



centre for  
sustainable  
energy

## Empowering emission insights: Harnessing data for a greener tomorrow

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# About The Centre for Sustainable Energy

CSE is a national charity supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes. It does this by sharing knowledge, practical experience and policy insights.

For over 40 years, CSE has supported people to take effective action on energy in their homes. CSE helps communities and local councils to understand energy issues, set priorities, and put plans into action. Meanwhile, CSE's research and analysis focus on making the energy system greener, smarter and fairer.

**For more information, please visit <https://www.cse.org.uk/>**

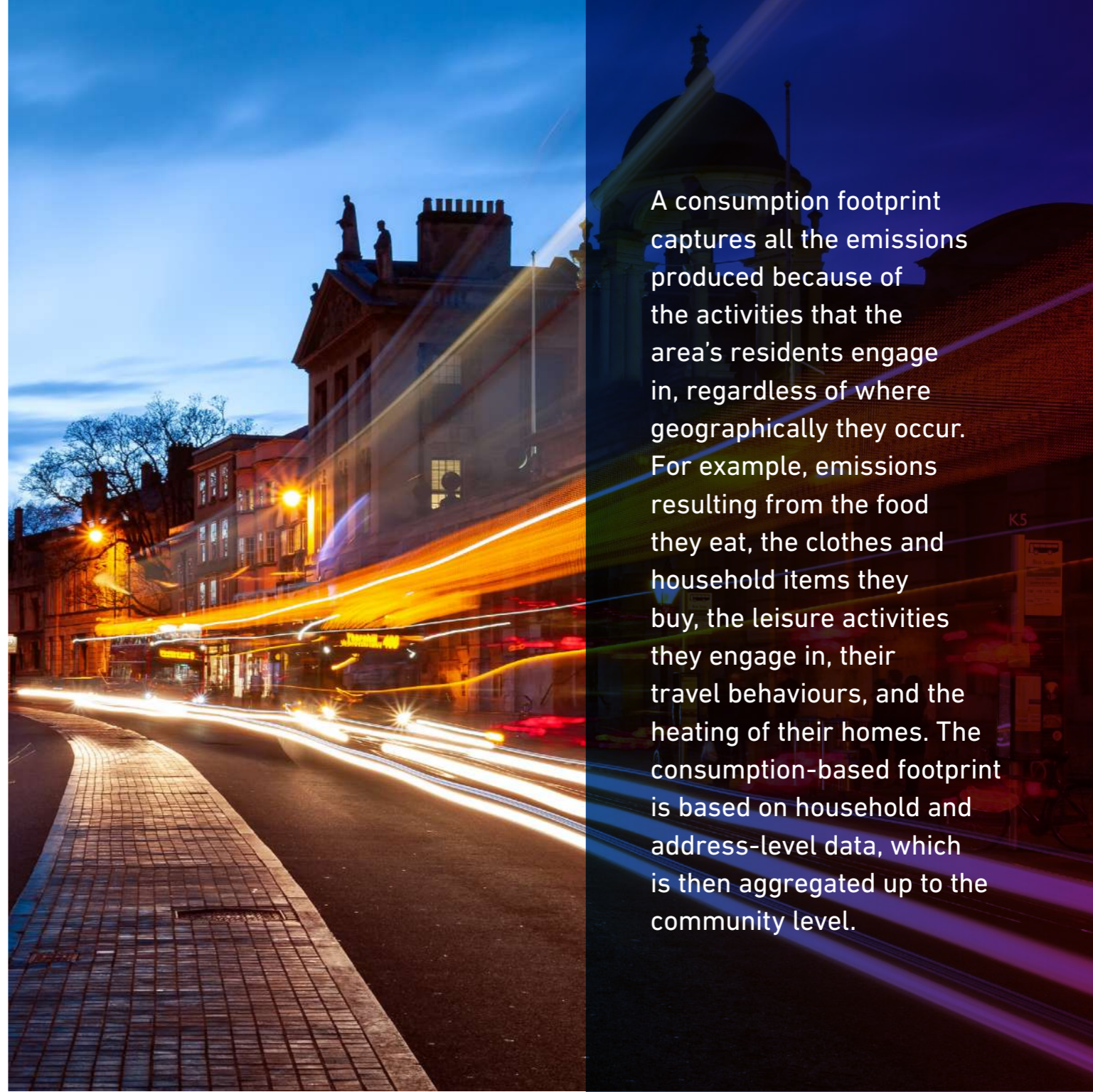


# Identifying the need

The Centre for Sustainable Energy (CSE), in collaboration with the University of Exeter's Centre for Energy and the Environment, developed the Impact Community Carbon Calculator as part of the South West Environment and Climate Action Network (SWeCAN) project.

They recognised the intrinsic complexities in estimating a community's carbon footprint, given the myriad of household compositions, consumption patterns, and lifestyles present in different areas. To create an estimator that could resonate authentically with the specific nuances and unique carbon imprint of each community, there was an evident need for robust, granular data that provided insights into consumer behaviours.

Designed for use by parishes, wards, district councils and unitary authorities, the tool draws on more than 30 datasets to estimate the total amount of greenhouse gases produced directly and indirectly because of everyday human activities in the given locality - heating homes, using electricity, transport, producing and distributing food, disposing of waste, etc.



A consumption footprint captures all the emissions produced because of the activities that the area's residents engage in, regardless of where geographically they occur. For example, emissions resulting from the food they eat, the clothes and household items they buy, the leisure activities they engage in, their travel behaviours, and the heating of their homes. The consumption-based footprint is based on household and address-level data, which is then aggregated up to the community level.

# Data-driven decision making

Choosing Experian's ConsumerView and Mosaic datasets was the turning point for development of the Impact Community Carbon Calculator.

These datasets offer a wealth of consumer data, making it possible to delve deeper into consumption patterns. The primary dataset, Experian's Mosaic Segmentation, offers a geodemographic breakdown of households into 15 groups and 66 types, based on a plethora of data sources. With this, users can dive into around 250 topics to better understand household attributes.

Complementing the Mosaic data is Experian's ConsumerView dataset, which was critical in linking data from the various surveys used to estimate emissions to the Great Britain-wide household level dataset that CSE developed. Variables extracted from this dataset included:

Age of the household head

Household's composition

Number of adults and children in the household

Property specifics such as number of bedrooms, residence type, property age, and tenure

Essential utilities information like mains gas connection

Using the amalgamation of data from Experian and the Energy Performance Certificate (EPC) data, the tool could precisely estimate carbon emissions emanating from energy usage in every home across Great Britain.





## Impacting change

The Impact Community Carbon Calculator, bolstered by Experian's datasets, has emerged as a trusted resource. Over 300 local councils and thousands of individuals have used it for actionable insights into carbon consumption patterns. As a result, carbon reduction strategies at the community level have become more targeted, efficient, and effective.

CSE's community engagement team have used the Impact Calculator in much of its engagement work – with local authorities, parish councils and community organisations and groups.

In a Winchester District Council-wide initiative, carbon footprint reports were generated for each civil parish and urban ward to help guide climate action. Parish councils then used this information in local communications – websites, social media, village newsletters – to inform residents and raise awareness. The data was also used to help prioritise which community initiatives groups should focus on to achieve the greatest carbon reduction.

In a Bristol-wide programme, funded by the National Lottery, CSE has worked with 6 communities across the city to support them to develop community climate action plans. The communities' carbon footprints have formed the foundation for each plan, and have been used extensively by the community organisations in their outreach activities.

Annette Lamley, Senior Project Manager at the Centre for Sustainable Energy:

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We recognised the need for accurate, tailored data to drive our carbon reduction initiatives. Experian's ConsumerView and Mosaic datasets were pivotal in refining our Impact Community Carbon Calculator. The granularity and depth of insights we gained have empowered our community actions. We are now not just working hard, but also working smart in our fight against climate change.”



## Get in touch to find out how we can help your business

Enhance your organisation's decision-making with the power of data and insights. Experian's comprehensive datasets offer depth and granularity, ideal for data analysts and marketers seeking to underpin their strategies with robust, actionable information. Connect with Experian today and find out more.

Contact us on [businessuk@experian.com](mailto:businessuk@experian.com)



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