



# Public participation in environmental impact assessment—implementing the Aarhus Convention

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## Abstract

This article explores the nature of public participation in the environmental impact assessment (EIA) process in the context of the potential integration of the Aarhus Convention principles into the UK EIA system. Although the Convention advocates ‘early’ and ‘effective’ participation, these terms remain undefined and questions persist about exactly how to implement the Aarhus principles. Ten practice evaluation criteria derived from the Aarhus Convention are used to analyse the public participation procedures used in four UK waste disposal EIA case studies. The paper reports the extent to which the practice evaluation criteria were fulfilled, explores the types and effectiveness of the participation methods used in the EIAs, and highlights some of the key barriers that appear to impede the execution of ‘early’ and ‘effective’ participation programmes. It concludes that the Aarhus Convention will undoubtedly lead to a strengthening of participation procedures but that the level of improvement secured will depend upon how its ideals are interpreted and incorporated into legislation and practice. © 2004 Elsevier Inc. All rights reserved.

*Keywords:* Public participation; Aarhus Convention; Environmental impact assessment; Practice evaluation criteria

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## 1. Introduction

Public participation is a fundamental component of the environmental impact assessment (EIA) process. Indeed, Wood (2002, 277) stated that “EIA is not EIA

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without consultation and participation.” The European Commission (EC, 2003b) strongly advocates public participation, arguing that it increases “the accountability and transparency of the decision-making process.” However, debate continues about exactly how to undertake public participation and confusion remains about when it should commence, the methods that should be used and which members of the public should be consulted.

The role and importance of public participation in environmental decision-making have been emphasised by the Aarhus *Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters* (United Nations Economic Commission for Europe, 1998). The European Community signed the Convention in 1998 and, since its coming into force in 2001, has had to adjust European Union law to comply with its three ‘pillars’ of principles. The ‘access to environmental information’ pillar of the Convention was addressed in European Directive 2003/4/EC (EC, 2003a). This states that the public should be provided with wider and easier access to environmental information. For example, local authorities will be required to respond to requests from the public for information within two months and will also be required to make information available in a wider range of formats. The ‘access to justice in environmental matters’ pillar has been addressed through a proposal for a directive. This will provide the right to recourse to administrative or judicial procedures to dispute acts and omissions violating the provisions of environmental law (EC, 2003c).

The third pillar of the Convention, that relating to ‘public participation’, was addressed in Directive 2003/35/EC (EC, 2003b). This Directive seeks to strengthen the public participation provisions of both the EIA and the integrated pollution prevention and control (IPPC) systems in the European Member States and requires the laws and administrative provisions necessary to comply with this Directive to be implemented by 25 June 2005. The overall aim of this Directive and the role of public participation in environmental decision-making are clearly outlined in the preamble which states:

“Effective public participation in the taking of decisions enables the public to express, and the decision-maker to take account of, opinions and concerns which may be relevant to those decisions, thereby increasing the accountability and transparency of the decision-making process and contributing to public awareness of environmental issues and support for the decisions taken” (EC, 2003b, para. 3).

Relatively little of the extensive literature on public participation has focused upon the Aarhus Convention and its implications for the UK EIA system. The specific meaning of terms contained within the Aarhus Convention, notably ‘early’ and ‘effective’ participation, remain undefined. If the ideals and principles of the Convention are to be implemented effectively, it is essential to gain a greater understanding of these terms. This paper therefore analyses UK public participation practice, employing an evaluation framework derived from Aarhus Convention principles, to ascertain the extent to which these principles have been fulfilled and to suggest how they might best be implemented in the UK.

The paper has eight further sections. A brief overview is provided of the principles of the Aarhus Convention and of the key literature relating to it in Section 2. This is followed by a summary of the research methodology employed in undertaking and analysing the

case studies, including the derivation of a number of practice evaluation criteria to provide an evaluation framework (Section 4). The next section identifies the criteria considered to be most important by the participants in this research. The longest section of the paper evaluates the extent to which each of these criteria was met. Section 7 considers some of the main barriers to achieving ‘early’ and ‘effective’ participation. The penultimate section reveals which of the principles of the Aarhus Convention were fulfilled in the case studies. Finally, the conclusion suggests how participation procedures might be enhanced. Throughout the paper the emphasis is placed upon understanding what is meant by the Aarhus terms ‘early’ and ‘effective.’

## 2. The Aarhus Convention

The Aarhus Convention was signed by the UK and the European Commission in 1998 (Department for Environment, Food and Rural Affairs, 2001). As mentioned in Section 1 above, the public participation requirements of the Convention were translated into European Union law in Directive 2003/35/EC. This makes a series of modifications and regulatory changes to the EIA and IPPC systems to ensure that the procedures are appropriately aligned with the requirements of the Aarhus Convention. Article 3 of this Directive specifically addresses the EIA process and further amends the EIA Directive (EC (1985) as amended by EC (1997)) to ensure that the timing and effectiveness of public participation procedures are enhanced. The main modifications include:

- A strengthening of Article 6(2) of the amended EIA Directive to require the public to be informed early in the decision-making process of the following matters:
  - The request for development consent;
  - The fact that the project requires an EIA;
  - Details of the competent authorities responsible for the decision-making process, an indication of where information can be obtained and details of where comments and questions can be submitted;
  - The nature of possible decisions;
  - Details of the availability of information gathered pursuant to Article 5 of the EIA Directive;
  - Details of where and how and the relevant information will be made available; and
  - Information regarding the public participation arrangements.
- The EIA Directive now states that “the public concerned shall be given early and effective opportunities to participate in the environmental decision-making procedures” [Article 3(4), replacement para. 4].
- The importance of carefully timing public participation is emphasised in paragraph 6 of Article 3 of Directive 2003/35/EC which amends EIA Directive 1985/337/EEC. This states that “reasonable time-frames for the different phases shall be provided, allowing sufficient time for informing the public and for the public concerned to prepare and participate effectively in environmental decision-making subject to the provisions of this Article.”

- Article 9 of the EIA Directive is strengthened. In addition to outlining the reasoning behind a decision, information must also be supplied about the public participation process and also the main mitigation measures proposed [Article 3 (6)(a)].
- A new Article 10a is inserted within the EIA Directive. This states that members of the public should have access to a review procedure either in a court of law or before another impartial body to challenge the legality of decisions. This is a considerable change to the existing EIA Directive. Furthermore, it states that the procedures shall be “fair, equitable, timely and not prohibitively expensive” [Article 3(7)]. Information regarding judicial procedures is also to be made available to the public.

These are clearly substantial changes intended to strengthen public participation procedures. However, the interpretation of the terms ‘early’ and ‘effective’ participation, which are not defined in Directive 2003/35/EC, is left to the discretion of Member States in transposing the provisions into their respective legal systems.

### 3. Research methodology

The degree to which the principles of the Convention are already being achieved in UK public participation programmes was assessed by deriving an evaluation framework to evaluate the participation procedures used in four waste disposal EIA case studies. Case study analysis was selected as the research methodology because its successful use has been widely reported in the public participation and waste disposal literature (e.g., [Petts, 1999](#); [Weston, 1997](#)). The framework was used to evaluate the EIAs of proposed waste disposal sites because the siting of waste treatment or disposal facilities is often highly contentious, stimulates considerable public debate (some proposals have either been severely delayed or abandoned; [Petts, 1995](#)) and necessitates the development of effective participation programmes.

The waste disposal EIA case studies were selected to ensure that wide ranges of planning authorities, developers, locations and types of waste disposal applications were selected. As the aim of this research was to establish the extent to which the public participation requirements of the Aarhus Convention were being achieved in UK practice prior to their legislative enactment (rather than their publication), the dates of the case study planning applications were not significant in this research (some are pre-1998 and some are post-1998). Four case studies were selected from the North West region of England. [Table 1](#) summarises the key characteristics of each of the waste disposal case studies and provides a summary of their main participation elements.

22 interviews were undertaken with the key stakeholders involved in the planning application process for the four case studies. The interviewees were five planning officers; one developer; eight local action group members; and eight members of the public. These stakeholders are acknowledged as being the main participants in the EIA process ([Petts, 1999](#)). Oral permission was obtained from each interviewee to name

Table 1  
Case studies of public participation in EIA practice

Case study characteristics	Oldham Waste Disposal Site, Oldham Metropolitan Borough Council	Wigan Disposal Site, Wigan Metropolitan Borough Council and Salford City Council	Winsford Disposal Site, Vale Royal Borough Council	Barrow Disposal Site, Barrow-in-Furness Borough Council
Planning application submitted	December 1992	January 1996	March 1999	First planning application submitted August 1994 and refused in May 1995. Further application submitted immediately in 1995.
Planning authority responsible	Oldham Metropolitan Borough Council	Wigan Metropolitan Borough Council	Cheshire County Council	Cumbria County Council
Developer	Bardon Roadstone Limited, now Bardon Aggregates PLC	Viridor Waste	Minosus	Caird Environmental, now Shanks Waste Solutions
Waste disposal operator	Onyx Total Waste Management	As above	To be arranged	Shanks Waste Solutions
Planning permission granted	October 1994	June 1997	July 2002	December 1996
Site location	Located in borough of Oldham on greenbelt land. Nearest housing 130 m from the site.	Located in Mersey Valley, 7 km west of Manchester. Close to Astley Green and Boothstown villages. Residential properties 550 m from site.	Located 3 km north east of Winsford and beneath villages of Davenham and Moulton.	Located to northwest of Dalton-in-Furness. Nearest residential properties 200 m from site.
Site history	Mineral extraction first began on site in 1950s. Poor planning conditions attached to previous planning consents: hours of working, noise emissions and blasting levels not controlled.	Used as colliery spoil tip until 1970s. Planning permission granted in 1979 for recovery of coal on condition of restoration of site. Restoration failed and site mostly derelict in 1996 when planning application submitted.	Mine previously used for extraction of rock salt.	Planning permission for waste disposal first granted in 1977. In 1991 Caird Environmental entered into Section 106 agreement with County Council for safe disposal of landfill gas and leachate. Phases 1, 2 and 3 of waste disposal completed in 1994.
Project description	Expand existing mineral operations and develop a landfill facility. Restore site to a rounded hill top of species rich permanent pasture.	Reclaim site, develop a clay quarry. Use quarry void as waste disposal facility for ten-year period in conjunction with a phased restoration scheme.	Utilise 75 ha of rock salt mine as a special waste disposal facility filling a void of approximately 2 million m <sup>3</sup> . Approximate life of facility 15–25 years.	Extend existing facility in westerly direction to create another landfill cell. Create a void space of 780 000 m <sup>3</sup> and extend landfill life by 7 years. Deposit 11 000 tonnes of waste each month.

*(continued on next page)*

Table 1 (continued)

Case study characteristics	Oldham Waste Disposal Site, Oldham Metropolitan Borough Council	Wigan Disposal Site, Wigan Metropolitan Borough Council and Salford City Council	Winsford Disposal Site, Vale Royal Borough Council	Barrow Disposal Site, Barrow-in-Furness Borough Council
Public participation methods	<ul style="list-style-type: none"> <li>• Public exhibition</li> <li>• Distribution of newsletters</li> <li>• Notices in local newspapers</li> <li>• Informal discussion between action group and planning officer</li> </ul>	<ul style="list-style-type: none"> <li>• Meeting between developer and local residents in 1994 to explain preliminary proposals</li> <li>• Three public exhibitions</li> </ul>	<ul style="list-style-type: none"> <li>• Nine-week consultation exercise prior to submission of planning application</li> <li>• Community newsletters</li> <li>• Public invited to contact Minosus to discuss proposals</li> <li>• Public meeting</li> <li>• Public inquiry</li> <li>• 648 objections</li> <li>• Local action group—Residents Against Mine Pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Site notices and newspaper advertisements</li> <li>• Public inquiry</li> <li>• 11 objections</li> <li>• 5 letters in support</li> </ul>
Public objections	<ul style="list-style-type: none"> <li>• 124 letters of objection</li> <li>• 20 letters supporting proposals</li> <li>• One action group—Scouthead Environmental Interest Association</li> </ul>	<ul style="list-style-type: none"> <li>• 100 letters of objection</li> <li>• Two action groups—Astley Green Residents Against Tipping and the Boothstown Residents Association</li> </ul>	<ul style="list-style-type: none"> <li>• Liaison committee to be established—a planning condition</li> </ul>	<ul style="list-style-type: none"> <li>• Liaison committee established—meetings held quarterly</li> </ul>
Participation following granting of planning permission	<ul style="list-style-type: none"> <li>• Liaison committee established—meetings held quarterly</li> </ul>	<ul style="list-style-type: none"> <li>• Liaison committee established—meetings held quarterly</li> </ul>	<ul style="list-style-type: none"> <li>• Liaison committee to be established—a planning condition</li> </ul>	<ul style="list-style-type: none"> <li>• Liaison committee established—meetings held quarterly</li> </ul>

them and to present their opinions in this paper. For each case study the research process was:

- 1) All the practice evaluation criteria were clearly explained to the interviewees who were then asked to rank the criteria in order of importance from 1 to 10 (10 being the most important) and to suggest any other criteria that they thought should be used when evaluating public participation. This exercise was designed to test the suitability of the criteria for evaluating the case studies and also to identify the main principles that each interviewee felt were critical to an effective participation process.
- 2) Each interviewee was then requested to determine, on the basis of his or her participation experience, the extent to which each of the ten practice evaluation criteria was achieved, using a four point scale: unfulfilled; partially fulfilled; nearly fulfilled; completely fulfilled.
- 3) Additional questions were posed to clarify the rankings provided and to obtain further details about the effectiveness of the participation methods employed. All the

interviewees were also asked to identify any barriers which they felt had prevented effective participation from being achieved.

- 4) The relevant planning files, environmental statements and planning inquiry reports were scrutinised to supplement the information gathered during the interviews and to verify the accuracy of information supplied by the interviewees (Hartley, 2002).

The analysis of the data collected was undertaken in three stages. The first stage of the analysis was primarily a numerical exercise designed to identify those practice evaluation criteria which were deemed to be of most importance to effective public participation generally. The overall perceived importance of each criterion was calculated by equating the (ordinal) ranking to the equivalent integer, multiplying the score by the number of interviewees who awarded it that ranking and then adding the results. The second stage, which aimed to analyse the specific participation experiences of the interviewees, was more qualitative and focused upon identifying the key themes that emerged from the interviews. In addition, the extent to which case study participants believed that each of the practice evaluation criteria was fulfilled was calculated as a percentage. The third stage consisted of a qualitative analysis of some of the key barriers which prevented ‘early’ and ‘effective’ participation from being achieved in the case studies.

#### 4. The evaluation framework

The evaluation of public participation in EIA is essential if increased understanding is to be achieved. A number of evaluation frameworks have been grounded in Habermas’s (1984) theory of communicative action and typically include the criteria ‘fairness’ and ‘competence’ (see, for example, the frameworks developed by Webler et al., 1995). Petts (2002) recommended that frameworks consider social learning, timing and the level of public trust achieved whilst the Institute of Environmental Management and Assessment (IEMA, 2002) has considered both the level of interaction between all the parties involved and the impact of public participation upon decision-making when analysing public participation programmes.

For the purposes of this paper, an evaluation framework was devised to operationalise both the Aarhus Convention principles and the main recommendations of the public participation literature. As Table 2 illustrates, the first stage in the development of the framework was the identification of the eight sub-sections of Article 6 considered to be the most important principles of this part of the Convention. Following further analysis, these sub-sections were refined into six overarching requirements for ‘early’ and ‘effective’ participation as it became apparent that certain sections of Article 6 deal with similar issues. The key public participation requirements of the Aarhus Convention emphasise the need to:

- time participation programmes to achieve ‘early’ participation;
- provide the public with access to all documentation relevant to the decision-making process;

Table 2  
Formulation of Aarhus practice evaluation criteria

Aarhus Convention principles (Article 6)	Requirements for 'early' and 'effective' participation	Practice evaluation criteria
<ul style="list-style-type: none"> <li>• The public concerned shall be informed, either by public notice or individually as appropriate, early in an environmental decision-making procedure, and in an adequate, timely and effective manner. . .(2)</li> </ul>	<p>Carefully time participation programmes and achieve 'early' participation.</p>	<p>Timing—The participation process begins early enough to ensure that all participants can have an input.</p>
<ul style="list-style-type: none"> <li>• The public participation procedures shall include reasonable time-frames for the different phases, allowing sufficient time for informing the public. . .(3)</li> </ul>		
<ul style="list-style-type: none"> <li>• An indication of the public authority from which relevant information can be obtained and where the relevant information has been deposited for examination by the public (2) (d)(iv)</li> </ul>	<p>Provide the public with access to all documentation relevant to the decision-making process.</p>	<p>Accessibility—The public have access to all documentation relevant to the decision-making process.</p>
<ul style="list-style-type: none"> <li>• Each party shall require the competent public authorities to give the public concerned access for examination, upon request where so required under national law, free of charge and as soon it becomes available, to all information relevant to the decision-making. . . (6)</li> </ul>		<p>Information provision—The public are informed where material relevant to the decision-making process can be obtained.</p>
<ul style="list-style-type: none"> <li>• Each party should, where appropriate, encourage prospective applicants to identify the public concerned, to enter into discussions, and to provide information regarding the objectives of their application before applying for a permit. (5)</li> </ul>	<p>Enter into discussions with the public concerned.</p>	<p>Interaction—The participation techniques used allow stakeholders to contribute effectively.</p>
<ul style="list-style-type: none"> <li>• Procedures for public participation shall allow the public to submit, in writing or, as appropriate, at a public hearing or inquiry with the applicant, any comments, information, analyses or opinions that it considers relevant to the proposed activity. (7)</li> </ul>	<p>Allow the public to submit opinions at public inquiries.</p>	<p>Competence—The public have the ability to challenge experts and have access to the necessary information to do this effectively.</p>
<ul style="list-style-type: none"> <li>• Each party shall ensure that in the decision due account is taken of the outcome of the public participation. (8)</li> </ul>	<p>Consider the outcome of participation in the decision-making process.</p>	<p>Influence on decision-making—The outcome of participation influences the decision-making process.</p>
<ul style="list-style-type: none"> <li>• Each party shall provide for early public participation, when all options are open and effective public participation can take place. (4)</li> </ul>	<p>Achieve 'effective' participation</p>	<p>All the above criteria and: Compromise—The process used allows a consensus to be achieved. Fairness—The full range of potentially affected individuals is identified. Communication—The material is presented in a non-technical format and is understandable to lay people. Trust—The process facilitates the development of trust amongst all involved.</p>

- enter into discussions with the public concerned;
- allow the public to submit their opinions at public inquiries;
- consider the outcome of public participation in the decision-making process; and
- achieve ‘effective’ participation.

These broad requirements summarise the key goals of Article 6 and hold the key to effective implementation of the Aarhus Convention. Ten practice evaluation criteria were then devised which could be used to test the fulfilment not only of these requirements but of other factors cited by commentators as being important elements of ‘effective’ participation programmes (e.g., [Petts, 1999](#))—compromise, fairness, communication and trust. For example, Article 6, paragraph (2)(d)(iv) of the Convention requires the provision of an indication of where relevant information can be obtained and viewed. This was interpreted as a need to provide the public with access to all relevant documentation and was thus tested using accessibility and information provision criteria. Some of the criteria, for example trust, cannot be mapped so clearly onto a specific section of the Convention. However, this criterion was included not only because commentators have argued that it is an important component of participation (e.g., [Petts, 1999](#)) but also because the development of ‘effective’ participation (an overarching principle of the Convention) is likely to rely upon trust.

[Table 2](#) outlines the ten practice evaluation criteria and provides an explanation of their derivation from the Aarhus principles and the issues cited in the literature as being necessary to achieve ‘effective’ participation. It should be noted that all ten criteria are inextricably linked and all contribute to the achievement of ‘early’ and ‘effective’ participation. The criteria should, therefore, not be viewed in isolation but be seen as a package of measures needed to meet the public participation requirements of the Aarhus Convention.

## 5. The importance of the practice evaluation criteria

As outlined in the research methodology (Section 3), the interviewees were asked to review the practice evaluation criteria and to suggest criteria that they felt might be more suitable. Most interviewees commented that this was a very difficult exercise and a small proportion felt that all of the criteria were equally important. However, the rankings provided by the remaining 16 interviewees indicated that they believed that ‘communication’ was the most important criterion and ‘trust’ the least important. The results are illustrated in [Table 3](#).

The opinions expressed in the interviews helped to clarify these results. Most interviewees stated that the accessibility of the relevant information and the provision of this information to the full range of potentially affected individuals were both essential. The criteria ‘trust’ and ‘compromise’, however, were elements that would be achieved if the participation techniques were effective and well-executed which, in turn, depended largely on access to information, the provision of this information to the relevant people and some degree of interaction with the stakeholders. Respondents found ‘influence on

Table 3  
Perceived importance of Aarhus practice evaluation criteria

Criterion	Very important ←—————→ Less important										Perceived importance
	10	9	8	7	6	5	4	3	2	1	
Communication	9 <sup>a</sup>	2	3				2				140 <sup>b</sup>
Fairness	2	5	7	2							135
Timing		4	2	5	3	2					115
Accessibility		2		9	5						111
Information provision		3	4		6	3					110
Influence on decision-making	5						4	5	2		85
Competence					2	11	3				85
Interaction							7	9			55
Compromise								2	12	2	32
Trust									2	14	18

*n*=16.

<sup>a</sup> Number of respondents awarding criterion 'communication' an importance of '10'.

<sup>b</sup>  $10 \times 9 + 9 \times 2 + 8 \times 3 + 4 \times 2 = 140$ .

decision-making' the most difficult criterion to judge and awarded it varying rankings. This criterion tended to be ranked highly by planning officers. For example, [Lea \(2002\)](#) argued that the impact of public participation upon the decision-making process should always be evaluated because if the results of consultation are not considered then the whole exercise might be considered a waste of time and resources. Only one additional practice evaluation criterion was suggested. [Shaw \(2002\)](#) and [McBride \(2002\)](#) felt that the time and money involved in organising public participation necessitated an evaluation of the cost-effectiveness of the methods employed.

These findings demonstrate that the stakeholders interviewed felt that the practice evaluation criteria employed were appropriate for evaluating public participation generally. They were therefore used when to analyse public participation practice in the four EIA case studies (Section 6).

## 6. The Aarhus principles in practice

This section examines the degree to which each of the practice evaluation criteria was perceived to be fulfilled in the case studies and highlights some of the most important public participation aspects. The methods of participation used in the case studies are discussed and the opinions of the interviewees are presented to explain the reasoning behind these. [Table 4](#) summarises the key findings.

### 6.1. Communication

Although documentary material was available in all four cases, its complexity presented difficulties and seven interviewees felt that this criterion was unfulfilled. Most planning officers argued that the non-technical summary provided an explanation which was understandable to the layperson and highlighted the main features of the developments.

Table 4  
Fulfilment of Aarhus practice evaluation criteria in case studies

Criterion	Perceived fulfilment in case studies	Commentary
Communication	<ul style="list-style-type: none"> <li>• 45% nearly fulfilled</li> <li>• 23% partially fulfilled</li> <li>• 32% unfulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Documentary material available in all case studies but members of the public struggled with the technical detail.</li> <li>• Local action groups were forced to seek expert advice to assist their understanding of the technical details.</li> </ul>
Fairness	<ul style="list-style-type: none"> <li>• 41% completely fulfilled</li> <li>• 50% nearly fulfilled</li> <li>• 9% partially fulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Standard LPA procedures enabled partial fulfilment of this criterion.</li> <li>• Oldfield (2002) emphasised the difficulty of ensuring that every potentially affected individual is informed.</li> <li>• A pro-active, nine-week consultation period was initiated in the Winsford case study. However, questions were raised about the distribution of the consultation information.</li> </ul>
Timing	<ul style="list-style-type: none"> <li>• 37% completely fulfilled</li> <li>• 45% nearly fulfilled</li> <li>• 18% partially fulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Pro-active approaches adopted in two case studies.</li> <li>• Careful timing and information provision should occur throughout the planning process</li> </ul>
Accessibility	<ul style="list-style-type: none"> <li>• 32% completely fulfilled</li> <li>• 36% nearly fulfilled</li> <li>• 32% partially fulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Material was fully accessible in all case studies but members of the public often asked for additional information.</li> <li>• Interviewees argued that documentation was required explaining planning procedures and public inquiries.</li> </ul>
Information provision	<ul style="list-style-type: none"> <li>• 36% completely fulfilled</li> <li>• 41% nearly fulfilled</li> <li>• 14% partially fulfilled</li> <li>• 9% unfulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Standard LPA procedures and correspondence from the developer were used to inform the public of where information could be obtained.</li> <li>• In the Winsford case study the provision of information relating to the public inquiry was criticised.</li> </ul>
Influence on decision-making	<ul style="list-style-type: none"> <li>• 27% nearly fulfilled</li> <li>• 55% partially fulfilled</li> <li>• 18% unfulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Planning officers stated that this criterion was nearly fulfilled.</li> <li>• Members of the public regarded this criterion as unfulfilled or partially fulfilled.</li> <li>• Planning officers stated that public opinions are carefully considered.</li> <li>• Responses from members of the public suggest that they need to be better informed of how their opinions are used in the decision-making process.</li> </ul>
Competence	<ul style="list-style-type: none"> <li>• 9% completely fulfilled</li> <li>• 27% nearly fulfilled</li> <li>• 59% partially fulfilled</li> <li>• 5% unfulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Members of the public argued that a lack of technical knowledge can make questioning experts a very difficult process.</li> <li>• Members of the public and local action groups regarded this criterion as being only partially fulfilled</li> </ul>
Interaction	<ul style="list-style-type: none"> <li>• 36% nearly fulfilled</li> <li>• 64% partially fulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• The public regarded this criterion as only partially fulfilled.</li> <li>• The strongly opposing views of the public and the developer can prevent effective interaction (Taylor, 2002).</li> </ul>

(continued on next page)

Table 4 (continued)

Criterion	Perceived fulfilment in case studies	Commentary
Compromise	<ul style="list-style-type: none"> <li>• 23% nearly fulfilled</li> <li>• 50% partially fulfilled</li> <li>• 27% unfulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Achieving a consensus is very difficult in controversial projects.</li> <li>• Role of the planning officer to act as a mediator (Lea, 2002).</li> </ul>
Trust	<ul style="list-style-type: none"> <li>• 5% completely fulfilled</li> <li>• 27% nearly fulfilled</li> <li>• 23% partially fulfilled</li> <li>• 45% unfulfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Results varied between case studies.</li> <li>• Members of the local action groups and the public regarded this criterion as unfulfilled</li> <li>• Company profile and reputation identified as influential factors in the development of trust.</li> <li>• The early explanation of project proposals could potentially increase levels of trust.</li> </ul>

However, Washburn (2002) felt that, although the non-technical summary was reasonably effective in communicating basic details, a greater understanding of the issues was required by the public, especially if they were to question experts effectively at the public inquiry. In the Oldham, Astley Green and Winsford case studies the action groups felt obliged to hire experts to help them to understand the complex material describing the projects and their impacts.

### 6.2. Fairness

In all four case studies standard local planning authority (LPA) procedures, following receipt of the planning application and direct correspondence, enabled this criterion to be at least partially fulfilled. 9 out of the 22 interviewees (41%) believed that this criterion had been completely fulfilled. However, as Oldfield (2002) stated, it can be very difficult to guarantee that every potentially affected individual is informed. In the Oldham, Astley Green and Winsford case studies the developer tried to ensure that all those potentially affected were notified by issuing leaflets and initiating correspondence. In the Winsford case study a pro-active approach to public participation was adopted (i.e., the developer consulted the public prior to the submission of the planning application) and the distribution of a newsletter initiated a nine-week consultation period. Despite criticism that the newsletter was poorly distributed, the public felt that it was an effective means of communicating basic information (Lawrence, 2002).

### 6.3. Timing

The appropriate timing of public participation is highly contentious and is much debated in the literature (e.g., Clark, 1994; Canter, 1996; Petts, 1999). In two cases pro-active approaches were adopted and 18 out of the 22 interviewees (over 80%) considered this criterion to be either completely or nearly fulfilled. In the Astley Green case study, discussion occurred before all the project details had been finalised. The opinions of the public were sought about both the routing of the access road and about the restoration of the site. Taylor (2002) felt that it was very difficult to have meaningful discussions with the

public when project details had not been finalised. The case studies also demonstrated that participation processes need to be carefully executed and that the timing of, and amount of warning given to the public about, participation events are carefully planned to ensure that the public can make appropriate arrangements to attend any exhibitions, meetings, hearings or inquiries.

#### *6.4. Accessibility*

In all four case studies information was fully accessible. However, on a number of occasions the public and local action groups asked for more information. This is why seven of the interviewees felt that this criterion was only partially fulfilled. Interviewees argued that, in addition to the environmental statement (ES) and the planning application, documentation was required to explain planning procedures, the format of public inquiries and the difference between the planning and the pollution control regimes, to allow them to contribute effectively (Lawson, 2002). This material provides the legal basis for any planning decision and it would seem logical to ensure that the public have access to it. The provision of leaflets containing simple explanations of these systems might help to overcome some of the confusion observed and to reduce misunderstandings.

#### *6.5. Information provision*

Information provision is a fundamental component of the Aarhus Convention. Standard LPA procedures<sup>1</sup> and correspondence from the developer were used to ensure that the public were informed of where documentation relevant to the decision-making process could be obtained and 17 out of the 22 interviewees (77%) considered this criterion to be either completely or nearly fulfilled. Indeed, Taylor (1993, 33) stated: “. . . I feel that the steps which have been taken to bring the proposals to the attention of as wide a public as possible have been all that could reasonably be expected.” However, in the Winsford case study the provision of information relating to the public inquiry was extensively criticised. Many local residents were informed that the Secretary of State had called in the application only four days before the preliminary inquiry. Generally, information provision should continue throughout the process of dealing with the planning application.

#### *6.6. Influence on decision-making*

The planning officers in all the case studies indicated that public representations are carefully considered in the decision-making process and that suggestions from the public are often used when formulating planning conditions. Indeed, in the Winsford and Barrow case studies many of the issues raised by the public were discussed at public inquiries and their opinions were influential in the formulation of the planning conditions. However, members of action groups believed that their influence on the final decision was limited, that the planning process was too political and that decisions had largely been made before

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<sup>1</sup> Cullingworth and Nadin (2002) should be consulted for further detail about the operation of the UK planning system.

they were informed, a problem referred to by [Petts \(1999\)](#) as ‘public alienation.’ Consequently, they regarded this criterion as being unfulfilled or only partially fulfilled. It appears that the public need to be far better informed about how their opinions have been taken into consideration in making the planning decision, a procedure strongly recommended by [IEMA \(2002\)](#).

### *6.7. Competence*

The public and local action groups generally regarded this criterion as being only partially fulfilled. Most planning officers commented that public inquiries, exhibitions and public meetings presented opportunities for the public to question experts. However, many members of the public queried their ability to do this effectively because of their lack of technical and legal knowledge. This issue is frequently cited in the literature as being a barrier to the achievement of effective participation ([Stephenson et al., 1995](#)). This problem manifested itself at the inquiry organised for the Winsford case study as questions were raised by the local action group and by members of the public about their ability to contribute usefully. Indeed, [Lea \(2002\)](#) argued that it was almost impossible for the public to question experts effectively, particularly in comparison with the effectiveness of the questioning by the waste disposal company, which had access to greater resources. Members of the Winsford local action group cited lack of access to legal guidance, of knowledge of public inquiry procedures, of financial resources, and of technical knowledge as the main barriers inhibiting their effective participation ([Williams, 2002](#)).

### *6.8. Interaction*

This criterion received a similar score to the competence criterion and was regarded as only partially fulfilled since members of the public felt that they were unable to enter into effective discussions because of their lack of technical knowledge. [Taylor \(2002\)](#) felt that the strongly opposing views of the developer and the members of the public prevented effective interaction.

### *6.9. Compromise*

[Lea \(2002\)](#) believed that it was the role of the planning officer to act as mediator and, as far as possible, to try to achieve a consensus. However, it was widely recognised that achieving a consensus is very difficult for controversial proposals as the various stakeholders have very different objectives and opinions. This was reflected in the ranking of this criterion, since 6 out of the 22 interviewees (27%), all of whom were members of the public or of a specific action group, considered that this criterion was unfulfilled.

### *6.10. Trust*

Results for this criterion varied between case studies. However, it was mostly regarded as being unfulfilled by members of the public and of local action groups and it appeared that a common belief prevailed that waste companies cannot be trusted. In the

Barrow case study, however, the effective management of a site that had been operating since 1977 appeared to be a reason why lack of trust was not an issue. In this case, therefore, the company's profile and reputation were very important in determining the degree of trust. Although trust is influenced by many factors, two interviewees commented that the early explanation of project proposals might have increased trust. The development of effective and timely public participation may therefore be vitally important in establishing trust.

## **7. Barriers to effective public participation**

Although public participation is widely documented in the literature as being a valuable component of the EIA process, it is apparent that the degree to which each of the practice evaluation criteria is fulfilled depends upon the public participation methods used and the way they have been implemented, as well as upon the personal beliefs of the stakeholders. This section of the paper considers some of the key barriers which the interviewees believed prevented 'early' and 'effective' participation and links them to the practice evaluation criteria. The main barriers identified by interviewees were:

1. poor public knowledge of planning, legal and waste licensing issues;
2. poor provision of information;
3. poor access to legal advice;
4. mistrust of the waste disposal industry
5. not in my back yard (NIMBY) syndrome;
6. failure to influence the decision-making process;
7. poor execution of participation methods; and
8. regulatory constraints.

### *7.1. Poor public knowledge of planning, legal and waste licensing issues*

One of the most commonly cited barriers to 'effective' participation was a lack of public knowledge of planning, legal and waste licensing issues. This barrier is linked to the competence criterion because a general lack of expertise and an inability to understand the complex technical details associated with the planning applications was a major factor preventing the public from interacting and participating effectively. This problem occurred in the Winsford case study when the public were able to question expert witnesses at the public inquiry but one participant felt that the most appropriate questions were not always asked (Lea, 2002). This issue is also linked to the communication criterion as not all the information necessary to enable the public to participate effectively is readily understandable by the lay person.

### *7.2. Poor provision of information*

The poor provision of basic procedural information was regarded by members of the local action groups and the public as a major barrier to 'effective' participation. This is

linked primarily to the information provision and accessibility criteria but also to the fairness criterion, as a failure to identify the full range of potentially affected individuals can often mean that the appropriate information is poorly distributed. The Planning Inspectorate's organisation of the public inquiry for the Winsford case study was criticised because of the lateness of information availability (Lawrence, 2002). Theoretically, a public inquiry presents an opportunity for the public to voice their opinions and to question expert witnesses but unless information about basic procedures is supplied and the inquiry dates are effectively circulated the public can be placed at a disadvantage and the potential effectiveness of the inquiry can be compromised.

### *7.3. Poor access to legal advice*

Poor access to legal advice and guidance was cited by the local action groups and the public in the Winsford case study as a factor impeding the effectiveness of the participation procedures. Lea (2002) stated that it was almost impossible for the public to contribute effectively, especially in comparison to Minosus Ltd. which retained legal representatives to present its case. This barrier is linked to the accessibility criterion because unless all individuals have equal access to information and guidance, disadvantaged parties may be unable to participate effectively.

### *7.4. Mistrust of the waste industry*

Mistrust of the waste industry and a belief that developers fail to publicise all the facts associated with a proposal objectively are barriers which are commonly cited by the public as preventing 'effective' public participation from being achieved. This issue is inevitably linked to the trust criterion, which was cited by Petts (2002) as being essential to public participation. McBride (2002) commented that developers occasionally fail to present all the facts objectively. This can create difficulties when trying to establish a good relationship with a public who feel that information is being withheld. In the Oldham and Astley Green case studies the local action group members felt that there was a failure to discuss any potential problems associated with the developments at the public exhibitions which made them suspicious of the proposals and consequently reduced their trust in the applicants. Trust is frequently discussed in the EIA literature and it is often argued that increasing the legitimacy of the decision-making process could contribute to increasing trust (Petts, 1999). However, public misconceptions about developers and the regulatory authorities are likely to remain difficult to overcome.

### *7.5. NIMBY syndrome*

NIMBY syndrome was evident in all the case studies and most members of the public admitted that the close proximity of the waste disposal sites to their homes had influenced their attitudes. NIMBYism appeared most prevalent in the Astley Green case study as many residents living in Astley Green were highly critical of the development, whilst residents living in Boothstown, slightly further away from the proposed site, were less hostile to the proposals. Individuals living in close proximity to a proposed development

are, of course, bound to express their opinions and concerns strongly. However, in cases of extreme NIMBYism, engaging in dialogue with affected individuals can be incredibly difficult and unproductive (Oldfield, 2002). This barrier is linked to the compromise criterion as NIMBYism creates difficulties when trying to achieve a consensus.

#### *7.6. Failure to influence the decision-making process*

Several of the members of the public interviewed remained unconvinced that their opinions were considered in the decision-making process, thereby creating feelings of public alienation. A belief that their impact upon the decision-making process is limited will inevitably constrain the effectiveness of participation by the public. This barrier is, obviously, linked to the influence on decision-making criterion.

#### *7.7. Poor execution of participation methods*

The poor execution of participation methods is a fundamental yet potentially rectifiable barrier that prevented ‘effective’ participation from being achieved on a number of occasions. This problem arose most frequently during the organisation of interactive participation methods or those which required the two-way exchange of information and is, therefore, most closely linked to the interaction criterion. For example, the public meeting utilised in the Winsford case study should have presented an opportunity for some interaction between the developer and members of the public. However, many members of the public questioned the organisation of the public meeting and the effectiveness of this technique. Although the public meeting is frequently cited as a means of aiding discussion, this (Table 2) was perceived merely as an opportunity for Minosus Ltd. to present its proposals since only a short period of time was allotted for questions (Williams, 2002).

Conversely, the liaison committees established following the granting of planning permission in all the case studies were cited as being generally well organised and conducive to the exchange of information and opinions. The four case studies demonstrate that, while the potential capability of different public participation methods to achieve two-way communication varies (Petts, 1999), their ‘effectiveness’ in achieving this depends upon how they are executed and organised.

#### *7.8. Regulatory constraints*

One of the most fundamental and overarching barriers to the achievement of ‘effective’ public participation are the EIA Regulations themselves (Lea, 2002). In complex waste projects a period of 21 days for public comment is perceived to be too short to allow planning officers to become more involved in the participation process. This is linked to the timing criterion. Furthermore, there is no mandatory requirement for public participation prior to the submission of the planning application and applicants are, therefore, fully justified in not involving the public at this stage. This barrier ultimately affects the fulfilment of all the criteria because fundamental changes to participation procedures are likely to be constrained unless the current time periods are extended.

Cullingworth and Nadin (2002) have demonstrated that public participation has never been a very strong component of the UK development control system. However, in the absence of fundamental changes to overcome the institutional and structural weaknesses of the planning regime, it is evident that minor modifications to public participation procedures could help the UK EIA system to meet the requirements of the Aarhus Convention.

## 8. Fulfilment of Aarhus principles

This section addresses the extent to which the six requirements for ‘early’ and ‘effective’ participation derived from the eight principles of the Aarhus Convention (Section 4) were met in the EIA case studies.

### 8.1. Early participation

The importance of commencing public participation ‘early’ is emphasised throughout the Aarhus Convention. In both the Astley Green and Winsford case studies, pro-active approaches to public participation were adopted and participation began prior to the submission of the planning application. Furthermore, discussions occurred in the Astley Green case study before all the project details had been finalised. Participation occurred in these two case studies whilst some development options were still ‘open.’

In addition to advocating ‘early’ participation, the Aarhus Convention also stresses that allowing adequate time throughout the participation process is essential. Article 6(3), *inter alia* (Table 2), states:

The public participation procedures shall include reasonable time-frames for . . . the public to prepare and participate effectively during the environmental decision-making.

The public inquiry organised in the Winsford case study should have provided an opportunity for the public to express their views and concerns. However, the poor timing and organisation of the process placed them at a severe disadvantage. Information regarding inquiry protocol was supplied only on the day the inquiry commenced and inadequate time in which to prepare was one of the factors which prevented the local action group from contributing effectively.

Article 3(4) of Directive 2003/35/EC has the potential to ensure that participation commences ‘earlier.’ However, the impact of the proposed modification will depend upon how the term ‘early’ is interpreted in the Regulations produced by each of the Member States. If measures are introduced by Member States to improve the organisation of participation procedures such as public inquiries then some of the weaknesses identified in the case studies regarding issues of timing should be overcome.

### 8.2. Access to documentation

Access to documentation was provided in all four case studies. However, some members of the public queried the types of documents available. The modification to

Article 6(2) of the EIA Directive (Section 2 above) increases the amount of information that must be supplied to the public. Furthermore, the new Article 10a will require the provision of information regarding administrative and judicial procedures. However, the findings of this research suggest that a wider range of information must be made available. Interviewees argued that documentation explaining the planning and waste disposal regulations would also have been very useful. This material is fundamental to people's understanding of the decision-making process and, therefore, should be available if the Aarhus principles are to be achieved.

### *8.3. Discussions with public*

Article 6(5) of the Convention (Table 2) encourages applicants to enter into discussions with the public concerned before applying for a permit. At the exhibitions organised in the Astley Green case study the public had the opportunity to express their opinions about the routing of the access road and about the restoration of the site. However, the case study analysis also demonstrated that careful planning must be used when initiating any methods which involve 'discussion' as, if not well executed, the participation method will not deliver the 'effective' participation that the Convention aims to achieve.

### *8.4. Submission of public's opinions*

In the Barrow case study the public inquiry was well-organised and allowed members of the public to express their opinions and concerns, therefore fulfilling Article 6(7) of the Convention (Table 2). However, poor organisation of the inquiry prevented the local action group from being able to participate effectively in the Winsford case study. It should also be noted that other factors such as lack of technical knowledge and financial and legal constraints also hindered the public. These difficulties need to be overcome if the public are to be able to submit their opinions effectively at a public hearing or inquiry.

Article 3(6) of Directive 2003/35/EC clearly states that 'reasonable time-frames' must be provided for participation. However the findings of the case studies suggest that, if opportunities are provided, they must be 'effective' and well-organised. The implementation of the Member State administrative and regulatory provisions to transpose the Directive, and the efforts made to enhance the execution of specific participation methods, will determine the extent to which the ideals of the Aarhus Convention are fulfilled in practice.

### *8.5. Consideration of participation outcome in decision-making*

All the planning officers felt that public opinions were invariably carefully considered in the decision-making process, suggesting that Article 6(8) of the Convention (Table 2) is fulfilled. However, members of the public in each of the cases were far less convinced that their input into the decision-making process had an effect. More information needs to be supplied about how public opinion is taken into account when making planning decisions.

### 8.6. *Effective participation*

Throughout the Aarhus Convention considerable emphasis is placed upon achieving ‘effective’ participation yet this term remains undefined. This investigation has demonstrated that achieving ‘effective’ public participation is very difficult and that the extent to which public participation is ‘effective’ appears to be determined by two key factors:

- Stakeholder attitudes: a variety of differing opinions prevail about what constitutes ‘effective’ public participation exists. Consequently, when designing a participation programme it is very difficult to ‘please everyone.’
- Operation of the participation process: the literature (e.g., [Petts, 1999](#)) suggests that a number of benefits can be secured by using particular methods. However, as this research has demonstrated, unless properly operated and planned, any chosen participation method will not achieve its aim and will not be entirely ‘effective.’

## 9. Conclusion

The overall aim of this paper was to discover how participation methods had been applied in UK waste disposal EIA case studies and to establish how the Aarhus Convention goals of ‘early’ and ‘effective’ public participation in the EIA process might be better achieved.

Some of the basic principles of the Convention have been fulfilled and examples of ‘effective’ participation have been identified. For example, the LPAs in all the case studies tried to ensure that as many people as possible were informed about the proposals and that good access was provided to the relevant documentation. Furthermore, the Winsford newsletter and site visit and the liaison committee meetings established in the Oldham, Astley Green and Barrow cases were viewed by most stakeholders as being effective public participation techniques. However, weaknesses have also been identified. These included:

- the ineffective timing and planning of participation procedures; and
- the poor implementation of public participation methods which should, theoretically, facilitate discussion and help to engage all the stakeholders involved.

Certain barriers need to be overcome before ‘early’ and ‘effective’ participation can be achieved and the ideals of the Aarhus Convention fulfilled. These include:

- current legislative participation time provisions;
- technical complexity of project proposals;
- developer and public attitudes;
- poor provision of legal and procedural information; and
- financial constraints.

The findings of this research suggest that allowing more time for public participation by modifying the UK EIA legislation to extend the consultation period from three to,

say, six weeks, thereby strengthening its importance within the EIA process, would be particularly beneficial. This would not only allow more time for the public to prepare and submit their comments but also provide greater scope for the developer and/or the LPA to organize public participation events. Alternatively, the UK could use the provisions of Article 5(3) of Directive 97/11/EC to make scoping with integral public participation mandatory. While the advantages of facilitating the effectiveness of public participation need to be weighed against the disadvantages of lengthening an already complex and costly procedure, many other countries have chosen to strengthen public participation (Wood, 2002).

This investigation suggests that concentrating upon the detailed implementation of public participation methods can significantly influence their effectiveness. Accordingly, any modifications to UK legislation should ideally be accompanied by enhanced guidance on good public participation practice to ensure that it is ‘effective’ and adds value. Such guidance should focus not only upon the types of techniques that can be used to engage the public but also upon careful preparation for their use and upon using them properly.

The Aarhus Convention undoubtedly presents a unique opportunity for public participation procedures to be enhanced and, as Palerm (1999) stated, it will be intriguing to observe how its provisions are interpreted. However, the findings of this research suggest that if real improvements are to be secured, and the potential of the Aarhus Convention maximized, the focus needs to be upon not only supplying ‘early’ opportunities for the public to participate but also upon ensuring that these opportunities are ‘effective.’

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