



FOR PUBLICATION

DERBYSHIRE COUNTY COUNCIL

**IMPROVEMENT AND SCRUTINY COMMITTEE - CLIMATE CHANGE,
BIODIVERSITY AND CARBON REDUCTION**

MONDAY 1 JULY 2024

Report of the Executive Director - Place

The Council's Role in Decarbonising Derbyshire's Schools

1. Purpose

- 1.1 To provide the Improvement and Scrutiny Committee for Climate Change, Biodiversity and Carbon Reduction with information on:
1. The carbon impact of Derbyshire's schools and current UK Government strategy and support related to the decarbonisation of schools.
 2. The progress that schools and relevant supporting Council service areas are making to reduce the carbon impact of Derbyshire's schools.
 3. The proposed next steps to explore what further action the Council could take to support the decarbonisation of schools.

2. Information and Analysis

The Carbon Impact of Derbyshire's Schools

- 2.1 There are around 170,000 children and young people in Derbyshire who are educated at 419 schools. These schools can be categorised into Derbyshire local authority-maintained schools and academies.
- 2.2 Derbyshire County Council ("the Council") has a commitment to playing its role in "*Achieving net zero emissions across all schools in Derbyshire*"

by 2050, and to set a more ambitious net zero target for schools within the Council portfolio” as set out in the Derbyshire County Council Climate Change Strategy: Achieving Net Zero (2021-2025).

- 2.3 The two main contributors to the carbon impact of schools are the emissions resulting from school buildings (energy used for power and heating) and the daily transport of pupils to and from school.
- 2.4 Although the Council has some influence on the decarbonisation of academies (primarily as it delivers the transport to schools), this report primarily focuses on the Derbyshire maintained schools which represent around 50% of the total Derbyshire schools, where the Council has budgetary control of the school estate, as well as being responsible for school transport.

Carbon Emissions from School Buildings

- 2.5 The largest part of an average school’s carbon impact results from the consumption of energy used to heat and power the school. Overall, Derbyshire schools are responsible for an estimated 1.4% of all carbon emissions across the county.
- 2.6 Table 1 provides a breakdown of the carbon impact and energy used in Derbyshire’s schools over the past two years (all maintained schools and a small number of academies that procure their energy through the Council’s procurement channels).

Table 1: Energy use in Derbyshire’s schools

Metric	2021-22	2022-23
Tonnes of CO₂e	14,370	11,870
kWh of energy consumed	73.1 million	62.1 million
kWh breakdown	Electricity 25% Gas 74% Other 2% (oil)	Electricity 26% Gas 72% Other 2%
CO₂ breakdown	Electricity 29% Gas 69% Other 2%	Electricity 29% Gas 69% Other 2%

- 2.7 In 2022-23, Derbyshire’s maintained schools emitted an estimated 11,870 tonnes of carbon dioxide (tCO₂e) which is one and a half times

more emissions than the Council's total corporate estate (7,475 tCO₂e). To give this figure some sort of comparison, the annual carbon emissions from Derbyshire schools are equivalent to emissions resulting from the Council's corporate estate, streetlighting and core fleet combined.

- 2.8 Compared to the 2021-22 period, the latest annual energy consumption data for schools and resulting carbon emissions have reduced by 17% which is due to the impact of fewer very cold days during the winter period and improved monitoring and control of energy consumption in more buildings. In 2022-23, the energy costs of Derbyshire's local authority-maintained schools were in the region of £9m, demonstrating that this is a significant cost annually to the Council.
- 2.9 The successful decarbonisation of schools is essential to achieving the target of Derbyshire being net zero by 2050, as well as the potential of reducing the operational running costs of schools.

Carbon Emissions from School Transport

- 2.10 The Council has a statutory duty to provide transport to and from schools for all pupils of compulsory school age attending the nearest available school that is over a statutory walking distance of over two miles when the child is aged seven and under and over three miles when the child is aged eight and over. Where the child has a special educational need, disability or mobility problem the child may be entitled to transport even if it is within statutory walking distance if they cannot reasonably be expected to walk to school because of their special educational needs, disability or mobility problem.
- 2.11 The transport of pupils to and from schools is categorised into mainstream school transport that is typically provided by bus, and special education needs and disability (SEND) transport that is typically provided by mini-bus or taxi.
- 2.12 School buses transport 7,000 pupils per day who are entitled to free transport, this is delivered through 150 dedicated school buses, 25 local commercial bus services and a small number of privately operated bus services for specific schools that organise their own transport. In total this costs the Council an estimated £7m per year.
- 2.13 SEND transport caters for 1,800 pupils and is delivered by approximately 850 different individual contracts that comprise of

individual pupils transported daily in taxis and small numbers of pupils in minibuses. In total, this costs the Council an estimated £16m per year because of the specialist nature of this transport and the higher average mileage required by SEND pupils.

- 2.14 Currently, data on the mileage from the transportation of school pupils is not collected. However, an estimate (using an average of 5 miles per pupil journey) produced in 2022, calculated that 13 million miles are undertaken annually, which equates to around 4,000 tCO₂e per year based on average vehicle types.

UK Government Role in the Decarbonisation of Schools

- 2.15 The UK Government is playing a role in the decarbonisation of schools, both through providing funding schemes and the production of a strategy that supports the ambition of reducing the carbon impact of schools.
- 2.16 In April 2022 (updated in December 2023), the Department for Education (DfE) launched its “Sustainability and climate change: a strategy for the education and children’s services systems” policy paper with four action areas defined, one of which is specific to the decarbonisation of school buildings and estates.
- 2.17 As yet, the impacts of the DfE strategy have been limited, with no clear guidance on delivery or direction of funding being announced, although a series of resources are planned for 2024 to assist schools and other education services on taking action to tackle climate change. This is expected to include an evaluation framework for project monitoring and evaluation¹.
- 2.18 In terms of funding, the Public Sector Decarbonisation Scheme (PSDS), administered by Salix (a non-departmental public body, owned wholly by Government) aims to support the Government’s commitment to reduce emissions from public sector buildings (including schools) by 75% compared to 2017 levels, as first set out in the 2021 Heat and Buildings Strategy. There have been three phases of the PSDS which has allocated more than £2 billion to almost 1,000 public sector organisations across England to support significant low-carbon energy upgrades to the buildings, ranging from heat pumps and solar panels to

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https://assets.publishing.service.gov.uk/media/658188b323b70a0013234bdb/Sustainability_and_climate_change_strategy_-_our_progress_so_far_December_2023.pdf

new energy efficiency measures such as insulation and low energy lighting. The Council was successful in securing funding from the PSDS in 2021 which has facilitated the installation of a heat pump and ancillary energy efficiency measures at Buxton Junior School.

- 2.19 In 2023, the Council submitted a further bid for PSDS to seek funding to support the decarbonisation of other Council buildings. Although this bid was unsuccessful, it provided valuable lessons learnt for future applications. It was evident from feedback and delivery timescales set by the PSDS governance that projects ideally need to be ‘shovel ready’ with prior funding for design and procurement already established.

The Council’s Role in the Decarbonisation of Schools

- 2.20 The decarbonisation of individual schools is not the responsibility of one particular organisation or individual and so is currently carried out through a variety of roles and channels that includes school headteachers, business managers, boards of governors and relevant Council services. The Council’s involvement depends on the aspect of decarbonisation being undertaken and typically consists of:

- School buildings – a combination of Children’s Services Development Team and Corporate Property’s Projects and Energy Teams
- Behaviour change – Climate Change Team
- Schools travel – Place Transport Team

- 2.21 Overall progress is being made with decarbonisation actions being delivered and emissions from schools reducing. The following sections provide a summary of the main areas of Council activity.

Energy Efficiency of School Buildings

- 2.22 The overall decision-making responsibility for school building energy efficiency improvements resides with Children’s Services Development Team and Corporate Property, or an assigned contractor who is responsible for delivery.
- 2.23 Corporate Property is responsible for producing and maintaining Display Energy Certificates (DECs) for schools. DECs are designed to show the energy performance of public buildings. They use a scale that runs from ‘A’ to ‘G’ with ‘A’ being the most efficient and ‘G’ being the least. Ratings A-C are considered good, D rating suggests that the energy efficiency is moderate, and E-G is considered poor.

- 2.24 Corporate Property has assessed the energy efficiency of all schools based on energy consumption data over the last two years. Out of a representative sample of 106 schools, 25% are rated good (A-C), 49% rated moderate (D) and 26% rated poor (E-G).
- 2.25 Corporate Property also support schools in accessing their own energy data through the Council’s SystemLink portal and encourage them to use their DEC’s to inform potential energy efficiency improvements.
- 2.26 Although Corporate Property assists in securing capital funding, giving technical advice and supporting the design requirements, Children’s Services is responsible for the planning and decision making of school energy efficiency improvements.
- 2.27 Typically, Children’s Services hold funding pots for school building energy efficiency improvements with a range of interventions and installations being carried out, as detailed in Table 2.

Table 2: Recent programme of works for school energy efficiency

School	Energy Efficiency Improvement
Crich Junior School	Boiler and heating renewal
Firfield Primary School	Pitched roof covering – insulation upgrade
Lady Manners School	Pitched roof covering – insulation upgrade
Hasland Infant School	Rewire, small solar PV array
Coppice Primary School	Rewire, smart lighting and solar PV array
Northfield Junior School	Flat roof covering – additional insulation
Brockwell Junior School	Flat roof covering – additional insulation
Ripley Infant School	Rewire, smart lighting and solar PV array

- 2.28 Corporate Property look to replace existing boilers when they reach their end of life with heat pumps and other low carbon heating where appropriate.
- 2.29 Individual schools can apply for external funding, such as the Government’s PSDS programme. Both Children’s Services and Corporate Property support schools in their applications to these programmes.
- 2.30 The installation of rooftop solar photovoltaic (PV) systems on schools reduces the use of grid electricity for power, which reduces cost and carbon. Since 2011 the Council has been installing solar PV systems at

schools. However, the current Council budget challenges has meant the planned programme of installations has been paused.

- 2.31 As of the end of 2023-24, 35 schools currently have rooftop solar PV installed with an estimated total annual generation of electricity of 243,009 kWh. Table 3 details the Derbyshire schools with rooftop solar PV installed.

Table 3: Schools with solar PV installed

School	Year of installation	Estimated annual generation (kWh)
Abercrombie Primary School	2015	8,370
Brailsford Primary School	2016	6,000
Breadsall Primary School	2023	28,400
Brockwell Nursery and Infant School	TBC	3,660
Burbage Primary School	2014	1,858
Buxton Junior School	2022	17,516
Cavendish Junior School	2015	21,000
Clowne Infant and Nursery School	2012	3,194
Creswell Infant and Nursery School	2015	3,348
Dallimore Primary School	2014	11,589
Darley Dale Primary School	2013	1,502
Grindleford Primary School	2015	3,194
Hady Primary School	TBC	TBC
Hallam Fields Junior School	2011	3,425
Harrington School	2023	TBC
Hayfield Primary School	2014	3,404
Heath Fields Primary School	2013	30,000
Herbert Strutt Primary School	2008	3,194
Leys Junior School	2014	1,650
Pinxton Nursery School	2015	3,300
Ripley Junior School	2023	7,014
Woodville Junior School	2014	2,453

Behaviour Change Initiatives

- 2.32 The decarbonisation of schools requires a reduction in energy consumption, as well as making buildings more energy efficient. The

cost of energy across Derbyshire's schools for 2023-24 is currently being analysed but is likely to be more than £8m. To help reduce these costs and resulting carbon emissions a stakeholder engagement and behaviour change programme called Energy Champions has been developed to support schools to reduce the energy consumption of their school.

- 2.33 The Energy Champions project (led by the Climate Change Team working in collaboration with Corporate Property's Energy Team) was launched in 2023 and aims to reduce energy consumption within Derbyshire's maintained schools. The project offers a dedicated, free carbon and energy management service to schools to provide both on-going energy monitoring data and bespoke carbon and energy management services, helping school staff to financially plan and mitigate against high energy costs and reduce the school's carbon emissions.
- 2.34 The project also promotes and implements energy efficiency behaviour change to help save costs, reduce emissions and make schools more sustainable. It provides energy reduction guidance and support for each school, as well as guided access to the Council's online energy portal. This portal enables schools to see how much energy is being used and provides access to a range of materials and advice on how schools can reduce their energy consumption.
- 2.35 The Energy Champions project also looks to support schools in analysing the energy consumption of their school, identifying school holiday consumption and heating start times with the aim of fine tuning, improving, and reducing heating requirements to help lower emissions and energy costs.
- 2.36 The project has a dedicated site on Derbyshire Services for Schools (S4S) website (<https://services.derbyshire.gov.uk/>), which is regularly updated to provide relevant areas of support and guidance.

School Travel Decarbonisation

- 2.37 As part of a wider review of the Council's indirect carbon emissions, the Council is currently reviewing the data available to help estimate and report on the carbon emissions resulting from home to school travel, which includes contract and spend data from home to school travel providers. This is an area where emissions can be reduced through contract management, route planning and vehicle choice.

2.38 The Council provides and promotes public transport initiatives for school travel for pupils through mechanisms, such as:

- Bus passes for pupils who can use any bus.
- Specific buses that only serve schools.
- Increased frequency of buses that go past schools at the start and end of the school day.

2.39 Although the Council delivers and promotes the use of public transport for school travel as a sustainable mode of transport, it currently has limited direct control over the types of vehicles the bus companies use but does encourage the transition of bus fleets to low carbon options.

2.40 The Council encourages schools across Derbyshire to join efforts to increase levels of sustainable and active travel to improve the health and well-being of children and young people through the [Modeshift STARS](#) scheme. This scheme recognises schools that have shown excellence in supporting cycling, walking and other forms of sustainable travel. Between 2015 (when the scheme was launched) to the 2019 academic year, accredited MODESHIFT Stars schools across the UK, reduced their car journeys by 2.5% which led to an overall shift away from single family car trips by 9%.

2.41 Through the Sustainable Travel Team, the Council provides dedicated officer time to support schools in creating, developing, and implementing travel plans, to monitor and evaluate travel plans and initiatives and to recognise and reward excellence in the promotion of sustainable and active travel.

Proposed Next Steps

2.42 Although the Council's role in decarbonising Derbyshire schools has been outlined in this report and actions and progress are being made, there is potentially the scope for further areas of support to be developed at zero or low cost to the Council using existing resources. This support could be formed around aspects such as:

- Strategy and policy – establishing a net zero target for Derbyshire's schools and a strategy and action plan to support its delivery in consultation with both Children's Services and Corporate Property. This could also include the addition of emissions from schools in the Council's annual emissions reporting and Climate Change Strategy refresh in 2025-26.

- Funding support – to provide the timely identification and provision of funding information, support, and advice to enable schools to access, apply for and succeed in external funding applications.
- Communication – subject to the resources being available and a lead service being agreed, establish a central Council contact point for 'climate change and schools' and effectively signpost schools to appropriate local, national, and international climate education resources and support.
- Behaviour change – the Energy Champions initiative could be promoted more widely to schools and potentially supported for implementation by the Education Partnership Board that can reach all 419 schools through its communications channels.
- Transport decarbonisation – strengthened understanding and management of the carbon impact of home-to-school transport and the development of an action plan for how these emissions can be reduced. This could include using data to target those areas where there is the biggest potential to reduce mileage and adapting commissioning and investment into provision.

2.43 Further work is proposed to be undertaken across relevant Council services to explore how these types of activities could be developed, co-designed and delivered with the input and agreement from all relevant service areas. Any formal recommendations would be considered by the Climate Change and Environment Programme Board and the Corporate Management Team (CMT) initially prior to any formal approval to proceed being sought.

3. Consultation

3.1 Consultation requirements will be considered on any projects proposed.

4. Alternative Options Considered

4.1 **No action:** Taking no action to support the decarbonisation of schools would not support the urgent need to reduce carbon emissions to achieve the Council's target of net zero emissions across all schools in Derbyshire by 2050, and to set a more ambitious net zero target for schools within the Council portfolio. It would also not support the delivery of the Department for Education's (DfE) sustainability and climate change strategy. Therefore, this option is not recommended.

5. Implications

- 5.1 Appendix 1 sets out the relevant implications considered in the preparation of the report.

6. Background Papers

- 6.1 None identified.

7. Appendices

- 7.1 Appendix 1 – Implications.

8. Recommendations

That the Committee:

- a) Notes the carbon impact of Derbyshire's schools and current UK Government strategy and support related to the decarbonisation of schools.
- b) Notes the progress that schools and relevant supporting Council service areas are making to reduce the carbon impact of Derbyshire's schools.
- c) Notes the proposed next steps to explore what further action the Council could take to support the decarbonisation of schools.

9. Reason for Recommendations

- 9.1 To ensure that the Improvement and Scrutiny Committee for Climate Change, Biodiversity and Carbon Reduction is informed of, understands and supports the work being undertaken to decarbonise Derbyshire's schools.

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Implications

Financial

- 1.1 The delivery of any next steps may have financial implications for the Council. These will be considered on a project-by-project basis subject to funding availability.

Legal

- 2.1 There is no current statutory obligation on Local Authorities to undertake work to support the decarbonisation of schools.
- 2.2 Local authorities do have a statutory duty to promote the use of sustainable travel to and from places of education in their area under section 508A of the Education Act 1996. Sustainable travel is that which may improve the physical wellbeing of users and/or the environmental wellbeing of all or part of the local authority's area.
- 2.3 The delivery of any next steps may have legal implications for the Council. These will be considered on a project-by-project basis.

Human Resources

- 3.1 The delivery of some of any next steps may have human resources implications for the Council. These will be considered on a project-by-project basis.

Information Technology

- 4.1 The delivery of some of any next steps may have information technology implications for the Council. These will be considered on a project-by-project basis.

Equalities Impact

- 5.1 The delivery of some of any next steps may have equalities impact implications for the Council. These will be considered on a project-by-project basis.

Corporate objectives and priorities for change

- 6.1 The delivery of projects and actions to support the decarbonisation of Derbyshire's schools supports the Council's ambition to be a net zero organisation by 2032, or sooner, and for the County to be net zero by 2050. This work will also help deliver the following Council Plan priorities: Resilient, Healthy and Safe Communities; High Performing, Value for Money and Resident-Focused Services; A Prosperous and Green Derbyshire.

Other (for example, Health and Safety, Environmental, Sustainability, Property and Asset Management, Risk Management and Safeguarding)

Environmental Sustainability

- 7.1 The delivery of projects and actions to support the decarbonisation of Derbyshire's schools will improve the environmental sustainability of the Council and the County and, in particular, will reduce greenhouse gas emissions.
- 7.2 The delivery of some of the recommendations may have other implications for the Council. These will be considered on a project-by-project basis.