



Environmental impact assessment in the UK: a review

Christopher Wood

To cite this article: Christopher Wood (1977) Environmental impact assessment in the UK: a review, *Landscape Research*, 2:3, 11-16, DOI: [10.1080/01426397708705839](https://doi.org/10.1080/01426397708705839)

To link to this article: <https://doi.org/10.1080/01426397708705839>



Published online: 25 Feb 2007.



Submit your article to this journal [↗](#)



Article views: 79



View related articles [↗](#)

and the impact of roads, *Landscape Research News* 1 (11), 6-7.

Coventry-Solihull-Warwickshire Sub-regional Study (1971) *Supplementary Report No. 5 — Countryside*

Dunn M C (1974a) *Landscape evaluation techniques: an appraisal and review of the literature*, Working Paper No. 4 Centre for Urban and Regional Studies, University of Birmingham.

Dunn M C (1974b) *Landscape evaluation: a further perspective*, *The Planner* 60 (10), 935-936

Fines K D (1968) *Landscape evaluation: A research project in East Sussex*, *Regional Studies* 2, 41-55

Hampshire County Council (1968) *East Hampshire A.O.N.B.: A study in countryside conservation*. Hampshire County Council, Winchester.

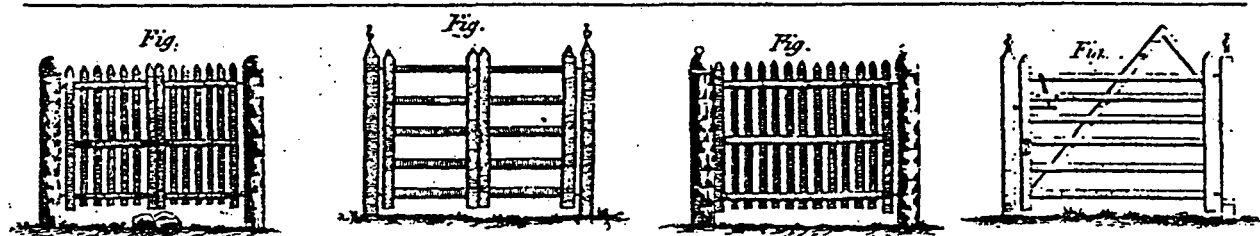
Linton D L (1968) *The assessment of scenery as a natural resource*: *Scottish Geographical Magazine* 84, 219-238

Penning-Rowse E C (1973) *Alternative approaches to landscape appraisal and evaluation*, Middlesex Polytechnic Planning Group, Report No. 11.

Penning-Rowse E C and Hardy D I (1973) *Landscape evaluation and planning policy: a comparative study in the Wye Valley Area of Outstanding Natural Beauty*. *Regional Studies* 7, 152-60.

Robinson D G et al (1976) *Landscape evaluation*, University of Manchester.

Tandy C V R (1969) *Landscape evaluation technique*. Land Use Consultants, Croydon.



ENVIRONMENTAL IMPACT ASSESSMENT IN THE UK: A REVIEW

Christopher Wood *University of Manchester*

Introduction

Environmental impact assessment (EIA) has become an emotive term. It stems from the US National Environmental Policy Act 1969, which requires analyses of the environmental impacts of major federal actions significantly affecting the environment in the form of an 'environmental impact statement' (EIS) covering:

- (i) the environmental impact of the proposed action
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

In the seven years since the introduction of this requirement much has been written about its advantages and disadvantages, especially in the American literature.* Its advocates point to the systematic, comprehensive consideration of environmental impacts, to better consultation and public participation and to a largely undisputed improvement in the quality of environmental decision-making. Its critics emphasise the costs and delays experienced with the US system, together with the encyclopaedic irrelevance and false quantification demonstrated in many EIS's.

Many other countries have been attracted to the EIA system, largely as a response to growing public demands for better environmental assessment of new proposals.

*See for example, Burchell and Listokin (1975), *Council on Environmental Quality* (1971-76), Delogu (1974), Dickert and Dorney (1974), Macbeth (1974), and Munn (1975).

Australia, Canada and Japan have already introduced EIA provisions and the Commission of the European Economic Communities is actively considering an initiative. Many of the EEC Member States are, in any event, independently implementing (France, Germany, Ireland), or considering (Denmark, Netherlands) various EIA procedures, generally greatly modified from the original American model, to meet national circumstances.

United Kingdom Interest

There has been considerable interest in EIA in the UK for several years. This has partly been reflected in the technical literature* and partly in 'official' writing. Dobry, (1975) in his report on the development control system, advocated that, in the case of specially significant development proposals, the local planning authority (LPA) should be able to insist that an impact study be submitted. He outlined the main topics to be covered in such a study, and stated that additional information will be required from the developer. The Royal Commission on Environmental Pollution (1976) endorsed Dobry's proposal that 'developers provide an assessment of the effects of air, water, wastes and noise pollution of certain major developments'. It stated that the developer would need the assistance of the LPA and other bodies in providing information and that rules should be made to ensure this.

The Stevens Committee (1976) recommended that a standard form for mineral applications be introduced which would require far more information than is currently requested. Though not so detailed as the Aberdeen University project specification report (see below), this would be comprehensive enough to allow LPA's to carry out an environmental appraisal of any mineral proposal and the Committee therefore 'see no need to apply to mineral applications the special impact statement procedure proposed by Mr. Dobry'.

*See, for example, various articles in the *Journal of Environmental Management*.

The Department of the Environment has initiated substantial research programmes in the field. The Local Government Operational Research Unit (1976) has been investigating measures of performance, including environmental quality, in structure plan evaluation. Aston University (1976) has studied the feasibility of developing a conceptual framework for environmental evaluation and research and the Institute of Operational Research (1977) has formulated draft guidelines for assisting planners and environmental scientists to understand the contribution of the environmental sciences in strategic planning. In addition, Lassi re (1976) has produced a report on the evaluation of alternative road plans (actually road projects) and Aberdeen University has been commissioned to investigate the relationships between development appraisal and development planning and to produce an EIA bibliography. However, the reports most centrally concerned with EIA in the UK are those of Aberdeen University (1976) and Catlow and Thirlwall (1976).

Aberdeen University Report

The Aberdeen University (1976) report was written by Brian Clark and his colleagues in the Geography Department, having been commissioned in 1973. It is intended for use as a manual for the assessment of major industrial applications by LPA's within the existing framework of planning control and other statutes. The main report is 26 pages long, of which 14 are concerned with the method of appraisal (Chapter 4). The first three chapters deal with the background and programme of the research and relationship of the method of appraisal to other aspects of planning. There are 143 pages of appendices, the first being a brief for a project specification report (a type of detailed planning application form), the second a list of questions to be answered by the LPA in assessing the development, the third a list of relevant public inquiries, the fourth a list of consultations to be undertaken by the LPA and the fifth a set of ten technical advice notes, one of which is concerned with 'landscape character assessment for the appraisal of major development applications'.

The appraisal method consists of eleven steps, of which several will be taken concurrently:

1. initial discussions with the developer,
2. receipt of planning application and completed project specification report (which provides a systematic means whereby the LPA can collect data on major industrial applications),
3. initial site inspection,
4. consideration of existing planning policies (including such special development control constraints as National Parks, Areas of Outstanding Natural Beauty, areas of great landscape value),
5. construction of an impact matrix — a 24 x 39 checklist to aid the identification and systematic consideration of likely impacts,
6. consultations undertaken on the basis of the completed matrix and the project specification report,
7. description of the existing situation in the area (including landscape character),
8. appraisal of potential impacts using consultees, technical advice notes, the list of questions and, often, additional specialist advice,
9. production of an impact statement, including beneficial/adverse, short/long term, reversible/irreversible, direct/indirect and local/strategic effects and a consideration of the no change situation, by the LPA,
10. preparation of final issues report and recommendation, including summary sheets for public participation,

11. planning authority decision on the basis of the various documents prepared together with lists of consultees and objectors. Enforcement and monitoring are considered at this stage.

There can be no doubt that the Aberdeen University report is a very important document. It is clearly written and presented and proposes a sound method which is relatively straightforward (if lengthy) to use. The report rightly emphasises that the matrix is merely a checklist and not an end in itself, but in practice there may still be some problems with double counting and ignoring secondary effects, (Munn, 1975). It also fills a long perceived gap in the planning literature since the invaluable lists of questions and consultees and the advice notes bring together, for the first time, much of the information needed by LPA's. It also provides a comprehensive framework which can be adapted to meet individual circumstances. The EIA method fulfills four of the five requirements of the American EIS, and the fifth, the difficult question of alternative sites, is mentioned.

Two main criticisms can be levelled at the report. The first relates to content. Most LPA's would be quite unable to deal with much of the information requested in the project specification report — eg. financial characteristics of expenditure on labour or sources of major raw materials, electricity demand or noise octave band rating. Similarly only a limited number of LPA's could answer many of the questions posed. Most could probably provide some answer to: 'will the proposed development substantially alter the landscape quality of the area?' but how many could or would wish to answer: 'how significant will the local area's share of revenue from raw material purchase be?' The report proceeds, obviously, on the basis that if the LPA collects enough information, some of it will be useful. It seems very doubtful whether the effort involved would always prove justified — selectivity must be necessary. Some of the advice notes, while invaluable illuminating, may not actually help the LPA make an assessment. The note on landscape character assessment which discusses quality of views, vegetation, water, pattern and detractors, and reviews briefly methods of assessment, and that on determining the zone of visual influence of a development, may, on balance, be helpful; but many merely inform. It would appear that these advice notes can best be employed to evaluate specialist consultants' advice to the LPA, rather than to actually carry out assessments.

The second criticism is perhaps more fundamental and relates to omission: when is the appraisal method to be used, and for what types of development? While criteria relating to the choice are mentioned (large land take, contentiousness, national or regional significance, etc.) there is no guidance on how these criteria should be applied; ie. on the types of development to be assessed, their location or on the lower limit of development size. These are serious faults since undertaking the appraisal method will be a long and costly business for LPA's, especially under present economic conditions.

The limitation of the method to 'industrial' projects and not to, say roads or water storage schemes is the sponsors' responsibility, not the authors', but also raises important questions. Until the method has been used in full, and its cost and time requirements evaluated, one cannot be certain that the criticisms of the American system will not apply, and that the claims made for this carefully conceived method will be justified. Initial small-scale trials show it is to be exceptionally tedious if not curtailed (Land Use Consultants, 1976).

Catlow and Thirlwall Report

John Catlow and Geoffrey Thirlwall were appointed in 1974 to investigate the need for environmental impact analyses in the UK. They conducted their study much like a two man Royal Commission, soliciting and hearing evidence, reading widely, circulating a draft report and finalising their views after representations had been received. Their report, dated 1976, was published in 1977, and consists of 70 pages. There is an introduction and seven chapters on background, analytical process, techniques for EIA (actually analysis, containing a lengthy section on landscape quality), a system for Great Britain, application of EIA to present planning procedures, responsibility for cost and, finally, conclusions and recommendations (which forms a summary). Further research is recommended. There are five appendices, covering 46 pages, one on evidence received, one a bibliography (35 pages, divided into six sections), one on English and Scottish planning provisions, one on overseas practice on EIA and the last on the circumstances in which EIA would be required.

Catlow and Thirlwall find that there is a need for EIA of perhaps 25-50 public and private developments per annum because they give rise to large scale and complex environmental impacts. They specify a flexible process involving identification of impacts, consideration of alternatives, assessment and evaluation of impacts, review, report and decision. They believe it inadvisable to impose specific requirements as to the content of EIA reports, because of the variety of projects concerned. They nominate county councils as responsible LPA's, who determine whether EIA is required, given central government guidance. Certain EIA's would be taken over by central government, who like the LPA, would work with the developer. An analysis team, working under a steering committee, would examine the impacts (after public participation) and prepare the report. The LPA would make its decision on the basis of the report or, if there was an inquiry, the report would be available to all parties. Provisions for public sector EIA's are mentioned, and they suggest that EIA be incorporated into the present planning system, firstly on an experimental basis, and later on the basis of minor legislative changes. Costs would be shared by developer and LPA.

Draft criteria for deciding upon an EIA are mentioned, although these would be specified by central government. They include 'cases where a diverse range of impacts might occur affecting the natural environment or aesthetic quality.' The list of project types for which EIA might be required include the establishment of national and country parks, impounding and storage reservoirs, new deep mines, opencast coal extraction and hypermarkets. It does not include large scale afforestation.

Unlike the Aberdeen report, Catlow and Thirlwall's is unstructured and not easy to read. In part this is because the authors are dealing with the principles of EIA, rather than preparing a precise method of EIA, but in part it is due to poor drafting. This is unfortunate, because the main themes of their argument deserve to be debated and they may be lost to many impatient readers. Nevertheless, the report is an important and courageous one, since it raises a number of fundamental questions.

Catlow and Thirlwall, like Aberdeen University, are convinced that the present system of project assessment is not uniformly adequate, and that improvement is needed in certain cases. Few would dispute this. They are convinced that public, as well as private, development should be properly and publicly assessed. Few (outside the public corporations) would dispute this. They are also convinced that central guidance is needed on the

circumstances in which EIA should be required, and that the developer should bear some of the cost. Again, few would dispute this. Their report is therefore to be welcomed, both because of the questions it raises and because of the contribution it makes to the debate on the adoption of EIA in the UK: indeed it represents one of the very few documents on the subject available.*

The report is unsatisfactory, especially in comparison with the Aberdeen University report, in that it does not specify the steps needed to implement a clearly defined EIA system. In fairness, the general terminology employed is partly a result of the terms of reference of the study. (The report does cover the five requirements of the US EIS).

Apart from, and despite its lack of specificity — claimed to be flexibility — several serious criticisms can be made. For example, the idea of a steering committee, appointed 'in consultation with the developer consulting as necessary any other authority' seems fraught with difficulty in local (as opposed to national) circumstances and to be open to charges of partiality by the public. The appointment of the analysis team, of unspecified composition, is again doubtful. In logic, either the developer should produce the report, and the LPA should check it (the US model) or the LPA should prepare it (Aberdeen University). No intermediate seems likely to work in most circumstances. Again, the proposals relating to cost sharing may be satisfactory in principle, but are likely to prove very difficult if the LPA decided to oppose the development. There are many such problems requiring elaboration.

Conclusions

The government has been very careful not to commit itself to EIA. In his response to Dobry, the Secretary of State (1975) stated that environmental impact analyses may have a part to play in assisting in the consideration of major applications and that he would study the various proposals. The foreword to Catlow and Thirlwall, (1976) states 'the views expressed . . . are those of the authors'; and whereas this caution is also to be found in the foreword to Aberdeen University (1976), it is moderated by the rider that they 'do not necessarily represent the views of the (sponsoring) Departments'. Moreover, while both are consultative documents, the latter report is 'commended for use by planning authorities, government agencies and developers'. The DoE sent a complementary copy of the Aberdeen report to every local planning authority in the country, but did not distribute the Catlow and Thirlwall report.

The DoE's press notice for the Aberdeen report (DoE, 1976) contains a neutral summary of its contents, whereas that for the Catlow and Thirlwall report (DoE, 1977) mentions that 'it raises wide issues affecting planning evaluations, the availability of specialised skills and manpower resources in local government'. It goes on: 'consideration of the report by local authorities should not be allowed to delay normal planning procedures and any new procedures involving additional calls on central or local government finance and manpower are unacceptable during the present period of economic restraint'. The implications seem clear enough: DoE is satisfied with the Aberdeen University report, but deeply discontented with Catlow and Thirlwall's report. Further evidence is provided by the year's delay between the latter's receipt and its publication.

*There is some discussion in O'Riordan and Hey, (1976)

The Aberdeen report relates mainly to capital intensive private, not public, development. It involves no central government initiative and it can be adopted as LPA's decide. In view of the additional resources required, it seems very unlikely that, in practice, many will decide to adopt the full procedure without government encouragement, unless the developer completes much of the work. There is a very strong case for research funds to be made available to test and, if necessary, to modify the Aberdeen University method, which has never been fully evaluated in a real situation. 'Assessing any comments received' is not enough. Catlow and Thirlwall's report, on the other hand, would involve many public bodies and considerable government action if implemented.

The government is no longer awaiting information and should now decide what action to take on EIA, if necessary on the basis of a consultative paper. Such a paper should contain provision for programme and plan evaluation (eg. road programmes, structure plans) rather than be confined to projects. Unless action is taken, huge local variations in the quality of environmental decision taking on development proposals and in structure plan preparation will continue.

References

- Aberdeen University (1976) *Assessment of major industrial applications: a manual* Research Report 13, Department of the Environment, London.
- Aston University (1976) *Conceptual Frameworks for environmental evaluation and research* Joint Unit for Research on the Urban Environment, AU, Birmingham.
- Burchell, R W and Listokin D (1975) *The environmental impact handbook* Centre for Urban Policy Research, Rutgers University, New Jersey.
- Catlow J and Thirlwall, C G (1976) *Environmental impact analysis* Research Report 11, Department of the Environment, London.
- Council on Environmental Quality (1971-76) *Environmental quality: second - seventh annual reports* US Government Printing Office, Washington.

- Delogu, O E (1974) *US experience with the preparation and analysis of EIS's: The National Environmental Policy Act* Environmental Policy and Law Paper No. 7, International Union for Conservation of Nature and Natural Resources, Morges, Switzerland.
- Department of the Environment (1975) *Circular 113/75* HMSO, London.
- Department of the Environment (1976) *Press notice 968* Department of the Environment, London.
- Department of the Environment (1976) *Press notice 68*, Department of the Environment, London.
- Dickert, T C and Domeny, K R (eds.) (1974) *Environmental impact assessment: guidelines and commentary* University Extension, University of California, Berkeley.
- Dobry, G (1975) *Review of the development control system: final report* Department of the Environment, HMSO, London.
- Greenberg, M R and Hordon, R M (1974) *Environmental Impact Statements, some annoying questions* JAIP, 40 164-175.
- Institute for Operational Research (1976) *The environmental sciences in regional and structure planning: a guide for planners and scientists* IOR, Coventry.
- Land Use Consultants (1976) *Report on EIA to NCB* Opencast Executive LUC, London. (Confidential)
- Lassi re, A (1976) *The environmental evaluation of transport plans* Research Report 8, Department of the Environment, London.
- Local Government Operational Research Unit (1975) *Development plan evaluation and robustness* Research Report 5, Department of the Environment, London.
- Macbeth, A (1975) *The National Environmental Policy Act after five years* Columbia J Env. Law 2 1-39
- Munn, R E (ed.) (1975) *Environmental impact assessment: principles and procedures* SCOPE, Toronto.
- O'Riordan, T and Hey, R (eds.) (1976) *Environmental impact assessment* Saxon House, Farnborough.
- Royal Commission on Environmental Pollution (1976) *Fifth Report* Cmnd. 6371, HMSO, London.
- Stevens Committee (1976) *Planning control over mineral working* Department of the Environment, HMSO, London.

Research Notes

LAND USE MAPPING BY LOCAL AUTHORITIES IN BRITAIN

Ann Molineux, *Experimental Cartography Unit, Natural Environment Research Council*

During 1975 a project was set up between the Department of the Environment (DoE) and the Natural Environment Research Council (NERC) in which NERC's Experimental Cartography Unit (ECU) was to investigate certain aspects of local authority land use data handling. The background to the proposed study was stated by DoE in the following terms.

"Many local authorities are known to experience difficulty in acquiring and storing detailed information about land use, whether in map or statistical form: recording change in land use may often be found particularly difficult. Where information is available in map form, there may also be difficulty in retrieving and using it when required, especially at short notice. At this time of progress in computer data management systems and with local government settling down into its restructured form, it would seem wise to ascertain the current, and if possible the potential, need to make land use data readily accessible within the authority. Additionally, it

would be useful to know whether such data should be handled by conventional means or through automated procedures, and whether the most useful information is cartographic or tabular in nature. There is therefore a case for studying the need for and the operational problems of using land use information by the planning departments of individual local authorities."

It was decided to approach the problem from a sample basis. Fifteen local authorities of wide ranging natures formed this sample. Those included were:—

County Councils:	Cheshire Gwent Hampshire Merseyside Mid Glamorgan Norfolk
Districts:	East Lothian Edinburgh
London Boroughs:	Kensington & Chelsea Lambeth