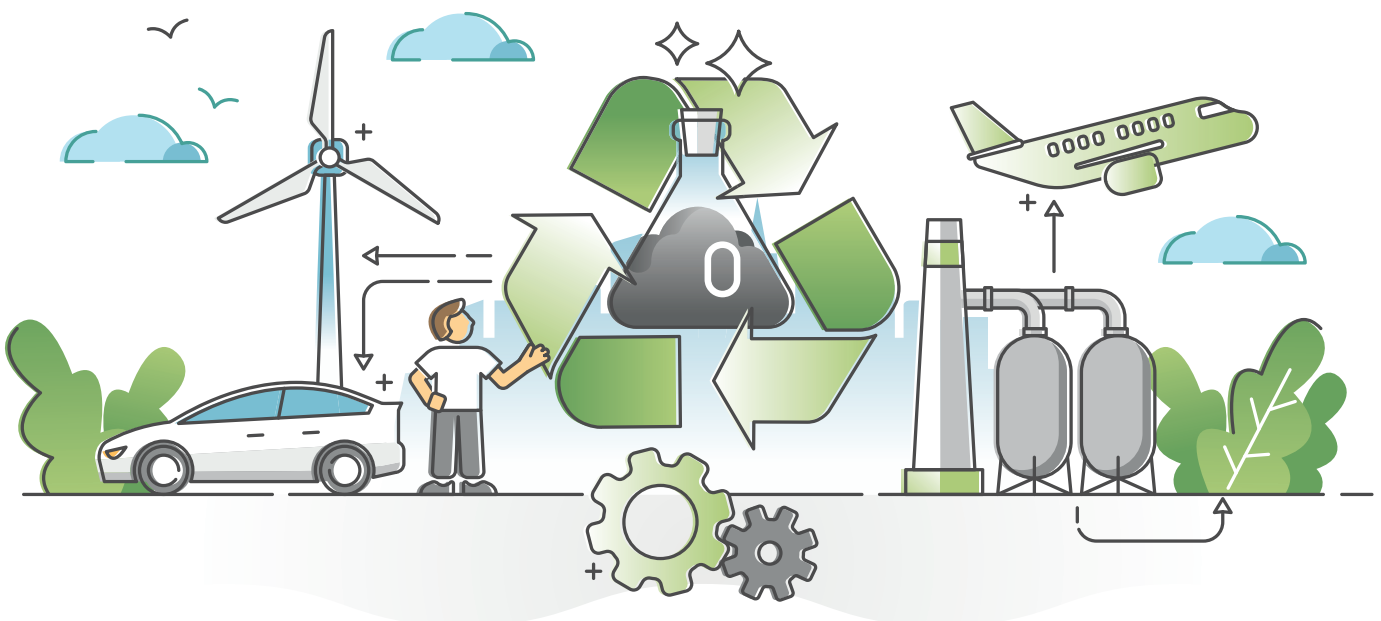
8. Learning and Development

8.1 Toolkit Workshops

To support schools and Toolkit Leads in using this toolkit, the climate change team will offer workshop sessions at key times, such as at launch or when there have been significant updates. Workshops will focus on further explaining the role of the toolkit and developing skills to use tools such as the School Carbon Calculator.

Additionally, the climate change team can accommodate requests from individual schools if they require further assistance and can be done either remotely or on site.

8.2 Climate Change e-learn Module

As employees of Flintshire County Council, school staff have access to the climate change e-learn module on Learning@Wales website.

8.3 Carbon Literacy Training

Carbon literacy is "an awareness of the carbon dioxide costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis".

Home - **The Carbon Literacy Project**

Training is recommended for decision makers at the school and is available from external providers and internally. Contact the Council's Climate Change team for more information.

8.4 Networking

As additional support for schools using this toolkit, Flintshire County Council's Climate team will look to facilitate networking events where Toolkit Leads can engage with one another to share experiences and progress and discuss ways in which the toolkit can be more beneficial.

The Climate Change team will notify all Toolkit Leads of networking events when they are arranged and will request schools to suggest agenda items for discussion.
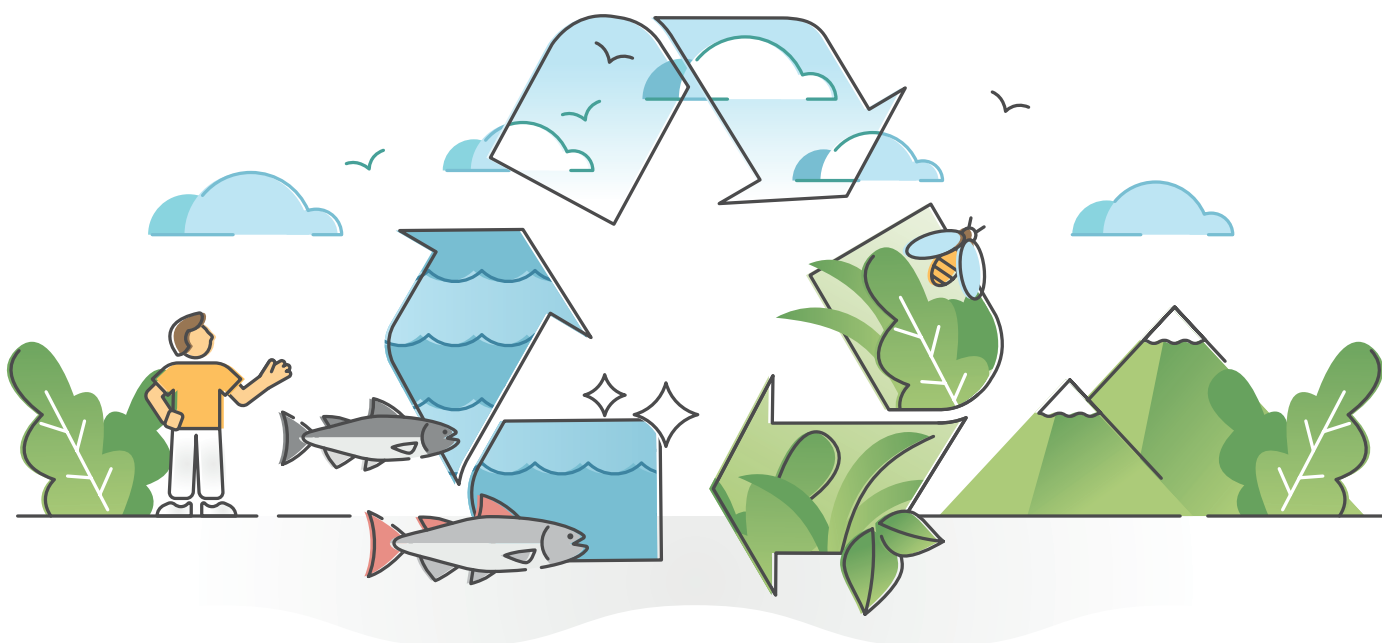
9. Funding & Support

9.1 Introduction

Although the council will conduct projects on some schools to improve building performance and renewable generation (e.g., Re:Fit programme: **Re:fit Cymru: overview | GOV.WALES)**, schools may identify projects they wish to implement and may need funding for.
In this section are some sources of funding for building and nature projects.

Click on the images and specific links to visit their website and funding pages.

9.2 Building Improvements

For any building-related projects, please contact **energy.unit@flintshire.gov.uk** for advice and support.

Salix is wholly owned by the Government and operates as a Non-Departmental Public Body, under the sponsorship of the Department of Energy Security and Net Zero.

- **The Wales Funding Programme**: Allows public sector bodies (including schools) to apply for interest-free loans for up to one hundred percent of the costs of energy-saving or renewable energy projects.

- **The Salix Recycling Fund**: This is a ring-fenced fund with capital provided by Salix and matched by the partner organisation, to be spent on energy-saving projects with paybacks up to eight years for Welsh clients.

The **Low Carbon Heat Grant**, provided by Welsh Government is available to all local authorities with projects that are ready for implementation. It is intended for capital works associated with retrofitting low carbon heat solutions in non-domestic, local authority-owned buildings.

9.3 Nature and Trees

Flintshire County Council's Biodiversity Team are keen to support the biodiversity improvement of school grounds and environmental education, the team can provide advice on biodiversity enhancement and funding opportunities for environmental projects.

biodiversity@flintshire.gov.uk

Keep Wales Tidy are a charity working across Wales's communities to protect our environment for now and for the future. Funding

- **Local Places for Nature:** Transform an unloved area into a beautiful garden where nature can thrive by accessing free garden packages to schools as well as community groups and other community-based organisations.

The Tree Council brings everyone together with a shared mission to care for trees and our planet's future. We inspire and empower organisations, government, communities and individuals with the knowledge and tools to create positive, lasting change at a national and local level.

- **Local Schools Nature Grant:** Open to schools and early years settings in England, Scotland, and Wales, this outdoor learning grant fund has two elements - £500 of outdoor equipment chosen from a catalogue of over 100 items, and an outdoor learning training course for your staff.

Learning Through Landscapes are a leading UK-based charity dedicated to enhancing outdoor learning and play for children.

- **Local Schools Nature Grant:** Open to schools and early years settings in England, Scotland, and Wales, this outdoor learning grant fund has two elements - £500 of outdoor equipment chosen from a catalogue of over 100 items, and an outdoor learning training course for your staff.

10. Appendices

10.1 Appendix 1 - Glossary

Baseline Year:	The emissions that occurred in the period of 1st April 2018 - 31st March 2019 are what targets are based on and all future carbon emission calculations compared to.
Carbon Dioxide Equivalent (CO₂e):	The warming effects of greenhouse gases are compared against the warming effect of carbon dioxide, providing a standardised unit of measurement. For example, methane is approximately 28 times more warming than carbon dioxide, meaning 1kg is equivalent to 28kg of CO₂, or 28 kgCO₂e.
Carbon Footprint:	Measurement of carbon emissions a person, organisation or place emits, thus their contribution to global warming. This multiplies data from energy consumption, travel, waste, and procurement by a relevant emission factor to give a final figure.
Climate Change:	Refers to a large-scale, long-term shift in the planet's weather patterns and average temperatures. Humans have increased levels of atmospheric carbon dioxide and other greenhouse gases, which causes increased global temperatures.
Decarbonisation:	Reducing the carbon intensity and carbon emissions of an activity or service or wider organisation.
Direct Emissions:	Emissions of carbon emissions into the atmosphere from sources that are owned or controlled by an organization such as burning natural gas in boilers, burning petrol in owned company vehicles etc.
Emission Factor (EF):	The quantity of carbon emissions related to a unit of activity or consumption, typically given in kg or tonnes of CO₂e. For example, burning 1 kWh of natural gas produces approximately 0.18254 kgCO₂e.
Four Purposes:	The four purposes should be the starting point and aspiration for schools' curriculum design. Ultimately, the aim of a school's curriculum is to support its learners to become: • ambitious, capable learners, ready to learn throughout their lives. • enterprising, creative contributors, ready to play a full part in life and work. • ethical, informed citizens of Wales and the world • healthy, confident individuals, ready to lead fulfilling lives as valued members of society.
Global Warming:	The earth Natural emissions have typically been in balance for 100,000s years, however, human-caused emissions have increased and shifted this balance so much so that the earth has warmed by 1.1°C since the late 1800s and is currently projected to reach 2.4°C by 2100.

Greenhouse Gas Emissions:	Emissions of carbon dioxide, methane etc from human and natural activities and sources. Wider greenhouse gas emissions are collectively calculated into a carbon dioxide equivalent' displayed as CO_2e.
Indirect Emissions:	Emissions of carbon emissions that are a consequence of the activities of the organization but occur at sources owned/controlled by another organization.
Net Zero Carbon:	An organisation reduces carbon emissions, and any that remain are balanced by carbon dioxide removals such as tree planting.
Reporting Period:	A defined period of time in which carbon emissions are emitted and calculated (e.g. Flintshire County Council use 1st April to 31st March).
Themes:	The Council sorts its own emissions into themes based on the emission source; **Buildings** (Gas, Electricity, Water and Waste); **Transport** (Fleet Vehicles, Business Mileage and Staff Commute); and **Procurement** (purchase of goods and services in the supply chain).