

Discussion Session 4

D. J. C. LAMING (Herrington Geoscience) asked Mr Siddle for clarification regarding the current status of the Code of Recommended Practice for landslip potential maps with respect to the appropriate planning conditions for the various degrees of landslip hazard.

H. J. SIDDLE (Sir William Halcrow & Partners) replied that this was not within the terms of reference of the project, but there was an outline of the contents of the Code of Practice in the paper.

H. R. PAYNE (Welsh Office) advised that the 'code' was currently being drafted and is to be tested and refined under 'live' conditions through a project commencing in the near future. He made the additional point that the maps are not 'hazard' maps in the normally accepted definitions. In South Wales both re-activation of ancient slipped masses and first-time landslides seem to be triggered most often by the actions of man, and so no assessment of probability was used in the preparation of the maps. Nor do they show the anticipated areal extent of a threatening process (i.e. the run-out distance of the landslide). The maps are intended to show where a potential exists for landsliding to occur if due care is not taken in carrying out development.

K. STYLES (Geotechnical Control Office, Hong Kong) asked Mr Siddle to comment on the relationship that had developed with his planning colleagues in the development of planning oriented maps. Their experience in Hong Kong was that a close collaboration was required before the results of such work were likely to be of use.

Some of the maps presented by Mr Siddle contained guidance notes for their correct use and application. This is very important because it underscores the very fundamental point, that every map or document is produced for a *purpose* or *specific function*. Yet, often our maps are applied to all sorts of problems or uses for which they were not designed. In some cases, the collector of information may be too close to the data and *fails* to realize that the many relatively simple principles associated with variability of data, map scale, reliability and accuracy are *not* necessarily understood by users. This may even be the case in situations in which users have been involved in project planning.

Considerable effort is required to educate and guide users in the application of information presented in map form. Instead of criticizing users for misinterpreting or otherwise misusing our maps we should be actively engaged in 'selling' our products. One of the ways in which this could be achieved is the provision of an '*after-care*' service. Unfortunately, such is the nature of our work that in many cases this is not practicable. This aspect is often entirely neglected or *overlooked* with predictably adverse results for the profession.

For the guidance of map users, it is strongly recommended that instructive user notes are included on maps and in documents or reports to describe how, and under

what circumstances, the data/information they contain should be applied.

H. J. SIDDLE replied that the long tradition of work his company had in the South Wales region had undoubtedly contributed to the team's knowledge of the stability problems in the area and of those responsible for dealing with them. A feature of the project was the close liaison between the team and planners from the Welsh Office, Mid-Glamorgan County Council and Rhondda Borough Council, which commenced at the proposal stage and continued throughout by meetings of a 'Planning Sub-Group' of the Steering Committee which guided the project.

Too often, engineering geologists engaged in the preparation of this kind of map fail to recognise the difference between an 'engineering geology map' intended for use by the engineering professions and the kind of map required by those engaged in other fields such as land use planning and development control. The end-user should always be uppermost in our minds when often complex data has to be presented in a form in which it can be used. This is particularly the case in the UK where there is often little geological expertise available in District Authorities who are responsible for most development control.

Although full accounts of the methodologies for map preparation are required in report form, the maps themselves should be as self-supporting as possible with the features noted by Mr Styles.

M. J. FLYNN (Mid Glamorgan County Council) commented that one of the most desirable aspects of the project had been the close collaboration between consultants and the planners right from the early stages of project conception, to produce research that could be of practical value within the planning process.

J. HENRY (Lothian Regional Council) stated that in relation to hazard or risk assessment maps, unless there was specific guidance from the Secretary of State, planning permission could not be refused on the basis of instability, even in a high risk area. Perhaps there should be a body designated by the Department of the Environment, to be responsible for commenting on applications to develop in landslip prone areas. Such a body could operate in a similar manner to those involved in the processing of coal applications. Finally, Mr Henry pointed out that DoE Circular 44 (1961) which had been mentioned in connection with subsidence risk in coal mining areas only referred to England and Wales and not Scotland.

M. O'HARA (Plymouth Polytechnic) commented that, in Jamaica, the procedure was for all sub-division applications to be passed from Local Authorities to the Town Planning Division, and then circulated to other relevant central government divisions. The Geological Survey of Jamaica was one of these and had acquired an effective

although not statutory power of veto on such applications. This power would be invoked whenever there was a serious risk of slope failure on a proposed development site.

D. H. WORTH (Manchester University) commented that, in his understanding, the legal liability related to the requirement that a developer had to make himself aware of any problems on his site. The rule of 'let the developer beware' applied and he must satisfy himself on this point.

Dr Worth added that, in connection with development in a coal mining area, County legal staff had argued that there was a British Coal liability under the Coal Mining Subsidence Act 1957 and one could not impose a planning condition which purported to do what other legislation did. They went back to Lord Justice Goddard and his dictum that 'Planning is not a universal longstop' (Ministry of Town and Country Planning 1951).

Morally, he believed, it is correct to protect the public from the consequence of subsidence damage; legally it is not practicable by conditions attached to a planning permission. That has been his understanding since this Circular was issued.

Reference

MINISTRY OF TOWN AND COUNTRY PLANNING. 1951. *Circular 58/51*. HMSO, London.

M. GANDY (Mid-Glamorgan County Council) asked Mr Hobbs to comment on the implications of geological/thematic mapping on planning blight. How much information should be published?

P. HOBBS (British Geological Survey) replied that the maps that had been produced were thematic maps, not hazard maps. Hazard and risk were not terms that they had used, at least in part, because of the legal ramifications implicit in the use of these terms. Such problems tended to be worse in the UK than in many parts of the world because of the intense pressures on land use and the likely reaction of the lay public.

I. STATHAM (Ove Arup and Partners) asked Mr McMillan whether, when they were defining areas of known and suspected workings, was this based solely on mine plans and observations in boreholes or did it include consideration of historical records, particularly those related to mining leases.

A. A. McMILLAN (British Geological Survey) replied that they had used historical records, particularly the abandonment collection held by British Coal and the working plans and documents which sometimes dated back several centuries, also held by British Coal. Further they had found the Scottish Record Office and similar archives useful. In addition, they had used all available borehole data.

I. STATHAM commented that in a study of the north crop

of the South Wales Coalfield in the Ebbw Vale area, where mining had been undertaken from 1780 onwards, their experience had been that, because of the number of mining operations, it was impossible to distinguish known from suspected mined areas. Eventually they had to take the whole of the outcrop as a potential shallow mining problem and this finding was supported by examination of opencast pits in the same area.

A. A. McMILLAN replied that, when outcrops were well known, and memoirs or other information was available, there was scope for subdivision. However, one problem is that any line delineating suspected workings is always likely to exclude some workings that may in fact have been undertaken.

Written contribution

J. C. CRIPPS (University of Sheffield) writes: The thematic maps described by Dr Marker constitute a valuable source of information for land use planning. In view of this, is there any possibility of increasing the coverage to include at least all potential development areas in the UK? The recent curtailment of basic geological mapping must reduce the amount of geological information available, albeit in a form not directly useful to planners.

D. BROOK AND B. R. MARKER reply: Policy for revising basic geological mapping rests with the British Geological Survey but the Survey's future structure and role is currently being considered by the study group of the Advisory Board for the Research Councils chaired by Sir Clifford Butler. The Department and others will consider their future sponsorship of geological research in the light of the conclusions of that group.

The Department of the Environment has limited resources to devote to geological and minerals planning research and these have been deployed to investigate varied geological settings with a broad range of land use planning problems. The results have given guidance on the best ways to undertake such studies and to present results so that they can be easily used by non-geologists. The study areas have been selected in such a way that they include land subject to planning problems, development pressures and derelict land reclamation initiatives, thus maximising the value of the work undertaken. There is little or no prospect that coverage can be extended to include all or even most potential development areas unless other bodies, such as local authorities, who will be the primary users of the thematic maps share in commissioning work. It may still be appropriate for the Department to launch further studies but these must continue to be directed towards areas which aid in developing methods and include planning initiatives which are both urgent and of regional or national significance.

Finally, it must be kept in mind that all proposals or DoE funded research are separately considered for approval by Ministers and compete with other planning projects, including non-geological work, for the scarce funds.