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A conceptual framework for negotiating public involvement in municipal waste management decision-making in the UK

Kenisha Garnett^{a,*}, Tim Cooper^b, Philip Longhurst^a, Simon Jude^a, Sean Tyrrel^a

^a Cranfield University, School of Water, Energy and Environment, College Road, Cranfield MK43 0AL, UK

^b Nottingham Trent University, School of Architecture, Design and the Built Environment, 50 Shakespeare Street, Nottingham NG1 4FQ, UK

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ABSTRACT

The technical expertise that politicians relied on in the past to produce cost-effective and environmentally sound solutions no longer provides sufficient justification to approve waste facilities. Local authorities need to find more effective ways to involve stakeholders and communities in decision-making since public acceptance of municipal waste facilities is integral to delivering effective waste strategies. This paper presents findings from a research project that explored attitudes towards greater levels of public involvement in UK waste management decision-making. The study addressed questions of perception, interests, the decision context, the means of engagement and the necessary resources and capacity for adopting a participatory decision process. Adopting a mixed methods approach, the research produced an empirical framework for negotiating the mode and level of public involvement in waste management decision-making. The framework captures and builds on theories of public involvement and the experiences of practitioners, and offers guidance for integrating analysis and deliberation with public groups in different waste management decision contexts. Principles in the framework operate on the premise that the decision about 'more' and 'better' forms of public involvement can be negotiated, based on the nature of the waste problem and wider social context of decision-making. The collection of opinions from the wide range of stakeholders involved in the study has produced new insights for the design of public engagement processes that are context-dependent and 'fit-for-purpose'; these suggest a need for greater inclusivity in the case of contentious technologies and high levels of uncertainty regarding decision outcomes.

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1. Introduction

Historically, decisions affecting the public, particularly environmental risk decisions have been made with input from selected stakeholders, including public officials with responsibility for decisions and technical expertise in the appropriate area (Laird, 1993; Stern and Fineberg, 1996; Jasanoff and Wynne, 1998). Often this has meant that the public has either been excluded from decision-making or involved too late (Rydin and Pennington, 2000; Petts, 2004). International guidelines such as the Aarhus Convention proposed increasing levels of public involvement in environmental decision-making (UNECE, 1998), but there are different perspectives on the benefits of involving the public in policy decisions. For instance, public involvement is often argued as necessary because "public support is needed to implement policy" (Renn et al., 1995; p. 6). However, this has not gone

unchallenged: "public participation and consensus-building is over-rated as a policy tool" (Nichols in Minard et al., 1993; p. 31). More recent research suggests the rationale for seeking greater public involvement needs to be better articulated (O'Faircheallaigh, 2010) with greater clarity around the definition of who participates in decision-making, the rules of participation, and the expected influences and learning outcomes that improve the quality of engagement (Benneworth, 2009). In this paper, "public involvement or engagement" is used as an umbrella term and encompasses: (1) "public participation" that implies a popular democratic notion of ordinary citizens' involvement in policy decisions, and (2) "stakeholder and community involvement or engagement" that implies a more pluralist notion of interest group involvement in policy-related issues, usually specific planning decisions (Creighton, 2005).

In Britain, the Localism Act 2011 and the National Planning Policy Framework (DCLG, 2012) gives communities a greater role in decision-making, promoting early public involvement through effective deliberative and participative systems of governance. In

* Corresponding author.

E-mail address: k.garnett@cranfield.ac.uk (K. Garnett).

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Table 1
Policy drivers for early public engagement.

Waste policy/planning documents	Relevant guidance on public involvement
National Planning Policy Framework (DCLG, 2012)	“Early and meaningful engagement and collaboration with neighbourhoods, local organisations and businesses is essential...” (p. 37) “...local planning authorities should aim to involve all sections of the community in the development of Local Plans and in planning decisions...” (p. 17)
Waste Management Plan for England (Defra, 2013a)	“In line with the Government’s approach to localism...local communities should benefit from hosting waste infrastructure and be involved from an early stage in planning for such infrastructure” (p. 29)
National Planning Policy for Waste (DCLG, 2014)	“...undertake early and meaningful engagement with local communities...recognising that proposals for waste management facilities such as incinerators can be controversial” (p. 4)

a waste policy context, local authorities are required to develop robust public engagement strategies that clearly demonstrate how stakeholder views, including those of local communities, will shape the development of waste strategies and facility plans (Table 1) (House of Commons, 2010; SITA, 2010).

The growing momentum for public involvement in waste strategy and facility planning presents an opportunity to refashion traditional consultation techniques to incorporate deliberative and participatory activities that involve stakeholders (including communities) at an early stage of decision-making, where there is still a chance to talk about alternatives, potential sites and community benefits (Cotton, 2013).

In studies related to environmental planning, Farina et al. (2012) suggest there is a need for purposeful and continuous efforts to balance “more” and “better” public involvement according to how it is “valued” in a particular policy context. Areizaga et al. (2012) suggest the need for flexible and adaptive participatory approaches with specific structures for different situations. We argue that certain decision situations may call for greater inclusivity while others may not; hence there is a need to understand how public engagement events are ‘valued’ in a particular context and best positioned within existing regulatory and institutional regimes. In the waste context, the problem of heightened contention around specific site applications (Environment Council, 2007a, 2007b) and regulatory fragmentation (i.e. separation of responsibilities for strategy development and facility planning) (Petts, 2004) poses questions about the degree to which engagement methods are ‘fit-for-purpose’ and culturally appropriate.

The major challenges faced in designing public involvement strategies are how to conceptualise unknowns, the limits of available scientific knowledge, the cognitive biases inherent in technical analysis and thus, the terms for wider public involvement in such judgements. In response to these challenges, questions such as ‘who to involve’, ‘at what level’, ‘what methods to use’, and ‘how to ensure engagement is suited to the decision context’ have been pursued in environmental planning (Rowe and Frewer, 2005; Chilvers, 2007; Krutli et al., 2010; Bull et al., 2010). In a study of engagement in the waste sector, we provide insights into the design of appropriate engagement processes by clarifying the context for deliberation and the conditions upon which public values may be successfully integrated with technical analysis (Garnett and Cooper, 2014). In this paper, we extend and expand on these findings by proposing a conceptual framework for negotiating the level and mode of public involvement. The conceptual framework is built on the premise that public involvement is context-specific, depending on the type of technology or waste facility under consideration, the local culture and history of public engagement in the community, and the potential for controversy.

The following section of the paper establishes the rationale and structure for public involvement in decision-making, and explores the appeal for early public involvement through examination of its origin within the political theory, governance and public involve-

ment literature. It is followed by a brief description of the problem-structuring technique that underlies the study, and the research methods. Finally, the findings from the study are presented, structured around our key arguments, and synthesised in final recommendations and conclusions.

2. Rationale and structure for public involvement in decision-making

2.1. Waste management context

This research focuses on the key challenge facing UK local authorities of determining the optimal method of managing municipal solid waste, specifically post-recycling residual waste. Providing an integrated service that links communities and their potential to participate in minimising and recycling wastes needs to be matched with implementing waste treatment technologies that are socially acceptable to the majority of the community. Management options to treat municipal solid waste including biodegradation or energy recovery differ in technological complexity, scale and potential locations. These are the key aspects of debate over such facilities (Tunesi, 2010). Resource recovery is generally accepted as a positive outcome from waste disposal. However, incineration as a basis for recovering energy from waste (EfW) is regarded as controversial from the perceptions of localised health and environmental risks. Emerging advanced thermal treatment (ATT) technologies are being considered by some local authorities as they appear less controversial. However, there is scepticism about the efficiencies of these technologies (e.g. gasification and pyrolysis), despite recent public investments made to support their design, installation and operation (Defra, 2013b; Evangelisti et al., 2015). Operating requirements for some ATTs include pre-treatment such as mechanical biological treatment (MBT), thus increasing the complexity while offering the potential for energy recovery and integration into wider municipal waste management strategies (Defra, 2007; Tunesi, 2010). Overall, reliance on technologies that are not well established increases development times as well as capital and operational costs for operators required to meet landfill diversion targets.

Non-thermal treatment such as anaerobic digestion (AD) and composting are emerging as more acceptable options (Frick et al., 1999; WRAP, 2009). AD is a mature technology with many commercial plants in existence. These are being increasingly sited in England, although this increase, in response to favourable energy tariffs, has resulted in a need for collections of source-segregated food and garden wastes within a market of limited supply and difficulty in determining the right mix of waste input (AEA, 2009; Defra, 2010, 2007; RTPI, 2010). Similarly, composting has expanded in response to increased landfill diversion targets, with a growth of centralised facilities, increased collections of source segregated food and garden waste and surplus markets for compost. Quality of the final product remains a concern, with standards

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