



Environmental Pathway to Net Zero Carbon 2030



‘A rising tide lifts all boats’

Dear Colleagues,

A healthy planet is vital for the flourishing of young people, but taking steps to become environmentally sustainable is a huge challenge for schools to navigate, in addition to their other priorities.

You may recently have heard about the Church of England’s commitment to become Net Zero Carbon by 2030. The Education team at the Diocese of Southwell & Nottingham is going to be working with church schools in Nottinghamshire to respond to this challenge and we would be delighted if other schools in the county wanted to join us on this journey.

Our goal is to identify an ‘environmental pathway’ which will support Nottinghamshire schools in taking manageable steps towards becoming Net Zero Carbon by 2030.

Governor Services has kindly agreed that Governorhub can be used as a central, online platform, from which ideas, expertise and an environmental pathway can be shared. Each school can then decide if the information/expertise being shared in the pathway below is applicable/useful to their local context. Your school may already have completed some of the steps set out in the pathway and it would be fantastic if you could upload examples of your completed projects to Governorhub, to inspire others on their journey.

Over the next eight years we will continue to refine and update the environmental pathway, as more information is shared. We really hope you will be able to join us on this journey.

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Alison Jacobson – Diocesan Admissions & Governance Lead
Jess Lane – Schools Buildings Lead

Resources used to Inform Version I of the Environmental Pathway

a) Church of England NZC Routemap 2030

b) Transform our World – FREE School Climate Action Planner

c) Let's Go Zero Campaign

Schools can join the campaign for support & funding

Access to webinars, where schools talk about what they are doing

1. Getting started with action in your school
2. Reducing energy in your school
3. Governance & reviewing the DfE strategy
4. Engaging students in climate action
5. Making sustainable travel the norm

d) National Governance Association – Greener Governance Pledge

Document – Environmental Sustainability: a whole school approach

e) Eco Schools

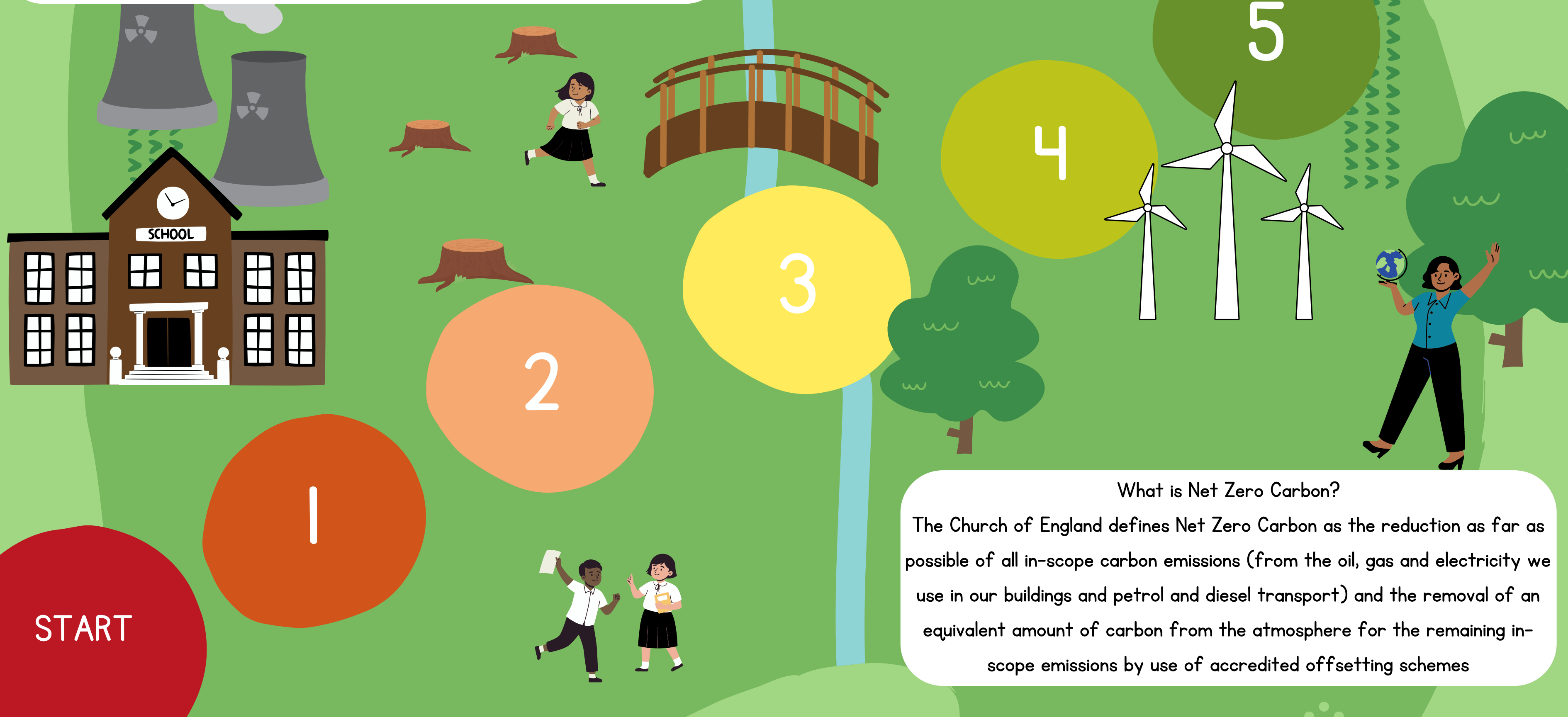
Provides a simple, seven-step framework that guides, empowers and motivates pupils to drive change and improve environmental awareness in their school, local community and beyond.

Environmental Pathway to Net Zero Carbon 2030

Incremental steps, leading to sustainable changes.

Version I: issued December 2022

NET ZERO



What is Net Zero Carbon?

The Church of England defines Net Zero Carbon as the reduction as far as possible of all in-scope carbon emissions (from the oil, gas and electricity we use in our buildings and petrol and diesel transport) and the removal of an equivalent amount of carbon from the atmosphere for the remaining in-scope emissions by use of accredited offsetting schemes

Step One: Green Governance

Make NZC 2030 a strategic priority in your school development plan and asset management plan. Make NZC a regular agenda item at meetings.

- Write your own environmental policy, to include a formal declaration of your school's commitment to carbon neutrality.
- Make all key stakeholders aware that NZC 2030 is a strategic priority for the school.
- Appoint a 'green' governor, a staff sustainability lead and student ambassadors (eco warriors) to work with all stakeholders - SLT / Local Authority / Diocese / students /community.
- Share your vision with your community – do they have any expertise or funding to offer your school?
- Add 'environmental expertise' to the list of skills required by your governing board.
- If you are part of a MAT, ask your Trust if they have an environmental action plan to support their schools?
- Aim for quick wins (steps 1-4) whilst also planning ahead for the most expensive steps. Start researching what funding is available to finance transitioning away from fossil fuels (step 5)
- If you have a boiler coming to the end of its life, start researching how you can transition to a cleaner source of energy (refer to step 5). E.g. Public Sector Decarbonisation Scheme for funding towards a heat pump.

TOP TIP – For a heat pump to work optimally (i.e. at a low temperature), the building it is providing heat for needs to be fully insulated. The efficiencies and benefits of a heat pump rely on a well-sealed/non-leaky building. If your school contains large quantities of asbestos, (CLASP buildings often do) then the decision to move to a heat pump may not be straight forward as the cost of removing asbestos whilst insulating walls, floors and roofs can be extremely costly.

Quick wins

- Sign up to [Let's Go Zero Campaign](#)

Let's Go Zero brings together UK schools who want to be zero carbon, are reducing their own climate impact, and demanding greater UK government support to achieve this goal. The Let's Go Zero website has helpful webinars where schools share what they are doing.

- Engage and involve your students in the NZC 2030 journey by signing up to become an Eco School
- [Eco Schools](#) provides a simple, seven-step framework that guides, empowers and motivates pupils to drive change and improve environmental awareness in their school, local community and beyond.

Step Two: Quantify your current emissions

What are the main contributors to carbon emissions in your school?

- Poor insulation – windows, doors, floors, walls and roof spaces?
- Energy – electricity supplied from a non-renewable source?
- Energy – heating reliant on fossil fuels – gas/oil?
- Transportation – emissions from school vehicles?
- Procurement – resources which have not been sourced locally?
- Waste products?
- Building projects?

Calculate your current carbon emissions using the CofE Energy Toolkit for Schools (**only available to church schools**)

- The importance of doing this is that you can't control what hasn't been measured. Quantifying your current emissions gives you a benchmark from which to move forward. Data from energy bills as opposed to your display energy certificate will usually provide the most accurate picture. The Energy Toolkit will be open 1st Jan- 31st July 2023 for 2022 bills. The link will be sent out in the new year.

Prepare a Heat Decarbonisation Plan ('HDP') to deliver steps 1 – 5.

- Your school will need to identify a technical, bespoke route to achieve NZC. The best way of doing this is the commissioning of an HDP. The HDP comes out of a detailed energy/environmental audit and will help your schools establish a clear business case to bid for the funding required to deliver the projects that are identified.
- Very roughly a HDP for an average sized primary will cost about £700 with the cost for a secondary around £1,200. Funding for HDPs is available via the Government's Low Carbon Skills Fund.

Quick wins

- Insulate, insulate, insulate! The potential gains from steps 4 and 5 will be compromised if your building(s) are not being maintained to minimise heat loss.
- Plant trees to offset carbon emissions (carbon capture) whilst you transition to cleaner and renewable energy sources. Trees also provide natural shade to classrooms, meaning less reliance on fans and air conditioning. You can do this via the Woodland Trust.
- Encourage parents who want to say thank you to teaching staff to plant a tree with the National Trust

Step Three: Design a maintenance programme which prioritises – reducing heat loss in your school building(s) and purchasing clean, renewable energy

Why is maintaining your building(s) so important?

The potential gains from steps four and five will be compromised if your building(s) is not being maintained to minimise heat loss.

Opportunities to reduce heat loss:

- Insulate pipework (corners/bends often missed)
- Resolve damp issues
- Repair broken windows
- Replace single glazing with double glazing (don't forget planning approval)
- Introduce suspended ceilings to allow for insulation above, and a lower air volume to heat in the room below
- Cavity wall insulation
- Insulate under old Victorian suspended timber floors
- Replace glass atriums with insulated walls and roofs
- Ensure the roof is in good order, watertight and contains insulation

The Church of England is working with a couple of advisers:

- RAFT - Providers of education and retrofit advice to schools in a proactive response to the climate emergency.
- Inspired Efficiency - Experienced advisors on energy, carbon and sustainability issues.

Quick wins

- Ensure electricity/gas is purchased from a renewable supplier (green tariff)
- PV panels to generate own renewable energy (with battery stores).
- Have a listen to the CofE environmental webinars for schools (3 so far). Scroll down to the penultimate section.

Register your interest in future webinars by emailing robyn.ford@churchofengland.org

- Net Zero Schools on The Church of England.

Step Four: Create an action plan to reduce current energy consumption and waste, and increase energy efficiencies

What steps can you take to reduce your current energy usage without additional costs?

1. Conduct a feasibility study using the [Transform our World – FREE School Climate Action Planner](#), which helps schools identify actions they can take to reduce their environmental impact.
2. Sign up to [Energy Sparks](#) (currently FREE to state schools). The charity supports schools to become more energy efficient via an online, school-specific energy analysis tool and energy education programme.

What steps can you take to increase your energy efficiency, which requires minimal additional investment?

- Transition to LED Lighting, zoning and controls.
- Install lights with occupancy sensors.
- Water heater in staff room (instead of kettle)
- Approach any future changes to the school building(s) from a NZC perspective. The Southwell & Nottingham Diocese work with CP Associates who are very forward looking in terms of helping schools on their journey to NZC.

Quick wins

- Governing Boards to watch the [Let's Go Zero webinar – 'Getting started with action in your school'](#)
- Smart meters – ask staff to prioritise reducing the school's energy footprint in their individual areas.
- School lunches – Meat free Mondays. Remove single use plastics from secondary school canteens. Recycling bins for crisp packets and biscuit wrappers.
- Reduce plastic consumption
- Affect a cultural shift in behaviours in school i.e. surplus lighting & appliances being turned off (can reduce consumption by 20 – 30%). Pupil walk rounds to identify appliances/lights left on and not in use.
- Stickers on all sockets/switches indicating if they must be left on, on standby or switched off.
- Ensure power saving features are set correctly.
- Reduce out of hours energy usage – ensure clock timers for heating and lighting change with seasons and account for weekends and holidays.
- Are ovens turned on as soon as midday supervisors arrive? Might they only need 10 mins or so pre-heat?
- In the summer months – 'no electricity day' – no lights, no computers, no smart boards (without compromising health & safety i.e. fire alarms etc.)
- Source materials/resources as locally as possible
- Encourage all stakeholders to travel to and from school as sustainably as possible. The travel hierarchy: walking, cycling, public transport, shared journeys, electric cars, fuel efficient cars, less efficient cars, ferries, flights.

Step Five: Create an action plan to transition to clean and renewable energy.

Be 'funding ready' to fund these initiatives & view offsetting, as a last resort

Your buildings are now as efficient as possible (heat retention) and you have introduced multiple initiatives to reduce energy consumption. The final and most expensive step towards becoming net zero carbon is to transition away from fossil fuels (oil and gas) to cleaner energy sources (heat source pumps, solar panels)

The Government via BEIS (Dept for Business, Energy and Industrial Strategy) provide funding via the Public Sector Decarbonisation Scheme (PSDS) and the Low Carbon Skills Fund. (LCSF). These funds are currently extremely over-subscribed with schools under-represented in successful bids. Feedback from schools has been taken on board and funds have now been ring-fenced for the education sector (includes universities).

The Nottinghamshire County Council Property team are a great point of contact for maintained schools. A conversation with them sooner rather than later is advised if your gas boiler is coming towards end of life.

The Schools' Energy Co-operative installs community funded solar panel systems on schools free of charge as well as paying all its profits to its member schools. The schools themselves use most of the energy generated by the PV panels, and any excess is exported to the electricity grid. As the School Energy Co-op owns the systems, the schools pay them for the power they use, at a discount to their normal electricity cost.

Inspired Efficiency speak of a NZC trinity:

- (i) Measures financed by <10 year pay back package to include lighting, PV, insulation, hot water electrification, sundry electrical and control measures.
- (ii) Measures that can really only be funded by Condition Allocation as very long pay backs (window replacement and flat roof replacement).
- (iii) PSDS application – replacing end of life boilers with heat pumps. NB highly competitive scheme.

Quick wins

- Governing Boards to watch a short video explaining what St Andrew's C of E Primary School, Chedworth had to do in order to become net zero carbon. St Andrew's journey towards NZC was triggered when its unreliable and expensive oil boiler reached the end of its life and the school took the opportunity to undertake a number of major changes which, together, have made the building net-zero carbon.

The boiler has been replaced with air-source heat pumps. Solar panels now produce much of the electricity required for the entire building. Additional electricity, largely in the winter, is then purchased from a local renewable supplier. Efficient LED lighting and new insulation, plus double-glazing to some of the windows, together ensure the efficiency of the building.

- Installation of electric vehicle charging points for staff and school vehicles.
- Fundraise for an electric vehicle for school?
- Aim to only offset what you cannot reduce.

