



Influencing and Supporting Policy



Moving the agenda forward

According to Ireland's Climate Action Plan (2025), transport represents 28% of the country's carbon emissions.

Professor Brian Caulfield's expert engagement with government and advisory bodies, strategic roles in planning, public-facing dissemination of evidence, and scholarly leadership is striving to see those emissions reduce in a tangible way.

His work seeks to shape the complex public policy landscape relating to infrastructure planning and usage. It highlights systemic challenges, from emission levels, infrastructure delays, the difficult route to achieving transport

behaviour change and questioning policy dependence, such as on EVs, but it also consistently offers pathways forward. His work on rural connectivity, traffic trials, and local innovations, such as the TRACT Shared Mobility Hubs, provides clear, actionable evidence of how policy informed by research can encourage climate-relevant progress.

By promoting multilevel approaches that balance infrastructure, behaviour, governance, and technological tools, he affirms that real change stems from engaged, evidence-led scholarship.

This work showcases how Trinity is using demonstrable models and advisory roles to challenge policymakers to consider how and whether climate action solutions can be implemented with success while reducing emissions.

Prepared by Trinity Civic Engagement for Societal Impact, August 2025

Prof Brian Caulfield

DEPARTMENT

Department of Civil, Structural and Environmental Engineering, School of Engineering

PARTNER AGENCIES

Department of Transport
National Transport Authority
Transport Infrastructure Ireland
ESB
Sustainable Energy Authority of Ireland

FUNDERS:

Environmental Protection Agency
Research Ireland
Conference of European Directors of Roads
Transport Infrastructure Ireland
Dept of Transport
Road Safety Authority
Sustainable Energy Authority of Ireland
HORIZON Europe

SUBJECT AREAS

Transport
Public Transport Infrastructure
Environmental Impact of Transport
Intelligent Transport Systems
Intelligent Vehicles
Transport Modelling
Road Safety



State of the Environment 2024

Professor Caulfield served as a lead author on the Environmental Protection Agency's 2024 *State of the Environment* report, highlighting transport emissions and policy shortcomings, including overreliance on Electric Vehicles and the growth of high-emission SUVs. He was also a lead author on Ireland's first Irish Climate Change Assessment in 2024.

Greater Dublin Area Transport Strategy

Professor Caulfield contributes to strategic transportation policymaking through his involvement in the National Transport Authority's steering group for the Greater Dublin Area Transport Strategy. His guidance helps shape infrastructure investments and long-term planning frameworks, ensuring they reflect both sustainability goals and technical feasibility.

TRACT Project

Prof Caulfield leads TRACT (*TRANsport Behaviour Change Trials*), a programme testing whether shared mobility hubs, targeted use prompts and electric options can displace private-car trips in Irish contexts. The SEAI-funded TRACT policy brief and project pages set out trials that measure emissions, mode shift and ownership impacts, turning pilots into potential quantified policy Implementation toolkits.

ROBUST Project

The ROBUST project extends long-duration electric shared-mobility hubs to Dublin, Waterford, Galway and Letterkenny, specifying real infrastructure mixes (chargers, e-cars, e-bikes, e-cargo bikes) and evaluation protocols. These hubs give shared, comparable data from which policymakers can learn.

Policy Leadership

Prof Caulfield's research has been cited 85 times in Irish policy documents. Overall his work has been cited over 250 times in 18 countries and by the EU, UN, OECD the Inter-American Development Bank and the World Bank.

Presentations to Government

Professor Caulfield has acted as a pre-eminent voice on Ireland's Sustainable Transport issues. He has presented to Joint Committee on Environment and Climate Action in April 2024, speaking on the transport aspects of the Climate Change Assessment Report and in March and July 2021 to the Joint Committee on Climate Action as part of the debate on decarbonising transport.

Citizens' Assembly on Climate Change

He also contributed to the Irish Citizens' Assembly on Climate Change in November 2017, addressing the Assembly on how Ireland could show leadership in tackling climate change in transport and in agriculture. He again addressed a second Citizens' Assembly in 2022 on the transport powers of a directly elected Dublin Mayor.

Editorial Leadership

Through his membership of editorial boards, Professor Caulfield also influences the academic discourse shaping policy. He is Editor of *Transport Policy*, Associate Editor of *Sustainable Cities and Society*, and previously a Senior Editor of *Renewable & Sustainable Energy Reviews*, and participates in a number of other editorial boards for journals focused on transport and environment.

"Traffic in Dublin is so bad mainly because of decades of underinvestment in public transport. Dublin is one of the very few capitals in Europe that doesn't have an underground system."

Prof Brian Caulfield,
Time Magazine, September 2024

Outputs

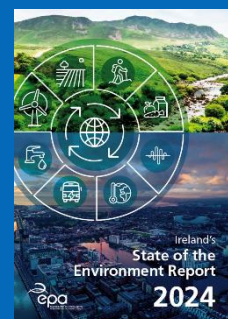


Ireland's Climate Change Assessment (2025)

The ICCA is Ireland's first comprehensive, authoritative national assessment of climate change. It brings together scientific research, observations, modelling, and projections to give a full picture of climate change. Professor Caulfield is a lead author on Volume 4: Realising the Benefits of Transition and Transformation.

State of the Environment Report (2024)

Produced every four years, this report is created by the Environmental Protection Agency and covers areas such as air, water, soil, biodiversity, climate, land use, nature, and the marine environment. Professor Caulfield served as a lead author on Chapter 11: Environment and Transport.



Should cars be banned from cities?



Brian Caulfield
Professor of Transportation and Head of Department
at Trinity College Dublin, Guest to the National
Transport Authority (Ireland)

20 February 2024



The Mobility Sphere

The Mobility Sphere by Transdev is a European think-tank that explores the future of mobility. Professor Caulfield is an identified expert contributing to the Mobility Sphere, contributing to events and providing thought leadership.

Climate Change Advisory Council

The Climate Change Advisory Council is an independent advisory body providing evidence-based advice and recommendations on policy to support Ireland's just transition to a biodiversity rich, environmentally sustainable, climate neutral and resilient society. Professor Caulfield has authored a paper to the Council on transport emission reduction.





Professor Brian Caulfield is a Professor in Transportation in the Department of Civil, Structural and Environmental Engineering. His primary research focus is addressing global issues such as the environmental impacts of transport and methods to reduce the carbon impacts of transport.

Prof Caulfield has published over 200 papers in these areas in high impact international journals and international conferences and to date has been awarded approx. €10 million in research funding. He currently has seven PhD students and six postdoctoral researchers in his research group.

Prof Caulfield also a member of a number of National and International research groups and is the former Chair of the Irish Transportation Research Network and was a member of the executive committee of the Universities Transport Studies Group as well as several committees at the Transportation Research Board in Washington D.C.

For More Information

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