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Rural Construction Industry Case Study Interviews on Circular Economy: Communication, Knowledge Exchange and Social Network Analysis¹

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Key message: Strategic outreach and support for local businesses led by local authorities and SEPA will help overcome perceived barriers to transitioning to CE in the rural construction and demolition sector and will help build knowledge and best practice.

Main Findings

- Surveys and interviews were undertaken by 5 case study businesses in North Ayrshire (Fig. 1).
- Results suggest there are three key players in the exchange of circular economy (CE) knowledge and the sharing of innovation to support CE progress in the rural construction and demolition (C&D) sector in North Ayrshire. These are Zero Waste Scotland, SEPA, and Local Authorities for smaller businesses.
- Findings suggest that micro-businesses in remote locations, particularly on the Scottish islands, are subject to rural divide with regards flow of information and sharing of best practices.
- There is a suggestion of a 'grey' divide in rural organisations with more mature managers (nearing retirement), indicated through lack of digital capacity (i.e. no e-mail address) and online presence.
- Barriers exist in how CE is reaching different stakeholders and customers. These barriers include: a lack of customer awareness of CE and its benefits, reduced sharing of ideas and innovation between peer organisations due to perceived competition, together with wariness regarding CE cost implications and loss of competitive advantage with the sharing of ideas.

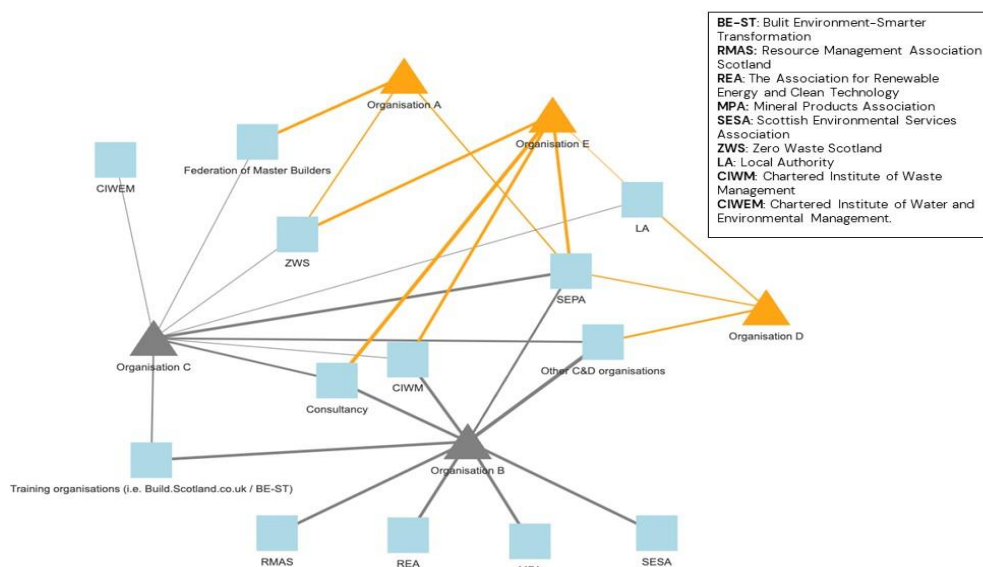


Figure 1: Social Network Analysis of five rural organisations from the C&D Industry in North Ayrshire (orange organisations are micro – small, and grey organisations are medium – large)

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Introduction

Internationally, it has been shown that communication has a significant positive effect for environmental policy development and alignment through extent and frequency of communication (Holzinger, Knill, and Sommerer, 2008⁴). However, small businesses have been shown to be hampered in their environmental success due to reduced communication ability and smaller numbers of relevant relationships helping drive innovation and change (Del Brio and Junquero, 2003⁵). This study maps the circular economy (CE) information flow between case study rural construction and demolition (C&D) businesses and other CE stakeholders in North Ayrshire.

Methods

North Ayrshire was selected as an initial case study area for this research, and from within this location five case study organisations were selected to provide cross-industry narratives on current modes of information exchange and effectiveness. Participants were asked to complete a survey with questions designed to support social network analysis (SNA) and were then invited to participate in an interview. The interview explored some of the information exchange pathways in more detail in terms of effectiveness and to establish barriers to information flow and exchange of CE innovation and ideas. Content analysis of the organisations' websites was undertaken to map out their connectivity and evaluate whether they actively advertised their sustainability activities or mentioned CE as a way of raising client/customer awareness.

Policy and Industry Recommendations

- Provision of an advisory service to facilitate sharing of information and guidance between government, governmental organisations, and the C&D industry. This would better support micro- and small organisations to build a more informal relationship for KE.
- Continued support for conferences such as the BE-ST Festival (including grants to cover expenses and time for micro and SMEs). Conferences might support more working together among organisations and reduce competitive practices.
- Strengthening of links/shared communication from governmental bodies via certification bodies (i.e. Federation of Master Builders) and community groups.
- Promote C&D demonstration sites to provide training and sharing of good practice/policy by practitioners from micro to large businesses with established CE business plans and practices. One example might be the continuation of the collaborative regional framework for knowledge exchange through Off-Site Hubs in Scotland (Hairstans and Smith, 2017⁶).
- Introduction of annual meetings within organisations to review any issues / barriers, to look at proposed changes to practice for the coming year (including recurrent CE deliverables on the agenda), and to ensure CE is routinely considered as part of annual business planning.

⁴ Holzinger, K., Knill, C., and Sommerer T. (2008) *Environmental policy convergence : the impact of international harmonization, transnational communication, and regulatory competition*, *International Organization*. 2008, 62(4), pp. 553-587

⁵ Del Brio, J.A. and Junquera, B. (2003) *A Review of the Literature on Environmental Innovation Management in SMEs: Implications for Public Policies*, *Technovation*, 23 (12), pp 939-948.

⁶ Hairstans R. and Smith R.E. (2017) *Offsite HUB (Scotland): Establishing a collaborative regional framework for knowledge exchange in the UK*, *Architectural Engineering and Design Management*, 14 (1-2), pp 60-77.

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