

CARBON REDUCTION PATHWAYS

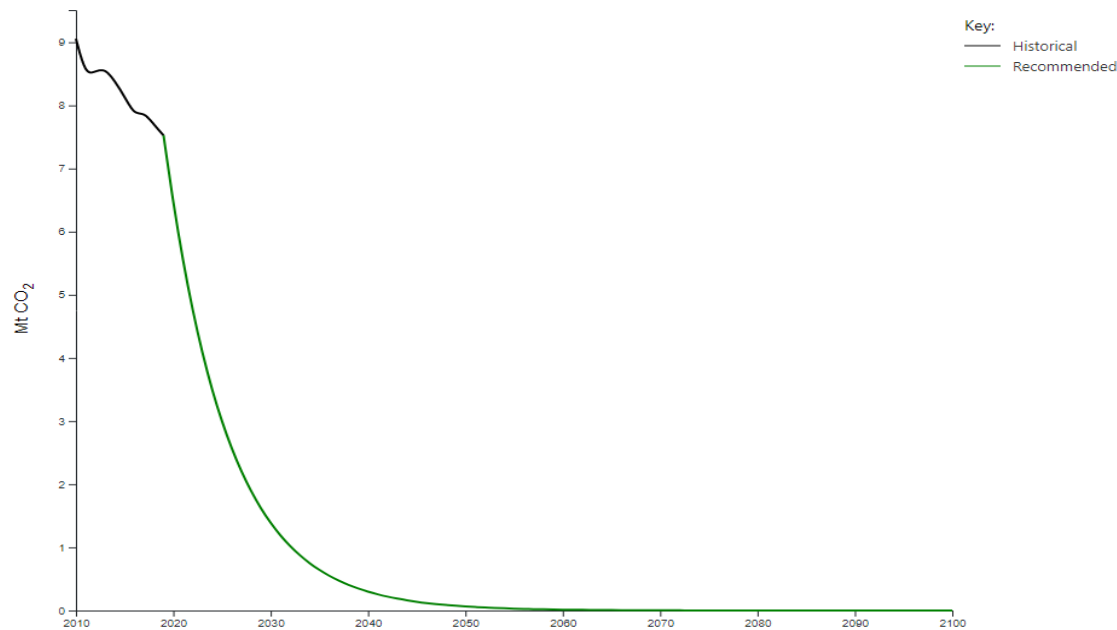
20. The Tyndall Centre for Climate Change Research hosted at the universities of East Anglia, Manchester, Newcastle and Cardiff have developed the web-based 'Tyndall Carbon Budget Tool'¹. The tool can be used to generate carbon budgets and pathways for local authority areas at district level and aggregated district groupings giving county level data. These budgets and pathways are based on achieving the scale of reductions necessary to meet the Paris Agreement target of keeping global temperature rise to "well below 2°C and pursuing 1.5°C". The pathways provide a clear graphical representation of the cuts in CO₂ emissions necessary to stay within the cumulative budget if the Paris target is to be realised. The graph below shows the CO₂ pathway projection for Derbyshire, highlighting the need for rapid and significant reductions in CO₂ emissions.
21. The area to the left of the curve above represents the cumulative carbon budget for Derbyshire for the period 2020 to 2100. This budget has been calculated by the Tyndall Centre for Climate Change Research as a 'fair' contribution to achieving the Paris Climate Change Agreement global temperature target of limiting climate change to between 1.5 to 2.0°C. The Derbyshire budget amounts to 45.2 million tonnes of CO₂ emissions over the period 2020 to 2100. At the current rate of emissions, this budget will be exceeded in less than six years. This demonstrates why speed

¹ Developed at Manchester University, Tyndall Centre for Climate Change Research.

of reduction in emissions is so important. A significant reduction in emissions is therefore needed if the Paris Agreement target is to be achieved.

22. Tyndall Centre pathways and budgets can be generated for each of the Local Authority areas in Derbyshire at: [Local and Regional Implications of the United Nations Paris Agreement on Climate Change \(manchester.ac.uk\)](https://www.manchester.ac.uk/research/tyndall-centre/implications-of-the-united-nations-paris-agreement-on-climate-change). The Tyndall Centre data does not enable analysis beyond District/Borough Council level, it is therefore not possible to use this data to provide a budget and pathway for the Peak District National Park Authority area.

Tyndall Centre for Climate Change Research CO₂ pathway for Derbyshire



The graph shows a steady decline in measured carbon dioxide emissions from 2010 to 2020 amounting to a decrease of approximately 1.5 mega tonnes CO₂ over 10 years, followed by a very rapid drop in emissions by 6.5 mega tonnes CO₂ in the following 10 years to 2030, required to achieve the target of limiting warming to between 1.5 and 2°C and reaching net zero by 2050.