

Institution: Robert Gordon University		
Unit of Assessment: 13 Architecture, Built Environment and Planning		
Title of case study: Enacting sustainable mobility		
Period when the underpinning research was undertaken: August 2009-December 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
David Gray	Professor	1999- present
Caroline Hood	Lecturer	2016- present
Richard Laing	Professor	1996- present
Period when the claimed impact occurred: 2014-2020		
Is this case study continued from a case study submitted in 2014? No		
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>This research concerns sustainable mobility, and has had numerous key areas of impact. The research stimulated policy debate about collective transport which has led to informing and supporting the delivery of a revised sustainable urban mobility plan for Aberdeen. The research guided local practice on stakeholder engagement, which provided evidence for policy makers to develop and apply the sustainable urban mobility plan and roads hierarchy for the region. It has steered and strengthened connections between policy and practice in Aberdeen and resulted in increased public understanding of and engagement with the issues, policies and opportunities.</p>		
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>The underpinning research was led by Professor David Gray (Professor of Transport Policy) and Professor Richard Laing (Professor of Built Environment Visualisation), and included collaboration with academics across architecture, the built environment, business and the social sciences.</p> <p>The work is important as it addresses issues and problems facing all urban areas and seeks to develop potential solutions. The significance of these issues relates to routes through which positive change can be enacted in urban mobility, within the wider context of urbanism and the relationships between people and their environments.</p> <p>The research ethos was founded on utilising innovative approaches to extensive stakeholder engagement, such that any results and insights emerging from the research could be utilised to drive both policy and associated practice.</p> <p>This research on sustainable urban mobility draws from earlier work undertaken by Gray and Laing since 2009 which explored urban and rural mobility and greenspace (including funding from the Scottish Government and EU FP5). This work has been undertaken across a portfolio of externally funded research commissions, often involving working with international consortia. These included work with Interreg North Sea Region (G-PATRA, Art-Forum, PAV, CARE</p>		

North), EU H2020 (Civitas PORTIS) and the Highlands and Islands Transport Partnership, with related project grants in excess of £900,000 (during the period 2009 to present).

Initial underpinning research was undertaken through Interreg North Sea (CARE North, and CARE North+) and involved close partnership working with a consortium of Municipal Authorities, including Aberdeen City Council. This **resulted in the collection and production of key evaluation/consultation data** regarding the prioritisation of city interventions (including 'car club' schemes and the introduction of a low emission zone).

Research undertaken during the REF period (EU H2020 Civitas PORTIS) has involved the **instigation and management** of a close evaluation process in Aberdeen region, led by RGU, where the participation of a wide stakeholder group was undertaken in parallel to the collection of quantitative behavioural data.

Early **key findings and insights highlighted the gap between stated policy and practice**, which could be attributed to a complex range of factors. Central among the potential research-informed solutions to this has been the approach taken towards stakeholder engagement, and the manner in which this can then inform and drive practice. The research has sought to study the processes through which aspirational mobility initiatives can overcome barriers to implementation, through reference to rigorous stakeholder participation.

In each project, **research insights and outputs of the RGU team have been able to provide rigorous frameworks and guidance** which have not only enabled the partners to undertake structured analysis and evaluation of their policies and actions but also allowed them to draw new insights and enact new policies and practices. Partners who have benefited from applying these methods **include municipal authorities from across Europe**.

3. References to the research (indicative maximum of six references)

Docherty, I., **Gray**, D and **Laing**, R. (2016) Delivering lower carbon urban transport choices: European ambition meets the reality of institutional (mis)alignment, *Environment and Planning A*, **49**(1), 226-242, [doi](#)

Quality indicator: Environment and Planning A is a **key Q1 journal** (Geography and Planning), and all papers undergo a rigorous process of peer review.

Tait, E., **Laing**, R. and D. **Gray** (2014) Governance and policy challenges of implementing urban low-carbon transport initiatives, *Local Economy*, **29**(1-2), [doi](#).

Quality indicator: Local Economy is a **key Q1 journal** (Economics), and all papers undergo a rigorous process of peer review.

Gray, D. and R. **Laing** (2012) CARE North fact sheet on economic and ecological impacts. Available online:

http://archive.northsearegion.eu/files/repository/20130812124512_WP4FactSheet-Assessmentofeconomicandecologicalimpacts.pdf

Quality indicator: This was one of numerous outputs from CARE North, a funded Interreg North Sea project. All projects go through a **rigorous process of review**, and the study attracted **funding** (exclusive of match) of €2,401,419 (ERDF grant to RGU €226,000)

Hood. C. and R. **Laing** (2020) *Managing demand in the North East*, NESTRANS, available from: <https://www.nestrans2040.org.uk/update/managing-demand-in-the-north-east/>

Quality indicator: This output from Civitas PORTIS, a funded EU H2020 project, was prepared in collaboration with Nestrans, the transport partnership for Aberdeen City and Shire. The document is a key reference point for the partnership, and has been used to inform policy regarding demand management in the region.

4. Details of the impact (indicative maximum 750 words)

Undertaken in close collaboration with external non-academic partners, the research has demonstrated impact across a wide range of thematic areas.

Engaged stakeholders included Municipal Authorities and non-partner stakeholders who were central to the method and conduct of the work. This engagement **resulted in the academic findings being appropriate for publication in esteemed journals, as well as having reach and significance to policy makers, practitioners and wider constituents.** [1]&[6]

Impact on public policy, law and services

Work undertaken within Civitas PORTIS concerned traffic demand management. Its findings were applied by NESTRANS to inform development of the Regional Transport Strategy. [2]

Impact on the environment

The research has **supported the development of a revised Sustainable Urban Mobility Plan**, a key policy document for North East of Scotland that aims to develop an accessible and well-connected transport network for everyone in the community and delivers a “safe, sustainable and economically buoyant city centre with an enhanced sense of place” (Sustainable Urban Mobility Plan for Aberdeen, Scotland). [3]

The research has also resulted in the introduction of an evaluation method (process and product) which has **transformed the use of evidence-based decision making.** [4]

Evaluation of Civitas PORTIS confirmed that **levels of NO₂ across 17 monitored sites had decreased by between 5.8% and 23.5% over the course of the project**, and especially in areas affected positively by smart and strategic freight routing. Aberdeen is currently utilising this data in support of plans to **introduce a low emission zone in the city, as direct evidence of the potential for further ongoing impact.** [4]&[5]

Another outcome of the collaborative research between RGU and Aberdeen City Council (initially within Interreg CARE North and CARE North+) has been **the introduction of a highly successful car share scheme in the city.** The car club run by Co-wheels, which was introduced and supported through evidence from those projects, has been extended beyond the completion of the original research. This also **demonstrates a clear impact of the research which supports the implementation of policy aspirations into practice.**

Co-wheels activity has taken place throughout the period 2014-20, which has more recently incorporated hydrogen powered and accessible vehicles. The car club when introduced had a fleet of 12 vehicles, which by the end of 2020 had increased to 52. Of these, 18 are electric, 9 hydrogen, 12 hybrid and 13 have standard unleaded petrol engines. Membership of the club now extends to over 2,000 personal accounts (over 1% of the City’s driving age population), and Aberdeen City

Council block book out 9 cars for staff use during the working day, **thus helping to reduce air pollution and congestion from staff not needing to take personal vehicles to work.** [4]

Impact on understanding, learning and participation

The research has had significant impact in terms of **enhancing public participation within the research process to facilitate and support wider understanding and democratic formulation of policy.** This has included hosting and running of open events (PORTIS), and engagement with the wider community on cycling and walking within urban areas (PORTIS), as evidenced by publications at Civitas level, and media coverage of work concerning informed mobility. [6]&[7]

In collaboration with the local regional transport partnership (Nestrans), the research team hosted the inaugural meeting of the newly formed Grampian Cycle Partnership, attended by 150 people in 2018. Members of the RGU research team and Nestrans (Caroline Hood, John Barron) are currently committee members in the partnership. Caroline Hood, through PORTIS, also facilitated a Cycle Law Scotland event attended by 75 cyclists, which included presentations and open debate concerning legal advice for riders. These activities form a vital part of our research, and demonstrate a commitment to involving the wider community in the work. [8]

In response to the global pandemic of 2020, Aberdeen City introduced a series of measures to improve space for people walking and cycling in the city centre. **The policy and its implementation were made possible due to data collected through PORTIS and evaluated by RGU.** The research team also engaged in public debate on these measures through the press. [4]&[9]

To conclude, **the research conducted by RGU in the area of sustainable urban and rural mobility has provided evidence and guidance which has been utilised by policymakers and practitioners and has informed decision-making.** Impact from the research team has continued to develop in terms of reach, with **key team members regularly invited to make contributions to external forums and debate** (notably Professor Gray in evidence to the Scottish Parliament). [10]

5. Sources to corroborate the impact (indicative maximum of 10 references)

- [1] **Engagement practice:** Civitas PORTIS innovation brochure (VECTOS)
- [2] Application of **demand management** research in forming policy: Testimony from Rab Dickson (NESTRANS Director) and <https://www.nestrans2040.org.uk/update/managing-demand-in-the-north-east/>
- [3] **SUMP:** Confirmation of Aberdeen City's adoption of a revised SUMP <https://committees.aberdeencity.gov.uk/ieDecisionDetails.aspx?Id=9727>
- [4] **Application of evaluation data** in relation to 'Spaces for People': Testimony from Gale Beattie
- [5] **Air pollution reduction:** Civitas PORTIS deliverable D6.4 ("Results of the evaluation"; confidential, but available on request)
- [6] **Civitas document regarding walking** <https://civitas.eu/document/one-step-time-aberdeen-site-portfolios>

- [7] **Press coverage:** <https://www.pressandjournal.co.uk/fp/news/specials/2385370/you-can-relax-aberdeens-cyclists-on-what-has-changed-since-lockdown/>
- [8] **Cycle Law Scotland citation to the group work**
<https://www.cyclelawscotland.co.uk/article/cycling-and-the-law>
- [9] **Press coverage:** <https://www.holyrood.com/news/view,aberdeen-city-council-launches-journey-planner-app-to-encourage-walking-and-cycling>
- [10] **Scottish Parliament Rural Economy and Connectivity Committee** (evidence from Professor David Gray). <https://www.scottishparliament.tv/meeting/rural-economy-and-connectivity-committee-october-3-2018>