



RESEARCH ON IMPACT ANALYSIS AND
ENVIRONMENTAL PLANNING

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PROJECT APPRAISAL FOR DEVELOPMENT CONTROL

Work Programme October 1973 - March 1976

In October 1973, the Project Appraisal for Development Control (PADC) research team was commissioned by the Scottish Development Department (SDD) and the Department of the Environment (DOE) to develop a systematic procedure for planners to make a balanced appraisal of the environmental, economic and social impacts of major industrial developments. The research findings were published in 1976 as DOE research report No. 13, entitled "Assessment of Major Industrial Applications- A Manual". The Manual contains an approach that can be used to structure appraisal of the impact of proposals and includes a series of appendices for use in implementing the assessment procedure. The structured approach contained in the Manual has been found to be applicable to the assessment, by local authorities, central government and statutory undertakers, of a wide range of development proposals.

During work on the PADC Manual, United States (US) experience of environmental impact analysis was examined. It was felt to be inappropriate to include a theoretical discussion of US procedures and methods for environmental impact analysis in a practical Manual intended for UK planners. Consequently, a separate research report which includes a detailed critique of impact assessment procedures and methods used in the US was prepared. This report will be published in 1978 as DOE research report No. 30 entitled "US Environmental Impact Assessment: A Critical Review".

Programme of Work April 1976 - March 1979

The research team has been sponsored by the SDD and the DOE to continue its research on impact assessment in planning in the United Kingdom. During this period the existing Steering Committee will be retained. This Committee is composed of members of central

government, local authorities, research organisations and statutory bodies. The work will focus on the following four areas of research;

- (i) planning information sheets on the locational requirements and impacts of selected development types.
- (ii) extending the scope of the Manual to non-industrial developments.
- (iii) testing the Manual.
- (iv) recommended modifications to the Manual.

Planning information sheets on the locational requirements and impacts of selected development types

During preparation of the Manual an attempt was made to obtain information on the locational requirements and major environmental, social and economic impacts of fifty major developments. Initially, it was intended to include information on a limited number of development types in the Manual. This was not possible because of time constraints. However, draft documents were prepared for mineral workings, aggregate workings, nuclear power stations, conventional oil and coal-fired power stations, cement works, oil refineries and gas terminals. These draft documents have been modified subsequently and a revised set of documents has been produced.

Extending the scope of the Manual to non-industrial developments

Although the Manual was designed for major industrial development, it could be adapted for use in the assessment of other development types. Consequently, the suitability of the structured procedure and the assessment techniques in the Manual is being determined for the appraisal of other development types. These include, water related developments, land reclamation schemes and linear developments. Alternatively, the possibility of adapting the Manual for small-scale developments may be examined. An additional aspect of the project is to give guidance on the assessment of the implications

of siting successive associated developments within a particular area. This problem is a characteristic feature of certain development types, particularly the oil refinery and petrochemical industries. The research utilizes both theoretical examples and specific case studies.

Testing the Manual

In early 1977 the Manual was issued to all planning authorities in the UK as an interim guidance document. Arrangements have been made, with a number of local planning authorities, to set up appropriate case studies to test the assessment procedures and techniques in the Manual. The Manual has been tested in two different planning contexts. First, it has been used in the assessment of planning applications for an iron-ore reduction plant and installations for the treatment of North Sea gas. Also, the Manual has been tested in a forward planning exercise. Alternative sites for petrochemical developments in Scotland have been appraised to select the most appropriate site based on technical, socio-economic and environmental criteria.

Recommended modifications to the Manual

During the research programme a series of meetings and seminars for central and local government has been arranged to enable English, Scottish and Welsh local authority planning officers consider problems and difficulties arising from use of the Manual. In light of the experience of users a number of modifications to the Manual have been suggested. It is likely that the case studies to test the Manual will be particularly valuable in indicating further modifications. Both sets of modifications will be useful in revising the Manual.

Output of the Research

There will be two main outputs from the research. First, the proposed modifications to the Manual will be incorporated into a

revised Manual or published separately to augment the existing document. Secondly, a report of research will be prepared. This is likely to contain a discussion of each of the case studies, a synopsis of the comments made by users of the Manual, the planning information sheets and certain of the large number of internal working documents produced during the research.

DEVELOPMENT APPRAISAL AND DEVELOPMENT PLANNING

Work Programme March 1977 - February 1979

In the course of preparing the Manual, the PADC team and its sponsors became aware of the potential for assessment techniques in forward planning as well as in development control. As a result the DOE commissioned a study under the title Development Appraisal and Development Planning (DADP). A Research Fellow was appointed to carry out this two year study beginning in March 1977.

The objective of the DADP study is to explore the application of development appraisal techniques to local authorities' development plan preparation work. Amongst other things it was anticipated that the study might reveal ways in which:

- (i) time and resources could be saved by integration of development plan preparation work with appraisal of developments,
- (ii) appraisal and evaluation methods could be used in the formulation of policies for the environment,
- (iii) alternative sites for major projects could be evaluated.

This work is now in progress and comprises two main streams of activity - desk research and dialogue with local planning authorities. The desk work includes studying the development plan preparation process and its links with the development process. The relationship with other planning systems and decision-making processes is also being considered. The dialogue with local authorities will explore their experiences gained during the preparation of specific structure plans and local plans.

The output from this study will be a report of research including recommendations to the DOE. The recommendations will, if it appears appropriate, include guidelines for use by local planning authorities.

Publications

- Clark, B.D. (1976) Evaluating environmental impacts. In Environmental Impact Assessment (Eds. T. O'Riordan & R. Hey), Saxon House, London pp 91-104.
- Clark, B.D. (1976) Project Appraisal. In Symposium on Environmental Evaluation (Ed. Planning and Transport Advisory Council) Department of the Environment, London, pp 135-146.
- Clark, B.D. Chapman, K. Bisset, R. & Wathern, P. (1976) The Assessment of Major Industrial Applications: A Manual. Research Report No. 13 Department of the Environment, London, pp 170.
- Clark, B.D. Chapman, K. Bisset, R. & Wathern, P. in press. US Environmental Impact Assessment: A Critical Review. Research Report No. 30, Department of the Environment, London.
- Clark, B.D. Chapman, K. Bisset, R. & Wathern, P. in press. Project appraisal for development control. In Proceedings of the First International Conference on Derelict Land Reclamation (Eds. J. Blunden & J. Essex), Open University.
- Clark, B.D. Chapman, K. Bisset, R. & Wathern P. in press. Environmental impact assessment. In Land Use and Landscape Planning, second edition (Ed D. Lovejoy), Leonard Hill Books, Aylesbury.
- Clark, B.D. Chapman, K. Bisset R. Pearce K.W. & Wathern P. Impact Analysis in UK Planning. In Environmental Impact Assessment, Principles and Procedures, second edition (Ed. R.E. Munn). International Council of Scientific Unions Scientific Committee on Problems of the Environment.
- Bisset, R. in press. Environmental impact analysis: a review article. Man NS, 13.
- Bisset, R. in press. Quantification, environmental impact assessment and decision-making in UK planning. Journal of Environmental Management, 8.

Wathern, P. (1976) The role of impact statements in environmental planning in Britain. International Journal of Environmental Studies, 9. 165-168.

DOE RESEARCH REPORT NO 13
THE ASSESSMENT OF MAJOR INDUSTRIAL APPLICATIONS - A MANUAL

1. The Department of the Environment Research Report No 13 has now been published. This Report has been prepared by the Project Appraisal for Development Control Research Team at the University of Aberdeen, Department of Geography, for the Scottish Development Department, Department of the Environment and Welsh Office.

2. Copies are available on sale from the Department at a price of £2.47p including postage (within the UK). Enquiries and orders should be addressed to:

Mr. P. Mayhew,
Room C11/19,
Department of the Environment,
2 Marsham Street,
London SW1P 3EB (Telephone 01-212-3242)

Cheques or postal orders should accompany the order and be made payable to "The Department of the Environment". Regrettably copies of the Report cannot be dispatched in advance of payment.

3. For orders from abroad, the total cost of the Report and airmail postage is:

Zone A (Europe and Middle East)	£3.60
Zone B (USA, Canada, Africa, Hong Kong and Singapore)	£6.12
Zone C (Rest of World)	£6.42

4. Comments on the Report and enquiries as to its use should be sent to Mr. John Hack, Room C11/17, 2 Marsham Street, London SW1P 3EB. The Research Team have been asked to suggest modifications to the Manual in the light of the experience of its use, and any comments will be forwarded to the Project Steering Committee and the Team as a contribution to further work.