Scoping in environmental impact assessment: Balancing precaution and efficiency?

Tim Snell [a,1], Richard Cowell [b,*]

[a] *Adams Hendry Consulting Ltd., 7 St. Peter Street, Winchester, Hampshire, SO23 8BW, United Kingdom*
[b] *School of City and Regional Planning, Cardiff University, Glamorgan Building, King Edward VII Avenue, Cardiff CF10 3WA, United Kingdom*

Abstract

Scoping is a crucial yet under-researched stage of environmental impact assessment, in which practice falls well behind conceptual ideals. We argue that such 'implementation deficits' reflect dilemmas between two key rationales for scoping — environmental precaution and decision-making efficiency — and between technical and participatory conceptions of the decision-making process. We use qualitative research to understand how scoping *practice* in the UK reconciles these competing imperatives. Our findings suggest that practitioners mainly rationalise their approach in terms of decision-making efficiency, while justifying excluding the public from scoping on grounds of prematurity, delay and risks of causing confusion. The tendency to scope issues in rather than exclude them reflects a pervasive concern for legal challenge, rather than environmental precaution, but this reinforces standard lists of environmental considerations rather than the investigation of novel, cumulative or indirect risks.
© 2005 Elsevier Inc. All rights reserved.

Keywords: EIA; Scoping; Precautionary principle; Efficiency; Participation

1. Introduction

This paper addresses the subject of scoping in Environmental Impact Assessment (EIA). Scoping has been defined by Glasson et al. (1999: 90) as 'determining, from all a project's possible impacts and from all the alternatives that could be addressed, those that are key,

---

significant ones' which should be subject to further assessment. A failure to scope an EIA effectively creates the risk that unnecessary work will be undertaken, or that the significant consequences are missed. To many analysts, therefore, 'scoping is of fundamental importance to the effectiveness of the rest of the EIA study' (Morgan, 1998: 103), and to the quality of decision-making as a whole (Harding, 1998; IEMA, 2004; Singleton et al., 1999; Stookes, 2003). Moreover, regulatory changes following from European Directive 97/11/EC 'served to elevate the importance of scoping' in British practice (Becker and Wood, 2003: 1). Yet despite its acknowledged importance, scoping is a 'poorly understood and under-researched aspect' of the EIA process (Mulvihill, 2003: 40).

Our aim is to extend understanding of EIA scoping. Rather than compare implementation against an idealised model of EIA, our approach is to try to explain scoping *practice* in terms of underlying tensions between different rationales. We argue that scoping practices can be seen as emerging from the interplay between efforts to give effect to the precautionary principle and to make decision-making processes more efficient. The contestability of these rationales, and the often ambiguous relationship between them, problematises any search for a simple, measurable, 'implementation deficit'. Moreover, the way in which precaution and efficiency are reconciled in scoping practices may reflect particular interpretations of the decision-making process.

The precautionary principle is usually defined as requiring that lack of scientific evidence should not be used as a reason for avoiding steps that might prevent environmental damage. EIA can be seen as fostering precaution insofar as it provides a mechanism for anticipating serious, irreversible environmental risks arising from development projects, and considering steps to avoid or mitigate them (Glasson, 1999; O'Riordan, 1999). Scoping is pivotal in this regard, by helping to ensure that all the potentially significant impacts, including indirect, secondary and cumulative effects are investigated. However, the 'precautionary principle' is not a unitary concept (O'Riordan and Jordan, 1995), and the strong ideal of avoiding harm even in the absence of evidence can sit awkwardly with the ethos of EIA that decisions should be made on sound information. Scoping reflects this dilemma, requiring a delicate assessment to be made about which impacts are likely to be significant, in advance of more detailed investigation. This raises questions about how 'likely significance' is gauged by practitioners.

Such judgements are not forged in a vacuum but in particular institutional settings in which other issues command attention. As O'Riordan and Jordan (1995) have noted, the interpretation of precaution is bound up with concerns about the efficiency of decision-making, and the desire to ensure that precautionary attitudes do not unduly constrain development. The evolution of EIA embodies these concerns. The ballooning volume of Environmental Statements produced in the USA under NEPA (Morgan, 1998) did much to inform beliefs — strongly expressed by Britain's Conservative governments of the 1980s — that EIA was a potentially burdensome addition to the land use planning process. Scoping (along with screening) is a key mechanism for managing this burden. As Weston (2000b: 198) remarks, 'if minor issues are not scoped out of the EIA process at an early stage it will result in a great deal of unnecessary work and wasted resources as well as a potentially verbose and confusing environmental statement'. Ideally, by focusing the assessment and reaching agreement between the parties about the information required, scoping not only improves the efficiency of decision-making but enhances its clarity and transparency as well (Glasson et al., 1999; Morgan, 1998; Stookes, 2003).

Evidence to date suggests that UK scoping practice is not working as well as it could in respect of either the precautionary principle or in helping to make EIA efficient (Becker and

Wood, 2003). Yet this apparent failure is arguably no less remarkable than the assumption that scoping procedures could straightforwardly support *both* precaution and efficiency, given the strong likelihood of tensions between them. Taking a precautionary approach to complex and uncertain environmental consequences, that increases the amount of analysis to be undertaken or extends opportunities for public deliberation, would scarcely hasten decision-making. These tensions are readily apparent from the wider institutional setting of EIA in the UK — the land use planning system. In the UK (as elsewhere), the planning system has been a site of conflict between those that wish to streamline the system to reduce perceived burdens on economic growth, and those that would extend the capacity of the system to promote environmental sustainability (Owens and Cowell, 2002). EIA is caught in this conflict, and scoping is a key stage at which opposing objectives are reconciled.

To understand how actors reconcile precaution and efficiency, we utilise the notion of interpretative 'frames' (Rein and Schön, 1991), which shape the way in which policy problems are conceptualised, and the meaning ascribed to particular principles. These frames may incorporate formal policy — the regulations applying both to the specific appraisal tool in question and the wider decision-making system — but also from the way that policy is rationalised with the norms, interests and interactions of the actors involved. Decision-making systems themselves can embody meta-narratives, or 'constitutive (knowledge forming) values' (Shrader-Frechette, 1985), which parties draw upon to negotiate ambiguities. Thus one might expect EIA in general, and scoping practice in particular, to be framed by existing regulations, concepts of precaution or efficiency, but also by beliefs about the merits of technical rationality, argumentation and public involvement (following Weston, 2000b; Morgan, 1998; Salder, 2001). These frames will also intersect with organisational goals, conventions and beliefs: for developers, this may reflect the dominant goal of achieving consent for their project; for regulators, it might be the routine processing of information.

By adopting this approach we seek to explain scoping practices in the UK and, through this, to elucidate how pressures of environmental precaution are balanced against efficiency in EIA. In the next section we review how alternative conceptions of the decision-making process have been applied to scoping. We then summarise current scoping practice in the UK, before setting out the findings of our own research. This consists of interviews and surveys with practitioners, followed by a brief comparative case study of two scoping exercises. The paper concludes with observations on scoping practice and the prospects for improvement.

2. Decision-making theory, EIA and scoping

Typically, debates about the role of appraisal techniques have pitted a technocratic, 'scientific' model of decision-making against a model that stresses public participation and deliberation. The distinction between these models is undoubtedly overblown, in terms of the normative guidance they provide, the 'actual complexities of appraisal practices, and ... the different, sometimes subtle ways in which they might secure legitimacy' (Owens et al., 2004: 1944). Nevertheless, each model offers a useful characterisation of *types* of practices within EIA, and of the rationales that inform framings of the policy problem. Moreover, such categories have been used by other analysts to construct theories of EIA (Weston, 2000b; Salder, 2001), and to synthesise two broad schools of normative thought regarding the role of scoping (Morgan, 1998). Technocratic and deliberative models suggest distinctive answers to the crucial question for scoping — how do we, or ought we, determine which issues are sufficiently significant to

warrant examination? — so we use them as a startpoint for our own review of interpretative frames in the scoping process.

Turning first to the technocratic model, it has long been recognised that the language of early literature on EIA is 'dominated by the language of rationalism' (Weston, 2000b: 189). While few would now conceptualise EIA wholly in terms of systematic procedures and scientific methods, it retains enduring appeal (Owens et al., 2004; Weston, 2004). It also underpins Morgan's conception of 'technical scoping' — a broader, objective and scientific process which uses expert practices to identify impacts and assess likely significance (Morgan, 1998). This technical scoping resonates with Salder's (2001) description of 'comprehensive rationality', and its assumption that decisions can be based, inter alia, on clearly defined issues, perfect information, unlimited resources and scientific prediction. There is a range of techniques for impact identification which have their roots in the rational comprehensive tradition — checklists, matrices, overlay maps and complex computer modelling.

The deficiencies in this perspective have been well rehearsed: even the most sophisticated techniques cannot predict all the environmental consequences of development; moreover, assessing which impacts are significant involves judgements about risk, value and system boundaries that are intrinsically subjective (Beattie, 1995; Owens et al., 2004). Partly in response, we have participatory and deliberative conceptions of EIA in which intuition and value judgement are acknowledged (Weston, 2000b). This is the basis of Morgan's conception of 'social scoping' (Morgan, 1998), where identifying significant impacts is framed as a process of discussion (Salder, 2001). Opening scoping to a wider range of inputs by other organisations and the general public can also help to interpret the precautionary principle (Gustavson, 2003), increase the democratic legitimacy of the EIA process, and redress concerns about developer bias. Social scoping has often been connected to a wider meta-narrative, bridging participatory and efficiency rationales, that extending public involvement at an early stage in the decision-making process helps to reduce conflict and so makes the project approval process quicker overall (see, for example, Sinha, 1998; Environment Agency, 2002; Weston, 2004).

Social conceptions of scoping are not without their problems either. Scoping processes, appropriately designed, may offer an additional *opportunity* for involvement in impact assessment, but do not, of themselves, address intractable barriers of information, resources and efficacy which restrict the participation of wider publics (Diduck and Sinclair, 2002). There are also thorny institutional and epistemological tensions to be negotiated in reconciling the different knowledge claims — 'expert', 'local', 'professional' and 'cultural' — that are brought to EIA. And neither technical nor social models of scoping offer an effective conceptualisation of practice. Just as with notionally 'technical' framings of impact assessment, social scoping cannot easily transcend the play of power in determining which knowledges count, who can be involved, at what stage and how (Saarikoski, 2000). And any desire to interpret social or technical scoping rationalities in a 'comprehensive', 'inclusive' way confronts pressures for efficiency, which shape how such principles are realised.

The deficiencies of these polar perspectives on EIA have focused attention on intermediate positions, characterised by Salder (2001) as the 'incremental' frame, where value judgements and trade-offs between impact areas are recognised, as is the inherently political nature of planning (Weston, 2000b). EIA is still seen as offering a systematic framework but decision-making is coordinated through gradual, small steps. Norms and standards have a useful role — whether those are the principles of scientific knowledge or the ideals of public engagement — but they cannot provide a substitute for case-by-case discretion. The scoping stage is part of this

incremental coordination, and has itself been seen in incrementalist terms. Many have come to see scoping as an exercise that seeks to reframe subjectivity as practical reason (Owens et al., 2004: 1953) in which value judgements are reached, ideally, through comprehensive community consultation, but guided by professional discretion, technical criteria and norms (Weston, 2000b; Morgan, 1998; Beanlands, 1988). Prior experience and intuition have also been identified as valuable scoping tools (Wood, 1995).

Such incremental frames undoubtedly seem more realistic than dominantly technical or social readings of scoping practice, and avoid the starker claims of the individual camps. Nevertheless, two difficulties remain. Firstly, it is sometimes unclear whether analysts are making normative claims about the desirability of incremental approaches or simply synthesising current practice. Secondly, the various factors that frame incremental approaches to decision-making in practice, and their implications, are not always explicitly considered.

To address these issues, our goal is to explain the form taken by contemporary scoping practices by understanding how practitioners frame impact assessment problems, and rationalise particular scoping solutions. In rationalising their actions, practitioners may draw (implicitly) upon the decision-making models discussed above, in conjunction with conceptions of precaution and efficiency. The merits of focusing on practitioners stem from the long-observed tendency of 'street-level bureaucrats' (Lipsky, 1980) to remake policy during implementation. Indeed, much theoretical discussion of scoping assumes that its virtues are acknowledged, accepted and acted on by officials and decision-makers, when in fact routines, organisational norms and expedience (for gaining/refusing/delaying planning consent) may be the dominant determinants of practice. By looking at how scoping solutions are constructed, we can begin to see how the precautionary principle and decision-making efficiency are balanced — and given meaning — within the particular institutional setting of British planning, and how those solutions might serve particular objectives.

Adopting this approach requires a methodology that explores the perceptions, experiences and conceptualisations of practitioners. Our research used in-depth interviews and survey responses from specialist environmental consultants and local planning authority officers, selected for their experience of EIA.[2] Data was obtained from 27 individuals — 8 interviewees and 19 survey responses — referred to collectively in this paper as 'respondents'. Clearly, this small sample only covers part of the stakeholder environment for EIA, which includes decision-making bodies (notably local planning authorities but also central government), developers and their consultants, and other parties that may be consulted — statutory bodies, environmental organisations and the wider public. However, as existing research has shown (Becker and Wood, 2003), planning officers and developers' consultants are key gatekeepers to the relatively closed world of scoping discussions; it is their judgements and attempts to rationalise them that therefore need to be understood.

---

[2] The research brings together data from two studies. The first consists of eight in-depth interviews conducted between August 2003 and March 2004: six with consultants and two with local planning authorities. The second is the unpublished research by Pizii (2004), which consists of 19 questionnaire responses (a 26% response rate from an initial sample of 74), including pre-coded and open-ended questions, returned from environmental consultants (twelve) and planning authorities (seven), collected in August 2004. In each case, environmental consultants were purposively selected for their experience in EIA, and planning officers because of their involvement in at least one EIA. Anonymity was offered to participants to encourage honest answers. The participation of statutory consultees (such as the Environment Agency) was sought but not achieved, for reasons significant to our research questions, which we discuss in the text. The case study is based primarily on documentary analysis, supported by interviews with planning officers.
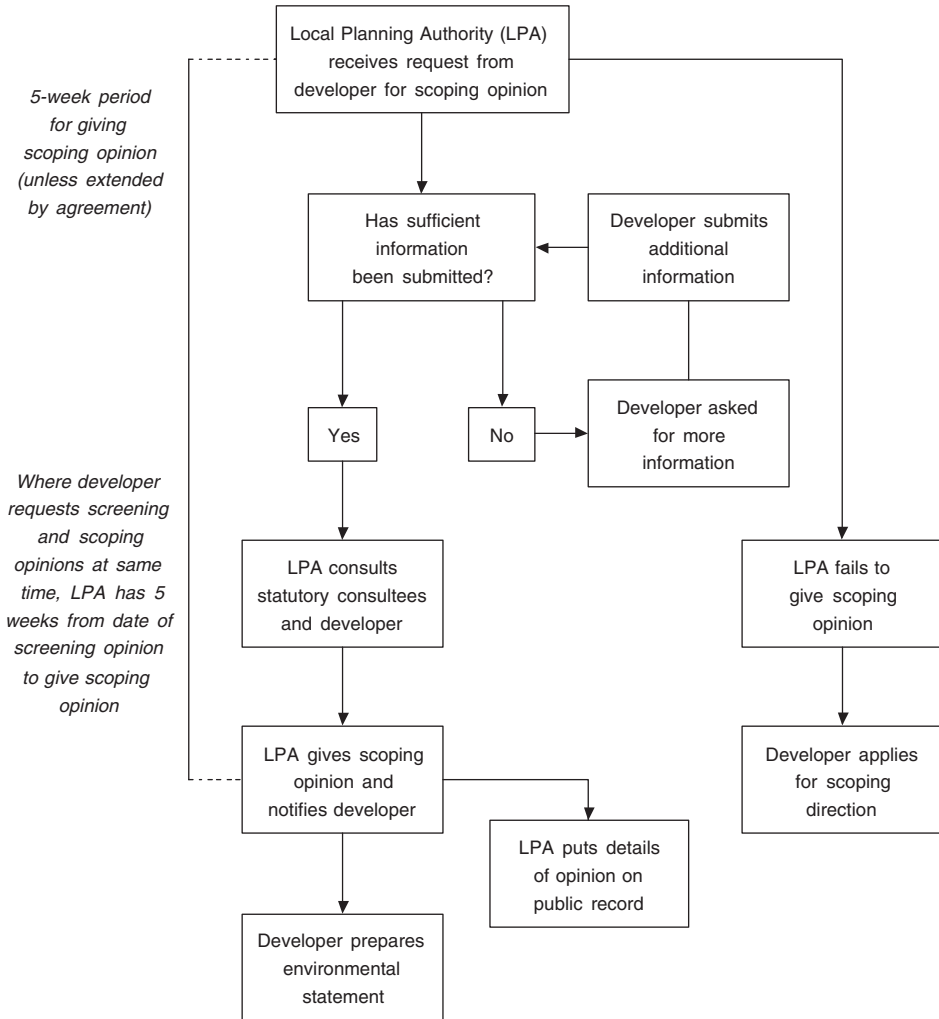
Fig. 1. Scoping opinions in the environmental assessment process (after DETR, 1999).

Before proceeding to our findings, it is important to set out the policy context for scoping in the UK in more detail, as this provides the institutional terrain on which scoping practice is played out.

3. Policy and practice

The legislative context for EIA in the UK is provided by EC directives (97/11/EC and 85/337/EEC) and the implementing Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (SI 1999/293),[3] supplemented by a raft of voluntary guidance.[4] Ambitious plans for mandatory scoping in the revised Directive were watered down

---

[3] For simplicity, these are subsequently referred to as 'the 1999 Regulations', although different regulations apply to England and Wales, Scotland and to Northern Ireland.

[4] For example: DoE (1989), Environment Agency (2002) and the European Commission (2001).

in the face of objections from Member States (Fuller, 1996). Nevertheless, Directive 97/11 did seek to improve EIA practices in a consistent way across the European Union and, as a result, Members that did not previously include scoping in their EIA systems were required to introduce at least a voluntary scoping stage.

So, while some Member States make mandatory provision for scoping, the UK has a voluntary procedure, in line with its long-standing policy style of administrative flexibility. Regulation 10 of the 1999 Regulations allows developers to obtain a formal opinion from the relevant planning authority on what they should include in the environmental statement — a 'scoping opinion'. This involves the identification from all possible environmental impacts those that are likely to be significant and therefore subject to further assessment (see Fig. 1). The planning authority has five weeks, or longer if agreed with the applicant, to adopt a scoping opinion: thereafter, the applicant may request a scoping direction from the Secretary of State (King, 1999).

In requesting an opinion, applicants may provide the authority with the same information as requests for a screening opinion; a plan sufficient to identify the land, with a brief description of the nature and purpose of the development and its possible effects on the environment. Applicants can also furnish authorities with a report containing more details about the proposal, the receiving environment, a preliminary identification of potentially significant effects, and proposed assessment methodologies. Such a report is recognised as assisting in providing a focus for consultation at the scoping stage. Local planning authorities 'shall not adopt a scoping opinion ... until they have consulted the person who made the request and the consultation bodies' (DETR, 1999).

The voluntary nature of UK scoping provisions leaves practice strongly determined by developers, their consultants and the decision-making body. Its voluntary character also explains why scoping has yet to be addressed directly in the stream of case law emerging on EIA (Pugh-Smith, 2002). However, insofar as case law has addressed the *content* and *adequacy* of the assessment process then practitioners do frame their judgements about scoping in terms of the legal consequences, as we discuss below.

Evidence suggests that the 1999 Regulations have helped to broaden experience with scoping. Under the original Directive, Fuller (1992) found less than half of developers engaging in scoping discussions. Since 1999, however, approximately 70% of local planning authorities and statutory consultees stated they had been involved in preparing a scoping opinion, while just over 60% of environmental consultants had been involved in producing a scoping report (Becker and Wood, 2003). Beyond this basic finding, it is less clear whether the process has proved effective. Becker and Wood (2003) found marked variation in practitioners' understanding of scoping — manifested in the range of different approaches — and in the perceived importance attached to this stage of EIA. Overall, while 78% of consultants and 71% of statutory consultees in their survey considered determining the significance of impacts to be 'important' or 'very important' in scoping, only 50% of planning authorities thought so. This is remarkable given that determining impact significance is usually considered the very essence of scoping.

Turning to the implications for decision-making efficiency, existing evidence suggests that in practice scoping often becomes an exercise whereby all impacts are identified, rather than focusing upon significant impacts (Weston, 2000a). This tendency holds even where 'technical' scoping methods are employed (Wood, 1995). Practitioners consider landscape and visual intrusion, traffic and transport, flora and fauna, noise and vibration, water resources and air quality impacts to be of high concern — all routine considerations for planning and environmental bodies. Of least concern are issues such as the risk of accidents and climatic factors (Becker and Wood, 2003). Mitigation is considered to be one of the top five most

important issues in preparing a scoping opinion or scoping report (Becker and Wood, 2003), although theoretically scoping should consider the potential for environmental effects of the unmitigated scheme.

Community consultation is not widely used with scoping, suggesting that, if the 'social scoping' frame has any resonance with practitioners, they do not view it as entailing wider *public* involvement. Only 4% of statutory consultees, 15% of local planning authorities and a third of consultancies report using public consultation at the scoping stage, and rarely has it had any substantial effect upon the scoping outcome (Becker and Wood, 2003). Internal and external consultation with statutory consultees is generally high but around 8% of planning authorities indicated that they did not consult with the Environment Agency, and a further 10% failed to consult other statutory consultees at the scoping stage, breaching the 1999 Regulations (Becker and Wood, 2003). If policy learning is going on, it is more a feature of consultancy practice (60% of consultancies referred to other, similar projects in the scoping exercises they undertook) than local planning authorities and statutory consultees (where only 25% did so; Becker and Wood, 2003).

4. Interpretations of scoping

To summarise research to date, the 1999 Regulations have raised the profile of scoping activity but one might question how the precautionary principle is being interpreted, and what conception of decision-making efficiency is being served. In this section we draw upon our own findings to try to explain these patterns. After reviewing practitioners' perspectives on the merits of mandatory scoping, the rest of the analysis is organised around three themes: the lure of technical scoping; social scoping and the distribution of expertise; and the drivers for 'precautionary' behaviour.

4.1. The merits of flexibility

Respondents regarded scoping as an important, and in some cases the most crucial stage of EIA. This concurs with existing research (Weston, 2000b; Glasson et al., 1999; Becker and Wood, 2003). Two thirds of our respondents believed that a fundamental reason for scoping was to minimise environmental risk resulting from development, and about half saw better scoping as a major way of reducing delays in the EIA process. While two thirds of our respondents also believed that the 1999 Regulations had improved scoping practices by clarifying arrangements, we found a slim majority against mandatory scoping. Most environmental consultants believed that the current voluntary system meets their requirements; and most have been preparing scoping reports on a non-statutory basis, as a matter of good practice. Advocates point towards the inherent flexibility that it provides:

> 'I don't believe scoping should be mandatory, as this would mean the whole EIA system would become less flexible and potentially more time consuming for developers/applicants . . . .' (Consultant)

The flexibility to have informal scoping exercises allows environmental consultants to respond to the time and resource pressures placed on them by clients. As one remarked: 'occasionally there have been instances where the formal response has taken 12 weeks, so sometimes if there is a desperate need we advocate a more informal flexible scoping process'. In this sense, flexibility fosters efficiency. Scoping can simply be a facet of initial discussions about

a proposal with the planning authority. Even proponents of a mandatory scoping stage did not want to see the process subjected to more detailed regulation. It was argued that since it is in developers' interests to undertake scoping, 'it should be left to the developers' discretion' (Consultant). One went as far as to question 'whether scoping is in some ways a redundant activity and you might be better simply having a checklist of things you have got to answer — would that not be easier?' (Consultant). As will become apparent below, this reference to a 'checklist' is indicative of the way that scoping norms are being constructed.

Some planning authorities, too, bemoaned the 'bureaucratic and overdetailed requirements of EIA' (planning officer) although, overall, planning officers seemed to support the principle of a tighter regulatory framework for scoping in the UK, if not necessarily a mandatory process:

> 'One advantage would be that it should speed up the decision-making process, post-application, as issues which might have been erroneously scoped out are included from the beginning, rather than coming to light at a later stage in the process.' (Planning officer)

While practitioners view scoping through varied conceptual frames, most endorse their preferred approach on efficiency grounds. Those who support an informal, flexible scoping stage point to its adaptability to project circumstances and the avoidance of a cumbersome regulatory 'hoop'. Those who endorse a more defined, formal procedure render their arguments in terms of process efficiency in the longer term. The next question, then, is what conception of scoping is seen as fitting best with these notions of efficiency.

4.2. The lure of technical scoping

The research found little consensus in how the process of scoping was conceptualised. For consultants especially, the prospect of using scoping as a predominantly rational and technical mechanism for the systematic prioritisation of environmental effects remains enticing: 'the scoping exercise as a whole should be biased towards the technical/rational end of the scale. It must be robust and if challenged, defensible' (Consultant). Others recognised the risks of producing scoping reports that become overbearing and highly technical:

> 'Some of the other things we have seen ... were absolutely inaccessible from start to finish. ... A technical document — completely not understandable, and I don't think anybody benefits from that. It serves the purpose of bamboozling people into thinking the Regulations have been met ....' (Consultant)

This concern provides a justification for more social and incremental framings of scoping as primarily a consultative opportunity and a framework for argumentation. Such framings were widely accepted, and meant that 'the most important thing about scoping is talking to people and interacting, not the mechanics of the scientific process' (Consultant). But again, this need not imply a high-minded endorsement of democratic practice, but rather calculative judgements that early discussions with key participants — especially the statutory consultees with their technical expertise — can make the process more efficient, in terms of increasing the chances of obtaining planning permission.

> 'We have always taken the view that the key thing is to manage the stakeholders properly and understand their concerns. Actually if you understand that at an early stage, and respond to it at scoping, then you can go a long way to mitigating a lot of objections.' (Consultant)

4.3. Social scoping and the distribution of expertise

If all practitioners viewed early consultation with statutory bodies to be a desirable element of scoping, the same can not be said of public consultation. In stark contrast with much of the normative literature on scoping, none saw it as important and most regarded it as neither desirable, nor practical. Their justifications are illuminating.

Most respondents felt that scoping was too early to involve the public. For some, this was justified in terms that sounded pragmatic — 'I don't think there is very much point doing a lot of public consultation when you don't have a fixed proposal' (Planning Officer); 'designs often change between scoping and the submission of the environmental statement' (Consultant) — but which also insulated developers' flexibility from wider scrutiny. These arguments were underlined by stereotyping the public as concerned with specific, individual, amenity impacts, rather than seeing the public as having relevant knowledge to offer: 'The public want to know what is going where, how many cars, how does it affect their house etc. (Scoping) isn't the stage for saying "I don't want that opposite my house"' (Planning Officer).

Although the advantages of early discussions with stakeholders and potential objectors was raised by respondents, many suspected a lack of realism in the meta-narrative that *public* involvement in EIA at the scoping stage fosters consensus and more efficient decision-making:

> 'I think if the developer did that, the first thing the public would do would be to come to the Council to object, and they wouldn't even be able to see an application . . . Most developers will shy away from it simply because it almost generates anxiety which doesn't need to be generated at such an early stage. I suppose it does enable community groups time to prepare themselves and create more opposition.' (Planning Officer)

Such exclusionary arguments were often leavened by claims that the public would be confused by the specific remit of scoping and use it inappropriately as an opportunity to marshal objections to the project. Thus one consultant felt that 'it would be necessary to understand the basic concept behind scoping (i.e. identifying potentially significant effects) which may be difficult to fully understand for members of the general public' (Consultant).

Of course, there are genuine difficulties in reconciling the virtues of deliberation with broadly based inclusion in decision-making processes (Owens, 2000), and the responses above highlight fundamental institutional problems in massaging public attitudes towards development into the sequential stages of EIA. But this ought not lead us automatically to support practitioners' resolutions of these dilemmas, especially where they seem to be problematic. One problem concerns the reconciliation of public and expert perspectives on likely significant effects; as one respondent suggested, 'it could potentially lead to conflict with the community as their concept of significant effects is likely to be very different to the experts' view and they may not feel that their comments are taken seriously or reflected in the EIA' (Consultant). But the typical solution to this dilemma — to exclude the public from scoping debates — rather presumes that an effective dialogue between experts takes place instead.

Our results suggest that this is far from the case, as confusion about scoping is not confined to the 'non-expert' public. The long-observed lack of expertise in EIA among local authorities and the statutory consultees (Glasson, 1999) is still widely apparent in scoping practices. As one consultant observed, 'even those authorities who have dealt with EIAs before are not sufficiently

experienced to make (scoping) decisions' (Consultant). The following quote illustrates the extent of the confusion:

> 'My boss asked me what I had to do with the scoping report, and I said I have got to produce a scoping opinion. He replied, "what does one of those look like?" So I looked in the advice and guidance and noticed there isn't an example of a good scoping opinion. This is a real problem' (Planning Officer).

The lack of expertise in local authorities seems to be compounded by a lack of specific advice and guidance on scoping issues. It may also be more severe in district (lower tier) planning authorities whose encounters with EIA are more sporadic than county councils' whose competencies include minerals, waste and highways applications. To address these deficiencies, the onus is put on the developer's consultants to guide the local authority in its decision-making. This partly accounts for the variety of scoping practice but also exacerbates a sense of frustration for developers, 'who wonder why something which they were able to just get on and deal with 5 years ago, suddenly find themselves being delayed by 6 to 12 months and spend 50 grand in the process' (Consultant).

If enduring problems of limited local authority experience with EIA are amplified with respect to scoping, there seems to be a particular problem with the statutory consultees. Only one of six regional offices of two prominent statutory organisations was prepared to assist with this research: not due to resource pressures; rather they professed a lack of expertise. Only one EIA officer was found in the statutory organisations approached, and understanding of the basic principles of scoping was felt to be lacking in the others:

> '... many consultees are unsure of how to respond to a scoping report as they do not see many (or any) others, and it is then a platform to bring up discussion on details/merits of the proposal, rather than addressing what should be in EIA. From (a local planning authority's) view this can make producing a useful scoping opinion rather tiresome and time-consuming!' (Planning Officer)

Our research found both consultants and planning officers to be highly critical of the statutory consultees, with concern being expressed about their minimal input, the provision of bland, noncommittal responses, and problems of delayed and poorly coordinated feedback. This is highly problematic given the pivotal role that the statutory consultees are deemed to play in scoping, and the disinclination to consult the wider public. It also highlights another impact of efficiency, albeit this time in the way that overstretched regulatory bodies manage pressures on their time and resources. Put simply, the statutory agencies prefer not to participate pro-actively in the early stages of individual EIAs in the way that precautionary, deliberative framings of scoping might suggest, but to issue brief standardised responses which retain their flexibility in 'downstream' stages of assessment.

4.4. The drivers of precaution

> 'We've adopted the approach, and I'm not entirely convinced this is the best way to do it, but we tend to produce a scoping table which summarises the main issues, whether they are scoped in or scoped out, and the reasons why, and we have an appendix to that which explains in a bit more detail how we arrived at those conclusions. And what (the local authority) did was to reproduce the table we produced and basically transferred all the ticks in the 'scoped-out' column back into the 'scoped-in' column and sent it back to us

and said that's our formal scoping opinion . . . and I think this example gets to the heart of the difficulty with scoping.' (Consultant)

Existing research has noted a stronger tendency for scoping to lead to issues being scoped in than for issues to be scoped out, and that this undermines the efficiency of EIA. This tendency is echoed in our research, as the above quotation illustrates, but what needs explaining is whether this is because practitioners are displaying precaution in the face of potential environmental risks, or whether other factors are framing the scoping process. Our interviews show that the tension between environmental precaution and efficiency is widely recognised.

> 'The thing I find difficult about scoping is that at that early stage, you are being asked to say whether or not there is likely to be significant environmental effects, so how far do you have to go down the impact assessment route? Because you have to do a certain amount of work to be able to say that. If there is any doubt you really have to scope it in because that is the equivalent to there being potential for a significant environmental effect. . . . It's not desirable to produce a mini-ES for the scoping exercise either, so it's got to be a matter for professional judgement.' (Consultant)

To say that 'professional judgement' is necessary to bridge these competing principles still begs the question of how those judgements are framed. Such judgements seem partly to arise from concerns about irreducible ecological complexity, and the desire to avoid pre-empting judgements about environmental value. A typical example concerns terrestrial ecology, where 'although a site may be covered in concrete you may discover a particularly rare plant which likes to live in cracks in concrete — you can't rule that out ever' (Consultant). Given this uncertainty, many practitioners felt that to scope anything out they would need to assess the issue in some detail anyway, 'so you could argue it comes out in the wash, whether you do it at the scoping stage or in the ES itself.' (Consultant).

However, ecological uncertainty per se cannot dictate that scoping is interpreted expansively; it is necessary to examine what makes uncertainty favour inclusion. And here, many practitioners believe that the tendency to scope 'everything' in reflects a pervading fear of legal challenge in local authorities.

> 'Unless it's completely obvious, for example if you are proposing a small housing estate on previously developed land, where you can scope out agricultural land . . . unless it's that black and white, local authorities tend to err on the site of caution . . . I think one of the main drivers for that is that local authorities are absolutely paranoid about being subject to some sort of legal challenge if they get it wrong or miss an issue.' (Consultant)

This fear is not without foundation. Planning officers readily admit 'a fear of legal challenge' from local objectors, hence 'we have to cover ourselves, which doesn't always result in the most efficient EIAs' (Planning Officer). Again, a lack of expertise in EIA scoping may contribute to this lack of confidence, exacerbating worries that — in issuing a scoping position — local authorities are assuming responsibility for deficiencies in the final environmental statement. But this fear of legal action can also be found among developers, many of which also 'tend to take the precautionary approach and look at all issues regardless' (Consultant), if there is a concern that legal action could ultimately threaten project consent:

> 'Ruling out things, I think, is dangerous, and will eventually be challenged legally I'm sure, by an aggrieved party who say "they shouldn't have done that because how could they have known it wasn't significant?" . . . If you get permission, and somebody notices

the EIA didn't consider some things the Regulations said it should, then permission is quashed.' (Consultant)

One of our most significant findings, however, is that this fear of challenge does not mean that developers are investigating complex, novel, indirect or cumulative effects. Rather, in the search for scoping decisions with which all parties can have confidence, the judgements of environmental value that are institutionalised in existing planning and environmental policies, and widely used assessment techniques, exert considerable authority. Thus we found many respondents identifying significant impacts through conventions and lists: for example, 'I think people have a standard list of ten different topics … noise, air quality, landscape etc.' (Consultant). Various pieces of scoping guidance are also utilised, from government and professional bodies, with one consultant opining that 'I think possibly what we all do, is cover the key things you have to hit in the guidelines and statutory requirements' (Consultant). A degree of learning is going on among environmental professionals, where 'most project managers will, however subconsciously, draw upon their experiences of similar projects and lessons learnt in order to define the scope of a later EIA' (Consultant), but this still tends to reinforce a checklist approach.

Framing scoping judgements around norms, standards and environmental policy may diminish fears of legal challenge, but it exerts important effects on which risks are deemed sufficiently significant to warrant consideration from the outset. Topics such as climatic impacts and the risk of accidents were recognised by practitioners as important but, in the latter case, to stretch 'your definition of environmental' (Consultant). The institutional structures of land use planning, which tend to focus attention on 'impacts' demonstrably bound to the individual application and site concerned (Whatmore and Boucher, 1993), also militate against scoping in impacts which are indirect and cumulative in nature. This is a generic problem with project-specific EIA, and difficult terrain on which to persuade developers to think expansively about potential risks.

> 'I think climate change is a more difficult one because a lot of clients generally understand the sorts of issues you are talking about but they find climate change quite far removed, as an indirect but nonetheless important effect. It is quite hard to convince clients to spend money on that, if they can't really see the direct link. … And these things are a cumulative issue with other developments, so the client will argue why they need to bear the cost of the assessment.' (Consultant)

Consultants and developers equivocate on whether it is in their interests to mention potentially marginal risks (Morgan, 1998), and their judgements are often reinforced (at least at the scoping stage) by the limited understanding on the part of the local authority and the minimal involvement of statutory consultees. The latter also tend to reproduce conventional, sectoral boundaries of environmental concern, based on their regulatory remit. Little wonder then that one planning officer felt that the growing number of scoping opinions reflected 'not necessarily "best practice" but more "standardised practice"' (Planning Officer).

5. Case study: a tale of two scoping exercises

The range of interpretations currently given to scoping, and their consequences, can be illustrated by a brief case study which compares two scoping exercises that were undertaken for essentially the same scheme. The subject is a major Army Land Command initiative that arises

from the Ministry of Defence's (MoD) Strategic Defence Review 1998, to prepare a fully integrated strategic plan for the redevelopment of part of the army estate. Two preferred bidders were identified, and each voluntarily embarked on an EIA process in connection with the scheme.[5] In April–May 2003, both submitted scoping reports to the local planning authority for consideration. While each shared the broad aim of delineating the subsequent EIA by identifying which environmental impacts were likely to be significant, the conceptualisation of scoping in each report shows marked differences.

For the first of the preferred bidders the scoping report was, in effect, a masterplan of the development, including a comprehensive environmental baseline study, making it unclear whether the document represented an over-elaborate scoping report or an inadequate environmental statement. Scoping was conceptualised in technical terms, having been determined by the expert judgements of specialist consultants. The document gave a strong impression of being technically robust, with the detailed text running to 98 pages supported by numerous figures and appendices, but it is unclear why certain issues were considered sufficiently significant to warrant further assessment. While there was no consideration of the more subtle environmental consequences of this major urban development scheme, such as micro-climatic impacts, the report was very prescriptive about those issues to be scoped in to the ensuing assessment. By going beyond topic areas into detailed potential chapter sub-headings and indicative descriptions of mitigation measures, the scoping report appeared to be seeking to close down dialogue through technical argumentation, inaccessible to the lay reader, and to pre-empt and channel later stages of the decision-making process. Nevertheless, there remains the risk that it could duplicate work which would be replicated in the EIA (hardly delivering efficiency), and that the developer ends up having the same debates twice, once at the scoping stage and again with the environmental statement.

The second preferred bidder adopted a more concise approach to the scoping exercise that, in many respects, is more typical of UK consultancy practice. The scoping report was still the product of an essentially technical exercise, derived from the analysis of baseline environmental conditions, and utilising the professional judgement of specialists (from air quality experts to town planners). A significant amount of detail was provided on likely assessment methodologies to be tailored to the individual impact areas. However, a key difference from the first report was the effort given to providing readers with a clear route through the scoping exercise, delineating the relationship between scoping and impact assessment. From an initial description of the proposal and its wider importance, the report provided a scoping matrix, and each topic area is described in more detail, with qualification of its relative significance and subsequent inclusion or exclusion from later stages of the EIA. More complex effects such as micro-climate and development waste were demonstrably considered, even though ultimately scoped out as insignificant. A clear, non-technical writing style supported the whole approach.

In terms of outcomes, a planning officer involved in producing the scoping opinion felt that the more detailed report from the first preferred bidder proved somewhat counterproductive:

> 'The (second) scoping report made my job easier than the (first) because it attracted less comments from the consultees. Scoping isn't supposed to be about commenting on the

---

[5] They assumed that due to the scale of the redevelopment, and the sensitivity of the receiving environment, the project would fall within Schedule II (10b) development under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. The bidders are referred to as 'the first' and 'the second' for anonymity — there is no implication that one took place before the other.

detailed proposals ... The (first) report however, attracted a lot of comment on things which weren't scoping issues, very much EIA issues and development control issues but not scoping. There is a tendency for people to ... forget what scoping is about, and write a list of things they think are important.'

What this brief case study shows is that in the absence of clear guidelines, and intractable ambiguities about how much information is needed to judge potential impact significance, the main influence on what is regarded as 'effective' scoping derives from the experience of consultancies. Developers are also making judgements about what might ultimately best expedite consent; judgements that they do not always get right. All these factors can lead to markedly different approaches to scoping. Both bidders favoured technical scoping, and incremental variations thereof, although the first seemed to believe that technical detail per se could help to construct consensus around their project. In practice, the simpler, more transparent scoping exercise of the second bidder proved more effective in containing debate around scoping issues, and in providing the planning authority with a clear basis for their scoping opinion. There are benefits to decision-making efficiency here, which may extend into subsequent stages of the process: while the first bidder's detailed approach increases the likelihood of disparity between the scoping exercise and full assessment, the second sets out a much clearer framework on which to base the environmental statement.

A key similarity between the bidders is that neither of them framed scoping in social terms; at least not to the extent of consulting wider publics. This was because they believed that Supplementary Planning Guidance already prepared by the planning authority for the military estate provided sufficient information on the concerns of interested parties, and that any significant omissions would be covered by the formal consultations undertaken by the authority in deriving their scoping opinion. While these might be legitimate reasons for prioritising efficiency at the scoping stage, there are also risks. If insufficient consultation was undertaken for the Supplementary Planning Guidance, then the submission of a planning application for this major redevelopment will be the first meaningful opportunity for members of the public to comment. This in turn may attract objections that key parameters of the development have been set behind closed doors, prior to consultation.

6. Conclusions

Our findings amplify and extend existing analyses of scoping within project EIA, in a number of important ways. Overall, we echo the concerns of Jain et al. (2002), that scoping is conducted in ways which meet the needs of the project, less tangible and secondary environmental effects are usually ignored, and opportunities for public involvement are minimal. Normal practice rarely extends far beyond regulatory requirements. While our interview-based, 'snapshot' research may obscure the scope for policy learning over the longer term (Owens et al., 2004), our findings do highlight the difficult terrain for procedural changes in the British context. Widespread consensus among practitioners on the value of scoping does not translate into support for tightening regulation. Yet at the same time, the existing level of knowledge among planning authorities and statutory consultees is low, and a confusing range of practices is being undertaken under the name of scoping. The inherent flexibility of the UK's non-mandatory scoping stage allows these various conceptions to be acted out.

This diversity of practice partly reflects the range of ways in which practitioners frame the scoping problem, and the incentives on them to prioritise particular principles. We found evidence

of scoping being viewed in terms of 'comprehensive rational' and 'argumentative' models of decision-making, though few frame the process wholly in 'technical' or 'social' terms. This gives further credence to 'incrementalist' models of EIA which stress the inevitability of value judgements. Our case study, too, shows the difficulties encountered by excessively technical approaches to scoping. But to describe practice as 'incremental' scarcely explains the nature of the judgements being made, and does little justice to the repertoires of justification that practitioners actually use. For consultants, the objective of efficiency is dominant, often reflecting a desire to expedite decision-making processes as far as possible, protect client relationships and manage objections. This might lead to strategic decisions about which information to present at the scoping stage and to whom, or it might mean scoping issues in if that reduces problems at a later stage. Concerns for efficiency sustain powerful arguments against extending public involvement in scoping; arguments with which local planning authorities appear to concur.

Beyond a broad endorsement of the way that scoping helps mobilise the precautionary principle, the research found little evidence that environmental concern per se directly impacted on scoping decisions, or that scoping provided a framework for the open deliberation of environmental risk. The main 'precaution' which practitioners were taking in enlarging the scope of environmental statements was the concern for legal challenge, or resulting delays. Of course, one might reply that motives are irrelevant — the outcome is precautionary, regardless that risk debates are mediated through fears of litigation. However, the main ways in which potentially significant environmental impacts were determined owe much to the authority of environmental standards, methodological conventions, local development planning documents (as with the case study) and consultants' prior experience. In the absence of effective engagement with the public — or indeed with statutory expert bodies — scoping tends to reproduce a standard brief for EIA of particular project types, which militates against the consideration of novel, complex environmental consequences in most circumstances.

Finally, the research has also helped to reveal the effort that goes into sustaining rationalistic fallacies of environmental assessment in practice. One fallacy is that social concerns about the consequences of development can be managed easily into discrete stages according to clear methodological principles. We found developers sometimes eliding scoping and impact assessment, occasionally seeking to influence 'downstream' decision-making processes, but there was little evidence of scoping being viewed dynamically, as part of an iterative process of project design, rather than a one-off 'hoop'. As our case study showed, some consultancies strive through their scoping statements to contain early discussions on purely scoping issues and avoid pre-empting the full assessment stage. Practical experience led few respondents to believe that the general public understood the distinctive role of scoping: a judgement used to justify excluding them from scoping discussions. This also points to another rationalistic fallacy of social scoping — the view that open, early discussion helps to generate better information, foster consensus and speed up the decision-making process. While this meta-narrative offers the tantalising prospect of bridging efficiency and precaution, along with technical and social scoping, many practitioners evidently not believe it, and there is little impetus — under the current institutional arrangements for EIA — for them to change their view.

Acknowledgements

References

Beanlands G. Scoping methods and baseline studies in EIA. In: Wathern P, editor. Environmental impact assessment theory and practice. London: Routledge; 1988.

Beattie RB. Everything you already knew about EIA (but don't often admit). Environ Impact Asses Rev 1995;15(2):109–14.

Becker, Wood C. Scoping decision-making under the town and country planning (Environmental Impact Assessment) (England and Wales) regulations 1999. Oxford: IAU; 2003.

DETR (Department of the Environment, Transport and the Regions). Town and country planning (Environmental Impact Assessment) regulations. London, UK: Stationery Office; 1999.

DoE (Department of Environment). Environmental assessment: a guide to procedures. London, UK: HMSO; 1989.

Diduck A, Sinclair AJ. Public involvement in environmental assessment: the case of the nonparticipant. Environ Manage 2002;29(4):578–88.

Environment Agency. A handbook for scoping projects. Bristol, UK: Environment Agency; 2002.

European Commission. Guidance on EIA: scoping. Office for Official Publications of the European Communities; 2001.

Fuller K. Working with assessment. Planning:14–5 [Environmental assessment and audit. A user's guide 1992–1993 special supplement].

Fuller K. Proposed changes to the EC Directive on EIA. Environ Assess 1996;4(1):11–3.

Glasson J. The first ten years of the UK EIA system: strengths, weaknesses, opportunities and threats. Plan Pract Res 1999;14(3):363–75.

Glasson J, Chadwick, Therivel R. Introduction to environmental impact assessment. 2nd edition. London, UK: Spon Press; 1999.

Gustavson KR. Applying the precautionary principle in environmental assessment: the case of reviews in British Columbia. J Environ Plan Manag 2003;46(3):365–79.

Harding R, editor. Environmental decision-making: the role of scientists, engineers and the public. Sydney, Australia: Federation Press; 1998.

Institute of Environmental Management and Assessment (IEMA). Guidelines for environmental impact assessment. Lincoln, UK: IEMA; 2004.

Jain R, Urban L, Stacey G, Balbach H. Environmental assessment. 2nd edition. New York, USA: McGraw-Hill; 2002.

King E. The new environmental impact assessment regulations. Institution of Civil Engineers Briefing; 1999 [20 March].

Lipsky M. Street-level bureaucracy: dilemmas of the individual in public services. New York, USA: Russell Sage Foundation; 1980.

Morgan R. Environmental impact assessment. A methodological perspective. Mass. USA: Kluwer; 1998.

Mulvihill P. Expanding the scoping community. Environ Impact Assess Rev 2003;23:39–49.

O'Riordan T. The politics of the precautionary principle. In: Harding R, Fischer E, editors. Perspectives on the precautionary principle. Sydney, Australia: Federation Press; 1999.

O'Riordan T, Jordan A. The precautionary principle in contemporary environmental politics. Environ Values 1995;4:191–212.

Owens S. "Engaging the public": information and deliberation in environmental policy. Environ Plann, A 2000; 32:1141–8.

Owens S, Cowell R. Land and limits. Interpreting sustainability in the planning process. London, UK: Routledge; 2002.

Owens S, Rayner T, Bina O. New agendas for appraisal: reflections on theory, practice and research. Environ Plann, A 2004;36:1943–59.

Pizii B. EIA Scoping: Unpacking the Practice. Unpublished MSc Thesis, Department of City and Regional Planning, Cardiff University; 2004.

Pugh-Smith J. Environmental impact assessment: the continuing jurisprudence. J Plann Law:1316–24.

Rein M, Schön D. Frame-reflective policy discourse. In: Wagner P, Weiss C, Wittrock B, Wollman H, editors. Social sciences and modern states. Cambridge, UK: Cambridge University Press; 1991. p. 262–89.

Saarikoski H. Environmental impact assessment (EIA) as a collaborative learning process. Environ Impact Assess Rev 2000;20:681–700.

Salder J. Adapting to context: towards flexible strategic environmental assessment in theory and practice. Unpublished PhD thesis, University of Wales, Cardiff; 2001.

Shrader-Frechette KS. Science, policy, ethics and economic methodology. Dordrecht, Netherlands: D. Reidel; 1985.

Singleton R, Castle P, Short D. Environmental assessment. London, UK: Thomas Telford Publishing; 1999.

Sinha S. Environmental impact assessment: an effective management tool. TERI Inf Monit Environ Sci 1998;3(1):1–7.

Stookes P. Getting to the real EIA. J Environ Law 2003;15(2):141–51.

Weston J. Screening, scoping and ES review under the 1999 regulations. Working Paper, vol. 184. Oxford: Oxford Brookes University Impact Assessment Unit (IAU); 2000.

Weston J. EIA decision-making theory and screening and scoping in UK practice. J Environ Plan Manag 2000;43(2):185–203.

Weston J. EIA in a risk society. J Environ Plan Manag 2004;47(2):313–25.

Whatmore S, Boucher S. Bargaining with nature: the discourse and practice of environmental planning gain. Trans Inst Br Geogr 1993;18(2):166–78.

Wood C. Environmental impact assessment: a comparative review. Harlow, UK: Longman; 1995.