
Managing Public Engagement to Optimize Learning: Reflections from Urban River Restoration

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Abstract

In the context of the growth in support for deliberative decision-making, this paper presents a new examination of an important and as yet largely ignored question of just how a deliberative process can capitalize on local knowledge and lead to shared (expert and public) learning and understanding. It speaks to both the academic and practitioner through a set of reflections upon the nature and demands of engagement management. Drawing upon a recent urban river restoration project in the UK, the subject of an innovative form of engagement, it identifies and examines the key management elements, i.e. the recruitment of representative interests; active facilitation; collaborative framing; optimizing interaction; and managing the unexpected. The paper concludes that both public and expert can learn if the right conditions for listening, sharing, reflecting on preferences and adapting are created and managed, and identifies the theoretical and practical implications.

Keywords: public engagement, deliberation, learning, environmental decision-making, urban river restoration, Water Framework Directive

Introduction

That the public should be engaged in environmental decision-making is now a common argument in democratic societies widely supported by international and national policy (e.g. UNECE 1998). Public engagement² is described and promoted with three rationales: normative, instrumental and substantive (Fiorino 1990; Hajer and Kesselring 1999). Hence, engagement is argued not only to be the 'right thing to do' and a better way to achieve particular outcomes, but ultimately it should also lead to better decisions.

Engagement is predicated on creating the necessary conditions to support a new relationship between expert and lay understandings of an issue, one that promotes learning about different perspectives, views, and knowledge. Deliberation to induce 'reflection upon preferences in a non-coercive fash-

ion' (Dryzek 2000, 2), is a different way of making sense of the world allowing for the exchange of views, consideration of evidence, reflection on matters of mutual interest, negotiation and persuasion (Stern and Fineberg 1996, 73). Actually designing and delivering a deliberative engagement process requires dealing with the difficulty not just of making technical knowledge publicly accessible, but of translating practical questions and public problems into an expert discourse (Bohmann 1999).

The growth in support for deliberative decision-making has been matched by a flurry of analysis and guidance as to what makes an effective process. Theoretically-based criteria stressing fairness, competence, and social learning (Renn and Webler 1992; Webler 1995; Webler et al. 1995) have underpinned evaluations of practice (e.g. Renn et al. 1995; Petts 2001; Horlick-Jones et al. 2004) and a burgeoning library of guidance for environmental decision-makers (e.g. in the UK, Clark et al. 1998; IEMA 2000; Petts and Leach 2000).

There is agreement that engagement processes should be 'fit for purpose' (e.g. Petts and Leach 2000; Burgess et al. 2006), that is, they should be appropriate to the decision situation. But does the 'suitable choice of a mechanism' (Rowe et al. 2005) automatically produce a good process? Arguably the form of process is not as important as the way in which it is conducted: i.e. different forms of deliberative practice (such as citizens' juries, consensus panels, focus groups, etc.) even if carefully selected to be 'fit for purpose' will not guarantee outcome success (Chess and Purcell 1999). The way in which an engagement method is applied could have a substantial, even determining, effect on the performance of the process (Webler and Tuler 2001).

This highlights an important question: *how* can a deliberative process capitalize on local knowledge, lead to shared and individual concerns, enable a discussion that moves towards closure in a respectful and productive manner, and not be derailed by unforeseen events and concerns (e.g. Webler 1998)? Importantly, how can a process achieve this without falling foul of the powerful framing and conditioning effects (ranging from choice of focus to personalities of protagonists) that privilege expert knowledge and analysis, concerns

about which underpin the search for effective deliberation (e.g. Stirling 2004)?

It is clear that good practice guidelines and evaluative criteria are not enough. There is an urgent need for a detailed understanding of how to operationalize these, not least amidst the rush to adopt participatory methods, with the potential for insufficient numbers of skilled practitioners and paucity of attention to resourcing. A discussion of how deliberative processes can be managed to optimize outcomes would seem to be overdue and highly pertinent. The concept of *management* could suggest a degree of interference that challenges deliberative ideals. Nevertheless, I argue that different forms of knowledge can *only* be revealed, challenged and beneficially brought together to inform a decision within the inevitable resource constraints that bedevil real decision-making through a managed process.

This paper speaks to both the academic and the practitioner using evidence from a recent engagement process relating to an urban river restoration project predicated on a learning approach. I begin with a discussion of this context. Next I draw upon the process evaluation³ and my personal reflections as an independent facilitator to discuss the key management elements (normative and practical). I conclude with a summary of the theoretical and practical implications.

The Learning Context

The Sustainable Development of Urban Rivers and Floodplains (SMURF) project was funded by the European Union (EU) Life program.⁴ The aim was to develop and disseminate a methodology for improved land-use planning and water management in urban floodplains consistent with the objectives of the EU Water Framework Directive (WFD) (European Commission 2000). This was to be achieved through the implementation of a river restoration project in the City of Birmingham. The partners in the project included the Environment Agency, Birmingham City Council, the water utility Severn Trent Water and Hydraulics Research (HR) Wallingford (who developed a planning decision tool during the project). The project (from engagement to restoration) had to be completed within two years.

The WFD (Article 14) places considerable emphasis on the planning and management of water resources through 'active involvement' of the public, including the creation of a 'learning approach.' The WFD reflects the approach to collaborative watershed planning used in the U.S. with an emphasis on decision-making that is place-based, cooperative, and inclusive of multiple parties (Wondollock and Yaffee 2000).

A learning approach attempts to build action among stakeholders (government, citizens and experts) through ex-

ploration of the issues, co-construction of the problem and then identification of, and agreement upon actions needed. This is more than individuals learning in a social situation. Instead, they learn how to solve shared problems in a manner responsive to factual correctness and normative consent (Webler et al. 1995). Of course, suggestions of a linear relationship between learning and an environmentally responsive citizenship have been rightly challenged (e.g. Owens 2000) and social learning is not the sole goal.

Certainly the learning driver is predicated upon the power of lay understanding and the intense, contextual knowledge of people in their local environments (e.g. Wynne 1991, 1996; Harrison et al. 1998; Irwin 1995; Irwin et al. 1999; Petts et al. 2003). However, it also responds to the notion of expertise as an ongoing learning process resulting from interactions between people (e.g. Limoges 1993). But how can the work of experts in decision contexts be directly informed and contextualized by the needs and preferences of other parties? While the concept of expert learning may not underpin many of the regulatory drivers for public engagement (such as the Aarhus Convention), it does strike at the root of concerns that expert science and analysis need to be quality assured. Hence lay input is conceived as being functionally similar to that of the expert, i.e. it assists in framing problems, provides for knowledge input, aids interpretation, and improves evaluation (Renn 1995). If learning is more than a social exercise, then we have to design and proactively manage engagement exercises to enhance collaborative learning. But this is not to neglect the power of learning (organizational, expert, social) that may transcend the decision and be one of the more powerful and lasting influences of any engagement effort.

The SMURF Approach

The Upper Tame catchment (West Midlands, UK) was the SMURF focus, specifically that part within the urban area of the City of Birmingham. Here the Tame is affected by at least 300 years of urban and industrial growth, having been modified, culverted and rerouted. Despite some improvements since 1965 with the focus on regeneration of river corridors and creation of parkland nature reserves, stretches of the river remain in a poor ecological state, having low amenity value, affected by pollution flushes during storms and facing development pressures along the important floodplain and on banksides.

SMURF was one of the first examples in the UK of public engagement in the design and implementation of an *urban* river restoration project⁵. There are fundamentally different perspectives about the role of the public in river restoration.

On the one hand, an expert perspective postulates that restoration goals should be formulated and evaluated in the context of geomorphological and ecological processes (e.g. Kondolf 1998). On the other hand, a democratic perspective postulates that restoration captures the interaction between scientific definitions and the goals of society as a whole, with a strong contextual influence emerging from socio-economic and cultural processes (e.g. Sear 1994; Eden et al. 1999; McDonald et al. 2004). Indeed, in densely populated areas it has been argued that it is not possible to have ecological restoration without strong public support (Van Diggelen et al. 2001).

Any major intervention in a local environment challenges alternative preferences: for example recreation, amenity, and ease of access versus species-related or ecological requirements (e.g. Tunstall et al. 2000). The complex interactions between the river corridor, anthropogenic change and the community suggests that 'enhancement' or 'rehabilitation' more aptly describes the work required — as opposed to philosophical concepts of restoring to a 'natural' state (e.g. Brookes and Shields 1996; Boon et al. 2000; Eden et al. 2000; McDonald et al. 2004). In SMURF, experts were challenged to achieve an innovative urban river restoration informed by new, primarily science-based sustainability indicators (Biotsidis and Gurnell 2004), using a process driven by accountability and local input.

At the beginning, key expert questions (worries) were evident, not least whether the multiple and differing communities of Birmingham would even be aware of the river. For much of its length in the City, the river is culverted or flows behind commercial and industrial buildings or beneath the elevated M6 motorway. Would people be sufficiently interested in providing input to a project that may not ultimately provide them with direct benefits? Would they be willing to engage in the technical issues related to urban river enhancement?

An early decision had to be made with respect to the learning objective. If potential sites were considered and identified through a standard technical appraisal this would neither embed river restoration in a broader environmental and water management context nor potentially understand public priorities for their local environment. Therefore, a two-stage process was designed. The first stage took a geographically broad, whole city perspective to create a vision for rivers in Birmingham. This was informed by the constraints and aspirations of different interests and produced criteria for restoration and management. These criteria directly informed the selection of relevant sites for stage two. The second stage focused on the Perry Hall Playing Fields⁶ and included designing and delivering a relevant and acceptable (to public and experts) restoration plan. The first stage encompassed three areas — Perry Barr, Castle Vale and

Northfield. These areas represented different experiences of the River Tame from heavily modified (flowing through a large urban park) to culverted and hidden, to semi-rural (respectively). They also represented different socio-economic conditions and environmental pressures.

The primary form of engagement was a discussion workshop. A small number of committed people (about 20 public participants per group) engaged with experts and decision makers in an information-rich environment (based on Lasswell 1963 cited in Dryzek 1990). Recognizing the limits this imposed in terms of numbers of people engaged, a project web-site⁷ provided information to, and collected views from, the wider community. At key stages information was mailed to households around the restoration site. There was frequent engagement with the local press. District and Ward Committee meetings were attended to ensure local politicians were informed about progress.

Recruiting Representative Interests

Attempting to optimize deliberation through a focus on relatively small groups prompted the common question from experts: Would these reflect the views and experiences of the wider community? Representation, in the statistical sense, is often considered central to the legitimacy afforded to processes by government and official stakeholders (Barnes et al. 2003). A fear that the 'usual interests' will get heard by force of interest often reflects a traditional focus on listening to, as opposed to engaging with, different voices.

Common to deliberative small group processes SMURF participants were recruited to be representative of the broad range of interests including general and social interests endemic to any community (education, residential, community) and interests important in the context of river management (recreation, conservation, flooding). Thus, recruitment was managed to optimize engagement of people with informed perspectives from a variety of viewpoints, not necessarily river experts. Local demographics were reflected as far as possible in the people we engaged.

For stage two, people who lived near the selected restoration site (in Perry Hall Playing Fields) as well as users of the playing fields in general were recruited. An important tool was to 'cascade' learning and views between the two stages. To enable continuity across the stages, some members of the stage one groups were nominated by their peers to continue into stage two.

A community assessment process drawing upon local authorities' understanding of key organizations, internet, local press, library searches, and 'snowballing' of names generated through individual contacts informed recruitment. At stage two, recruitment was also done in the Playing Fields.

The recruitment process took at least 25 days for stage one and 12 days for stage two, not an inconsiderable length of time, but vital to ensuring a sufficient range of interests as well as ‘buy-in’ to the process by those who signed up. Importantly, recruitment was undertaken by the lead facilitator (see below).

Two groups were particularly difficult to engage: young people under 18 years old and the ethnic community. The young were contacted by networking through youth organizations and the City’s Youth Parliament. Some adult participants were asked to bring along younger family members or friends (minimum age 13). Young people’s views were also gathered via a local school governor who encouraged a geography project with children aged 9-10. In terms of the ethnic community, participants were individuals who could network readily into a number of local activities (not least local cricket teams using the Playing Fields). It proved more difficult to persuade the broader ethnic community to take part. There may be multiple reasons for this, such as the nature of the ethnic mix; the degree of local integration; language; cultural reluctance to engage in discussion groups; and timing of meetings coinciding with evening prayers (although the latter was not given as a reason by people contacted). To overcome the slight under-representation of people from the ethnic minorities the individuals who did take part were asked to use their own organizational and interest group networks to cascade information to members of their broader communities.

At the end-of-project debrief session for the experts there was general agreement that “*ordinary people*” had been attracted and committed. There was also recognition that recruitment had to be managed closely to achieve such input, “*getting on the phone and talking to people was obviously the key.*” However, there was also some remnant skepticism as to whether these results were due to the unusual nature of SMURF. One person wondered, “*would you have got them if it had not been a special project?*”

Active Facilitation

Active facilitation was essential. SMURF operated with two independent facilitators — a lead who provided the vital link from recruitment to participation and a second (this author) who provided the technical subject link. Because they were independent of the agencies delivering the restoration, the facilitators were able to develop and maintain a relationship with participants that focused on the latter’s concerns. They also understood the pressures and restrictions facing the experts. The facilitators had significant experience facilitating similar types of engagement processes and had direct subject knowledge. A very careful balance was required between assistance and direction (or control).

During meetings the facilitators’ role was to move the agenda through, ensure that all participants had an opportunity to be part of the discussions, act as a ‘go-between’ between expert and lay participants, make essential subject linkages, draw conclusions, and provide real-time summing up⁸. They capitalized upon the power of contextual knowledge, and captured thoughts and images. They were continually synthesizing and summarizing the dimensions and significance in the context of the expert views and information being presented.

Between meetings, the lead facilitator’s role was to maintain people’s engagement, particularly when there was little or nothing happening and participants might be ‘lost.’ As the project moved to stage two, most people involved in stage one had no further active role. However, there was a need to keep them up-to-date with progress as contributors to the project and potential disseminators of information in their communities. Hence all participants received regular update letters, as well as phone calls to talk through concerns and information needs and to remind people about the next meeting.

Collaborative Framing

At the outset it was essential to make people feel as comfortable as possible, to show that a professional approach was being adopted, but that the framing of the issues (and hence) decision had not been ‘closed down.’ At the beginning of both stages participants (public and expert) agreed upon group terms of reference which set ground-rules, defined remit, and agreed upon a clear framework for management. This stressed that people were engaged in a ‘professional’ process. The danger of a committee-like process is that discussion can be too readily restricted or the agenda streamlined. Lay participants needed to feel comfortable that their levels of knowledge and opinions would not be challenged as fundamentally uninformed or illegitimate. Protagonists (lay or expert) for particular views had to be heard but not allowed to dominate.

Stage one focused on a strategic vision for river management in the City, a topic relatively meaningless to the majority of the lay participants at the start. Participant ‘buy in’ to the process was achieved through capitalizing on the many local issues (environmental, social, economic) that people were concerned about. This helped to embed the concept of river restoration in people’s local lives. By focusing on things people knew about, ‘new’ technical information (for example about ecological diversity, indicators of ecological sustainability, flow rates, storm surges, etc.) could be positioned in the context of existing knowledge. Often this experiential knowledge had been gained through looking at the river, listening to it, walking along its banks, fishing in it, catching

frogs in the spring, etc. Thus, facts and values were allowed to overlap and interweave in a narrative-based discussion, with the vivid personal and moral power of the latter used positively to synthesize the diversity of views and interests, such as community access, wildlife value, safety, flood risk, amenity and river form. People understood how the river had changed — for example, older members recounted how as children they paddled in the water but now that the river was culverted there was a sense of physical isolation. Younger participants talked of fishing and where the river was difficult to access, where fish were more abundant, and so on. Participants were asked to bring photographs or pictures that reflected their relationships with the river and these were pinned up at meetings to provide a personal library of project visual prompts.

The framing discussions generated a consensus on the ‘physical’ and ‘emotional’ characteristics of the ideal urban river. For the experts, the public’s emotional criteria (e.g. tranquil, relaxing, colorful, natural, friendly, light, safe, not clinical [for further discussion see Petts and Gray 2005]) were particularly novel. For the public, the physical criteria (variety of shape and form, variety of wildlife, safe, flood free, etc.) were reinforced and amplified through their engagement with experts. The concept of ‘bringing a little of the rural into the urban’ became particularly poignant. Both public and experts used the phrase as shorthand for shared learning.

Throughout, there was a tension between what the EU money would deliver (which was restricted to river restoration) and broader community concerns about their urban environment (such as excess litter, flytipping, or crime). A difficult balance had to be managed between ensuring that actual concerns were aired and addressed and maintaining a focus on what might be possible. Hence, meeting time was provided for local issues to be raised, but we returned as soon as the facilitators deemed possible to the terms of reference and project framework. By having representatives of the City council at every meeting, participants had a direct and tangible mechanism for logging their broader concerns, placing some onus on officers to at least recognize these.

Optimizing Interaction: The Balancing Act

Expert Preparation

Encouraging learning requires a *balancing act*. This means bringing public concerns into an expert discourse while making the technical accessible. The multi-disciplinary expert team — ecologists, hydrologists, landscape designers and architects, land use planners, project managers, pollution control officers, flood control planners — were immediately challenged to recognize the relative value of lay versus expert

knowledge. The culture of expertise witnessed at the beginning of the process was one that espoused a deficit model of lay knowledge and was focused on the efficiency of an evidence-driven process. The majority had not taken part in a public process involving multiple roles (including observation, listening, presentation, discussion and debating). As people noted in the debrief session it is “*much easier to talk to your organizational peers,*” “*you have to think more in a public forum,*” and “*it can be scary at the beginning.*”

Therefore, an essential management tool was the project team meetings led by the facilitators, at the beginning of each stage and also before key workshops. The purpose was to ensure the whole team understood the draft agenda, to agree on the potential scope of discussion, individuals’ roles and the information needed, and to discuss presentation drafts. The facilitators’ role was to ensure that community interests were served.

Facilitators suggested changes to draft presentations to improve the explanation of terms; encourage the use of local examples; restructure arguments to explain why something might not be possible (as well as why an option might be preferred); and to ensure that complex concepts were introduced appropriately. Despite this, the facilitators often had to help the lay participants understand scientific jargon and interpret plans and maps. For example, during the last meeting the mistake of photocopying the engineering drawings for the draft restoration plan was made. Within minutes it was evident that about 30% of the group could not visualize which elements of the river were being referred to and how the proposed changes (e.g. forming a beach at the bottom of a re-profiled riverbank) were being depicted. In retrospect, annotated drawings using local names would have been more valuable. Despite the considerable efforts to make the technical elements understandable some remnant concerns were expressed in the participant evaluation. One person noted: “Lots of ordinary people with little knowledge and lots of experts with too much knowledge made it at times difficult for ordinary people...., but lots of knowledge and opinions were gained by the exercise.”

Lay-Expert Interactions

Informal as well as formal interactions were encouraged. Thus, participants had access to experts during and after meetings including during refreshment breaks, helping to break down barriers and to build understanding of different perspectives. Importantly the same experts maintained their involvement throughout (not an inconsiderable time commitment) so that familiar faces were regularly seen at the discussion table. Even when not presenting, they attended as observers to ensure their awareness of how issues were raised, developed and resolved.

The didactic value of site visits was confirmed. The stage one visits provided a vital means of showing people different types of river environment within the City. Common to experience elsewhere the site visits played fundamentally important roles. They promoted understanding and helped participants place issues in context. They also generated empathy between participants and experts through the opportunity to share stories, learn more about each other, and travel together on the coach. There was evidence of sharing stories about local conservation activities, pressures upon the agencies to maintain water quality and flood protection, and social needs for recreation space. Eighty-five percent of the participants rated the site visits as 'essential.'

By stage two, visits had different roles — to reassure people about work in progress, to provide evidence for participants to take back into their communities, and to talk to the engineers working on the site. By this time the site had started to be 'owned' by the community. Indeed by this stage it was necessary to respond to local interests by arranging special community planting events⁹.

Learning through Knowledge Input and Assessment

Two tools underpinned the learning process: provision of information and management of discussion. With regard to the former, each participant received a book (*Urban Rivers*) (Petts et al. 2002) written for a general audience. It highlights many of the key issues and challenges for urban rivers. With regard to the latter, workshops were held. In stage one there were two whole day meetings for the three groups combined and two evening meetings for each of the groups. In stage two there was one whole day meeting and two evening meetings for the single group. All workshops used a mix of plenary and small group discussion. This approach is thought to optimize cognitive enhancement (Webler et al. 1995). Small groups (5-6 people) provided a more conducive environment for interaction between participants and experts, for participants to crystallize questions for the experts, and for experts to understand the variety of interests. Mixing the very different dynamics of small group and plenary discussions brought variety into long meetings. Formation of the small groups required careful and sympathetic matching of individuals to ensure a dominant voice could not take over. This was not always easy. The evaluation revealed considerable satisfaction with the workshops. Eighty-four percent thought that they were the right length and 82% thought that they provided 'sufficient' or 'very good' opportunities for discussion and a 'good mechanism for getting consensus.'

Developing a Shared Vision

It might be assumed that consensus amongst the groups about a river restoration would be easily reached, being rela-

tively uncontroversial. However, as already noted, differing priorities were frequently evident and reaching a consensus often entailed agreeing on a balance of characteristics. For example, in the context of 'bringing a little of the rural into the urban' trees were an essential element, but creating dark and gloomy places by allowing trees to become overgrown was not. Dark places were characterized as unsafe places by some.

Once the physical and emotional characteristics of the ideal river had been agreed upon, it was essential to have people consider the practical constraints and barriers to implementation and management. Thus, expert presentations on the challenges of land use planning, flood management priorities, and the need to enhance biodiversity and habitat value were combined with lay participants' articulation of their experiences of what would detract from the achievement of some of these goals. The outcome was an agreed set of community criteria (13 elements¹⁰) (see Petts and Gray 2005) that drove the expert selection of a site from a short list of seven. These also became a management tool in stage two, being used as a continual check that the restoration plan was developing in accordance with community priorities, and finally for an evaluation of the 'success' of the restoration as implemented.

During phase two it was evident (just as in rural river restoration projects e.g. Tunstall et al. 2000) that participants wanted to be presented with a range of restoration plan options to evaluate against their criteria. People evidently 'wouldn't know where to start' (comment from one participant) in designing a restoration themselves. But because of the expert/public interaction, a design that ignored key principles and priorities was self-evidently not only going to be unacceptable, but also likely to challenge ecological, hydrological and geomorphological principles exactly because these had been 'co-produced' in the local context.

Managing the Unexpected

While there were limits to what the EU would fund, it became evident early that it would be impossible to restrict restoration to the physical features alone. If nothing else it would negate the learning mode. Once the costs were finalized it proved possible to respond in part by the provision of litter bins and additional benches/seating. What could not be dealt with were issues relating to security in the playing fields and toilet facilities. These expectations had to be left with the City Council. What the community engagement achieved was a highlighting of such issues and a mobilized set of individuals with a watching brief.

One relatively easy change to plans was an additional evening meeting in stage two in response to concerns of some

members of the group who had not been part of stage one about the possible options for restoration. While the meeting involved additional time and expense it was essential to enable participants to feel confident in moving discussion forward.

The biggest unexpected issue requiring management was the failure to deliver a second restoration because of the identification of land contamination¹¹. While stage one had stressed that no participants were guaranteed a restoration project in their local area, the public announcement of Plants Brook, Castle Vale as the selected second site was done in advance of site investigation work. Local residents were “*excited*” (as one person recounted) at the prospects of a restoration project on their estate. Waiting to tell residents about the selection until the site was confirmed as physically suitable for restoration would have led to a 3-month delay and the inevitability that they would see the site investigations and want information. Managing expectations is vital, but requires a careful balancing of transparency and openness against false promises. SMURF was fortunate in that there was money to allow the lead facilitator to maintain contact with the Castle Vale residents — in a more cash-strapped exercise a significant loss of trust in the process might have resulted.

Managing Learning — Conclusions

Persuading non-experts is not the issue, nor is turning them into experts. Understanding depends on the construction of mutual recognition which, by means of joint management of problems, redefines the division of epistemic work, the connection among competences... (Pellizzoni 2001, 82).

Pellizzoni’s critique of the myth of the best argument, far from negating the potential of the deliberative process, confirms the importance of creating and *managing* the right conditions to support learning. The analysis of the SMURF two-stage engagement process has responded to the largely unexplored question in theoretical and practical literatures of *how* to capitalize on local knowledge, identify shared and individual concerns, and en-

able a discussion that moves forward to closure without being derailed by unforeseen events. Table 1 summarizes the five management elements identified — recruitment of representative interests, active facilitation, collaborative framing, optimizing interaction and managing the unexpected — in terms of their key practical requirements.

The evidence strongly promotes a theory of learning as a *balancing act*, requiring careful management of the powerful framing effects that can privilege expert knowledge while ensuring that local knowledge and public issues and priorities are tensioned against what is practically achievable. I contend that the two-stage process adopted was important in this regard for three reasons. First, it allowed quality time for expert-lay interaction. Second, it enabled co-construction of the problem and definition of community priorities as well as technical principles. Third, it promoted agreement on the actions needed and recognition of the practical constraints. In

Table 1. Requirements of Key Engagement Management Elements to Support Learning

Management Element	Requirements
Recruitment of representative interests	<ul style="list-style-type: none"> -Locally informed perspectives from a variety of viewpoints -Sufficient time for recruitment -Recruitment by lead facilitator to provide contact continuity -Direct contact with potential participants -Core participants engaged through whole process -Information provision to wider community
Active Facilitation	<ul style="list-style-type: none"> -Independence from project decision/delivery agencies -Act in interests of lay <i>and</i> expert participants -Control the more dominant voice while encouraging the weaker -Significant facilitation experience -Subject knowledge and ability to synthesize technical information -Maintenance of balance between assistance and direction -Assist discussion by elucidating issues and making essential linkages -Ongoing participant contact within and outside of meetings
Collaborative Framing	<ul style="list-style-type: none"> -Achieve buy-in by showing issue framing is not closed down -Agreed upon terms of reference and ground rules -Time to explore all issues but ensure focus on what is possible -Continuous use of narrative and visual prompts -Capitalize on and be seen to value local and experiential knowledge -Co-produced lay and expert framing and priorities for action -Mechanism to ensure that official agencies recognize all local issues
Optimizing Interaction	<ul style="list-style-type: none"> -Project team pre meetings -Making technical presentations publicly understandable -Bringing public concerns into an expert discourse -Expert and public informal and formal interaction throughout -Continuous individual expert involvement -Site visits -Background information provision -Small group and plenary discussions
Managing the Unexpected	<ul style="list-style-type: none"> -Sufficient funds to allow flexibility of process -Facilitator close monitoring of process -Open communication when problems arise -Manage expectations to maintain confidence and build trust

the urban river management context, the managed learning approach enabled restoration to be embedded in a broader environmental context with evident ongoing social relevance but also clear understanding of local priorities at the specific site.

Organizational or social learning may be a more lasting impact of any engagement effort than the actual plan or project delivered. In SMURF there was clear expert learning about how to optimize and manage public engagement. It was also evident that experts came to appreciate the power of the lay voice and the extent of public interest in, and priorities (environmental and social) for, the management of rivers in the urban environment. In the public context there was evident individual subject learning which could inform ongoing engagement generally and locally, but also social learning of, and increased empathy with, different community interests and priorities. One remnant question has been whether the community criteria for restoration developed in SMURF, which focused on the need to 'bring a little of the rural into the urban,' could be replicated in other projects without such an extensive engagement process? While this may negate the learning of process requirements, it also suggests a degree of pragmatism, as the resources available in SMURF¹² may not be replicated often.

Of course, important caveats impact on both theoretical and practical learning. SMURF was a place-based project (i.e. spatially limiting in that it did not involve the whole catchment). Because it was relatively uncontroversial it was easier to manage, although there were a few who argued that the money could be better spent on improvements to the environment in general rather than the river. However, the lack of strong contention could have made recruitment and retention of public interest more difficult. Certainly there were more available resources than may normally be the case, and there was inherent expert buy-in as funding was contingent on engagement. Nevertheless, SMURF has confirmed that the public and experts can learn if the right conditions for listening, sharing, reflecting upon preferences and adapting are created and managed.

Endnotes

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2. Engagement is used here rather than participation to encompass the more deliberative concept inherent in the term. Public participation is often used more generically to include information provision and consultation.
3. The process evaluation involved two primary components: a questionnaire survey of community participants at the end of each stage conducted by the University of Birmingham, and a half-day debrief session with the experts on the project team.
4. See www.smurf-project.info. EU Project No. ENV.UK/000014
5. For further details of the engagement work see Petts and Gray 2005.
6. Originally two restoration projects were planned. However, after selection of a second site on the Plants Brook in Castle Vale, land contamination issues came to the fore to the extent that work could not be considered within the project's financial limits.
7. The web site (www.smurf-project.info) was created and managed by a specialist company. It was particularly successful, with a very high number of page requests (105,917) and copies of documents (39,058) downloaded over the two years. While it is not possible to identify who it engaged — e.g. local community versus international academics — the site played an important role in project communication.
8. Feedback was recorded directly onto a computer and projected onto a screen in the meeting room allowing for all participants to check that ideas were being recorded accurately and captured adequately, for consensus to be developed visibly, and for differences to be explored. After each meeting a more formal set of notes was compiled and agreed with all participants before being put on the website.
9. This had not been considered from the outset but emerged as a community priority. Members of the local scouts group assisted with planting of reeds along the water's edge. A local school (9-10 year olds) assisted with planting by a conservation group as part of a learning exercise. On a Saturday some 80 local people arrived in response to a general advertisement to assist with planting of a wild-flower meadow.
10. The criteria covered a mix of physical and ecological outcomes such as water quality to maintain ecology, allowing the river to find its own course, enhancing variety of flow and depth, no building on the floodplain, as well as important community outcomes such involvement of the public in the design of the restoration project, optimisation of educational opportunities, and safe access to the river.
11. See note 5.
12. The costs of the facilitators and the direct cost of running the meetings was £120K. This does not include the costs of the experts' time, etc.

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