REVIEW OF THE PROVISIONS OF MINERAL PLANNING LEGISLATION: THE PROBLEM OF UPDATING OLD PERMISSIONS

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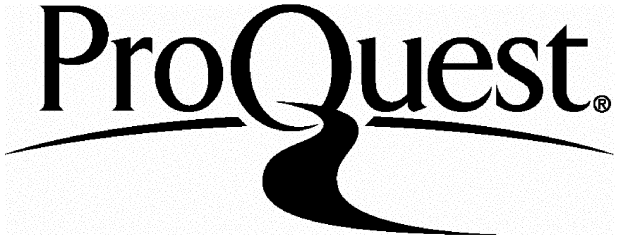

Abstract

This paper examines how to ensure that mineral extraction operates and restores its sites, using the most environmentally compatible methods. The problem is that extraction can take several years or even decades and circumstances alter as sites are worked. Conditions attached to the development's planning permission can become out-of-date, as quarrying methods or planning requirements change. Public attitudes to working can also alter resulting in demands for enhanced controls, for example, over hours of working. This raises questions about the effectiveness of the powers regulating extraction. The study reviews the existing powers to bring sites up to modern standards, the alternative procedures and potential solutions to the issues.

The problems encountered when mineral operations and the controls over them become out-of-date are explored. Some of the reasons why these are environmental concerns are explained, such as the inadequacy of previous conditions and enforcement difficulties. The current mechanism for updating mineral permissions is outlined. It requires mineral authorities to review and update sites at such intervals as they consider fit. However, the powers have not been widely used and there have been demands for changes. The British Government is examining the legislation and has proposed several different approaches. These are explored by reviewing the opinions given by the mineral industry, local planning authorities and other interested groups.

A case study of Bedfordshire discusses the potential impact of revised procedures on a mineral authority. It demonstrates need for a database of sites and permissions and highlights that each site has a unique combination of circumstances. The paper concludes that the Government will have to introduce clear simple procedures with a phased implementation to spread the load for mineral authorities and operators and possibly a revised compensation regime, if the position is to improve.

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Abbreviations

1947 Act or 1947 Planning Act	Town and Country Planning Act 1947
1971 Act	Town and Country Planning Act 1971
1981 Act or 1981 Minerals Act	Town and Country Planning (Minerals) Act 1981
1990 Act	Town Country Planning Act 1990
1991 Act	Planning and Compensation Act 1991
AGLV	Area of Great Landscape Value
AONB	Area of Outstanding Natural Beauty
BACMI	British Aggregates Construction Materials Industries
CBI	Confederation of British Industry
CCA	China Clay Association
COPA	Control of Pollution Act 1974
CPO's Society	County Planning Officers' Society
CPRE	Council for the Protection of Rural England
DoE	Department of Environment
EN	English Nature
GDO	General Development Order 1988
IDO	Interim Development Order
LPA	Local Planning Authority
MAFF	Ministry of Agriculture, Fisheries and Food
MPA	Mineral Planning Authority
MPG	Mineral Planning Guidance Note
NFCI	National Federation of Clay Industries
NRA	National Rivers Authority
PPG	Planning Policy Guidance Note
PSNCI	Prime Site of Nature Conservation Importance
RICS	Royal Institution of Chartered Surveyors
RSNC	Royal Society for Nature Conservation
RSPB	Royal Society for the Protection of Birds
RTPI	Royal Town Planning Institute
S. 77	Section 77
SAGA	Sand and Gravel Association
SERAWP	South East Regional Aggregates Working Party
SERPLAN	London and South East Regional Planning Conference
SSSI	Site of Special Scientific Interest
WO	Welsh Office

1. Introduction

This thesis is intended to review the current legislation covering mineral planning control and the operation of mineral workings, and its capability for ensuring that the workings of today and of the future are operated and restored by the most up-to-date and environmentally compatible methods. The study investigates the problems associated with out-of-date planning permissions, including the difficulties of enforcing poorly phrased conditions and ensuring best practices are used. It examines the present mechanisms available for updating permissions, some of the alternative solutions to the problem and makes suggestions for the future.

Interest in the topic was stimulated by working in the Minerals Section of Bedfordshire County Council and being involved in drafting planning conditions for current applications. Drafting conditions and the reasons for them proved personally how difficult it was to ensure that the wording was accurate, enforceable and reasonable. An inspection of mineral planning permissions issued over the years by the authority and its predecessors showed that some contained conditions that were poor or inadequate by today's standards. These included some from before July 1948, the Interim Development Orders (IDOs), but also examples amongst the more recent permissions.

Then in 1990, the Government announced in its White Paper: "This Common Inheritance" that it intended to address the problems associated with the regular updating of mineral planning permissions. They proceeded to introduce expedited procedures in 1991, to deal with the oldest pre-1947 Planning Act permissions (the IDOs). These were alleged to be the greatest problems and environmental hazards, because they did not appear on the planning register, unlike those issued after 1 July 1948. However, a brief scan in 1990, comparing the IDOs issued in Bedfordshire with the permissions from more recent decades, seemed to suggest that action was also necessary for the latter consents, as some of them were no more 'environmental' than the IDOs. It was possible that they could become a problem of their own, especially if the position evident in Bedfordshire was extrapolated to illustrate the scale of the situation for the whole country. That view was later confirmed when the Government issued in March 1992, its consultation paper on updating permissions.

Updating Mineral Permissions

Normally development is a finite activity, with the development granted permission, being carried out and completed. However, mineral extraction often continues for a number of years as it progresses across the site. During this time the terms and conditions, attached to the original permission, can become out of date if there are changes to mining and quarrying methods or planning requirements. There can also be alterations to the environmental acceptability of working and public perception of the effects of working. This has generated demand for changes to the planning conditions regulating a variety of aspects, such as hours of working, noise, dust and blasting controls, the depth of working and many other issues. The concerns have been addressed, to an extent, through specific legislation and control regulations.

It was a key recommendation of the 1976 Stevens Committee Report on "Planning Control Over Mineral Working" (DoE, 1976) that mineral permissions should be examined and modified, where necessary, to bring them up to date. The Committee also recommended that, because of the special nature of mineral extraction, the industry should accept reasonable additional costs arising from the modernisation of old permissions. Ultimately the Government attempted to balance the need to update the permissions and the extent to which it was right for mineral operators to bear the costs of such improvements. Therefore, the 1981 Minerals Act, (now part of the 1990 Town and Country Planning Act), reflected the view of Parliament in 1981, by providing for a statutory review of sites, for amendment of existing permissions and for abatement of the compensation payable as a consequence of such amendments.

The 1981 Act provided for mineral planning authorities (MPAs) to review mineral sites in their area and to make orders updating inadequate permissions to modern standards. However, because the making of such orders can render the MPA liable for compensation payments, progress on reviews and updating old permissions has not been as fast as the Government hoped. Since the mid 1980s, there has been increasing concern about the lack of progress on the statutory review, the complexity of the powers to update the permissions and the associated compensation and abatement provisions. There has also been a growth in public anxiety about the state of old mineral permissions. Nonetheless, the Government is committed to dealing with old mineral permissions and they are currently investigating how the permissions granted since 1948 should be updated and how to ensure that periodic updating of permissions continues in the future so that the problem does not re-emerge.

In 1991, the Planning and Compensation Act introduced new procedures for dealing with the permissions for the winning and working of minerals or the deposit of mineral waste that were originally granted under Interim Development Orders (IDOs). These permissions were granted between 21 July 1943 and 1 July 1948 and preserved as valid permissions by successive Planning Acts. The procedures made provision for the IDOs to be listed on planning registers for the first time. That addressed the problem of the re-activation of long dormant workings without warning. The re-activation problem partly arises because in some areas the mineral companies have worked the most easily reached reserves and are now under pressure to examine more environmentally sensitive sites. Elsewhere they are re-considering permitted sites within their control that have previously been less attractive propositions. The submission of a scheme of working and restoration is also required by the 1991 regulations and this should tackle the issue that some IDOs are not subject to 'proper' conditions governing operation of the quarry or its restoration.

Having introduced measures to cope with the pre-1948 permissions this still leaves many permissions for extraction, issued since 1948, that also fail to meet today's environmental standards. Some of these permissions are over 40 years old and can involve extensive areas with virtually no restrictions. Another debate arising from the 1991 Act has been that of equity, as some operators claim they have been put at a disadvantage in relation to their competitors, who may be reliant on more recent permissions that are not subject to the same immediate upgrading requirements. The aim of this thesis is to examine whether the current legislation controlling mineral workings is sufficient or whether further new measures are required.

The Reason for Concern

Various concerns have been raised over the state of mineral planning permissions and their conditions. For example, the 1981 Act brought in a requirement for all mineral working permissions to be subject to a time limit condition, requiring development to cease not later than the expiration of 60 years from the date of the permission. However, this still gives ample opportunity for the conditions to get out-of-date, as methods and rates of extraction, plant and environmental concerns, etc. change. Some say that all sites should have formal working programmes to ensure that areas are not worked haphazardly or left unrestored for long period. Many older permissions lack a condition specifying the depth of working and this is now giving rise to questions over the effect of working on underground aquifers. Other issues include controlling the disposal of waste; screening; use of buildings, plant and machinery, the absence of dust and noise controls, hours of working; the effects of blasting;

the safety of water supplies and many aspects of reclamation (e.g. saving of topsoil, planting, fertilising, maintenance and aftercare).

Various reasons have been given for the delay in the Minerals Review process including: other priorities such as the immediate problems of unauthorised activities and breaches of control, a lack of staff resources, the deterrent to authorities of potential compensation payments, the fear that serving an order will result in a site being reopened before the order can take effect and a lack of deadlines creating a tendency to deal with sites 'as and when'. However at this stage it is important to realise that the term "minerals" covers a wide variety of different geological resources; each with their particular characteristics and methods of extraction, time scales and associated problems. Therefore, devising a method of updating permissions that is equitable to all mineral operators is extremely complex.

The Study

This thesis therefore examines the legislation both past and present, considers where environmental concerns have arisen regarding mineral working, and explores whether the current control measures for keeping site operation up-to-date are sufficient. Since it was started the Department of the Environment (DOE) has proposed various options in its 1992 consultation paper:

1. Changing the time limits on permissions;
2. Extending the IDO provisions, (this has the advantage of making the permissions subject to similar requirements to those operating for IDOs);
3. Amending the compensation regime by removing or abating the right to compensation in respect of orders that update operating, restoration or aftercare conditions;
4. A phased review, that would spread the workload for MPAs and operators over a specified number of years.

These options and the possible alternatives that might be feasible and/or practicable, whether formal procedures or voluntary negotiation, are also explored.

A letter survey of a variety of organisations, (mineral operators, MPAs and environmental groups), provides their opinions on: the existence and nature of the problem, the feasibility of the current review powers coping, if not how they can be improved and what, if any, alternatives should be considered. A questionnaire was not used as from previous experience many organisations give responding to them a low priority.

The mineral sites of Bedfordshire are used as a case study to illustrate the problems in relating the formal procedures to specific sites. It demonstrates that problems do exist with conditions and that action is needed. Bedfordshire is used because it is a convenient source of a range of permissions, dates and minerals (sand, gravel, clay, chalk and fuller's earth). It does not have any active hard rock quarries, china clay, coal or peat so the comments from the letters, other survey information and a personal familiarity with hard rock and peat in Somerset and Yorkshire cover those aspects.

The thesis also touches on the issue of local government re-organisation, because, if the counties (which are the mineral planning authorities in the non-metropolitan areas), are abolished by the current review of local government then this could have an impact on the ability of authorities to review and update mineral permissions. The case study and the survey responses are then drawn together to make recommendations for the future.

2. Problems With The Planning Control of Mineral Workings

Minerals are an important national resource and their exploitation makes an essential contribution to the nation's prosperity and quality of life. Many industries depend on the raw materials provided and the minerals also contribute to the balance of payments through exports and substituting for imports from other countries. However, minerals can only be worked where they occur, and their extraction often has a greater impact on the environment than some other forms of development, because of their scale, duration and location. Some effects may be temporary, but others are irreversible, however suitable restoration and aftercare conditions can reduce the impact and secure beneficial after-uses.

Concern over mineral extraction and its restoration occurred before World War II. Even in 1843, a case of Clayton v. Corby maintained no right was recognised to take unlimited quantities of clay, even to feed a brick kiln on the taker's land (Harte, 1985). The 1939 Committee, on the Restoration of Land Affected by Iron Ore Working, was asked to advise on the measures to achieve "future utilisation of the land to the best advantage, whether by restoration or otherwise, and how the necessary expenditure should be met," (Shearer, 1978). War prevented early action on the report, but the Scott Report, on Land Utilisation in Rural Areas, also recommended restoration of land worked for minerals.

After World War II, the Government decided that a balance was essential between the country's need for minerals to enable post-war reconstruction and the need to avoid conflict with other land uses and the protection of amenity. The Town and Country Planning (General Interim Development) Order 1946 had withdrawn previous permitted development rights for surface mineral working. Thus new surface workings needed express grant of permission from the interim development authority.

Mineral Legislation

Comprehensive control of the development of land in England and Wales dates from 1 July 1948 when the Town and Country Planning Act 1947 (the 1947 Act) introduced general planning regulations. Under the 1947 Act mineral permissions granted under Interim Development Orders (IDOs), before 22 July 1943, ceased to be effective on 1 July 1948. However, Section 77 (S.77) of the 1947 Act allowed consents for development granted in respect of applications under IDOs on or after 22 July 1943 to have deemed consent if the

development covered by the IDO had not been carried out before 1 July 1948. These IDO consents for winning and working of minerals are now being updated through procedures introduced by the Planning and Compensation Act 1991 (the 1991 Act) as outlined in Chapter 4.

The current statute is the Town and Country Planning Act 1990 (the 1990 Act) as amended by the Planning and Compensation Act 1991. The 1990 Act consolidated into one document earlier planning legislation including the Town and Country Planning Act 1971; Town and Country Planning (Amendment) Act 1972; Local Government Act 1972; Local Government, Planning and Land Act 1980; Local Government Act 1985 and the Housing and Planning Act 1986. The special features of mineral development had traditionally been acknowledged through separate legislation and regulations such as the Minerals Workings Act 1951, Town and Country Planning (Minerals) Regulations 1971 and the Town and Country Planning (Minerals) Act 1981 and in sections of the General Development Order. However parts of these Acts and regulations are now incorporated into the 1990 Act.

Thus the 1990 Act is the basis for minerals control with the key elements being:

(a) Structure Plans that set the policies and proposals for minerals within a national and regional context and aid co-ordination of mineral working with other strategic planning;

(b) Minerals and Waste Local Plans which develop the structure plan policies and relate them to identifiable areas of land;

(c) Unitary Development Plans in the London Boroughs and the Metropolitan Districts;

(d) The grant or refusal of planning permission for working minerals in any particular area, for erecting associated plant or buildings, for disposing of mineral waste and for other ancillary purposes and the imposition, when planning permission is granted, of conditions and

(e) The enforcement of planning control to prevent unauthorised development and ensure compliance with planning permissions.

Local authorities are also able to enter into agreements for regulating the use or development of land.

Central Government provides the national framework for operating the planning system by formulating national policies and making the regulations and orders accompanying the primary legislation. The Mineral Planning Authority (MPA) is any authority with responsibility for planning control over mineral workings: County Councils, London Borough Councils and Metropolitan District Councils are responsible in their respective

areas; in National Parks the National Park committee exercises development control powers over mineral operations.

Minerals Guidance

To accompany the primary legislation of the 1947 Act a Memorandum on the Control of Mineral Working in England and Wales (the "Green Book") was produced in 1951 as a guide to mineral planning control and to indicate the broad policy directions on planning problems raised by mineral working. A revised edition was published in 1960. Further legislative changes resulted in the Government issuing revised policy guidance in the form of Minerals Planing Guidance Notes (MPGs). To date MPGs have been published covering: general principles and policy considerations including the development plan system; mineral planning applications, permissions and conditions; open-cast coal mining; the review of mineral working sites; minerals and the general development order; aggregate provision in England and Wales; reclamation of mineral working; Interim Development Order Permissions statutory provisions; IDO conditions; the provision of raw material for the cement industry and the control of noise at surface mineral workings.

Planning control is meant to be a positive mechanism to reconcile, as far as possible, the conflicting claims on land by mineral workings, agriculture, amenity, building and other uses. As Mineral Planning Guidance Note 1 (MPG 1) states the following aims are particularly relevant:

(a) To ensure that the needs of society for minerals are satisfied with due regard to the protection of the environment;

(b) To ensure that any environmental damage or loss of amenity caused by mineral operations and ancillary activities is kept to an acceptable level;

(c) To ensure that land taken for mineral operations is reclaimed at the earliest opportunity and is capable of an acceptable use after working has come to an end;

(d) To prevent the unnecessary sterilisation of mineral resources.

Mineral Development

Mineral extraction is included within the definition of development requiring planning permission under S.55(1) of the 1990 Town and Country Planning Act: "the carrying out of building, engineering, mining or other operations in, on and over or under land, or the making of any material change in the use of any buildings or other land". Mining operations

are further defined in S.55(4) to include: "(a) the removal of material of any description - (i) from a mineral working deposit; (ii) from a deposit of pulverised fuel ash or other furnace ash or clinker; or (iii) from a deposit of iron, steel or other metallic slags; and (b) the extraction of minerals from a disused railway embankment".

Section 336(1) amplifies by defining 'mineral working deposit' as "any deposit of material remaining after minerals have been extracted from land or otherwise deriving from the carrying out of operations from the winning and working of minerals in, on or under land". It also defines 'minerals' as including "all minerals and substances in or under land of a kind ordinarily worked for removal by underground or surface working, except that it does not include peat cut for purposes other than sale". Paragraph 12 of Schedule 1 of the 1991 Act amends 'minerals' to "substances of a kind...other than sale" and defines 'the winning and working of minerals' to include "the extraction of minerals from a mineral working deposit".

Obtaining Planning Permission

The general requirements for making applications have changed very little since the 1951 Green Book was issued. Applications for planning permission must be made on a form obtained from the local planning authority and accompanied by a plan sufficient to identify the land concerned and by any other plans, drawings and documentation necessary to describe the development proposed. Various certificates regarding advertisement of the proposal, notification of land owners and agricultural tenant also have to be submitted. Mineral Planning Guidance Note 2 (MPG 2) contains a checklist of information that will probably be essential for a satisfactory appraisal of most mineral working proposals. However, it notes that the detail required by the planning authority will depend on the circumstances of the particular case. Nonetheless applications need to be clear, and describe the full extent of the proposed development.

Applications for outline planning permission cannot be made for the winning and working of minerals, unlike most development. Some ancillary development, at mines or quarries can be carried out, under the provisions of the General Development Order (GDO). However, where a separate application is required for permission to erect buildings, this may be for outline planning permission, subject to subsequent approval on matters of siting, design, external appearance, means of access and landscaping. Approval of these 'reserved matters' must be applied for, including sufficient detail to identify the outline planning permission and showing the proposals clearly on plans and drawings.

A Mineral Planning Authority (MPA) may grant planning permission with or without conditions, although it will be unusual for a mineral permission not to have some planning conditions attached to it. To draft conditions, the MPA must understand the applicant's intended methods and programme of working. MPAs also have to consider the economics of the mineral industry, the topography and geology of the site, the method of excavation and the buildings and equipment to be used. These issues affect whether the programme of working will meet the operator's needs and yet still minimise the effect on the environment, during and after working. Ideally, conditions should have a long-term viability but this requires foresight to anticipate how working and the surrounding environment will develop, whilst still leaving the operator scope to work without unreasonable obstruction or delay.

It is vital for both MPAs and operators that there is no possibility of ambiguity or confusion over the area for which permission is granted. MPG 2 suggests that if the area cannot be easily and accurately defined by the application itself or by reference to road boundaries or Ordnance Survey plot numbers, a plan on an adequate scale should be attached, showing the precise land for which permission is granted, with a suitable endorsement to indicate that it is the plan referred to in the permission. It is the nature or even absence of such a plan that can be one of the problems later on. Some permissions failed to have an adequate plan, with identifiable boundaries, or to indicate areas that are not to be worked; others failed to endorse the permitted plans satisfactorily when several versions had been submitted.

Conditions may only be imposed within the powers available: S.70(1), 72 and Schedule 5 of the Town and Country Planning Act 1990. Section 70(1) empowers a local planning authority (LPA) to qualify a grant of planning permission by conditions and S.72(1)(a) enables it to impose conditions affecting land under the control of the applicant, whether or not that land is included in the application. Such conditions may regulate the development or use of that land or may provide for the carrying out of works on it but only "so far as appears to the LPA to be expedient for the purposes of or in connection with the development authorised by the permission". Section 72(1)(b) enables conditions to be imposed requiring the removal of any buildings or works or the discontinuance of any use of land, for which permission is granted at the end of a specified period and for the reinstatement of the land at the end of that period. Conditions attempt to secure environmental acceptability of mineral extraction proposals during and after extraction. Advice is given in Planning Policy Guidance Note 1 (PPG 1) and DoE/WO Circular 1/85, however, not all planning permissions have acceptable conditions by today's standards. The requirements are that conditions should be necessary, relevant to planning and the development, enforceable, precise and reasonable in all other respects.

As mentioned earlier it is vital that conditions are carefully worded to avoid ambiguity and any possible misinterpretation. A condition is binding on the land, so a mineral operator and those with an interest in the land must know precisely their obligations. Furthermore, a poorly phrased condition will be difficult, if not impossible, to enforce. Where a condition refers to a specific area, this should be clearly defined, preferably with reference to a plan, to avoid later dispute. An MPA may also attach conditions requiring the submission of details for approval later on certain points that were not settled when the main consent was given. However a condition cannot require the further consent of some other person or body; neither should it duplicate the controls under other statutes nor matters covered by common law.

It is illegal for any payment of money or other consideration to be demanded in connection with the grant of permissions or licences from any person except on a clear and distinct authority laid down by statute. A condition requiring an applicant to pay or to deposit money as security for compliance with conditions is *ultra vires*. However voluntary agreements relating to the use of land may be made under the provisions of S.106 of the 1990 Act, S.111 of the Local Government Act 1972 or S.33 of the Local Government (Miscellaneous Provisions) Act 1982.

Planning Conditions for Mineral Permissions

Recently the scale and rate of extraction have increased, and as resources have been used up working has spread into areas not traditionally associated with mining as operators seek to work deposits that may be under high quality agricultural land or in areas of natural beauty, scientific or historic interest. There has been a parallel growth in public concern about the environment that has heightened the potential for conflict between the case for mineral extraction and that for protecting the environment. Mineral conditions cover a range of issues, some of which are common to all consents, others are specific to individual circumstances. The following paragraphs illustrate the range of conditions imposed and some of the problems now encountered with them.

The cost of meeting acceptable environmental standards mostly falls on the mineral industry in line with the 'polluter pays' principle. However, the standards are often set locally by MPAs when planning applications are considered, taking into account the benefits that can be achieved and the costs they impose on industry. Industry therefore wishes to build the cost of meeting standards into its investment projections for a project. The Government envisaged in MPG 1 that raising the standard of existing workings with inadequate reclamation conditions would be a partnership between industry and the MPAs using the Town and

Country Planning (Minerals) Act 1981, (the 1981 Act) and the Town and Country Planning (Compensation for Restrictions on Mineral Working) Regulations 1985. This approach was believed to be an efficient and equitable way of obtaining good environmental standards that were acceptable to the industry and also to the community. Button (1978) considered that a basic problem with the Town and Country Planning Acts, when applied to minerals, was that they were designed for 'ordinary development' therefore problems arose as methods and speed of mineral working changed.

Time Limits

Section 91 of the 1990 Act requires most permissions to be subject to a condition that the development should be begun within 5 years of the date on which the permission is granted or such longer or shorter period as the LPA may consider appropriate. If no such condition is included then the permission is deemed to be granted, subject to a condition that the development must begin within 5 years. There are several problems with this, but an important one is that development can be deemed to have commenced even when only one bucket load of mineral had been removed. This stems from the Town and Country Planning (Minerals) Regulations 1971 that required that if a permission, granted before 1 April 1969 without a time limit, was to remain valid it had to have commenced by 31 March 1979. Therefore some operators merely did enough to keep the permission 'live', then returned to their other operations elsewhere. Consequently the local community possibly has forgotten the existence of the consent until operations recommenced years later.

Schedule 5 of 1990 Act requires all permissions for mineral working to be subject to a time limit condition requiring development to cease not later than 60 years from the date of the permission or such longer or shorter period as the MPA may specify. Permissions existing on 22 February 1982, that were not already time-limited, become time-expired on 22 February 2042. Time limit periods are supposed to be appropriate to the case, but where permission becomes time expired and workable deposits remain, the regulations provide that an application for the permission's renewal should normally be granted unless there has been a material change of planing circumstances since the expiring permission was granted. Nonetheless this still leaves scope for consents with time limits of 22 February 2042 to legally remain unworked until 21 February 2042. Therefore it is possible for conditions, unless reviewed, to become extremely out-of-date as methods and rates of extraction, the plant and machinery used and environmental awareness and concerns change.

There is, generally, no obligation upon an operator to notify the MPA that work is to be re-started. For example, one site in Bedfordshire was partly worked in the 1960s and then abandoned for nearly twenty years. It was then re-opened by a different company in 1988 and the MPAs attention was only drawn to it because mud was being deposited on the road and the operators were using a different access to that permitted in 1960. This site demonstrates not only the re-activation issue but also difficulties with access (solved by surfacing the entrance and installing a wheel-wash) and the working problem.

Access and Protection of the Public Highway

Where the transport of minerals causes a substantial increase in traffic or creates road safety problems, conditions may be necessary to restrict traffic to a particular access. The access may be in a satisfactory location but may not be suitable for the type of transport to be used, therefore conditions may require vision splays or improved surfacing and this should be settled in consultation with the highway authority or the Department of Transport, where appropriate. The Highways Act 1980 and other statutes can control some aspects: Section 59 of the Highways Act provides for "the recovery of any extra expenses that have been or will be incurred by the highway authority on maintenance due to excessive weight or extra traffic".

Highway authorities can also make traffic orders to prevent the use of certain roads by unsuitable traffic but a difficulty with this is that such orders apply to all traffic in the class irrespective of its origin or destination, so it may be impracticable to distinguish vehicles visiting a particular site. It also makes no allowance for the cumulative effects over time of several permissions, including those for development other than mineral extraction. Operators sometimes offer to restrict their lorries to particular routes, however it is rare that all lorries using the site are in the control of the operator and in law a planning condition cannot control the right of passage over public highways. Nevertheless a condition may require the posting of a notice requesting the use or avoidance of a particular route, but this can also be achieved through negotiation with the operator, as at one site in Bedfordshire (see Appendix 1, p. 106).

Mud deposited on roads by quarry traffic may be dealt with under S.148 and 149 of the Highways Act 1980 but, unless the roads in the immediate vicinity of the site can be seen to be consistently dirty, identification of the source of the mud can be difficult. Prevention is preferable but not all consents include a condition requiring the installation and use of wheel and possibly even body-washing equipment near the exit or the provision of surfaced access

roads. The following example illustrates the importance of phrasing of a condition, for it requires the provision of the equipment but does not direct its use: "Provision shall be made for the cleansing of the wheels and bodies entering the highway, and details of such arrangements shall be agree in writing with the County Planning Authority prior to the commencement of operations". This example is from a 1990 permission for an extension to a sand quarry, so illustrating that slack wording is not solely a problem of the 1950s and 1960s. However there is no pattern of problems as another 1990 permission states "wheel cleaning facilities shall be provided within 2 months of the date of this permission ... and the facilities shall thereafter be used by all lorries visiting the site". In the event it was agreed that no enforcement action would be taken over the first example, because the site also had a long, surfaced access road, but elsewhere problems do occur where old permissions omitted any reference to wheel cleaning.

Working Programmes

One of the most important elements of a mineral permission is the working programme, as it can control several aspects of environmental concern: hours of working, direction and progress, depth, production limits and topsoil preservation.

It is possible to impose a condition establishing when operation should be carried out at the site. This may address the concerns of nearby residents regards plant and traffic noise by restricting night time or weekend working. However, at one site where a 1978 consent restricted working by saying "no such operations shall be carried out on Bank Holidays or Sundays", there were in complaints when working occurred on the Royal Wedding Day in 1981. However as that was a Public Holiday, therefore working was not prevented by the wording used. Another difficulty relates to the inclusions or exclusions within a condition, for example: "mineral extraction and earth moving operations shall only take place between the following times ....". This omits any restriction on loading and movement of lorries, so may create the problem experienced at one site, where lorries legitimately start moving before the hours specified for mineral extraction. More frequently tighter control is obtained through the phrasing: "No operations authorised or required in connection ... shall take place outside the hours of ..."

The use of a pre-arranged working programme may reduce disturbance where a large area is to be worked over a number of years. This may divide the area into units to be worked and reclaimed in succession and should ensure that extensive areas are not left unreclaimed for lengthy periods. It may simply involve specifying the direction of working but even this can

be upset by unpredictable working difficulties, changes in the nature of the deposit or fluctuations in demand, that can affect the speed or method of working. Yet the units must be sensible sizes to prevent haphazard working unlike, for example, a consent granted on appeal in 1975 that required: "The maximum extent of the site which at any one time may be stripped of topsoil and overburden, under excavation and excavated but not restored in accordance with condition x, shall not exceed 3 acres". This was later agreed by both the operator and the MPA to be impossible and impracticable, because it meant the working area was too small for extraction to occur, therefore enforcement action was not taken. To avoid this some permissions use a condition specifying a general scheme but also requiring the submission and approval of detailed phases or progressive reclamation at particular times. This is helpful especially in hard rock quarries where techniques and other factors may change over the years.

The absence of a condition limiting the depth of an excavation is giving concern in several regions, especially in relation to the possible effects on the aquifer of working below the watertable. Examples of this concern and the associated debates can be found in the limestone areas of the Mendips, in sand areas of the Greensand Ridge and the chalk of the Chilterns. However aquifer protection is not the only justification for controlling the depth of working, other issues include landscape impact, restoration and after-use and avoiding the need for importing filling materials. Counter-arguments suggest that this may result in a waste of mineral if the resource can not be fully exploited and this may increase the lateral impact on the area.

Limiting production is difficult because market fluctuations and other variables require that the MPA must not cause the operator problems in remaining viable, but the environmental impact of increases in traffic remains. Furthermore, it is not possible to impose a condition after the initial grant of permission without incurring compensation. Nonetheless there remains the issue that the production levels envisaged when permissions were granted in the 1950s and 1960s were not as high as those possible now or in the future. This is illustrated by the aggregate demand forecasts of the Waters Committee for 1946-76 compared with those of the Verney Committee, (DOE, 1975), and those of today.

Planning conditions are normally needed to supplement the working programme and aid future restoration by requiring separate stripping, storage (where necessary) and re-spreading of topsoil, subsoil or any other soil making materials. Not all consents include this condition and such a can make restoration difficult, one merely required: "Topsoil and all subsoil, other than clay, shall be removed from the site and as working proceeds, spread over Enclosure 260 from the eastern boundary of the site towards the River Great Ouse at depth not

exceeding 2 ft. The material shall be spread evenly, harrowed over and sown with grass seeds."

Environmental Protection

Control of dust, smoke and fumes

Applications for mineral working near residential or other development or in attractive countryside have to consider the effects on local amenity of dust, smoke and fumes from the associated processing operations and the handling of materials. There are other statutory controls that cover some aspects, for example, the Health and Safety at Work Act 1974 provides that at prescribed premises the best practicable means must be used to prevent emissions into the atmosphere of noxious or offensive substances and for rendering harmless and inoffensive any substances that may be emitted. Other statutes include the Clean Air Acts of 1956 and 1968, the Public Health Act 1936 and Regulation 100 of the Road Vehicles (Construction and Use) Regulations 1986. The latter provides for the securing of loads so that neither damage nor nuisance is caused by reason of all or part of a load being blown from the vehicle. This means it should be unnecessary to include a condition for the sheeting of loads to prevent dust blowing from vehicles. Nonetheless it is sometimes still necessary to control dust by requiring wheel washing facilities and the use of bowsers on haul roads.

Noise

Some mineral working processes create noise problems so this is a major consideration when working is proposed close to houses or other noise-sensitive premises. Ways of reducing disturbance include siting plant after examining the prevailing wind direction and existing screens. Although guidance is given on the criteria there are two problems for MPAs: firstly most do not have staff with expertise in noise assessment so have difficulty checking the applicant's figures; secondly understanding of noise is continuously changing, for example whether soft or hard barriers are more useful for acoustic screening. This creates problems for MPAs in setting conditions but they can still use restrictions on general hours of working and operation of plant; require directional bleepers, silencers or quieter machinery and rubber lining of appropriate sections of plant.

Setting standards is made more complex because noise perception matches a logarithmic rather than an arithmetic scale, and monitoring is affected by local weather conditions, other

noise sources, etc. There is also the problem of whether the complaints are the result of a genuine noise problem or merely the result of a change, for example commencing topsoil stripping. Dr A. Walker et al (1991) observed that it is noticeable that there are more objections on grounds of noise for new workings than for extensions to existing sites. Recently MPAs have been given more guidance on the control of noise through the issuing of MPG 11.

Disposal of Waste

Most workings produce some waste and conditions controlling the disposal of such waste should always be included to prevent disfigurement of the countryside, sterilisation of unworked deposits and interference with water supplies or important ecological habitats. Waste can be used positively to raise levels for a more suitable after-use but if this is not possible a suitable site nearby should be used with an appropriate tipping profile and proper restoration and after-care. Reworking of mineral waste used to be a problem but is now covered within the S.55(4) definition of mining operations requiring permission. The safety of mineral waste tips is controlled by the Mines and Quarries (Tips) Act 1969 and the supporting Mines and Quarries (Tips) Regulations 1971 and these should be sufficient without conditions.

Any importation of waste will require a site licence under S.55 of the Control of Pollution Act (COPA) 1974. It is granted to the licence holder and does not run with the land but is intended to ensure that landfilling operations entail no unacceptable risk to the environment or to public health, safety and amenity. However, as the licence does not continue after tipping has ceased, it is necessary for the planning conditions to cover aspects of amenity, access, landscaping and eventual restoration until new requirements are introduced to deal with the post-closure situation. Circular 55/76 provides advice that is supposed to ensure that planning and licensing controls are complementary not contradictory.

Some old permissions have few controls on what could be deposited, the associated traffic movements and site construction. This has created problems with leachate and gas migration and with achieving satisfactory progressive restoration. A 1952 Ministerial Decision covering 1800 acres has the condition: "All waste arising from the working or processing of the clay shall be deposited in the workings in such a manner; and the excavated areas shall be further restored by such filling and levelling as may be agreed with the Local Planning Authority, having regard in the latter respect to the availability of suitable filling materials at suitable

times on reasonable terms, or to any representations that such materials are not available, or in the event of disagreement as shall be determined by the Minister".

Tailings, the fine particles from mineral processing, are generally disposed of as a slurry to tailings dams; these have a pollution potential, depending on the mineral involved and the mining processes used. There is also the possibility of seepage, the question of safety and stability, the visual impact and the effect on land drainage. Difficulties occurred at the Glebe Tailings Dam at Eyam in Derbyshire, between the 1940s and 1970s where restoration involved coping with a substrate that was toxic with metals, lacked structure because of the fine particles, was prone to erosion and being thixotrophic, had no landscape features and a failed tree screen (Pillar, 1988).

Blasting

Blasting often causes public concern and it is desirable to impose conditions to regulate when blasting is permitted, to ensure that adequate public warning is given and to set limits that can be measured and monitored for ground vibration and air over pressure. Conditions may also prohibit secondary blasting or specify the alignment of the quarry face. HM Inspectorate of Mines and Quarries is responsible for the safety of all people who might be affected by mining and quarrying and will investigate complaints about quarry blasts.

Complaints usually arise from vibration of buildings, as that reported by N. Reynolds in 1980 near Selby during seismic surveying. It resulted in the serving of a notice under S.58 of COPA on the company involved and the National Coal Board. Secondary blasting, which breaks up large rocks dislodged by primary blasting, is difficult to control and is a potential source of fly-rock. Some older permissions have limited controls, beyond the good practice ones required for safety by the Inspectorate and certainly many do not have monitoring programmes.

Buildings, Fixed Plant and Machinery

Restrictive conditions attached to a planning permission can override the deemed permission granted by the GDO for the erection, alteration or extension of buildings, plant or machinery. It is intended that the freedom given by the Order should only be removed if there are compelling planning reasons to do so. Visual impact is often a justification for restrictions,

particularly in areas of natural beauty, where height and siting may be important. However, suitable screening may also ameliorate the impact.

Another aspect relating to buildings on mineral sites results from the essentially temporary nature of mineral extraction, where authorities do not wish to see any industrial-type activity become excessive or prolonged. Therefore it is customary to impose conditions restricting such plant, machinery and buildings to use in connection with the treatment and processing of material produced from the site. Likewise, it is usual to require that buildings, plant and machinery, when no longer needed in connection with the workings, are removed, either for amenity reasons or as part of the reclamation of the site.

A problem that sometimes occurs concerns whether the GDO rights were removed, not only regarding the erection of buildings, but also over their potential use for processing material produced at other sites. This can not only prolong the life of the site but also affects traffic and noise levels. At one site in Bedfordshire there has been disagreement between the MPA and the operator on whether the importing of mineral, extracted at another site, for processing contravened the 1983 planning permission relating to that site. The issue has been whether such a use of the plant was included in the particulars of the development permitted or alternatively constitutes a material change in the use of the plant and therefore requires a new permission.

Drainage and Pollution Control

Mineral working can affect water supplies, pollution levels and land drainage. The use of water on site may diminish flow in a river; the discharge of effluent, filtering of strata and contamination of water by crossing disturbed ground may pollute rivers or underground supplies. Other drainage problems include the disruption of field drainage systems.

Protection of water courses is the responsibility of the National Rivers Authority, however there is debate about the potential pollution impacts of removal of the filtering strata over groundwater aquifers, of working below the water table and over responsibility for discharges from former mineral workings that have or are being landfilled. Requirements to prevent sediment reaching the watercourses, by the use of settling tanks or silt beds, are reasonable, during the life-span of a working, but problems have occurred following closure of a site and shutting down of the pumps as at Wheal Jane in Cornwall. Many small mines also lack conditions requiring maintenance of the water effluent discharges. Dewatering to avoid 'wet' working can affect the water table over a substantial area, but, it is often difficult to prove

conclusively the source of the impact as being the mineral working. Claims relate to the impact on agricultural holdings, aquifers, wells and trees and also buildings.

Landscaping

Screening can improve the appearance of mineral workings by hiding objectionable features, but not all permissions have conditions to ensure this occurs and furthermore some lack the requirements of today, for the screening to be maintained and any lost plants to be replaced. However, screens remain a useful barrier against noise and dust and so it may be possible to negotiate their use even in the absence of a condition.

Old planting schemes did not always have a commitment to using native species and details for maintenance were sparse. One permission specifies: "Trees shall be planted where and when the local planning authority decides at the applicant's expense". This could potentially cause problems for enforcement regarding what it is reasonable for the authority to require. Another (1971 consent) omits reference to the implementation of a scheme: "Before the commencement of excavation a landscaping scheme shall be submitted to and approved by the Local Planning Authority. This scheme shall exclude the formation of any bank on the eastern boundary and shall allow for free access along the 50 foot beam of the river."

Restoration and Aftercare

The 1981 Act introduced the possibility that MPAs could impose an aftercare condition requiring that restored land is planted, cultivated, fertilised, watered, drained or otherwise treated for a specified period, so as to bring it to the required standard for agriculture, forestry or amenity use. However, problems have occurred with earlier permissions, due to the lack of conditions requiring the proper removal, storage and re-use of soil, or from poorly designed planting and fertiliser and drainage schemes. For example, "...the surface of the unexcavated land within the boundaries of the site shall be levelled and the site left in a tidy condition." The problem with this is there is no requirement to maintain the 'tidy' condition after working and, anyway, what is 'tidy'?

Another 1951 Ministerial Decision illustrates the vagueness of wording used and raises interesting enforcement questions: "The ultimate **** quarry face shall be worked to a finish in a more or less straight line." When is a line more than straight?!

Subsidence and Support

Underground mining risks causing subsidence that may damage in varying degrees land drainage, roads, railways, buildings and other surface features. However, it is difficult to impose conditions to prevent subsidence, without either duplicating the existing common law obligation to maintain support or modifying the rights of the operator to the mineral and resulting in unnecessary sterilisation of mineral reserves. Generally, however, this is less of a problem than it used to be, when the salt workings of Cheshire caused buildings to subside on a large scale. One reason is that companies wish to avoid the compensation claims.

Reasons for Poor Conditions

Various reasons can be suggested for why poor conditions occur and the following sections attempt to explain some of them.

Post-war Reconstruction

Many of the late 1940s and 1950s permissions were over extensive areas, with little regard for environmental protection. The emphasis, as Couzens (1992) said, was 'putting Britain back on its feet' after World War II. Indeed, as Shearer (1978) stated, during the early 1950s most of the planning permissions were given for workings that already existed 1948, or had reserve land that industry expected to work to provide continuity of supply. Exploitation was largely taken for granted and, although conditions were imposed, these were often grossly inadequate by today's standards and it was not until 1960, with and the revision of the 'Green Book', that any advice on the control of environmental problems caused by quarrying was given. Nardecchia (1978) observed that very few of the immediate post-war applications to continue working were refused and the conditions were often rudimentary, requiring little or no landscaping, restoration or aftercare and were even "immaterial, incompetent or irrelevant". Furthermore, it was not until after the 1981 Wildlife and Countryside Act that the importance of nature conservation was considered.

Rebuilding, redevelopment and new development meant the scale of working increased, as illustrated by the number of consents issued in Bedfordshire in 1948/9 (29) compared with 53 in 1951/2 (Table 3, p.79). This meant staff probably had less time to consider the details of each application, so could not examine the full implications and requirements of the development and its control. In addition, originally because minerals formed a small proportion of applications, few LPAs had officers skilled in assessing the features and effects

unique to minerals. Again this meant consents were granted with only rudimentary conditions relating to environmental matters: as demonstrated by the 1952 permission that included the landfilling condition described on page 22; one of only four covering the 1800 acres involved.

Drafting

As mentioned, already not all officers were skilled in assessing mineral applications and hence they were unlikely to be able to include all the minutiae of detail in planning conditions. The 1951 Memorandum on the Control of Mineral Working did give some example conditions, but still key phrases important now to enforcement, were left out, such as requiring the submission of a scheme, its approval by the LPA and its subsequent implementation. Even now, most planning authorities do not have a set of standard conditions to act as a checklist and phrase guide; some also lack an effective monitoring system to chase up reserved matter submission and implementation, or even the time to do it.

The Stevens Committee (1976) considered minerals staff should be full time and involved in continuous monitoring of mineral operations but this still fails to occur. Frost (1983) suggested that poor conditions were not solely the responsibility of the industry, as before the 1981 Act MPAs could place whatever conditions they deemed necessary. Hence he believed some failed to attach appropriate conditions on workings or failed to enforce adequately those that they did impose.

Of course, it is easier to judge with hindsight how the conditions might have been improved, by, for example 'requiring the maintenance of borehole records' to protect the water table; or 'the use of plant and machinery for processing of only material won on the site', so as to prevent importation from other sites and those associated problems. Mineral working is more complex now and there is also greater awareness of the potential environmental impacts of the working and the need for control. For example, the 1951 Memorandum suggests a condition: "Soil removed from the area of excavation shall, after extraction of the mineral, be spread over the floor of the excavated area to a uniform depth". This omits several features crucial to the success of any subsequent restoration and after-use. Firstly the need for careful removal and separate storage of topsoil and subsoil, also the avoidance of damage to the soil structure by compaction and the necessity for a sufficient depth of soil etc.

Another factor is the 'reason' for attaching a condition because if the reason stated does not match that being used by the present MPA it may be difficult to justify enforcement action.

This is not helped when phrases such as "to the satisfaction of the local planning authority" are used in conditions as this is imprecise because it gives scope for an LPA to change what 'satisfies'. Button (1978) considered that a scheme should be required instead to be submitted and approved so that operators had a right of appeal. He also felt that if too many conditions were imposed, it ran the risk that the MPA would not be able to police the consent and possibly increased the potential for arguments and legal battles later. Anon (1980) believed that subjectivity was a problem when assessing visual intrusion as MPAs, operators and the public can have different views on the same development. He thought it was difficult enough when phrases such as "major intrusion" or "detrimental on a large scale" but it can also arise when "to the satisfaction of the LPA" or "to a substantial extent" are used in conditions and DoE guidance.

Other Issues Concerning Permissions

Enforcement problems are not solely associated with old permissions, as all consents encounter problems with having sufficient evidence to proceed, the time and cost of securing court proceedings, etc. However as Lindley (1992) suggested, PPG 18 maintains that although difficulties may occur it is up to MPAs and operators to liaise to ensure contraventions are avoided. Some conditions are unenforceable because of the uncertainty of their wording, but others were affected by the old enforcement regulations, that required notice to be given in respect of non-compliance with 4 years after the non-compliance had come to the knowledge of the LPA. This was most important with restoration, as, if no enforcement occurred, then there may be no power to compel restoration, but the 1991 enforcement changes now extend the period in most cases to 10 years. Reasons for delay vary, but include difficulty in identifying ownership and serving the notice. Local authorities may do the work but from who do they reclaim the costs? Tain (1980) suggested that possible solutions could be to accept the time scale for mineral workings and delete the four year rule or alternatively organise independent financing of restoration. (The new procedures are further explained in Chapter 4.)

Under the Law of Property Act 1925, S.205(1)(ix) ownership of land may be divided horizontally or vertically. Thus ownership of the minerals below ground is often separated from that of the surface, if, for example, on selling land the vendor has reserved the mineral rights. This complicates both enforcement and the review order making procedures, because notices have to be served on the operator and any one else with an interest in the land. This difficulty may be avoided if the operator is willing to apply for a permission amalgamating areas. This was used at Darlton Quarry in Peak Park in 1991, where four quarries were

originally in separate ownership. It also tightened control of the site, as the original consents had no end-dates, output limits, blasting, noise or working hours' restrictions, restoration or aftercare requirements (Anon, 1991).

During the past decade there have been several cases where MPAs attempted to deal with the problem of 'abandonment' of old quarries. The subject is important, because if a permission or use can be said to have been abandoned, then the resumption of that use, is likely to be a material change of use, thereby needing new planning permission. This would give the MPA opportunity to refuse a use that is now considered undesirable or at least to extend control over the use via new conditions. Williams (1990) attempted to give a guide based on the case histories of Pioneer Aggregates v. Secretary of State (1983) at Hartshead Quarry and Durham C.C. v. Secretary of State (1989) at Chilton Quarry, Ferryhill Station, but he acknowledged that each case would raise its own peculiarities that might therefore have to be pursued through the courts.

Harte (1985) mentioned that LPAs were empowered to carry out reclamation work on land that is 'derelict, neglected or unsightly', or which, through collapse of the surface as a result of underground mining other than coal, is likely to become so. However the definition of land eligible for derelict land grant specifically excludes "... the following categories of land: (i) land damaged by development but which is subject to conditions attached to planning or other statutory arrangements providing for after-treatment." Therefore from where will LPAs obtain the funding to do the work?

This chapter has explored some of the problems that arise with the control of existing mineral workings, and the difficulty of enforcing poorly phrased planning conditions. The examples are a random selection of cases from Bedfordshire's files but demonstrate the range of aspects involved in mineral working, and hence, the problems the MPA has with ensuring that site practices are kept up-to-date. However Bedfordshire is a small county and does not have all the minerals that are worked in the United Kingdom, so there are many more issues than those raised in this chapter. It is a national problem to keep mineral workings using good practices, and to ensure that the permissions controlling them up-to-date. The current mechanism for updating permissions is explained in the next chapter.

3. Existing Provisions for Updating Mineral Permissions

Unlike many forms of development, mineral working often continues for a number of years and, during this time it is possible for the terms of the original permission to be overtaken by changes in quarrying methods and planning requirements or by changes in public attitudes to working. During the 1970s the Government tried to stimulate greater use of indigenous mineral resources, however, there was also increased opposition to workings on grounds of amenity, and ecological groups challenged whether increased extraction was necessary (Murdoch, 1992). In response the Stevens' Committee was appointed to: "Examine the operation of the statutory provisions (except the provisions of the Opencast Coal Act 1958) under which planning control is exercisable over mineral exploration, over surface mineral working and installations, over the deposit on the surface of spoil or waste from mineral workings, and over the after-treatment of surface land worked for minerals; to consider whether the provisions require to be amended or supplemented; and to make recommendations".

A key recommendation of the Committee in 1976 was that mineral permissions should be examined periodically and modified, where necessary, to bring them up to date. They also recommended that, because of the special nature of mineral extraction, the mineral industry should accept reasonable additional costs arising from the modernisation of old permissions. The 1981 Act partly implemented the recommendations, by providing for a statutory review of mineral working sites; for the amendment of existing mineral permissions and for the abatement of the compensation payable as a consequence of such amendments.

Nevertheless, it is not always necessary to use the statutory powers to achieve improvements because constructive negotiation between MPAs and operators can help ensure that, as far as possible, existing mineral operations continue to adapt to meet the standards of the day. Such co-operation over time can and does significantly improve the environment.

The Current Powers for Reviewing Mineral Workings

Section 3 of the 1981 Act inserted S.264A into the Town and Country Planning Act 1971 (the 1971 Act) and this was incorporated into S.105 of the 1990 Act but has subsequently been amended by paragraph 7 of Schedule 1 of the 1991 Act. The amended section imposes a duty on MPAs to review the winning and working of minerals and the depositing of mineral waste at such intervals as they consider fit and to make in respect of these sites such orders as

they consider appropriate using S. 97 or S. 102 or paragraphs 1, 3, 5 or 6 of Schedule 9 of the 1990 Act (as amended by the 1991 Act). These orders enable planning authorities to revoke or modify permissions and thus raise environmental standards. MPG 4 stated the review's purpose is to monitor all recently active sites or sites authorised but not yet started to ensure, where practicable, that conditions were consistent with current mineral planning practice. However an MPA's approach will be influenced by the number and situation of sites in their area and the history of exploitation.

Reviews must cover every mining site (including any not covered by a specific planning permission) being used for the winning and working of minerals or the depositing of mineral waste, or has been used at any time during the five years preceding the commencement of the review (or other period preceding that date as may be prescribed); and also every site authorised by a planning permission but where working has not yet begun. Authorities may include other sites if they wish. There is currently no statutory direction regarding the timing, frequency and manner of conducting reviews. Each authority is free to choose in the light of its own particular circumstances. Authorities are merely advised, by MPG 4, to formally fix the date of the start of the review, as the review sites are identified by reference to this date.

A list of sites to be included in the review will be prepared, including their planning status and any problems with them. Priorities for action will be set with sites being tackled possibly according to their geographical area, the mineral extracted or the nature and scale of the planning problems that they create. MPAs have to alert mineral operators and landowners of the review's commencement and purpose but S.105 does not require consultation on the same scale as for planning applications. However it is important to consult the relevant district council (in Shire Counties), and other appropriate bodies such as the National Rivers Authority (NRA), HM Mines and Quarries Inspectorate, MAFF and the highway authority. These consultations may help identify the right solution and the most efficient way of achieving it in a manner acceptable to all parties. The legislation requires MPAs to make orders where appropriate. However, as many authorities have observed, the solution to the problem may not always be a formal order, rather other measures such as voluntary agreements, enforcement procedures or a new planning permission may be more effective. The final decision on what action to take remains with the MPA.

Order Making Powers under the Review Procedure

Revocation and Modification Orders

Under S.45 of the 1971 Act, a planning permission to win and work minerals could be revoked or modified by an MPA if they considered it was expedient to do so. In the 1990 Act this section became S.97 but it was further amended by paragraph 4 of Schedule 1 of the 1991 Act to cover permissions for the winning and working of minerals and those for the depositing of refuse or waste materials. MPAs must still have regard to the development plan and to any other material considerations. Section 8 of the 1981 Act added a provision enabling MPAs to include an aftercare condition in the S.45 order provided that the order also included, or the planning permission already contained, a restoration condition. This was incorporated into paragraph 7 of Schedule 5 of the 1990 Act, but again the 1991 Act amended this in paragraph 14 of Schedule 1 to include the depositing of refuse or waste materials as well as the winning and working of minerals. The MPA can specify such steps as they think necessary to bring the land to the required standard for the use specified - agriculture, forestry or amenity. Guidance on aftercare conditions is given in MPG 7. In the case of mineral workings an order can only be made before any development commences or it only can cover uncompleted parts of the development.

Under S.98 of the 1990 Act, MPAs have to serve notice of a S.97 order on the owners and occupiers of the land affected and on any other person who in their opinion would be affected by the order. The section allows anyone served with a notice to require that their representations are heard by a person appointed by the Secretary of State before the order is confirmed by the Secretary of State. However, S.46 of the 1971 Act provided for an expedited procedure if all those who received notice of the order informed the authority that they did not wish to object to it, (this is now S.99 of the 1990 Act). In such cases the order can take effect without being confirmed by the Secretary of State provided that the authority have: advertised the making of the order; sent a copy of the advertisement to the Secretary of State not more than 3 days after it is published and the Secretary of State has not: directed that the order be submitted to him for confirmation; or received notice that a person affected by the order wishes to object.

However the provisions of S.99 do not apply where the order has been submitted to the Secretary of State for confirmation, where the order revokes or modifies a permission granted or deemed to have been granted by the Secretary of State, or where the order modifies conditions imposed by virtue of S.91 or 92 of the 1990 Act (which relate to time limits on the commencement of development). Where a site is subject to more than one permission MPG 4

advises that a single comprehensive amending order under S.102 of the 1990 Act would usually be more effective than a series of S.97 orders covering individual permissions. It however remains the local authority's choice to decide which option will best achieve their planning objectives for the site.

Discontinuance Orders

Where MPAs considered it "expedient in the interests of the proper planning of their area (including the interests of amenity)", and after considering the development plan and to any other material considerations, they could under S.51 of the 1971 Act make an order requiring any use of land to be discontinued, or they could impose conditions on its continuing use or require buildings or works to be altered or removed. Section 9 of the 1981 Act amended the 1971 Act so that the winning and working of minerals was a use of land for the purposes of S.51. The S.51 order could include requirements for the alteration or removal of plant or machinery and conditions relating to the use of land. If the order imposed restoration conditions or the site is already subject to such conditions, aftercare conditions could also be imposed.

Unlike S.45 orders that could only be used if a planning permission exists, S.51 orders related to the use of land. They could therefore be used where: mining began before the 1947 Act came into effect and no express permission existed; where mining operations began in breach of planning control but enforcement action was not appropriate, or the S.51 order represented the most efficient method of modifying the use (such as by ensuring restoration) of a large site that was subject to more than one permission. In such a case MPG 4 suggested the operator might be prepared to apply for a consolidated permission and such an application would be exempt from the normal fee.

In the 1990 Act S.51 became S.102 but S102(8) stated that S.102(1)-(7) did not apply to the use of land for development consisting of the winning or working of minerals except as provided in Schedule 9 of that Act and that Schedule would provide for land that is or has been so used. However paragraph 6 of Schedule 1 of the 1991 Act extended S.102(8) to include development involving the depositing of refuse or waste materials as well as the winning and working of minerals. Paragraph 15 introduced this change into paragraph 1(1) of Schedule 9 with equivalent alterations to paragraph 1(1)(c) to involve plant or machinery used for the depositing of waste. The same paragraph amended paragraph 2(1) of Schedule 9 of the 1990 Act giving power to impose a restoration condition.

Discontinuance Orders take effect only if, as explained in S.103 of the 1990 Act, they are confirmed by the Secretary of State. The MPA must serve notice on the owners and occupiers of the land and any other person who, in their opinion, will be affected by the order and those people have a right to be heard by a person appointed by the Secretary of State. There is no expedited procedure for unopposed orders but through S.104 there is a facility for the Secretary of State to make S.102 orders.

Prohibition Orders

Section 10 of the 1981 Act introduced S.51A to the 1971 Act enabling MPAs to make orders prohibiting the resumption of mineral working in, on or under land where no such working had been carried out to any substantial extent for a period of at least two years and where, on the evidence available to the authority, it appeared that working was unlikely to resume. The aim of these orders was to establish without doubt that mineral operations had ceased; ensure that working could not resume without a fresh planning permission and ensure the restoration of the land. It was intended to resolve the status of inactive sites, obtain restoration or tidying up of old sites and to be of particular use on sites that were operated under permissions that did not require progressive restoration.

Section 51A orders could also require: the removal or alteration of plant and machinery; the removal or alleviation of any injury to amenity caused by the workings (except where caused by subsidence from under ground workings); compliance with any planning conditions to which the workings are subject and the restoration of the land. Again where a restoration order was imposed by the order or the site was already subject to one, an aftercare condition could also be imposed subject to the requirements of S.30A of the 1971 Act, (now paragraphs 2 - 6 of Schedule 5 of the 1990 Act, as amended by paragraph 14 of Schedule 1 of the 1991 Act).

The S.51A powers were included as paragraph 3 of Schedule 9 of the 1990 Act but were amended by paragraph 15(6) of Schedule 1 of the 1991 Act. Paragraph 15(6) provides that where it appears to the MPA that winning and working of minerals or the deposition of mineral waste has occurred but has now permanently ceased, the MPA may by order prohibit the resumption of that activity or require the alteration or removal of plant or machinery used in the activity or ancillary to it. They may also require steps to remove or alleviate any injury to amenity caused by the activity; compliance with planning conditions and a restoration condition.

Several parts of the legislation are important: whether no working has been carried out 'to any substantial extent' - this will depend on individual cases, the scale of operation and past levels of production. Likewise MPAs have to decide using evidence supplied by the operators or owners on the pattern and programme of their operations including production and market forecasts whether a resumption of working is unlikely. They will need to demonstrate, in the event of an inquiry, that to make the order is reasonable in the light of such issues and other relevant information. As with S.51A, the 1991 Act amendments direct that an MPA may assume the activity has permanently ceased only when no activity has occurred, to any substantial extent, at the site for at least 2 years and it appears on the evidence available to them that resumption of the winning, working or depositing to any substantial extent is unlikely.

Like discontinuance orders, prohibition orders can only take effect if confirmed by the Secretary of State and he can make such modification as he considers expedient. When the prohibition order takes effect, any planning permission to which the order relates ceases. Paragraph 4(8) of Schedule 9 of the 1990 Act allows MPAs to grant further planning permission for winning and working minerals or the depositing mineral waste (as added by Schedule 1, paragraph 15(7) of the 1991 Act), on the site provided they revoke the prohibition order but that revocation also must be done by order. However a permission that is terminated by a prohibition order is not reinstated automatically if the order is revoked; a fresh permission is required.

Suspension Orders

Where an MPA believes an operator intends to resume working in the near future, it would be inappropriate to use an order prohibiting future working; therefore S.51B of the 1971 Act (introduced by S.10 of the 1981 Act) enabled MPAs to make suspension orders in respect of a site where mineral working had taken place but had been temporarily suspended. As Schedule 9 paragraph 5 of the 1990 Act, this was amended by Schedule 1 paragraph 15(8) so that it must appear to the MPA that a resumption of operations "to a substantial extent" is likely. They can assume this when mineral working or depositing has not been carried out to any substantial extent for at least 12 months but it appears to them that a resumption of operations is likely.

The aim of these orders is to address the environmental problems arising at sites where operations have been temporarily suspended, by acting as a holding measure pending a resumption of working or deposition or the making of a prohibition order. Unlike

discontinuance and prohibition orders, these orders cannot attach restoration or aftercare conditions, they can only require steps to protect the environment. These steps may, as specified in Schedule 1 paragraph 15(9), include those measures to preserve the amenities of the area in which the land is situated during the period of the suspension; to protect the area from damage or to prevent any deterioration in the condition of the land during that same period. MPG 4 advised that the requirements could include the removal where practicable of plant or equipment, the disposal of stockpiles and waste heaps and the tidying and maintenance of the site. The order should include a time limit for compliance with any steps required, but because some steps may take longer than others, provision is made in Schedule 9 paragraph 5(5) for an MPA to specify different time limits for different steps.

An MPA is able to take account of changing circumstances after a suspension order has come into force, because it is a temporary order, by making a supplementary suspension order (Schedule 9 paragraph 6 of the 1990 Act). For example, if the resumption of working is postponed due to changing market conditions. The order may direct the operator to make additional or alternative steps to protect the environment. The supplementary order can also direct that the suspension order should cease to have effect where mineral working has resumed sooner than had been anticipated. The suspension and supplementary suspension orders must be confirmed, with or without modification, by the Secretary of State unless the supplementary order is simply to revoke a suspension order or a previous supplementary suspension order.

Section 10 of the 1981 Act also introduced S.51E to the 1971 Act; as Schedule 9 paragraph 9 of the 1990 Act this gives MPAs the duty to review suspension orders and supplementary suspension orders at intervals of not more than 5 years. They must decide whether a prohibition order under Schedule 9 paragraph 3 or a (further) supplementary suspension order should be made. This provision is intended to ensure that a suspension order does not remain in force indefinitely without the MPA considering what other action might be more applicable.

If an operator wishes to re-commence mineral working or mineral waste deposition on land that is subject to an order, they must (under Schedule 9 paragraph 10 as amended by the 1991 Act) notify the MPA of the intended date of re-commencement. The authority should revoke the order if working resumes to a substantial extent. If they do not revoke the order within 2 months of the date of notification, the operator may apply to the Secretary of State for its revocation and either the operator or the MPA may request a hearing prior to the decision being made. The Secretary of State may then, if satisfied that the development has recommenced to a substantial extent, revoke the order.

Choices of Order

An MPA is required to have regard to the development plan and any other material considerations when making an order. The selection will depend on the circumstances of the individual case and the working status of the site. In confirming an order or not the Secretary of State will consider whether it will be effective in promoting the planning objectives for the site. Under S.288 of the 1990 Act, any person aggrieved by an order on the grounds that it is not within the powers of the Act or that a procedural requirement has not been complied with, may appeal to the High Court.

Compensation Following Orders

Under S.33 of the 1971 Act, now S.75 of the 1990 Act, 'any grant of planning permission to develop land shall (except in so far as the permission otherwise provides) enure for the benefit of the land and all persons for the time being interested therein'. Therefore an authority imposing a restriction on an extant permission or use of land by means of an order automatically incurs a liability, now under Part IV of the 1990 Act, to pay full compensation for any loss or damage arising from that order. Mineral development is subject to the same general rule, but because it can last so much longer than other forms of development, the terms of the original permissions are more likely to be overtaken by changing circumstances. The 1981 Act therefore provided for regulations to modify the compensation provisions of the 1971 Act as applied to mineral working. However compensation could only be modified where 'mineral compensation requirements' were satisfied. This still applies and the circumstances in which the requirements are satisfied continue to vary with the type of order. In all other cases MPAs are still liable for full compensation.

The regulations governing compensation and its modification used to be set out in The Town and Country Planning (Compensation for Restrictions on Mineral Working) Regulations 1985, SI No. 698, (the compensation regulations) but the 1990 Act introduced, via S.116, Schedule 11 that specified the powers to modify compensation provisions and the mineral compensation requirements. However the 1991 Act substituted via Schedule 1 paragraph 9, a revised S.116 to the 1990 Act, this directed that Schedule 11 was to be omitted and that the Secretary of State had powers to introduce new regulations. Nevertheless Schedule 1 paragraph 16(2) of the 1991 Act provides that the Schedule 11 regulations will continue to have effect until such time as the new regulations are introduced.

Where the mineral compensation requirements are satisfied they modify the basis of compensation payable under what was S.164 of the 1971 Act, (now S.107 of the 1990 Act) for an order under S.97, and under what was S.170 (now S.115) for orders under Schedule 9 paragraphs 1, 3, 5 or 6 of the 1990 Act. They bring the basis for compensation under S.115 into line with that of S.107 so that compensation is payable in respect of expenditure incurred in carrying out works made abortive by an order and loss or damage directly attributable to the provisions of the order. They also provide for any expenditure on works to remove or alleviate injury to amenity caused by mineral working, or to restore land after extraction of minerals, to be treated as loss or damage qualifying for compensation. However for this to occur the works must have been carried out under a written voluntary agreement entered into since the regulations came into force but before the order takes effect.

Schedule 11 also provides for the compensation that would be payable under S.107 and 115 to be reduced: by a prescribed sum for S.97 or Schedule 9 paragraphs 1, 3, 5 and 6 orders and by a prescribed percentage of currently not more than 10% of the "appropriate sum". This sum represents the annual value of the right to win and work minerals at the site to which the order relates subject to upper and lower limits and a multiplier that the Secretary of State considers appropriate having regard to the period at the expiry of which the minerals in, on or under that site might be expected to be exhausted if the mineral continued to be extracted at the rate that has been assumed for the purpose of calculating the annual value of the right to win and work them. It is subject to a minimum reduction of £3200 and a maximum reduction of £128000. The order making powers apply to development by British Coal but the compensation regulations do not. Revocation or modification orders for development of British Coal's 'specified land' have their compensation assessed in accordance with Part XI of the 1990 Act without abatement.

As with the order making regulations the new S.116 extends the definition of mineral activity to include the deposit of mineral waste for S.97 and paragraphs 1, 3, 5 and 6 of Schedule 9. It states that, with the consent of the Treasury, regulations may provide that where an order is made under those powers Sections 107, 115, 279 and 280 shall have effect subject to any modification as may be prescribed. The regulations may specify the circumstances in which no compensation is payable; the modification of the basis on which any amount to be paid as compensation is to be assessed and for the assessment of any amount on a basis different from that on which it would otherwise have been assessed. However the regulations have to be approved by resolution of both Houses of Parliament. The Secretary of State must also first consult representatives of persons carrying out mining operations, of owners of interests in land containing minerals and also of MPAs.

'Restrictions' are any measures that relate to the period before the expiration of which development consisting of the winning and working of minerals or depositing of waste was to begun; or to the size of the area to be used for the winning and working of minerals or the depositing of waste. They also include any that affect the depth to which operations for winning and working were to extend; or the rate at which the mineral was to be extracted or the period at the expiry of which winning and working of minerals was to cease and any other provision that would restrict the total quantity of minerals to be extracted.

If there is only one claimant for compensation the whole amount of a reduction will be set against that claim, but where there is more than one person with an interest in the land and the minerals affected by the order, each claimant's compensation will be reduced by the same proportion of the whole reduction as his interest in the land and minerals bears to the total value of the land and minerals. Schedule 11 paragraph 13 confirms that any dispute is referred to the Land Tribunal using S.118 of the 1990 Act.

Revocation and Modification Orders

If planning permission is revoked or modified by a S.97 order, a person with an interest in the land or in the minerals in, on or under it, may claim compensation under S.107 of the 1990 Act for expenditure incurred in carrying out work that is rendered abortive by the order or for any other loss or damage directly attributable to the order including any depreciation in the value of the interest of the land. No compensation will be paid for work carried out before the grant of the planning permission that is revoked or modified or for any loss or damage arising from anything done or omitted to be done before the grant of that permission. Mineral compensation requirements are satisfied if the order does not restrict the right to win and work minerals, or deposit refuse or waste materials or modify or replace any such restriction imposed by the planning permission or by another S.97 or Schedule 9 paragraph 1 or 3 order. The permission must have been granted not less than 5 years before the date of the order or alternatively where the planning permission was granted before 22 February 1982 and the order imposes an aftercare condition and no other condition. The MPA must have consulted about the making and terms of the order before it is made, with those with an interest in the land to which the order will relate or in the minerals in, on or under the land and, in a metropolitan council, with the district council in whose area the site is located. Where the mineral compensation requirements are satisfied compensation is abated as prescribed by the regulations. A further S.97 order can only satisfy the mineral compensation requirements if the previous order, S.97 or paragraph 1 or 3 of Schedule 9, was made more than 5 years earlier.

Discontinuance Orders

An order under paragraph 1 of Schedule 9 of the 1990 Act may result in compensation payable under S.115 of the 1990 Act. A person with an interest in the land or in the minerals in, on or under it, may claim compensation for damage suffered in consequence of the order by depreciation of the value of the interest or by being disturbed in his enjoyment of the land or of the minerals. Compensation may also be claimed in respect of any expenses reasonably incurred in carrying out works to comply with the order.

However S.170B of the 1971 Act (now part of Schedule 11 of the 1990 Act) and the compensation regulations provide that, where the mineral compensation requirements are satisfied, the basis for assessing compensation under paragraph 1 of Schedule 9 is the same as S.97 and compensation is payable on the same basis. A discontinuance order satisfies the mineral compensation requirements if it imposes conditions on the continued use of the land for mineral working or waste deposition or requires that any buildings, works or plant or machinery used for the winning and working of minerals or waste deposition be altered or removed. In addition the development must have begun not less than 5 years before the date of the order and must not restrict the amount of minerals that may be won or waste deposited, therefore the abatement provisions do not apply and compensation is assessed in the unmodified form. The MPA must have consulted about the making and terms of the order before it is made with those with an interest in the land to which the order will relate or in the minerals in, on or under the land and, in a metropolitan council, with the district council in whose area the site is located. A further S.97 order can only satisfy the mineral compensation requirements if the previous order, S.97 or paragraph 1 or 3 of Schedule 9 was made more than 5 years earlier.

Prohibition Orders

An order under Schedule 9 paragraph 3, may be liable for compensation payable under S.115 of the 1990 Act with claims on the same basis as discontinuance orders. Where the mineral compensation requirements are satisfied compensation will be assessed and abated, including a provision that the value of any mineral in the site that cannot be extracted because of the order is to be ignored in assessing compensation. Compensation will then be reduced by the prescribed sum of £6400. The compensation requirements are satisfied if the development begun not less than 5 years before the date of the order and the MPA has carried the required consultations. Where the compensation requirements are not met, assessment is by S.115 in its unmodified form and the value of any mineral in the site that cannot be extracted because

of the order will be taken into account. Again the compensation requirements are not satisfied by an order if it is made less than 5 years after a previous order.

Suspension Orders

Compensation is also payable under S.115 of the 1990 Act for orders under paragraph 5 or 6 of Schedule 9. Where the compensation requirements are met the initial amount will be assessed in accordance with S.115 as modified by the regulations and will then be reduced by the prescribed sum of £6400. The mineral compensation requirements are met provided the MPA makes the consultations as required by the regulations of Schedule 11 paragraph 12. Unlike the other orders there is no stipulation of the time period that must elapse before an order is made. Where the requirements are not met the assessment reverts to S.115 in the unmodified form.

Completion Notices

Where development has begun within the period imposed, or deemed to be imposed, by the planning permission and has not been completed within that period, the local planning authority may serve a completion notice under S.94 of the 1990 Act, if in their opinion the development will not be completed within a reasonable time. It will only take effect if confirmed by the Secretary of State. However because mineral operations are generally long-term MPAs may find that prohibition and suspension orders are more useful for control of such operations.

This chapter demonstrates the cumbersome nature of the formal review and order-making procedures, which have been one of the causes for relatively little progress on the minerals review. These reasons and their impact on the review process will be explained in more detail in Chapter 4.

4. Options for Updating Mineral Permissions

During the last decade there has been continual pressure to keep the standard of mineral workings up to date and there have also been complaints about the use of the existing powers to review permissions. However there have been arguments over how best to achieve any changes: some people suggest MPAs should be forced to use the review powers, others say the compensation levels need altering, whilst another group demands a more radical change to the nature and length of mineral permissions. This chapter examines some of the proposals in greater detail and Chapter 5 explains some of the opinions voiced about them.

Problems with the Existing Powers of Review

The provisions of the 1981 Act have not been widely used. The "Survey of land for Mineral Workings in England, 1988" revealed that 15 MPAs had begun their minerals review by 1 April 1988. A subsequent survey conducted by the County Planning Officers' Society indicated that only 35 MPAs had begun their review by December 1989, but 10 of them had not examined any sites at that date and only 5 had assessed all sites. None had progressed to ranking sites and selecting action priorities. The main reasons for delay given in the survey were: lack of staff (including support from other professions such as solicitors), fear of the financial implications of compensation, and the cumbersome nature of the procedures. Even those who had commenced their reviews mentioned similar dilemmas. Another difficulty raised was that many authorities did not, as was supposed by the 1981 Act, have systematic monitoring schemes to identify problems with mineral sites. Suggestions were made for improvements to the powers: simpler procedures; lower compensation payments and the allocation of more resources to the review process.

Therefore progress on reviews and updating old permissions was not as fast as the Government hoped, so in 1990 they announced in the Environment White Paper, their intention to review the operation of the 1981 Act and the compensation arrangements. In 1991 they took action, via the Planning and Compensation Act 1991, to ensure IDOs were entered on planning registers and to require the submission of new schemes of operating and restoration conditions for determination by the Minerals Planning Authority (MPA). The aim of the IDO provisions was to ensure relatively quickly that these permissions could be identified by land searches from the planning register and that they would be subject to proper conditions.

However there were complaints that these requirements placed some operators at a disadvantage compared with their competitors, who might be more reliant on permissions granted more recently, that were not subject to the same upgrading requirements. In addition to the complaints about unfairness, there was separate pressure, on environmental grounds, to improve the post-July 1948 permissions. Awareness of environmental issues had increased and attitudes about the balance between the need for development and the protection of the environment had changed.

In response the Government issued in March 1992, a consultation paper seeking views on ways in which all permissions could be updated and on possible mechanisms for ensuring future periodic updating of mineral permissions. In particular opinions were sought on who should bear the cost of updating permissions, the timing of any changes and the implications for staff resources.

The DoE Options for Updating Old Permissions

The DoE consultation paper offered consultees 4 possible approaches for achieving updating of inadequate permissions and invited comments on possible mechanisms for future periodic upgrading of permissions.

Option 1. - Time Limits on Mineral Permissions

As outlined on page 17 of Chapter 2, Paragraph 1(5) of Schedule 5 of the Town and Country Planning Act 1990 (as amended by the Planning and Compensation Act 1991) provides for every permission for the winning and working of minerals or depositing mineral waste granted or deemed to have been granted before 22 February 1982 to be subject to a condition that the development must cease not later than 22 February 2042. The 60 year period was chosen in the light of the Stevens Committee Report's conclusion that 60 years was sufficient to allow for the amortisation of capital investment; was an appreciable period in terms of the changing attitudes and needs of society; and that the assessed present value of the right to extract mineral beyond the 60 years would be negligible and therefore the limitation should have no appreciable financial consequences at the time when it was imposed.

In Option 1 the DoE asked whether the 60 year period was too long to protect an operator's assets whilst still ensuring that society could receive benefit from rising environmental expectations. They questioned whether permissions should expire sooner than 22 February 2042. Thus after a specified date development would have to cease unless a new planning

permission had been granted. As is currently the case, operators would be able to appeal to the Secretary of State who could allow a longer period. As a suggestion the DoE paper mentioned a time limit of 10 years, but conceded that this would have a severe impact on the economics of sites where operators have invested capital on the basis that the permission would not expire before 2042.

Although this option, as the DoE acknowledge, is relatively simple it would require primary legislation and no action would be required to update operations before the specified period expired. It could also result in a large number of applications having to be determined at the same time as operators seek to have continuity, thereby swamping already stretched minerals staff. The DoE ask whether the approach is practicable and what period of time should be used; and whether a phased implementation would be preferable, for example by providing for different expiry periods according to when the original permission was granted.

Option 2. - Extension of the IDO Provisions

The 1991 IDO procedures required holders of such permissions to apply to the MPA for the permissions to be registered (as originally they did not appear on the planning register). Subsequently they must submit, within 12 months of the validation of the consent, a scheme of operating, restoration and aftercare conditions for determination by the MPA. The MPA cannot refuse to grant an application for determination of conditions, but unlike new planning permissions, any new or upgrading operating, restoration and aftercare conditions imposed do not give rise to compensation. The DoE asks whether a similar approach should be adopted for the post-July 1948 permissions.

Again it would require primary legislation to place a duty on mineral operators to review their permissions within a specified period and submit revised schemes for the approval of the MPA. The DoE state that at least the 1950s and 1960s permissions would then be subject to similar requirements to those applying to IDOs and also that it would reduce the workload for MPAs.

Option 3. - Amend the Compensation Regime

One of the principles of planning legislation is that refusal of planning permission for new development or the imposition of planning conditions on the grant of planning permission does not normally attract payment of compensation. Compensation is however, usually

payable, if an established right to use or develop land is taken away or restricted. The powers of the 1981 Act for abating compensation following orders updating mineral permissions were re-enacted in the 1991 Act. They restrict the circumstances in which abatement can apply and the amount of that abatement. Under S.116 of the 1990 Act (as substituted by the 1991 Act) the Secretary of State can make regulations providing for the circumstances in which compensation is not payable, and to provide a different compensation regime for different cases.

The DoE suggest that new regulations could provide for no compensation to be payable in respect of orders that updated or composed operating, restoration or aftercare conditions; alternatively this could only occur for certain cases. The advantage stated is that it would only involve using secondary legislation but the DoE note the difficulty that there would be no requirement to act over a specified time-scale. In Goodman's opinion (1992), there is no point in amending any legislation unless the compensation issue is addressed. There is also the aspect of what costs it is reasonable to expect operators to bear relative to the age of their original consent, their investments and the value of the asset.

Option 4. - Phased Review

Although the Stevens Committee recommended that MPAs should carry out an initial examination of all existing permission within 5 years and then review cases with deficiencies, the 1981 Act did not specify the period within which these reviews should be completed. Under the 1991 Act amendments, the Secretary of State can prescribe the periods within which MPAs must carry out reviews and the matters to be covered by such reviews. The power cannot be used to restrict the duty to review every site in an area, but can require reviews to occur within a set period. For example the DoE could require MPAs to carry out their review duty within '4 years' and by guidance advise MPAs to concentrate on the earlier permissions (1948 - 1969) in the first two years before moving on to permissions from the 1970s or later. Once these reviews were completed revised regulations could specify a different time-scale for future periodic reviews.

The current review duty also requires MPAs to make orders updating permissions as necessary. Normally, this would result in a liability to pay compensation. However S.116 provides for either:

a) no compensation to be payable for a particular class of case;
b) no compensation to be payable on orders imposing restoration and aftercare conditions; or

c) compensation to be payable only where the orders restrict the amount of mineral that can be worked.

Thus orders imposing environmental and amenity conditions such as noise and dust limits would not be liable for compensation. Again the DoE suggests this could potentially achieve the 'one off' updating of post 1948 permissions, using secondary legislation. The process could be phased to address the earliest permissions first, but they acknowledge that this would only be a progressive levelling of standards and would also have implications for staff resources in MPAs.

Other Points Raised in the DoE Paper

The DoE paper recognised that certain issues have caused considerable concern in recent years. For example the damage to designated SSSI areas due to the exercising of a valid consent, such as through peat extraction, or the possibility of unlimited depths of excavation adversely affecting water resources or the disposal of large quantities of waste from some mineral activities, e.g. china clay. Other problems mentioned include those consents that do not specify the mineral to be worked, as with some for ironstone that are now unlikely to be worked for their original purpose but do not preclude working for other minerals even though the permissions were not designed for that purpose.

Regarding future reviews the DoE ask whether any of the options can be adapted to enable periodic updating or whether conditions that contain an in-built requirement to periodically review working programmes or permitted levels would be preferable. They acknowledge that any proposal will have financial implications for the mineral industry and MPAs, as well as resource implications if specified time periods are used, and costs if the compensation arrangements are changed. In 1992, Mr Bird, of the DoE Minerals Division, stressed the Government's intention to have as far as possible a level playing field.

The consultation period ended on 2 July 1992 and no announcement has as yet been made by the DoE on their preferred option. Nevertheless the 4 options described above are not the only possibilities for achieving better operation of mineral sites, there are other approaches that could help with improvements, even if only in combination with another option.

Alternatives to the DoE Options

Various other proposals have been made over the past few years as ways for updating old permissions in order to secure environmental improvements. They include the use of voluntary agreements such as restoration or other bond schemes; codes of practice; changes to other planning legislation; negotiation and options used elsewhere.

As part of the 1991 procedures for updating IDOs, MPG 9 states that offers to enter into voluntary agreements as part of schemes of working and restoration are valid mechanisms for addressing some issues such as vehicle movements. In 1984, Parry questioned whether such agreements really gave more protection than that available through planning conditions and the enforcement procedures available to all MPAs. Yet the DoE obviously still believe that using such agreements may be a valuable way of ensuring proper planning control. One form of voluntary agreement that is sometimes used is a restoration bond, this aims to ensure that operators do not avoid their responsibilities. Montgomery (1984), stated that his authority felt bonds appeared to eliminate those operators who considered they could make a 'quick buck' and disappear; it also enabled his Council to negotiate reasonable consents with genuine operators. West Glamorgan County Council also uses a condition requiring a bond to be deposited with the Authority for security against failure to restore, landscape and maintain a site (County Planning Officers' Society, 1989). It applies solely to private coal working and excludes British Coal and originated from the abandonment of several private opencast sites by a company which then went into liquidation.

Bonds can also be a means for coping with the post-closure problems of pollution or contamination from waste disposal sites, but under Part II of the Environmental Protection Act 1990 licence holders will not be able to surrender their licence until the Waste Regulation Authority is satisfied that the site no longer poses a pollution or health risk. A 1991 appeal decision confirmed that a condition that required an insurance policy or bond to cover third party liability for 30 years after tipping ceased was valid, therefore it may be possible to apply this to mineral sites. One problem that Lawson (1992), noted was that the insurance industry was increasingly unwilling to underwrite more than limited pollution cover. However Cheal (1984), of the Sand and Gravel Association (SAGA) questioned the need for bonds because he believed they could delay proceedings, were unnecessary for SAGA members as they were required to be part of a Restoration Guarantee Fund and the enforcement powers available to MPAs should be sufficient provided they were used properly.

The 1991 Act introduced new enforcement provisions including:

(i) Planning Contravention Notices - a discretionary power for authorities to obtain information about activities on land where a breach of planning control is suspected. Failure to comply with the notice within 21 days is a summary offence;

(ii) Breach of Condition Notice - also discretionary, the procedure enables planning authorities to take enforcement action against a breach of a planning condition, by serving a notice requiring compliance with the condition. Failure to comply within a time-limit is a summary offence.

(iii) Injunctions - planning authorities may seek an injunction in the High Court or County Court against an actual or threatened breach of planning control.

Other provisions include new ten-year limit for enforcement action against most breaches; improved notice procedures and increased penalties. However some authorities still complain that enforcement court proceedings can be protracted and costly in staff time and anyway the DoE believes MPAs and operators should avoid enforcement action by addressing problems earlier through negotiation following continuous proceedings as advocated by the Stevens Committee. The new powers may help MPAs enforce existing conditions and ensure that permissions are complied with even if they cannot update the working practices.

As reported in Planning 976 (1992) The British Aggregates Construction Materials Industries (BACMI) assert that their recently adopted environmental code signals a 'serious and costly' commitment to improving environmental performance and should lead to substantial improvements they say, without eroding the industry's planning and asset base. Other mineral industries are also developing environmental codes. Negotiation is an alternative to formal proceedings but to ensure later compliance it may still require legal agreements to set out the obligations. However as with the review order and enforcement notice methods it can be time consuming because of the need for legal wording and input from other professions such as solicitors.

A further aspect being pursued by the Government to support the decision for making changes is the commissioning of research into a variety of aspects of mineral planning. For example, the environmental effects of surface mineral working (DoE, 1991) and amenity reclamation of mineral workings (DoE, 1992) are two reports recently published. Other studies being undertaken include the environmental effects of blasting at surface mineral workings and restoration of metalliferous mineral working sites. Studies examining the use of secondary and recycled or reused construction materials instead of primary aggregates have been done. The issue links with updating permission because it suggests a way of making best use of permitted reserves for end-uses where high quality mineral is essential. It

may prolong working in an area, but may also enable an MPA to negotiate or obtain legal agreements to gain environmental improvements.

Therefore, there are several approaches that the DoE could adopt to achieve the updating of mineral permissions, but not all can be or have to used on their own. It appears that a combined approach has some advantages but there are pros and cons with each of the options. Hence it was necessary to obtain the views of those likely to be directly affected by any new legislation such as the mineral industry and MPAs, as well as the view of the environmental and amenity groups. The views of these interested parties will be explained in the next chapter.

5. A Critical Review of the DoE's Options for Updating Permissions

Method

To help decide the most appropriate mechanism for updating mineral planning permissions and operations, (whether DoE option or other alternative), it was necessary to investigate what the opinions were amongst the mineral industry, local authorities and other interested bodies. Therefore letters were sent to the consultees listed in the DoE's option paper asking for their views on the subject or alternatively a copy of their response to the DoE. The letter survey received 50 responses although 12 of these indicated that the organisation had not made comments to the DoE. Several groups made combined responses or referred to those made elsewhere. (A list of the consultees together with a copy of the survey letter is given in Appendix 2, page 107.)

The DoE's own consultation results are not yet available even though the consultation period ended on 2 July 1992. A representative of the DoE said that the information was unlikely to be released until the Review Group and the Government were closer to announcing their recommendations and it is still unclear when this will occur. Eventually copies of the responses will be available for viewing by Parliament and the public in the libraries of both Houses of Parliament and the DoE library. The DoE representative did confirm that they had received over 100 responses and that they covered a wide range of opinion on the methods to use and the implications for operators, central and local government and other people.

Results of the Survey

There were nearly as many different opinions given in the survey as responses received, which probably illustrates the diversity of minerals planning. Thus what will suit an operator with few or many sites; small rather than big sites or short-term rather than long-term permissions will not necessarily suit another operator with different circumstances. Likewise MPAs with few sites can have different opinions to those with many sites or ones with complex problems. There was some consensus within the environmental and amenity groups but still differences occurred over timing, phasing and compensation. Most respondents believed that the main review procedures were sufficient to cope with special methods or plant used to extract different minerals and that no adjustments were necessary to allow for rare minerals.

General Comments

There were strong feelings within the mineral industry about the retrospective nature of the proposals. BACMI considered that there was a clear distinction between legislation that affected all industries such as the Integrated Pollution Control of the Environmental Protection Act, and retrospective changes that had a direct and expensive impact on mineral companies. Such changes are not applied to their competitors and they believed this was unfair and was not leading to a level playing field as promoted by the DoE. Indeed they felt it was an unjustified attack on a single industry that contradicted all past principles. As illustrations they said no supermarket was expected to alter its opening hours without compensation, or other industry provide and plant screening even when public perception subsequently considered the development or traffic generated was environmentally harmful.

SAGA explained that the mineral procedures were already exceptional as normally planning permissions could not be revoked or amended without full compensation. They claimed no other activity, even a chemical or noxious industry, was required to change its operating regime following a retrospective amendment to an earlier planning permission due to changed perceptions. (However residential developments have to meet enhanced buildings regulations when they are introduced so the mineral industry's treatment is not unique.) SAGA asked why minerals were singled out as they thought there should be an equal commitment to for example, contaminated land. Nonetheless they accepted that, where reasonable and practicable, permissions should be reviewed and where necessary updated to meet modern standards. The British Cement Association also accepted the need to improve standards in the light of increased public awareness and expectancy, but said that it was not appropriate to apply the highest current standards, to all existing sites at each review, they should only apply to new sites.

In spite of these concerns there was widespread support for the commitment to update permissions, although the CBI was anxious that the 1981 Act and associated compensation arrangements should not be lightly overturned because they were the outcome of much consensus in 1981.

All of the environmental and amenity groups welcomed the action on old permissions and generally they considered that a combination of the approaches would be necessary. Most felt that it was important to distinguish between those sites that really should not exist and which, in their opinion should be revoked without compensation, and those that just needed initial updating and regular review. The RSPB explained that they believed reviews should

start on the premise of whether continuation, extension, resumption or new exploitation was appropriate.

The institutions and statutory advisors opinions' were influenced by their backgrounds. There was support for the use of environmental assessment procedures to justify future extraction, but it was also felt that now was an opportunity to promote more efficient use of the materials and recycling. Reduced time limits and levels of compensation were important especially where the protection of water resources, peat, archaeological and nature conservation sites was involved or where the site was located in an area of natural beauty such as a National Parks or other area of special protection. There was a preference for a combination of options 1 to 3 (time limits, extended IDO procedures and changes to the compensation regime) because option 4 (a phased review) could fail unless MPAs had adequate resources and trained staff.

Generally the industry felt that the onus for a review should be transferred to operators so that they would prepare the operational and restoration schemes as they have more experience in this field. Many doubted whether MPAs could operate any of the procedures unless they had sufficient resources, however SAGA considered that the process should remain with MPAs. Most LPAs felt that they were under-resourced and feared the financial implications of the review procedure, but they nevertheless believed that there was merit in reduced compensation and transferring the onus for action to operators in line with the concept of the "polluter pays". Some of the institutions and statutory advisors felt that review by MPAs was essential, but the RICS considered that operators had more of the necessary knowledge. The Law Society amplified this by saying that if MPAs undertook the review then they would still have to ask operators for information on current and future working methods, rates of extraction and the extent of reserves.

Of the environmental and amenity groups, some were against operators doing the reviews because they believed there would then be a loss of public confidence in the procedures. However there was strong support for MPAs to have the power to require environmental assessments during the review process and for greater public participation. (The Secretary of State can under S.15 of the 1991 Act introduce requirements for environmental assessments to be undertaken for 'different classes of development' prior to applications therefore the RSPB felt this could be extended to include S.105 reviews.) They considered that the principle of applying environmental assessments to a broader range of matters had already been accepted as the BACMI environmental practice code requires site appraisals based on environmental assessments.

As the 1981 review powers took 11 years from the Stevens Committee report to reach the statute books, most of the industry was concerned that if new procedures were introduced then sufficient parliamentary time should be found to ensure the new procedures were rationally designed and then thoroughly implemented, otherwise they could see the problem arising again. This belief was also strong amongst the environmental and amenity groups. They considered that it was vital to give immediate parliamentary time so that implementation was not delayed. Furthermore local government reorganisation should not be allowed to delay action, rather MPAs should be provided with sufficient resources and staff to review all sites within a specified period and with a set start-date. MPAs should also have efficient enforcement procedures. Proper definition of terms in the procedures was required: because the criteria for deciding when a site was 'dormant' was different in the 1981 Act (at 5 years since last worked) to that in the 1991 Act (at 2 years since last worked). Likewise the conditions that should be subject to the no compensation ruling should be defined. There was scepticism over the impact on mineral supply because policy over supply is changing and the market is depressed. The RSNC believed that companies should have thought that old permissions could be modified and therefore they should have geared their investment to anticipate it.

Comments on Option 1 - Time Limits

All the mineral organisations were opposed to arbitrary time limits to permissions believing rather that limits should be tailored to the life of the mineral. Their reasoning was that, although 10 years might be viable for the short-term extraction of some SAGA members, others such as hard rock or china clay operators require longer periods of at least 20 years. It did not, they believed, make sense for a consent to expire before all the workable mineral was extracted and it might hinder restoration. However some suggested that alternatively extensions in time could be permitted if the company had not substantially breached its permission. Both the China Clay Association and the National Federation of Clay Industries were anxious that conditions should not make their products uncompetitive in the export market as this was a major part of their businesses. They also felt that uncertainty over renewal of permissions could devalue their investment or even prevent future investment so requested thought on this matter especially as it could affect supply and create a problem of demand for new sites elsewhere.

The environmental and amenity groups considered that ten year limits to permissions would be useful by enabling tight control of mineral workings and allowing re-assessment of all the issues when operators applied for a renewal of the consent. The institutions and statutory

advisors agreed that 60 year consents were too long and that time limits should be tailored to accommodate different types of minerals, but they also felt that there should be a shorter life-span for smaller and dormant sites. At the absolute minimum they believed that the 60 year period should run from the date of the original consent. The Countryside Commission suggested 10-20 years consents, but English Nature saw merit in 10 year consents. English Nature also proposed that the re-opening of dormant sites should be prevented by legislation stating that operators cannot restart without a new permission.

The LPAs believed that 60 years was definitely too long but opinion varied on what shorter time limit should be imposed. The Lake District National Park suggested 15 years 'in line with structure plans' if a 10 year date proved unacceptable; whilst the Peak District National Park proposed genuinely dormant sites should be given only 6 months, as after all they said, some had already had the benefit of the consent for nearly 40 years and it would remove the compensation liability together with the problem of restarts when prohibition orders were mentioned. Others believed the limit should be phased with different expiry times for different minerals and for active relative to dormant sites to spread the load. For example, 10 years could apply to an active hard rock quarry and 5 years for a smaller or dormant site. However it was recognised that not only would this delay short-term improvements but would also have potentially severe staffing implications as the time limit approached.

Comments on Option 2 - Extension of the IDO Provisions

Most mineral groups were opposed to the IDO mechanism because that had been justified as tackling a particular problem, registration; and because it involved no compensation payment, was unfair. The CBI pointed out that George Young, when introducing the IDO procedures in 1991, had emphasised that conditions that significantly affect the asset value would be better dealt with under the 1981 Act review powers. This was then reiterated in MPG 9. Operators therefore felt that the absence of compensation and an appeal facility through an extension of the IDO procedures would be untenable. However they did believe that it would be helpful to delay implementation of any new approach until the lessons from the IDO procedures were clear.

Some environmental and amenity groups opposed extending the IDO procedures because their original purpose was registration and it would also take time enact the necessary legislation. Amongst the institutions and statutory advisors, some considered that experience from operating the IDO procedures would be important as a guide to setting timetables for working and restoration and that there was therefore some logic in extending these procedures. Option 2 was popular with LPAs because it was seen as providing consistency

and continuity with the expertise to be gained from the main IDO procedures and the compensation standards associated with it, but again it would need phased implementation. The Peak District National Park suggested that MPG 10 had already set the precedent by requiring all cement quarries to be covered by schemes within 2 years, but they agreed that clearer guidance and definition of terms were required.

Comments on Option 3 - New Compensation Regime

The industry was unanimous that full compensation should be retained for any restrictions affecting the asset value or economic structure of the operation. Although most agreed that the abatement compensation procedures should be simplified, with the industry bearing a larger but fair proportion of the 'sensory' improvements; provided that restrictions on area, depth, period and rate of extraction and hours of working were excluded. However the Peat Producers Association considered that any proposal to have no compensation in respect of orders imposing or updating operating, restoration or aftercare conditions was totally unjust, especially if applied to existing consents that were being worked.

Many environmental and amenity groups considered that there should be scope to revoke permissions without compensation. At other times the industry should bear more of the costs, although they should still retain the right to appeal against unreasonable conditions. There was agreement that some MPAs had been inhibited by fears of compensation liability, especially as their budgets were increasingly restricted and they could not make provision for future payments. The feeling amongst the environmental groups was that costs generated by revocation or modifications relating to sites of national or international importance should be borne by a central government fund. The RSPB felt that compensation should be proportional to the losses actually suffered rather than based on the calculation of estimated losses foregone. Yet the CPRE said operators should bear all of the costs because other sectors, they said, did not expect or receive compensation for bringing their operations into line with changing environmental standards. They quoted the words of the planning minister in 1991, "If it is an environmentally responsible industry, already working to those standards, there is no need to compensate it".

Amendments to the compensation regime were proposed by the institutions and statutory advisors to allow abatement of compensation for any conditions relating to operating, restoration and aftercare. This would include scope to restrict depth and lateral extent of workings without punitive compensation. English Nature felt there should be a move away from the notion of potential loss, based on the supposed value of the mineral, and towards

compensating for loss of investment on plant and machinery made in the expectation of a long working life. Sensory conditions were considered to be not eligible for compensation, but there was also a proposition that restrictions on hours of working should be excluded. The RTPI felt the restriction of hours of working was an environmental condition, where it was intended they would protect residents' amenity. Adjustments to the compensation arrangements were also popular with LPAs provided they were linked to another option with simple procedures, otherwise there could be unnecessary delay and the protracted negotiations could still continue. Both the Lake District and Peak District National Parks felt minimal compensation was essential in National Parks in order to ensure priority for environmental improvements.

Comments on Option 4 - Phased Review

Most operators considered that any review should examine whole sites and not individual consents and that the initial review should be phased over 2-5 years as it was unlikely that MPAs or operators would have the resources to examine all sites at one time. Different suggestions were made on the way to phase implementation: BACMI suggested 2 years per decade; the China Clay Association proposed 3 years for permissions from 1 July 1948 to 31 December 1964 and 3 years for 1965 permissions onwards commencing once the IDO procedures had finished in 1994. Meanwhile SAGA proposed sites should be selected by 1994, with the 1950s permissions being reviewed by 1996 and the 1960s permissions by 1998, etc.

The environmental groups believed phased implementation would avoid bunching when operators re-applied for permission and the consequent impact that would have on MPAs; but different timings were suggested. The RSNC proposed implementation should be within 2-3 years, whilst the RSPB put forward a 4-5 year timetable. Some organisations felt that there should be a degree of discretion on how to order which sites should be done first in the review, (that is not necessarily the oldest first). Phasing was usually supported by the institutions and statutory advisors because it would spread the load for both MPAs and the industry. However the RICS disagreed, believing that it would be cheaper and easier to budget for reviews by doing all sites at one time.

Most of the industry believed that spacing further reviews every 10 years was reasonable, but SAGA felt reviews every 15-20 years would be sufficient. The environmental groups considered future reviews at set timings would help allow conditions to keep pace with changes in practice. The CPRE suggested that non-working sites should lapse immediately

and all sites should lapse within 5 years of Royal Assent of the new procedures. They also suggested that there should be a new condition inserted by the review that should specify the content of further review. Amongst the statutory advisors the consensus for time-tabling future reviews was a 10 year period. English Nature proposed a time-scale for phasing the initial reviews that referred back to the enactment of the review procedures in 1986. It suggested that permissions issued from 1948-51 would expire on 19 May 1996 unless a new permission was obtained; likewise those from 1952-53 would expire on 19 May 1997 and those for 1954-55 on the same date in 1998, etc. Meanwhile the LPAs said future reviews should be every 5-10 years.

Other Issues Raised in the DoE Paper

Most mineral organisations requested that full compensation should be retained for sites where SSSIs were designated, their justification was that many SSSIs were designated after the grant of planning permission and there was no right of appeal against the designation. BACMI considered that if it was intended that SSSI designation should overrule planning permissions this could have far-reaching consequences beyond mineral planning. They also pointed out that some SSSIs were actually created by mineral working. Likewise the China Clay Association felt that if 'interests of national importance' now constituted justification for confiscation of assets without compensation then the rules of compensation for compulsory purchase and revocation would have to be altered nationally for all property otherwise it would be contrary to all natural justice for one area to be altered selectively. The British Cement Association felt that negotiation was more effective at preserving the best SSSIs.

Some environmental groups believed that permissions on sites of national or international importance should lapse immediately after the legislation was implemented but others felt these sites should merely be reviewed early in the procedure. All said SSSIs and other sites of national importance should be protected and this should include peat resources, as the government had indicated that commercial peat extraction would be addressed in this review. The statutory advisors considered protection was most vital in national parks, areas of outstanding natural beauty and for SSSIs and again the use of a central fund was put forward. English Nature justified this by saying that the Government had expressed a commitment to the environment protection therefore they should bear some of the burden for making such improvements. The RTPI, on the other hand, believed the codes of practice might be more helpful with the SSSI situation than straight revocation. The LPAs supported provision of resources for MPAs as well as the use of a central fund for coping with the special areas of national parks, SSSIs, etc. They also believed the right to work using non-specific

permissions such as working limestone using a consent originally intended to allow vein mineral extraction should be removed.

Regarding the protection of water resources, the industry considered full compensation should be retained for similar reasons to those given for SSSIs, that is the absence of a right to appeal and the impact on natural justice. Meanwhile the statutory advisors merely proposed that if restrictions related to a government agency such as water resources and the actions of the NRA then they should pay the compensation.

Several groups highlighted the positive role played by voluntary agreements, negotiation and the environmental good practice codes such as that produced by BACMI, the CBI Environmental Charter and the SAGA Restoration Awards and Restoration Guarantee Fund. However the groups believed that environmental codes and other measures should only supplement the procedures and not act instead of them.

Other Opinions on Updating Permissions

CPO's Society Survey

In addition to the main letter survey it was possible to examine a copy of a survey carried out by the County Planning Officers' Society in 1992. This survey of the views of MPAs on the review process was made just after the option paper was issued. The results revealed that, amongst those who responded, there was a strong conviction that reviews under the 1981 Act powers had been delayed by lack of staff resources and by anxiety over the compensation implications. However other aspects had also contributed to hinder progress: in particular other priorities, such as mineral development control and local plan work; the absence of a deadline for implementation and the complexity of the procedures.

There was greater diversity of view concerning the future operation of the system, although generally it was felt that the compensation and order making procedures needed simplifying and the compensation levels reducing. Better guidance and definition of terms were requested. There was no consensus on either time limits for permissions or on the timing and phasing of future reviews. Some believed that the IDO mechanism was preferable provided that it was linked to a changed compensation regime. Others considered this omitted scope for future reviews and properly dealing with dormant sites especially if the permission by permission IDO basis was used. Another group felt greater use should be made of alternative procedures such as reinforced codes of practice, BATNEEC (Best Available Techniques Not

Entailing Excessive Cost) and negotiation. Some believed more research was needed to establish the full implications of phasing and compensation changes. There was also a request from some authorities for a delay in proceeding with legislative changes until the results and lessons of the IDO procedures were clear.

Other views

In the literature, Goodman (1992) commented that it did not make sense for MPAs to bear most of the cost of updating old permissions to modern standards. This was not expected for health and safety improvements to sites so why should it apply to measures designed to mitigate the physical impact of operations on nearby residential areas or to ensure proper restoration and aftercare. He considered time limits should relate to the life of the mineral and supported the use of the IDO provisions but with additional standards and criteria. He also believed provision for discretional action outside the normal review schedule should be maintained.

Couzens (1991) considered that the right of individuals and companies to pollute and degrade the environment had already been taken away on several occasions in the last decade, so there was therefore no reason to exclude mineral extraction from this process. He also suggested that as other countries had tighter controls and companies still coped therefore similar changes could occur here. For example, German Federal mining law has altered to ensure that review of licences for operating quarries takes place every 2 years, including making a full environmental assessment.

In summary therefore the consultees to the DoE option paper, those who responded to the CPO's Society survey and the comments made in the literature demonstrate a wide spread of opinion. Sometimes this can be related to the organisation's background and interests, as with SAGA's view on time limits compared with those of BACMI. However there are some additional counter arguments to those put forward so far. Firstly the British Cement Association's proposal that improved standards should only apply to new sites (p.51): this would continue the present situation with some consents being up-to-date and others less so and therefore would make the whole purpose of trying to upgrade permissions pointless. Therefore as a suggestion it appears unacceptable.

Regarding the IDO procedures, the request by some of the statutory advisors that the Government should wait before introducing new procedures until the 1991 IDO schemes have been submitted and their implications clarified, has the risk of further putting off action

on old permissions, (as happened in 1976). Both compensation levels and the phasing of review procedures must be practicable; for example, the CPRE's suggestion on page 57 that a condition should specify the content of further reviews seems impractical when MPAs cannot predict what the future environmental concerns will be. Likewise English Nature's proposed time-scale for the review (p. 57) will delay bringing all sites up to date because it would only reach permissions dating from 1969 by 2005 and there were still poor consents being issued in the 1970s.

Similarly the request for further research, made by some respondents to the CPO's Society survey seems impractical, especially if more surveys of MPAs are proposed, because some authorities did not have the time or staff to respond to the Society's survey. It is therefore unlikely that further surveys would be more revealing. However, the next chapter attempts to analyses the implications of the various approaches, described in chapter 4, on an MPA.

6. Case Study - Bedfordshire

The purpose of this case study is to examine some of the issues of the review process at a local level, and investigate the possible implications to an MPA of the approaches suggested by the DoE and the respondents to the Option Paper as discussed in Chapters 4 and 5. Bedfordshire was chosen as an example of current, though not necessarily best, practice because of the availability of information. It has a variety of minerals, ranging from the widespread aggregate reserves to the relatively rare fuller's earth, so there is scope to illustrate where different problems arise with different minerals. It is acknowledged that as the county lacks hard rock resources the study will not be able to address those issues in depth, but it is believed that Bedfordshire is still a valid illustration of the scale of the problem even though it is the third smallest county in England and Wales.

Introduction to the Geology

The County of Bedfordshire is situated on strata predominantly from the Jurassic and Cretaceous Periods (205 to 60 million years ago). The rocks are of sedimentary origin, laid down in varying depths of water during the fluctuating climatic conditions of those times.

The oldest deposit in the County is the Great Oolite Limestone that is exposed in the north-west in the Upper Ouse Valley. Overlying this bed is the Lower Oxford Clay which is the source of material for the Fletton brick industry. However it only outcrops at the surface in a few places, the largest of which is the Marston Vale, south-west of Bedford. Above the Oxford Clay, the Lower Greensand is the most economically important bed of the Lower Cretaceous. It forms a prominent ridge across the centre of the County and is also an important aquifer. The Greensand in turn dips below the Gault Clay. The Gault forms a vale crossing the south and south-east of the County but is generally of little mineralogical value at present. The clay vale is bounded to the south by the escarpment of the overlying Lower Chalk, which in places is overlain by a further escarpment of the Upper Chalk. The Upper Chalk areas form the higher parts of the Chilterns Ridge. The chalk has for many years supplied the cement and lime industries, but it is also an important aquifer so water quality protection is vital to ensure public water supplies.

Thus the solid geology (Figure 1), comprises a series of beds that dip gently south-east, as shown by the cross-section. The beds have been eroded and covered during several periods of glaciation that also deposited glacial drift deposits over large areas. The drift deposit is

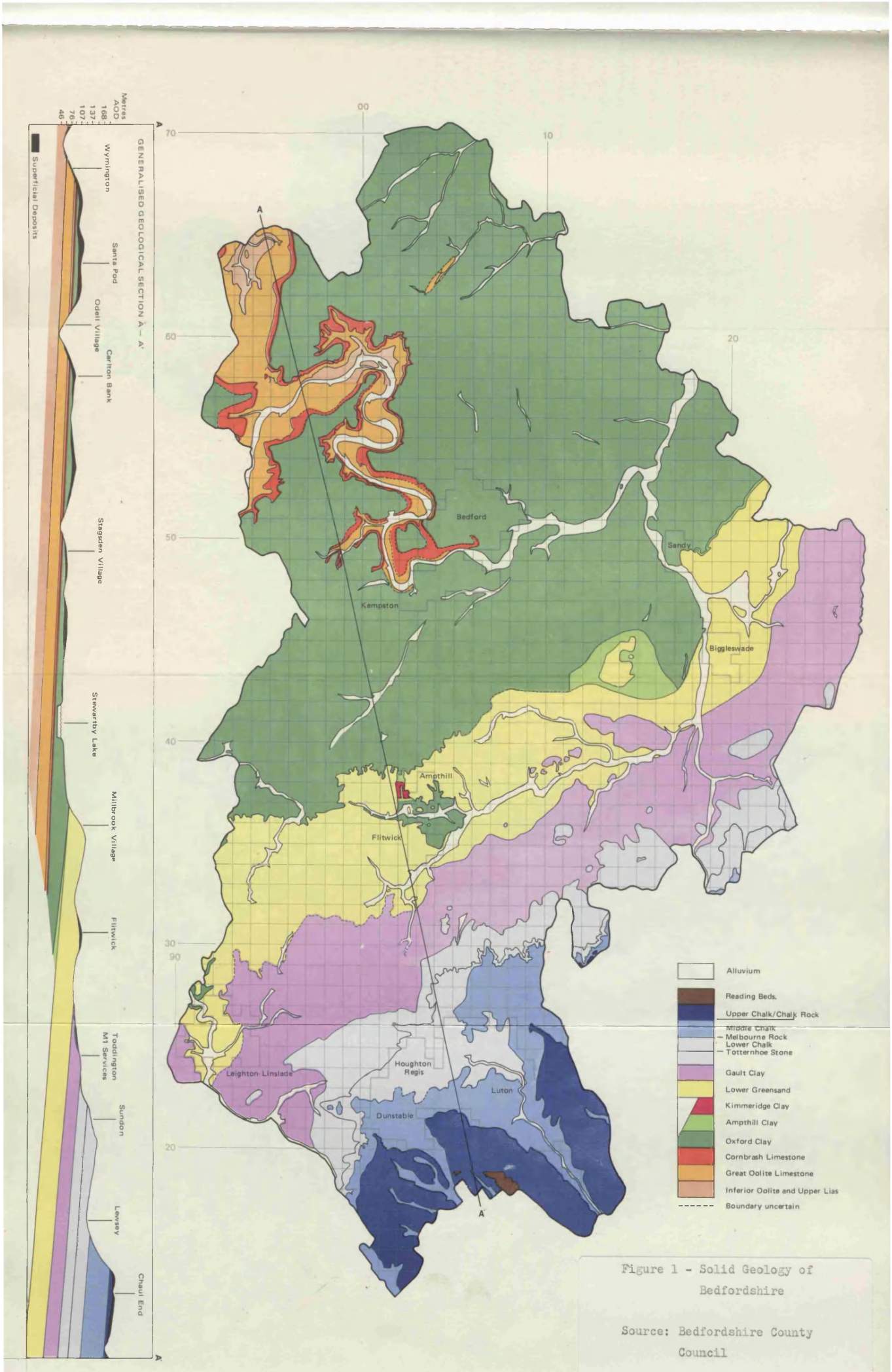


Figure 1 - Solid Geology of Bedfordshire

Source: Bedfordshire County Council

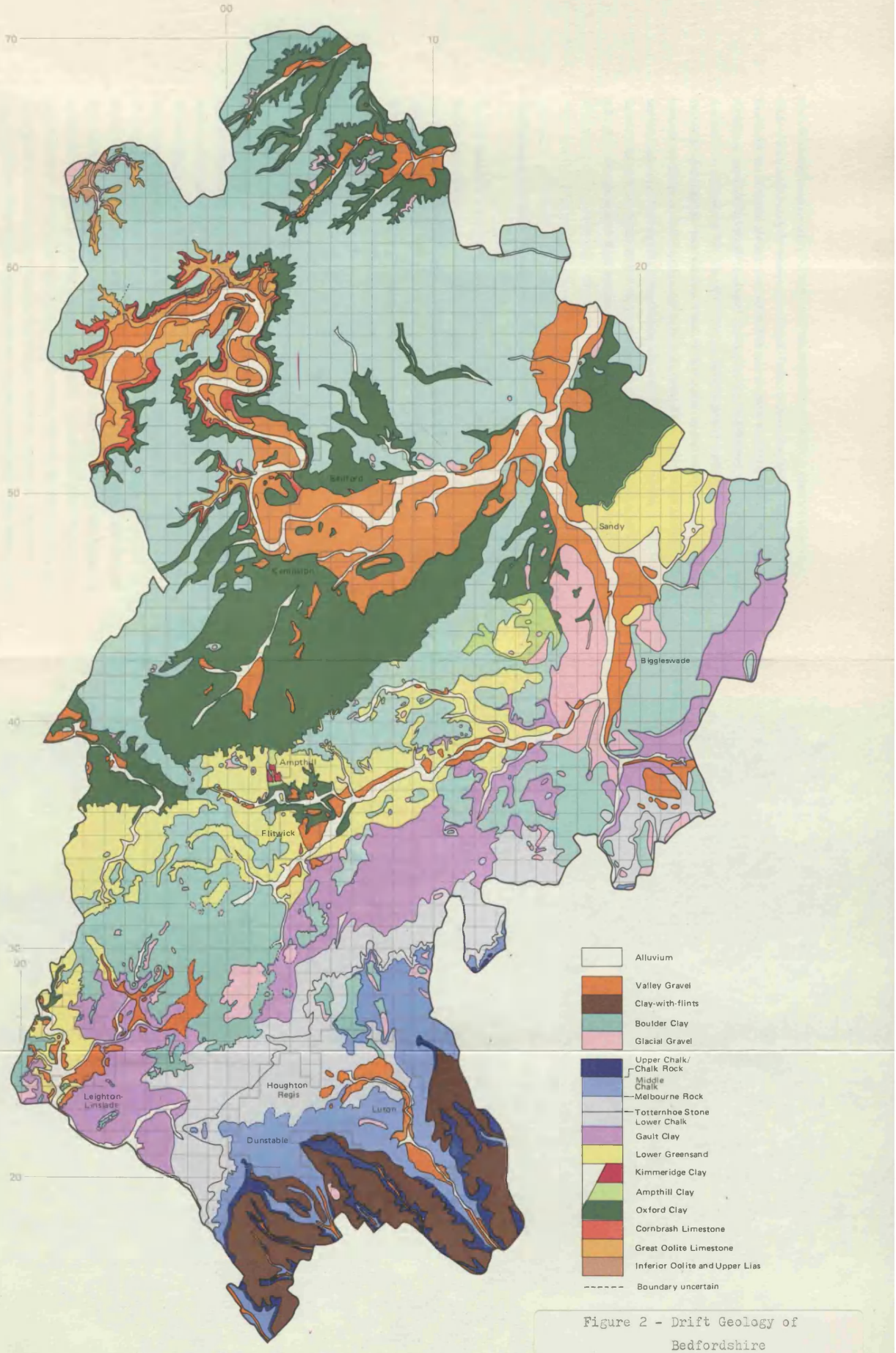


Figure 2 - Drift Geology of Bedfordshire

Source: Bedfordshire County Council

predominantly boulder clay and in parts of the north of the County it covers the Lower Oxford Clay with nearly 24 metres of material. Figure 2 shows the drift geology map for Bedfordshire. However the deposit varies from clay through to gravels and sands, some of which are worth extracting for minerals. During the last 10000 years, the Holocene era, the formation of the river valleys has moved the glacial drift gravels and re-deposited them along the banks of the Rivers Great Ouse and Ivel. Both the river and glacial deposits are very variable in thickness, extent and purity, often being mixed with softer rocks or clay. This makes forecasting their mineral extraction potential difficult; but there is increasing interest in its extraction as is illustrated by the permission for 218 hectares at Broom, given last year subject to the signing of a legal agreement.

Background to Mineral Working in Bedfordshire

As described above the County has a varied geology and a wide range of mineral deposits that are extracted primarily, but not exclusively, for the construction industry. The minerals are extracted today by open quarrying, although in the past chalk was mined on a small scale. Blasting used to be used at some sites but with modern equipment this is no longer necessary, there being no hard rock currently viable for extraction in the County. The following section gives a brief introduction to the production of the various minerals in the County.

Aggregates

In 1990, Bedfordshire produced 2.6 million tonnes of sand and gravel, and by the beginning of 1992 the county had a total permitted reserve of aggregates of approximately 49 million tonnes. That satisfied the 10 year landbank requirement of the Government and the apportionment of 22 million tonnes per annum that was Bedfordshire's contribution to land-won sand and gravel production by the South-east, as agreed by SERPLAN. The main sources of aggregates are the river terrace gravels found in the Ouse and Ivel Valleys and the Greensand Ridge running across from Leighton Buzzard to Potton.

There are currently 5 active sites from which sand and gravel are being extracted. The 218 hectares of glacial gravel at Broom mentioned earlier is awaiting the signing of a legal agreement, prior to the issue of the planning permission. An additional site is due to open near Willington. The rate and standard of restoration have, with one or two exceptions, been fairly good, because most of that restoration has been for water based uses. It has been County policy in the past to resist application for extraction in the Upper Ouse Valley, north-

west of Bedford and on high grade agricultural land however relaxing governmental policy over agricultural land means that areas in the east of the county are being scrutinised by developers.

The Greensand Ridge supplies construction sands (building and concreting sand), that contribute to the aggregate total mentioned above, however it also produces the relatively scarce industrial (or silica) sands. In 1990, Bedfordshire produced 287000 tonnes of industrial sands. There are 13 active pits, with the main concentration being around Leighton Buzzard. Inadequate conditions on old permissions have posed some major problems and, whilst significant progress has been made in revising restoration requirements, there are still a number of sites with less than satisfactory after-use proposals. Virtually the whole of the Greensand Ridge is constrained by either Areas of Great Landscape Value (AGLV), or by high grade agricultural land so the Council has had to be flexible in granting extensions to existing workings in the area.

Oxford Clay

Brick-making flourished in the Marston Vale during the early part of this century. In the 1960s, there were 7 operating brickworks in the Vale controlled by 3 companies. Today there are only 2 works (Stewartby and Kempston Hardwick) operated by the London Brick Company, which is owned by the Hanson Trust. Extraction has been around 1 million tonnes per year and the brickworks have capacity to produce over 300 million bricks per year, but the industry has recently been affected by the recession so many employees have been made redundant. This will extend the life of the clay reserves (approximately 100 million tonnes), that are already adequate until around 2066.

Over 700 hectares have been excavated and there are additionally 600 hectares still to be worked. Two pits are operating and 4 others contain unworked reserves. Four old workings are now landfill sites and two more have been restored by flooding. However there remains a backlog of unrestored workings so the County is discussing a comprehensive package of proposals for the future of the Vale. In 1991, the Marston Vale was announced as the location for one of the Community Forest projects and the area covers 61 square miles. The Vale also forms part of the Bedfordshire Countryside Strategy: part of which aims to secure improvements in the Vale particularly through landscape conservation and enhancement, recreation, nature conservation and timber production. Nevertheless, restoration is not the only issue in the brickfields: other problems include air pollution from the brickworks, and the environmental dilemmas of landfill operations and use of redundant brickworks sites.

Gault Clay

Until recently there was one site extracting gault clay, at Arlesey. It extracted less than 50000 tonnes per year for a local brickworks, however as with the Oxford Clay brickworks, this site was affected by the recession and in 1992 it was mothballed. The permitted reserves are already sufficient for more than 30 years. The worked area is being backfilled with refuse, and at the present rate of extraction, the tip face will catch up with the working face within the next decade.

Chalk

During the 1960s, the chalk area of the south of the County supported 4 major cement works. Today these have all been demolished. Over 300 hectares have been worked for chalk and about a third have been restored to agriculture. Yet there is still a significant amount of chalk "dereliction", with Houghton Regis (46 hectares) and Sundon (61 hectares) being the largest areas. However parts of these sites, even in this "derelict" state have been designated as SSSIs. The only remnants of the industry in Bedfordshire are the Totternhoe Lime and Stone Company, that produces 20000 tonnes of chalk per year for agricultural lime production and the Rugby Cement quarry at Kensworth that produces over 1 million tonnes per year for cement.

The Kensworth site covers 170 hectares in the Chilterns Area of Outstanding Natural Beauty (AONB) and the reserves are in excess of 27 million tonnes. Provided the legal agreement currently being drawn up is signed, the site has planning permission to work deeper with an associated revised restoration scheme. An unusual feature is that the chalk is pumped as a slurry by pipeline to Rugby and Southam in Warwickshire for cement manufacture. This has implications for making any changes to the extraction permission by use of the review powers. Alterations in Bedfordshire could affect supply to the Warwickshire works, likewise applications at either of the cement works could affect demand for chalk from the Kensworth site. The two planning authorities have therefore agreed to consult each other about any proposed changes in their areas that may affect the other authority.

Fuller's Earth

Fuller's Earth is a scarce mineral in Britain due to the special conditions required for its formation, but it has some important uses in pharmaceuticals and engineering. However

opponents to extraction point out that a large proportion of the UK production goes into cat litter manufacture. Nonetheless other industrial applications are still being found and demand continues.

There are two deposits in Bedfordshire: Aspley Guise, where permissions cover over 188 hectares in an AGLV, and Clophill that covers 121 hectares. The Aspley Guise site is being restored back to forestry and restoration has closely followed the excavations. An application to extend the workings was made in 1989; this was refused by the County Council and then subsequently allowed on appeal. The Secretary of State's decision was challenged in the High Court and the challenge was dismissed. The permission involved moving a tree-lined road and extracting the mineral beneath it, and recently the Secretary of State for Transport confirmed the road diversion. National need was considered to out-weigh the environmental value of the area. At Clophill full scale operations commenced in 1987, 35 years after the original permission was granted. The restoration there will include areas of woodland and water.

Other Minerals

The Great Oolite Limestone has been quarried in the past, but it was last worked in the early 1980s. As it is an inferior source of aggregate there is currently no demand for more working. Peat was excavated at Flitwick many years ago and it is unlikely that, with the small area of the deposits that there will be pressure to renew working because modern commercial extraction operates on a much larger scale than that which would be possible at Flitwick.

Minerals Policy Framework

County Structure Plan

The County Structure Plan was approved in 1980 and was followed by Alterations No. 1 in 1986. Alterations No. 2 dealt with the transport and disposal of nuclear waste but it was rejected by the Secretary of State in 1986. In 1992 the Secretary of State approved Alterations No. 3. This is the County Council policy document for the development of Bedfordshire up to 2001 and work has now commenced on the next update of the plan. The over-riding objective of the Structure Plan is to improve the physical environment and quality of life for its residents. The Plan contains broad policies including some covering the extraction,

restoration and after-use of mineral workings. These provide a framework for the detailed policies of the Local Plan. The mineral policies explain the County's approach to avoiding sterilisation of resources and the issues it will examine when considering mineral applications and restoration schemes. Specific policies address the presumption against further permissions for extraction of Oxford Clay in the Marston Vale; sand and gravel extraction in the AGLV; chalk in the AONB and fuller's earth and limestone working in the County. The positions on brick manufacture, extraction of sand and rail-served aggregates are also described. There are other policies relating to the environment, waste disposal, recreation and nature conservation that are also relevant to the consideration of areas of mineral extraction.

Mineral Subject Plans

In 1978 a document entitled "Minerals Appraisal and Issues" was published; this set the background for a Minerals Subject Plan. It was decided to produce a series of plans, one for each of the main minerals quarried in the County. Priority was given to the Oxford Clay Subject Plan and the draft was published in 1984. A fundamental issue was the restoration of the pits and because at that time there was a shortage of fill the Plan adopted a policy of seeking to restore to agriculture at the level of the base of the worked-out pits. However at the same time London Brick submitted restoration schemes in accordance with the revised planning permissions issued in 1980 and 1981. They proposed backfilling with refuse, arguing that low level restoration was not practicable because it would involve pumping the sites in perpetuity. Following a Public Inquiry into the Plan the Inspector concluded that, in the absence of a successful field trial, it was inadvisable for the Plan to require low level restoration. The Inspector's recommendations were reported to the County's Committee but no further progress was made on the Plan. Subsequently changes in the government's agricultural policy reduced pressure for agricultural restoration, and a shortage of waste disposal sites in the London area made backfilling more feasible.

In 1987, the County Council produced a Waste Disposal Local Plan under the provisions of the 1974 Control of Pollution Act setting out policies on the location, working and restoration of landfill sites. This plan is due to be replaced by a new Waste Disposal Plan, to be prepared under the provisions of the Environmental Protection Act 1990, which covers the licensing side of waste disposal.

By 1990 the intention to produce separate plans for each mineral had been abandoned and it was decided to prepare a combined Minerals and Waste Disposal Local Plan. It is now

known as the Minerals and Waste Local Plan because it covers more than waste disposal issues. The plan will address both aspects of mineral planning and those of waste planning. The draft Plan was published for consultation in October 1992 and it is anticipated that the deposit version will be produced in mid to late 1993. The main functions set out for the Plan are:

- To identify the need, amount and location for extraction of each mineral and for the location of waste disposal sites.
- To balance the allocation of these sites with the environmental constraints in the County.
- To ensure sensible and prudent use of the mineral and waste disposal resources in the County.
- To prevent sterilisation of these resources.
- To encourage reduction in use of raw materials and greater recycling of waste products.
- To minimise the effects of extraction and waste disposal on the environment.
- To exploit the full potential of site restoration for public and environmental benefits.

The Local Plan identifies preferred areas where it is likely that operations will be given consent. It contains 47 policies covering a variety of policy and control measures as part of an extraction and landfill strategy. These policies also deal with the environmental priority areas - the Marston Vale and it's Community Forest; the Leighton Buzzard and Heath and Reach areas; and the Ivel Valley. In terms of extraction policies include those controlling the scale of extraction; its future location; the protection of mineral resources and alternative sources and the rationalisation of existing reserves. Regarding environmental considerations the Plan sets out the information that will be required for a planing application and the Council's position on environmental assessment, agriculture, AONBs, AGLVs, wildlife, trees and woodland, archaeology, pollution, water resources and flooding. Transport issues are also addressed (alternative means, access and rail aggregate depots), as is associated development; importation of material; disturbance; buffer zones, borrow pits; restoration and aftercare.

Waste reduction and recycling play a central role in the waste disposal strategy. However there are also detailed policies on phasing of sites; application information; special and prohibited wastes; landfill gas; waste transfer stations; tidy tips and civic amenity sites. There are also explanations of how the policies for minerals and waste will be implemented, monitored and reviewed.

Minerals Planning Control

There are 264 mineral workings recorded in the County, covering over four and a half thousand hectares, many of which are now either restored or naturally regenerated. Table 1 lists these sites and Figure 3 shows the location of the sites. However, as shown by Table 1, not all of the sites have planning permission, some were worked prior to the time when planning permissions were required and others have no records of a permission ever being issued. There are currently 24 sites where minerals are being worked, a further 12 are intermittently worked or temporarily inactive and 4 others have planning permission but have yet to start working.

The Mineral Planning Authority also has responsibility for the planning control of three rail-served aggregate depots at Elstow; Leagrave Road, Luton and Crescent Road, Luton. In addition the authority is responsible for the planning control of waste disposal sites in the county, and indeed it should be noted that Table 1 and Figure 3 do not include those waste disposal sites that are not located in former mineral workings. This is important because these sites add to the workload both for development control and through needing relevant policies in the Local Plan. In 1991-92, 22 landfill sites accepted 4.9 million tonnes of waste, approximately 50% of which was imported from other counties. It has been Council policy over the last decade to concentrate imported waste in the Marston Vale clay pits; this helps with their restoration and the sites are ideal for the disposal of putrescible waste.

The Minerals Section deals with a steady flow of applications for minerals' extraction, waste disposal and associated development. As illustration of the level of activity in the county, Table 2 shows the variety of decisions made between 1990 and 1992.

TABLE 1 - SUMMARY OF MINERAL WORKINGS IN BEDFORDSHIRE

Pit No.	Pit Name and Location	Minerals	Grid Reference	Consent?
1	Wymington (Little)	Sand & Gravel	SP 950649	No
2	Wymington (Big)	Sand & Gravel	SP 951649	Yes
3	Podington	Limestone	SP 946635	No
4	Keysoe	Clay	TL 078630	No
5	Dungee Farm, Harrold	Limestone	SP 939588	No
6	Clay Piece Plantation, Sharnbrook	Clay	SP 985590	No
7	Odell Road, Sharnbrook	Sand & Gravel	SP 988587	No
8	Pinchmill Way, Sharnbrook	Sand & Gravel	SP 996592	No
9	Long Haydons, North-west of Bletsoe	Sand & Gravel	TL 013593	No
10	Vicarage Farm, Felmersham	Sand & Gravel	TL 005588	Yes
10A	Moor End Radwell	Sand & Gravel	TL 012580	Yes
11	Bourne End, Bletsoe	Clay	TL 021601	No
12	A6 North of Bletsoe Turn	Sand & Gravel	TL 016587	No
13	Eaton Socon, Cambridgeshire	Sand & Gravel	TL 175595	Yes
14	Wood Road, Harrold	Sand & Gravel	SP 947573	No
15	Harrold	Sand & Gravel	SP 953572	Yes
16	The Meadway, Harrold	Sand & Gravel	SP 955570	No
17	Harrold/Odell Country Park, Odell	Sand & Gravel	SP 960570	Yes
18	Felmersham Nature Reserve, Felmersham	Sand & Gravel	SP 990583	No
19	Radwell Bridge , Radwell	Sand & Gravel	TL 003567	No
20	Hurdlefoot Woodlands, Pavenham	Sand & Gravel	TL 004555	No
21	Cherry Orchard, Chawston	Sand & Gravel	TL 152564	Yes
22	South Brook, Chawston	Sand & Gravel	TL 158561	No
23	Little End, Eaton Socon	Sand & Gravel	TL 168581	No
24	A1/A45 Interchange, Eaton Socon	Sand & Gravel	TL 165577	No
25	Rear of Lake's Garage, Wyboston	Sand & Gravel	TL 163572	No
26	The Lane, Wyboston	Sand & Gravel	TL 162569	Yes
26A	Wyboston	Sand & Gravel	TL 163567	Yes
27	East of A1, Wyboston Golf Course	Sand & Gravel	TL 168594	Yes
27A	Forty Farm, Wyboston	Sand & Gravel	TL 169563	Yes
27B	North of Forty Farm, Wyboston	Sand & Gravel	TL 165566	Yes
28	Turvey	Limestone	SP 940521	No
29	Oakley	Sand & Gravel	TL 015531	No
30	Clapham Folly, Clapham	Sand & Gravel	TL 023531	No
31	Fetlock Close, Clapham	Sand & Gravel	TL 025531	No
32	Hill Farm, Renhold	Clay	TL 081526	No
33	New Road, Bromham	Limestone	TL 002503	No
34	Lower Farm Road, Bromham (NW)	Sand & Gravel	TL 019519	Yes
35	" (E)	"	TL 030520	Yes
36	" (SW)	"	TL 026515	Yes
36A	" (N)	"	TL 028519	Yes
37/37A	Barkers Lane, Bedford	Sand & Gravel	TL 075505	Yes
38	Octagon Farm, Cople	Sand & Gravel	TL 097494	No
39	Dog Farm, Cople	Sand & Gravel	TL 100494	No
40	North-west of Manor Farm, Willington	Sand & Gravel	TL 103499	Yes
41	Manor Farm, Willington	Sand & Gravel	TL 108498	Yes
42	Adjacent to A 603, Cople	Sand & Gravel	TL 102491	No
43	Darnell's Field, Willington	Sand & Gravel	TL 115493	Yes
43A/43B	South Mills/Bridge Farm, Moggerhanger	Sand & Gravel	TL 159499	Yes
44	Tempsford Road, Blunham	Sand & Gravel	TL 158516	Yes
44A	Brickhill Road (now Sunderland Road), Sandy	Clay	TL 176499	Yes
45	Cox Hill, Sandy	Sand	TL 179496	Yes
46	North of Cox Hill, Sandy	Clay	TL 179499	No
47	Everton	Sand	TL 199512	No
48	Keeley Green, Kempston	Sand & Gravel	TL 006462	No
49	Hillgrounds Road, Kempston	Sand & Gravel	TL 029279	No
50	Springfield Road, Kempston	Sand & Gravel	TL 035476	No
51	Springfield Avenue, Kempston	Sand & Gravel	TL 034376	No
52	Margetts Road, Kempston	Sand & Gravel	TL 035474	No
53	Kempston Road, Bedford	Sand & Gravel	TL 042486	No
54	Harrowden Road, Bedford	Sand & Gravel	TL 066481	No
55	Elstow, Marston Vale	Oxford Clay	TL 045455	Yes
56	Eastcotts, Bedford	Sand & Gravel	TL 072482	Yes
57	Cople Tip	Sand & Gravel	TL 098486	Yes
58	Home Farm, Cople	Sand & Gravel	TL 105488	No
59	Station Road, Sandy	Sand	TL 178486	No
59A	Quarry Hill, Sandy	Sand	TL 185490	Yes
59B	Deepdale, Potton	Sand	TL 210488	Yes
59C	Sandy Heath, Potton	Sand	TL 205491	Yes
60	Stewartby Lake, Stewartby	Oxford Clay	TL 005420	Yes
61	L' Field, Stewartby, Stewartby	Oxford Clay	TL 014434	Yes
62	Stewartby Works, Stewartby	Oxford Clay	TL 019426	Yes
63-65	Kempston Hardwick, Marston Vale	Oxford Clay	TL 033451	Yes

66	Coronation, Marston Vale	Oxford Clay	TL 028434	Yes
67	Quest, Marston Vale	Oxford Clay	TL 032427	Yes
68	Old Warden	Sand	TL 133444	No
69	Ickwell Green	Clay	TL 151458	No
69A	Southill	Sand & Gravel	TL 150431	Yes
70	Potton Road, Biggleswade	Sand & Gravel	TL 196455	No
71	Boddington Gardens, Biggleswade	Sand & Gravel	TL 199454	No
71A	West Sunderland Farm, Biggleswade	Clay	TL 208202	No
72	Kitelands Road, Biggleswade	Clay	TL 198436	Yes
73	Brogborough No. 2, Marston Vale	Oxford Clay	SP 973403	Yes
74	Brogborough No. 1, Marston Vale	Oxford Clay	SP 977396	Yes
75/77	Escheat/Thrupp End, Marston Vale	Oxford Clay	SP 990402	Yes
76	Marston (Millbrook), Marston Vale	Oxford Clay	TL 006413	Yes
78	Lidlington, Marston Vale	Oxford Clay	TL 000402	Yes
79	Millbrook Works & Tip, Marston Vale	Oxford Clay	TL 004404	Yes/No
80	Rookery, Marston Vale	Oxford Clay	TL 016412	Yes
81	Houghton Conquest (Camel Field), Marston Vale	Oxford Clay	TL 039420	Yes
82	Sandpit Farm, Haynes	Sand	TL 088411	No
82A	Haynes West End, Haynes	Sand	TL 071403	Yes
83	Standalone Farm, Haynes	Sand & Gravel	TL 107414	No
84	Bedford Road, North of Shefford	Clay	TL 134407	No
85	Rowney Warren, Southill	Sand	TL 130400	Yes
86	Stanford	Sand & Gravel	TL 159406	Yes
87	Clifton/Henlow	Sand & Gravel	TL 177400	Yes
88	Langford	Sand & Gravel	TL 186410	No
89	Braystone, Aspley Guise	Clay	SP 934371	No
90	Brogborough Tip, Marston Vale	Oxford Clay	SP 971391	No
91	Ridgmont, Marston Vale	Oxford Clay	SP 965383	Yes
92	Lake Cottage, Husborne Crawley	Sand & Gravel	SP 966361	No
93	Seathill Plantation, Lidlington	Sand	SP 992384	No
93A	Vauhall Proving Ground, Lidlington	Sand	TL 000386	Yes
94	Ampthill Grange, Ampthill	Sand	TL 029368	No
95	West of Flitwick Road, Ampthill	Sand	TL 029369	No
96	Gravelpit Plantation, near Houghton House, Ampthill	Sand	TL 035391	No
97	Maulden	Sand	TL 048380	No
98	Model Farm, Maulden	Clay	TL 049367	No
99	Red Hills Farm, Maulden	Sand	TL 062376	No
100	Kiln Farm, Clophill	Sand	TL 081388	Yes
101	Bedford Road, Clophill	Sand	TL 080381	Yes
102	Simpsonhill Plantation, Clophill	Sand	TL 082372	Yes
103	Highlands Farm, Silsoe	Sand & Gravel	TL 078366	No
104	Clophill	Fullers Earth	TL 095376	Yes
104A	Cainhoe, near Cainhoepark Wood, Clophill	Sand	TL 104377	Yes
104B	Cainhoe, Clophill	Sand	TL 102375	Yes
105	near Warren Farm, Clophill	Sand	TL 093371	No
106	Castle Hill, Clophill	Sand	TL 099373	No
107	Campton Road, Shefford	Sand	TL 134388	No
108	Airman Public House, Meppershall	Clay	TL 156374	No
109	Poppy Hill Farm, Henlow	Sand & Gravel	TL 181391	Yes
110	Cityfield Farm, Henlow	Sand & Gravel	TL 185376	No
111	Henlow Plant Site, Henlow	Sand & Gravel	TL 184380	Yes
112	South-west of Hill Farm, Arlesey	Sand & Gravel	TL 193386	No
113	Etonbury Farm, Arlesey	Clay	TL 193383	Yes
114	Cityfield Farm, Henlow	Sand & Gravel	TL 185373 TL 185366	Yes
115	Stotfold	Clay	TL 228372	No
116	Aspley Heath	Fullers Earth	SP 925351	Yes
116A	Aspley Guise	Fullers Earth	SP 936346	Yes
117	Eversholt	Clay	SP 997343	No
118	Warren Hill, Tingrith	Sand	TL 009331	Yes
118A	Trout Farm, Tingrith	Sand	TL 005335	Yes
118B	Home Farm, Tingrith	Sand	TL 005330	Yes
119	Flitwick Station, Flitwick	Sand	TL 033351	No
120	High Street, Flitwick	Sand	TL 033353	No
121	The Ridgeway, Flitwick	Sand	TL 035356	No
122	Flitwick Moor, Flitwick	Peat	TL 049355	Yes
123	Silsoe	Sand	TL 078357	Yes
124	Meppershall	Sand & Gravel	TL 133354	No
125	Henlow Camp, Henlow	Clay	TL 160360	No
126	Stondon Manor, Stondon	Sand	TL 153354	No
127	Tyne Hill Farm, Lower Stondon	Sand & Gravel	TL 149346	Yes
128	Shillington Road, Lower Stondon	Sand & Gravel	TL 151347	No
129	Arlesey	Gault Clay	TL 184349	Yes
130	Green Lagoon, Arlesey	Chalk	TL 198348	No
131	Blue Lagoon, Arlesey	Chalk	TL 196343	No
132	Fox & Hounds, Heath & Reach	Sand	SP 932305	Yes

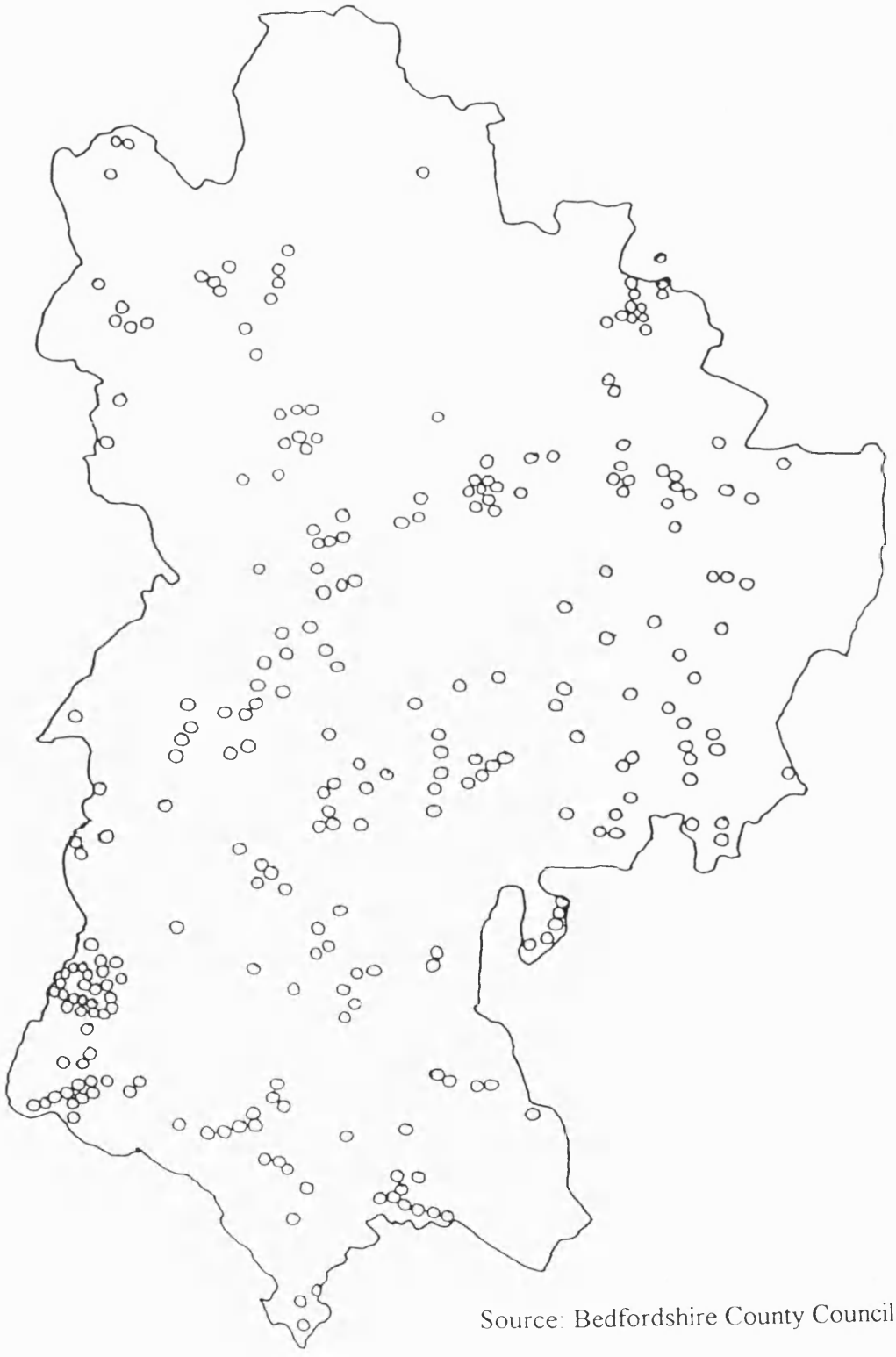
133	Sandhouse, Heath & Reach	Sand	SP 935300	Yes
134	A5 Quarry, Heath & Reach	Sand	SP 939297	Yes
135	Milton Bryan	Sand & Gravel	SP 966310	No
136	Tingrith	Clay	TL 013327	No
137	Toddington Road, Harlington	Clay	TL 029307	No
138	Westoning	Clay	TL 035316	No
139	Old Park Farm, Harlington	Sand & Gravel	TL 030297	Yes
139A	Harlington	Sand & Gravel	TL 033301	Yes
140	Clark's Hill, Pegsdon	Chalk	TL 118299	No
141	Kettledean Farm, Shillington	Chalk	TL 134316	No
142	Knocking Knoll, Shillington	Chalk	TL 132312	No
143	Pegsdon Common Farm, Shillington	Chalk	TL 130309	No
144	Hitchen Road, Pegsdon	Chalk	TL 125303	No
145	Bryants Lane, Heath & Reach	Sand	SP 927285	Yes
146	Sheepcote, Heath & Reach	Sand	SP 923288	Yes
147	Thrift, Heath & Reach	Sand	SP 922284	Yes
148	Emu Close, Heath & Reach	Sand	SP 923282	No
149	Pinkle Hill Road, Heath & Reach	Sand	SP 923281	No
150	Gig Lane, Heath & Reach	Sand	SP 926282	No
151	Old Linslade Road, Heath & Reach	Sand	SP 922278	Yes
152	Fox Corner, Heath & Reach	Sand	SP 926292	Yes
153	Stone Lane, Heath & Reach	Sand	SP 929290	Yes
154	Churchways, Heath & Reach	Sand	SP 940295	Yes
154A	Checkleywood, Heath & Reach	Sand	SP 944289	Yes
156	Double Arches, Heath & Reach	Sand	SP 938288	Yes
157	Reach Lane, Heath & Reach	Sand	SP 932284	Yes
158	Mundays Hill, Heath & Reach	Sand	SP 940282	Yes
159	Nine Acres, Heath & Reach	Sand	SP 939275	Yes
160	Spinney Farm, Heath & Reach	Sand	SP 928276	No
161	Mile Tree Farm, Heath & Reach	Sand	SP 943276	No
162	Shenley Hill Road, Heath & Reach	Sand	SP 937273	Yes
163	New Trees, Heath & Reach	Sand	SP 930276	Yes
164	Shenley Hill Road, Heath & Reach	Sand	SP 936274	Yes
165	Chamberlain's Barn, Heath & Reach	Sand	SP 930270	Yes
166	Vandyke Upper School, Leighton Buzzard	Sand	SP 935261	No
167	Park Road, Toddington	Sand	TL 002291	No
168	Luton Road, Toddington	Sand	TL 019281	No
169	Sundon Lime Works, Sundon	Chalk	TL 039284	? Yes
170	Sundon Cement Works, Sundon	Chalk	TL 037275	Yes
170A	Sundon Hoggin Quarry, Sundon	Sand & Gravel	TL 043275	Yes
171	Burnt Ground Spinney, Harlington	Chalk	TL 045288	No
172	Sundon Road, Harlington	Chalk	TL 050290	No
173	Barton	Chalk	TL 078297	Yes
174	Windsor Avenue, Leighton Buzzard	Sand & Gravel	SP 918253	No
175	Billington Road, Leighton Buzzard	Sand	SP 922242	Yes
176	North of Grovebury Road, Leighton Buzzard	Sand	SP 919240	No
177	Grovebury Road, Leighton Buzzard	Sand	SP 920230	Yes
178	Grovebury Farm, Leighton Buzzard	Sand	SP 923238	Yes
179	Grovebury Tip, Leighton Buzzard	Sand	SP 925239	Yes
180	Vandyke Road, Leighton Buzzard	Sand	SP 930256	Yes
181	Regent Street, Leighton Buzzard	Sand	SP 929254	No
182	Stanbridge Road, Leighton Buzzard	Sand	SP 928245	Yes
183	Former Leighton Buzzard Water Works, Leighton Buzzard	Clay	SP 935246	No
184	Pratts (Billington Road), Leighton Buzzard	Sand	SP 931239	Yes
185	Leighton Road, Stanbridge	Clay	SP 947242	No
186	Yirrell's Brickyard, Leighton Buzzard	Clay	SP 951245	Yes
187	Bidwell Hill, Houghton Regis	Chalk	TL 010242	Yes
188	Chalk Hill, Houghton Regis	Chalk	TL 009237	Yes
189	Houghton Raod, Houghton Regis	Chalk	TL 013232	No
190	Birdsfoot Lane, Limbury, Luton	Sand & Gravel	TL 079244	No
191	Midhurst Gardens, Limbury, Luton	Sand & Gravel	TL 083241	No
192	Badgers Hill Road, Stopsley, Luton	Chalk	TL 096238	No
193	St Thomas' Road, Stopsley, Luton	Clay	TL 101240	No
194	Stanbridgeford	Clay	SP 968225	Yes
195	Totternhoe (RPC), Totternhoe	Chalk	SP 981223	Yes
195A	Totternhoe Lime & Stone, Totternhoe	Chalk	SP 979222	Yes
196	Sewell	Chalk	SP 995225	Yes
197	Dunstable Lime Works, Dunstable	Chalk	TL 001228	No
198	California Quarry, Dunstable	Chalk	TL 007211	Yes
199	Spondell Quarry, Dunstable	Chalk	TL 001210	Yes
200	Canesworde Raod, Dunstable	Chalk	TL 012208	Yes
201	Blows Down, Dunstable	Chalk	TL 040220	No
202	Laporte's , Luton	Chalk	TL 024220 TL 026222	No
203	Wigmore Lane, Luton	Chalk	TL 118225	No
204	Kensworth	Chalk	TL 020196	Yes
205	Landpark Wood, Kensworth	Chalk	TL 016185	Yes

206	Garden Centre, Caddington	Clay	TL 054193	No
207	Dunstable Road, Caddington	Clay	TL 058194	No
208	Holly Farm, Caddington	Clay	TL 062195	Yes
209	Folly Lane, Caddington	Clay	TL 060199	No
210	Luton Road, Caddington	Clay	TL 069199	No
211	Edgecote Close, Caddington	Clay	TL 063193	No
212	Manor Road, Caddington	Clay	TL 065190	No
213	Grove Road, Caddington	Clay	TL 077186	No
214	Slip End, Caddington	Clay	TL 079183	No
215	Studham	Sand & Gravel	TL 022156	No
216	Greencroft Wood, Studham	Clay	TL 020137	No
217	Kensworth Road, Studham	Sand & Gravel	TL 028158	No
218	Ridgeway , Moggerhanger	Sand & Gravel	TL 159494	Yes
219	Bakers Wood, Heath & Reach	Sand	SP 924290	Yes
220	Tiddenfoot, Leighton Buzzard	Sand	SP 915237	Yes
221	Mentmore Road, Leighton Buzzard	Sand	SP 912236	Yes
222	Turvey Stone Quarry, Turvey	Limestone	SP 948537	Yes
223	South Mills, Blunham	Sand & Gravel	TL 154499	Yes
224	Roxton Lock, Roxton	Sand & Gravel	TL 156535	Yes
225	Great Barford	Sand & Gravel	TL 130508	Yes
226	Home Farm, Heath & Reach	Sand	SP 928293	Yes
227	Eaton Socon, Cambridgeshire	Sand & Gravel	TL 177581	Yes
228	Broom (Adjacent to River Ivel)	Sand & Gravel	TL 182421	Yes
229	Myer's Farm (Potton), Potton	Sand	TL 225504	Yes
230	Old Wavendon Heath, Aspley Guise	Fullers Earth	SP 932345	Yes
231	College Farm, Great Barford	Sand & Gravel	TL 120508	Yes
232	Warren Villas, Sandy	Sand & Gravel	TL 181477	Yes
233	Kempston S. Relief Road Borrow Pit, Kempston	Clay	TL 030461 TL 035461	Yes
234	Willington	Sand & Gravel	TL 103506	Yes
235	Elstow Storage Depot, Elstow	Clay	TL 042457	Yes
236	Ascott Farm, Leighton Buzzard	Sand	SP 903238	Yes
237	Deep Spinney Farm Borrow Pit, Bromham	Sand & Gravel	TL 015504	Yes
238	Lower Shelton Road Borrow Pit, Marston Moretaine	Clay	SP 997423	Yes
239	Leagrave Road Depot, Luton			Yes
240	Lodge Farm, Salford	Sand & Gravel	SP 928400	Yes
241	Ford Lane, Roxton	Sand & Gravel	TL 157539	Yes
242	Barton Borrow Pit, Barton	Chalk	TL 077291	Yes
243	Shefford Bypass Borrow Pit, Shefford	Sand & Gravel	TL 162379	Yes
244*	Hill House, Broom	Sand & Gravel	TL 170440	
245	Dog Farm, Willington	Sand & Gravel	TL 098497	Yes

(* approved subject to legal agreement-permission not yet issued)

Source: Bedfordshire County Council

Figure 3 - Location of Mineral Workings in Bedfordshire



Source: Bedfordshire County Council

Table 2 - Decisions made between 1990 and 1992

	1990		1991		1992		Total	
Type of Application	Permission	Refusal	Permission	Refusal	Permission	Refusal	Permission	Refusal
Sand & Gravel extraction	2	0	1	0	1	1	4	1
Sand extraction	4	1	1	0	0	0	5	1
Chalk	1	1	0	0	0	0	1	1
Mineral Plant	2	0	1	0	0	0	3	0
Mineral Building	1	0	0	0	0	0	1	0
Other Mineral	0	1	0	0	0	0	0	1
Storage	2	0	1	0	1	0	4	0
Landfill	12	2	5	3	2	0	19	5
Waste Plant	1	0	0	0	0	0	1	0
Waste Building	1	0	0	0	0	0	1	0
Waste Treatment	1	0	1	0	0	0	2	0
Incineration	0	1	0	0	0	0	0	1
Civic Amenity Sites	0	0	0	0	6	0	6	0
Waste Transfer Stations	0	1	1	1	0	0	1	2
Other Waste	1	0	0	0	0	1	1	1
Other	1	0	0	0	9	0	10	0
TOTAL	29	7	11	4	19	2	59	13

Source: Bedfordshire County Council

There were 17 applications outstanding at beginning of April 1993 as listed below:

- Chalk - 1
- Sand and Gravel extraction - 3 (including one awaiting the signing of a S.106 legal agreement)
- Importation sand and gravel - 1
- Restoration proposal - 2
- Incinerator - 1
- Waste Sorting Centre - 2
- Waste Transfer Station - 5 (including two awaiting the signing of a S.106 legal agreement)
- Other waste disposal operation - 2

In addition there are sites that are in the process of being restored that require regular inspection and various other ones that need checking periodically to ensure no illegal tipping has taken place. For example, during the year ending 31 March 1988, over 500 visits were made to at least 70 sites. Most were routine inspections, but inevitably they generated a considerable amount of follow-up work and enforcement activity to deal with matters as varied as the implementation of restoration schemes, working outside permitted hours and the unauthorised disposal of waste materials. However in only one case was an enforcement notice served. Experience has shown that regular, thorough inspections are essential to ensure compliance with conditions and to identify problems before they become too serious. Since 1988, accurate site inspection records have not been maintained, and the frequency of inspections has decreased significantly due to other pressures and a lack of resources. The

latest problem is that mileage restrictions have been placed on all sections of the Planning Department; this obviously has implications for the amount of monitoring that the Minerals Section can undertake.

A restoration survey was completed in 1987 to update information on restoration and provide a definitive view of the progress being made. It was updated to 1988, but since then no detailed monitoring has been undertaken. Therefore it is likely that if proper control of restoration and after-care are to be re-established then the survey will need to be repeated and expanded, by examining the files to determine what schemes have been submitted and approved and what matters are still outstanding.

The Planning Department has also been active in mineral matters at the regional level through the South-east's Standing Conference, over the last decade. In particular the County Planning Officer is chairman of the Aggregates Working Party (SERAWP) and other officers represent the authority on the Waste Disposal Working group and the Hazardous Waste Sub-group.

History of the Minerals Section

Prior to 1979, mineral development control and planning policy were undertaken by separate sections. The Minerals Section was then merged with the Development Control Section with a consequent loss in staff. Although a staff review in 1982 acknowledged the heavy workload of the section and confirmed that it was understaffed no action was taken. In 1985, all mineral functions were merged, again with a loss of staff; another staff review in 1986 recommended that the number should be increased however again this did not occur.

The workload also increased with the Local Government, Planning and Land Act 1980. This extended the list of County Matters to include: the use of land or the carrying out of operations in or on land for the deposit of refuse or waste materials; and the erection of buildings, plant or machinery designed to be used wholly or mainly for the purposes of treating, storing, processing or disposing of refuse or waste materials. The 1981 Act added responsibilities such as the imposition of after-care conditions and the review of old mineral permissions. Public awareness of environmental issues has led to increased demands for information and consultation, and the enforcement procedures have been revised and extended. When combined with eroding resources in the Section, this has almost inevitably resulted in an inability to cope properly with even the statutory responsibilities. However since 1990 there has at least been less turn-over in staff.

These pressures and the staff reductions explain why no progress has been made on the review of mineral sites despite it being a statutory responsibility. As the Local Plan progresses the possible programming for carrying out the Review is being considered. This is because the Plan programme has implications for both staff and resources so any commencement of the review must be adjusted to take account of this as, at the moment, it is unlikely that additional resources will be provided to start the review before the Plan reaches at least the inquiry stage. Indeed the draft Local Plan comments on the DoE's review of the Review process to the effect that "it may be prudent to wait until any changes are known". This could delay Bedfordshire's Review still further depending on the progress made by the Government in response to the comments made on the 1992 Option Paper. In the meantime a considerable amount is achieved to improve working methods and restoration schemes through informal negotiation or in conjunction with new applications.

Possible Impact on Bedfordshire of Revised Review Procedures

This section attempts through a prototype review of the County's planning permissions to demonstrate some of the issues that are likely to be encountered by all MPAs when undertaking a review of mineral sites under new procedures. For example, the scale of work that might be involved by the different options, and their information requirements. Together with the background knowledge that will be necessary to guide decision making during the review. However since the review of the mineral sites in Bedfordshire has not commenced it is only possible to highlight some of the concerns that may face the MPA and in the time available it is not feasible to examine every site in detail. It is also important to note that the results given and any comments made are those of the writer and not necessarily those of Bedfordshire County Council.

The evaluation process developed below gives some clues as to the time that the full review exercise will require although it should be recognised that this time will vary between MPAs depending on the nature of their databases. Until Table 3 was drafted there was no single collective record of all the planning permissions relating to minerals. (Whereas some authorities have their records computerised complete with planning conditions, restoration details and deadlines and site monitoring information. Some even use G.I.S. (Geographic Information Systems) to map permission boundaries and restoration progress.) There are plans to improve recording in Bedfordshire but it is not yet clear how useful this will be for monitoring and enforcement or the review.

TABLE 3 - SUMMARY OF PERMITTED MINERAL WORKINGS IN BEDFORDSHIRE

Pit No.	Pit Name and Location	Minerals	Grid Reference	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
2	Wymington (Big)	Sand & Gravel	SP 951649					E		E														
10	Vicarage Farm, Felmersham	Sand & Gravel	TL 005588				E																	
10A	Moor End Radwell	Sand & Gravel	TL 012580																					
13	Eaton Socon, Cambridgeshire	Sand & Gravel	TL 175595								2E													
15	Harrold	Sand & Gravel	SP 953572					E				E					E							
17	Harrold/Odell Country Park, Odell	Sand & Gravel	SP 960570					E						E			E				E			
21	Cherry Orchard, Chawston	Sand & Gravel	TL 152564																E					
26	The Lane, Wyboston	Sand & Gravel	TL 162569																					
26A	Wyboston	Sand & Gravel	TL 163567			E																		
27	East of A1, Wyboston Golf Course	Sand & Gravel	TL 168594									2E	E	2E	E		E		E					
27A	Forty Farm, Wyboston	Sand & Gravel	TL 169563																				E	
27B	North of Forty Farm, Wyboston	Sand & Gravel	TL 165566																					
34	Lower Farm Road, Bromham (NW)	Sand & Gravel	TL 019519														E							
35	" (E)	"	TL 030520				E								E			E		E	2W	2W		E
36	" (SW)	"	TL 026515																					E
36A	" (N)	"	TL 028519																					
37/37A	Barkers Lane, Bedford	Sand & Gravel	TL 075505							E	E				E									
40	North-west of Manor Farm, Willington	Sand & Gravel	TL 103499								2E										P			
41	Manor Farm, Willington	Sand & Gravel	TL 108498			E		E			E			E		E								
43	Darnell's Field, Willington	Sand & Gravel	TL 115493											E	2E									
43A/43B	South Mills/Bridge Farm, Moggerhanger	Sand & Gravel	TL 159499													E			E				E	R
44	Tempsford Road, Blunham	Sand & Gravel	TL 158516																				2E	
44A	Brickhill Road (now Sunderland Road), Sandy	Clay	TL 176499												W									
45	Cox Hill, Sandy	Sand	TL 179496										E											
55	Elstow, Marston Vale	Oxford Clay	TL 045455					E											W				W	
56	Eastcotts, Bedford	Sand & Gravel	TL 072482							E														
57	Cople Tip	Sand & Gravel	TL 098486					E				E				E								
59A	Quarry Hill, Sandy	Sand	TL 185490															2E						
59B	Deepdale, Potton	Sand	TL 210488																					E
59C	Sandy Heath, Potton	Sand	TL 205491																					
60	Stewartby Lake, Stewartby	Oxford Clay	TL 005420								E													
61	L' Field, Stewartby, Stewartby	Oxford Clay	TL 014434								E			E	E									
62	Stewartby Works, Stewartby	Oxford Clay	TL 019426																					
63-65	Kempston Hardwick, Marston Vale	Oxford Clay	TL 033451								E	2E			2E									
66	Coronation, Marston Vale	Oxford Clay	TL 028434								E										2E			
67	Quest, Marston Vale	Oxford Clay	TL 032427								E													
69A	Southill	Sand & Gravel	TL 150431															E						
72	Kitelands Road, Biggleswade	Clay	TL 198436												W									
73	Brogborough No. 2, Marston Vale	Oxford Clay	SP 973403			E								E										
74	Brogborough No. 1, Marston Vale	Oxford Clay	SP 977396			E							E											
75/77	Escheat/Thrupp End, Marston Vale	Oxford Clay	SP 990402			E					E		E											
76	Marston (Millbrook), Marston Vale	Oxford Clay	TL 006413								E													
78	Lidlington, Marston Vale	Oxford Clay	TL 000402			E															W			
79	Millbrook Works & Tip, Marston Vale	Oxford Clay	TL 004404																					
80	Rookery, Marston Vale	Oxford Clay	TL 016412								E								E					
81	Houghton Conquest (Camel Field), Marston Vale	Oxford Clay	TL 039420								E													
82A	Haynes West End, Haynes	Sand	TL 071403																E		E			
85	Rowney Warren, Southill	Sand	TL 130400					E	E															
86	Stanford	Sand & Gravel	TL 159406					E	E				P	E										
87	Clifton/Henlow	Sand & Gravel	TL 177400											W	B									
91	Ridgmont, Marston Vale	Oxford Clay	SP 965383																					
93A	Vauhall Proving Ground, Lidlington	Sand	TL 000386																					
100	Kiln Farm, Clophill	Sand	TL 081388																					
101	Bedford Road, Clophill	Sand	TL 080381					E										E						
102	Simpsonhill Plantation, Clophill	Sand	TL 082372											E										
104	Clophill	Fullers Earth	TL 095376								E	E			2E					E		E		
104A	Cainhoe, near Cainhoepark Wood, Clophill	Sand	TL 104377																			E	?E	
104B	Cainhoe, Clophill	Sand	TL 102375																					E
108	Airman Public House, Meppershall	Clay	TL 156374																					
109	Poppy Hill Farm, Henlow	Sand & Gravel	TL 181391				E												E					
111	Henlow Plant Site, Henlow	Sand & Gravel	TL 184380				E													P				
113	Etonbury Farm, Arlesey	Clay	TL 193383								E													
114	Cityfield Farm, Henlow	Sand & Gravel	TL 185373 TL 185366								A,2E						E							
116	Aspley Heath	Fullers Earth	SP 925351					E									E	E						
116A	Aspley Guise	Fullers Earth	SP 936346																	A,3E	2B		E	B
118	Warren Hill, Tingrith	Sand	TL 009331				E																	
118A	Trout Farm, Tingrith	Sand	TL 005335																		E			
118B	Home Farm, Tingrith	Sand	TL 005330																					
122	Flitwick Moor, Flitwick	Peat	TL 049355					E							E									
123	Silsoe	Sand	TL 078357				E									E								
127	Tyne Hill Farm, Lower Stondon	Sand & Gravel	TL 149346																			W		
129	Arlesey	Gault Clay	TL 184349								E		A							E				
132	Fox & Hounds, Heath & Reach	Sand	SP 932305				E			E														

Pit No.	Pit Name and Location	Minerals	Grid Reference	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
133	Sandhouse, Heath & Reach	Sand	SP 935300				E							E			P							
134	A5 Quarry, Heath & Reach	Sand	SP 939297	E						E					E									
139	Old Park Farm, Harlington	Sand & Gravel	TL 030297								E													
139A	Harlington	Sand & Gravel	TL 033301																E					
145	Bryants Lane, Heath & Reach	Sand	SP 927285				E	E	E															
146	Sheepcote, Heath & Reach	Sand	SP 923288	E																				
147	Thrift, Heath & Reach	Sand	SP 922284	E																				
151	Old Linslade Road, Heath & Reach	Sand	SP 922278			?E					E			E						EP				E
152	Fox Corner, Heath & Reach	Sand	SP 926292				E			E														
153	Stone Lane, Heath & Reach	Sand	SP 929290				E			E														
154	Churchways, Heath & Reach	Sand	SP 940295				E			E														
154A	Checkleywood, Heath & Reach	Sand	SP 944289							E				E										
156	Double Arches, Heath & Reach	Sand	SP 938288				E			E														
157	Reach Lane, Heath & Reach	Sand	SP 932284				E																	
158	Mundays Hill, Heath & Reach	Sand	SP 940282							E		E												
159	Nine Acres, Heath & Reach	Sand	SP 939275				E			E														
162	Shenley Hill Road, Heath & Reach	Sand	SP 937273																					
163	New Trees, Heath & Reach	Sand	SP 930276							E												E		E
164	Shenley Hill Road, Heath & Reach	Sand	SP 936274							E								W						
165	Chamberlain's Barn, Heath & Reach	Sand	SP 930270							E														
169	Sundon Lime Works, Sundon	Chalk	TL 039284								E													
170	Sundon Cement Works, Sundon	Chalk	TL 037275								E		E											
170A	Sundon Hoggin Quarry, Sundon	Sand & Gravel	TL 043275																		E			
173	Barton	Chalk	TL 078297					E		E														
175	Billington Road, Leighton Buzzard	Sand	SP 922242																				W	
177	Grovebury Road, Leighton Buzzard	Sand	SP 920230							E			E											
178	Grovebury Farm, Leighton Buzzard	Sand	SP 923238				E			E			E											
179	Grovebury Tip, Leighton Buzzard	Sand	SP 925239			E																W		W
180	Vandyke Road, Leighton Buzzard	Sand	SP 930256				E			E						W								W
182	Stanbridge Road, Leighton Buzzard	Sand	SP 928245		E		E											E				C/U		
184	Pratts (Billington Road), Leighton Buzzard	Sand	SP 931239							E														
186	Yirrell's Brickyard, Leighton Buzzard	Clay	SP 951245										E											
187	Bidwell Hill, Houghton Regis	Chalk	TL 010242																		WA			
188	Chalk Hill, Houghton Regis	Chalk	TL 009237							E									P	E				S
194	Stanbridgeford	Clay	SP 968225							E														
195	Totternhoe (RPC), Totternhoe	Chalk	SP 981223			E							E											
195A	Totternhoe Lime & Stone, Totternhoe	Chalk	SP 979222				E																	2P
196	Sewell	Chalk	SP 995225							E														
198	California Quarry, Dunstable	Chalk	TL 007211			E																		
199	Spondell Quarry, Dunstable	Chalk	TL 001210							E														
200	Canesworde Road, Dunstable	Chalk	TL 012208																			E		
204	Kensworth	Chalk	TL 020196									E											B2P	
205	Landpark Wood, Kensworth	Chalk	TL 016185							E														
208	Holly Farm, Caddington	Clay	TL 062195																					
218	Ridgeway, Moggerhanger	Sand & Gravel	TL 159494																		E			R
219	Bakers Wood, Heath & Reach	Sand	SP 924290																			E	E	
220	Tiddenfoot, Leighton Buzzard	Sand	SP 915237				E			E														
221	Mentmore Road, Leighton Buzzard	Sand	SP 912236										E		E			E						
222	Turvey Stone Quarry, Turvey	Limestone	SP 948537																					
223	South Mills, Blunham	Sand & Gravel	TL 154499																					
224	Roxton Lock, Roxton	Sand & Gravel	TL 156535																					
225	Great Barford	Sand & Gravel	TL 130508																					
226	Home Farm, Heath & Reach	Sand	SP 928293																					
227	Eaton Socon, Cambridgeshire	Sand & Gravel	TL 177581																					
228	Broom (adjacent to the River Ivel)	Sand & Gravel	TL 182421																					
229	Myer's Farm (Potton), Potton	Sand	TL 225504																					
230	Old Wavendon Heath, Aspley Guise	Fullers Earth	SP 932345																					
231	College Farm, Great Barford	Sand & Gravel	TL 120508																					
232	Warren Villas, Sandy	Sand & Gravel	TL 181477																					
233	Kempston S. Relief Road Borrow Pit, Kempston	Clay	TL 030461 TL 035461																					
234	Willington	Sand & Gravel	TL 103506																					
235	Elstow Storage Depot, Elstow	Clay	TL 042457																					
236	Ascott Farm, Leighton Buzzard	Sand	SP 903238																					
237	Deep Spinney Farm Borrow Pit, Bromham	Sand & Gravel	TL 015504																					
238	Lower Shelton Road Borrow Pit, Marston Moretaine	Clay	SP 997423																					
239	Leagrave Road Depot, Luton																							
240	Lodge Farm, Salford	Sand & Gravel	SP 928400																					
241	Ford Lane, Roxton	Sand & Gravel	TL 157539																					
242	Barton Borrow Pit, Barton	Chalk	TL 077291																					
243	Shefford Bypass Borrow Pit, Shefford	Sand & Gravel	TL 162379																					
244*	Broom	Sand & Gravel	TL 170440																					
245	Dog Farm, Willington	Sand & Gravel	TL 098497																					

(* approved subject to legal agreement-permission not yet issued)

Pit No.	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	
2																												
10																												
10A		E				P									P	A				P		P		P				
13																												
15																												
17	E																											
21																												
26							W																					
26A																												
27																												
27A																												
27B	E																											
34									W																			
35			W	WE		W																						
36				W		W																						
36A				E		E																						
37/37A					E								E															
40						B																						
41							W																					
43																												
43A/43B					R																							
44		E			E																							
44A																												
45																												
55								W		W						W												
56																												
57																												
59A																												
59B	W		EW				E				W	E		W						WE					E			
59C	E																			E		B						
60								C/U																					
61													B							3P		B	P	P	PB	P		
62															P/E,P									2P				
63-65															P/E						3B		B	B				
66															P/E													
67															P/E	P,3B												
69A																												
72																												
73																P/E	B				B	P	P	BA	3B			
74																												
75/77																P/E												
76																												
78								W								?P/E												
79																		B										
80						EB										P/E												
81																P/E												
82A			E						E					E									R					
85																								W				
86																												
87			W																									
91																P/E												
93A			E		E																							
100						W																						
101																						I						
102																												
104				E																	A							
104A																												
104B		E																								B		
108																												
109																												
111	P										P					P												
113																												
114																												
116																												
116A	2E		E	E	A							B	P															
118																												
118A																												
118B							EA									B												
122																												
123																												
127																												
129								W			W				P		PB			P	B		B	P				
132																		B		E			W					
133		P			B										P								P					
134									E																			
139																												

Pit No.	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
139A																											
145		E														P		S	B			E					
146							E																				
147							E						E							W						W	
151		E			E		E									W							P				
152							A																				
153																											
154																											
154A																											
156												W										W		W			
157																			E								
158																E								B			B
159							W												P						P		
162		W					W																				
163				E																B							
164		W									?W																
165																				S							
169																											
170																											
170A		E			W		E		E				E						W								
173															W					W					W		
175	B	P	P				W																				
177	E									ER															W	E	
178																			PB	B							
179																											
180		W																									
182																											
184										E									E				S	2E			
186																											
187																											
188								R	W																		
194																											
195																											
195A																P								B	AW		
196																											
198																											
199																											
200																											
204						E																					
205																											
208		W																									
218		R																									
219																											
220																											
221									B/P		EP	E							E/W								
222					E																						
223				E																							
224						E																					
225									E																		
226										E	B/A			W			S				E						
227								E			B							E									
228												E												E			
229											E		E		E				E			E		E			
230													EBr											Br			E
231															E									E			
232															E			PW						E			
233																E											
234																		E									
235													P					P	B	2B	B				B		
236																			EW						W		
237																				E							
238																					E						
239																						P					
240																						E					
241																						E					
242																								E			
243																								E			
244*																											
245																											E

Key

A - Access
B - Buildings
Br - Bridge
C/U - Change of Use
E - Extraction
I - Importation of Material
P - Plant or Machinery
R - Restoration
S - Storage
W - Waste Disposal

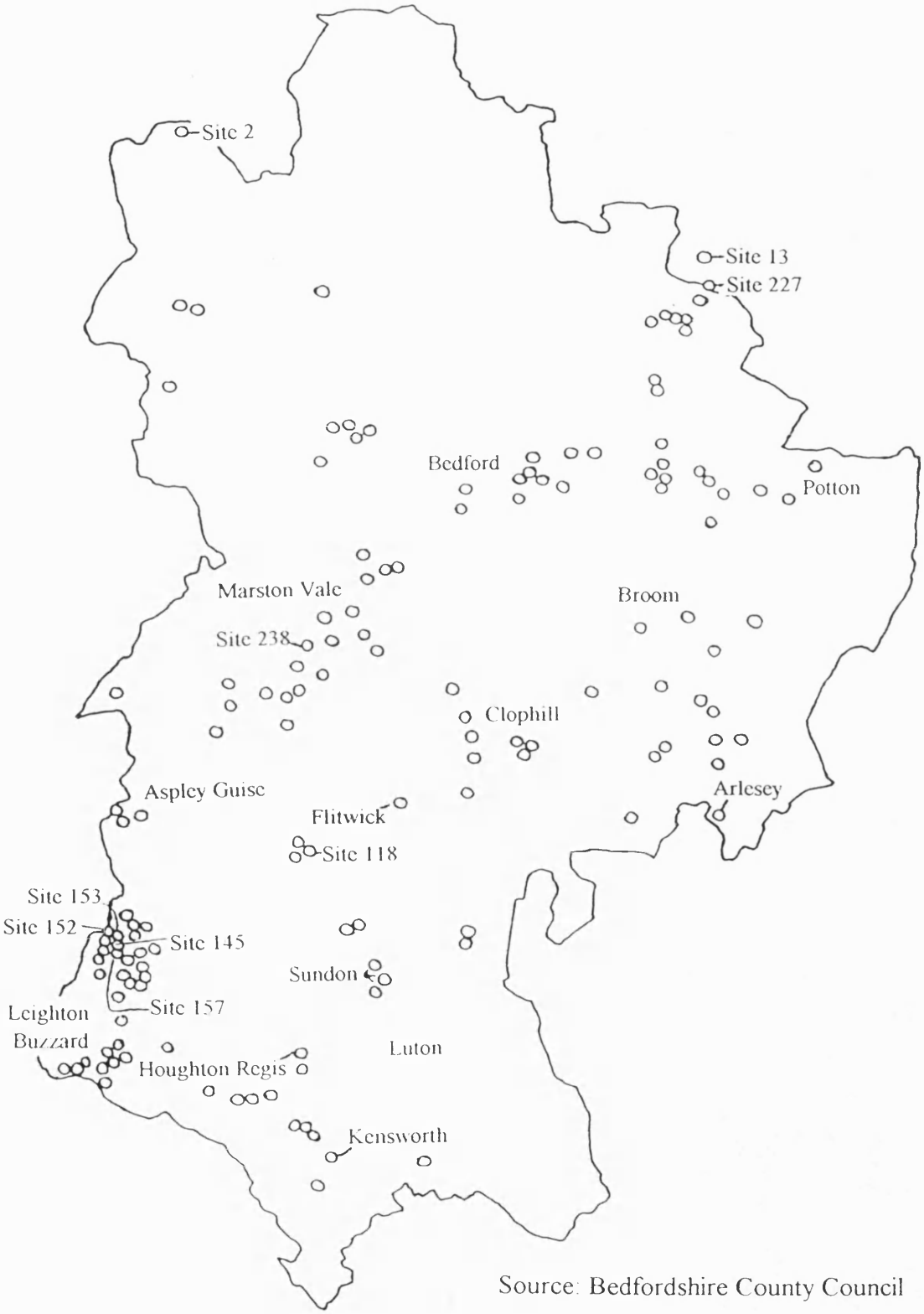
Source: Bedfordshire County Council.

All the tables in this chapter were constructed following a search through all the files relating to mineral sites in Bedfordshire. Table 3 shows the scale of mineral activity in Bedfordshire: the 144 sites shown in Figure 4, each have one or more planning permission. IDO permissions affected 32 sites, but following the 1991 legislation only 7 of the 26 known IDO permissions were registered, so this reduces the number of sites affected by IDO consents to 11 and the total number of permissions for extraction to 279. However extraction consents are only part of the situation as the 144 sites also have between them: 12 access permissions, 63 for plant and machinery, 49 for buildings, 67 for waste disposal, 7 restoration schemes and 5 for storage. Table 3 demonstrates that to ensure that all sites and permissions are properly considered then an accurate database must be compiled. This table of permissions is the starting point for considering the impact of any proposed changes to the review powers on the County sites, their operators and the MPA.

Have compiled Table 3, those sites that are no longer within the County boundaries have to be deleted: sites 13 and 227, together with those that were never worked for minerals. For example, site 238 was given permission to be a borrow pit for use in the construction of the Marston Mortaine bypass, but in the event the area was not used and the permission lapsed because it was not implemented within the specified 5 years. However not all sites are this simple to assess - site 2 was permitted in 1949 but there are no records to say whether the permission was ever implemented. A note on file in 1951 said that the applicant did not intend to pursue with the permission because of the development charge but there is nothing to show if this happened. A further complication is that this site overlaps with a pre-planning regulation site and working did occur in the area at some time. Hence to establish the validity of the permission the authority would have to investigate whether any working occurred before 1979 otherwise the permission would have lapsed in accordance with the Town and Country Planning (Minerals) Regulations 1971. They would then have to find the land owners using the Land Register to then notify them that the MPA considered that the permission had lapsed and to give them opportunity to object.

Other sites to remove are those that have been fully worked out and restored in accordance with their conditions or where the situation has changed to the extent that further working is not possible, for example, site 118 is bisected by the M1 motorway. Assessing completion of working is difficult for several reasons. For example, although site 152 has not been worked for some years and has naturally regenerated with vegetation, there is no depth restriction on the planning permission so it could be reopened if the mineral company wished to do so. The MPA would resist this, especially as the site is adjacent to a SSSI, however this could then mean having to make prohibition or revocation orders with their associated compensation implications. There is also a problem that the authority does not always have detailed

Figure 4- Mineral Workings With Planning Permission



Source: Bedfordshire County Council

geological information to test the operators' claims, unless they employ consultants to do the work with those additional costs.

There is a further complication not evident within Table 3 as it is presented - some of the permissions cover more than one site. For example, although 'E' is shown for both sites 152 and 153 in 1951 this is one and the same planning permission. This may not be a problem where the sites are in the same ownership as in this case, but different ownerships can create problems. For instance, there are logistical difficulties when negotiating sensible schemes of operation and especially restoration schemes for sites 145 and 157. Even when sites are in the same ownership there can be problems when the time-scale and the methods for working mean that sites are worked and then not restored as has occurred in the Marston Vale. Although that particular problem is being addressed through the Marston Vale Strategy and the Local Plan.

An additional difficulty is that individual sites may be covered by more than one permission, either over the same or a different area and this has implications for enforcement especially of restoration conditions. Part of the information on Bedfordshire contained in the Stevens report (DoE, 1976), explains a reason for this: the practice was adopted some years earlier of granting a fresh planning permission over exactly the same area in order to modify the previous permission rather than using the modification procedure, but the original consent was not formally revoked. One method that the authority uses now to avoid this, is the submission of a consolidating application, but even this is not fool-proof as it still requires the agreement of the operator to submit the new application in the first place and for the authority to draft for the permission sensible, enforceable conditions with adequate reasons. The final comment from Bedfordshire in the Stevens report was that: "... although this survey may present apparently sound statistical evidence that the extractive industries are not dilatory in complying with restoration conditions, this far from the case in this County." It is still hard to collate accurate statistics for restoration in the County.

Possible Impact of the DoE Options

Option 1 - Time Limits

In terms of the options presented by the DoE, a 10 year restriction on permission length would have an impact on 19 of Bedfordshire's active sites, 12 intermittently or temporarily inactive sites and 3 unworked sites out of 40 possible sites. A 20 year restriction, as suggested by the CPO's Society, would still affect 15 sites as well as the intermittently or temporarily

inactive sites and unworked sites. In both scenarios the greatest impact would be on the sand and oxford clay reserves, but it is not possible to say what impact this would have on the national economy.

Furthermore if the 10 year date was introduced there would have to be adjustments to other governmental minerals' guidance in particular MPGs 6 and 10, in order to ensure that the guidelines set targets that can be achieved. For example, MPG 6 currently requires the County to maintain a landbank of permitted reserves sufficient to support the production of sand and gravel for at least 10 years. This MPG is being separately revised and the government proposes to introduce a requirement for a 5 year landbank. MPG 10 introduced guidelines for the provision of raw materials for cement production and this affects Kensworth especially as the associated plant is not in Bedfordshire. This demonstrates why contact between the two MPAs is vital. A 10 year permission could affect the cement production of the country both through difficulties for generating investment in the plant and ensuring restoration of the sites not only at Kensworth but also in the limestone areas of the Peak District. It would also increase pressure to release other areas for extraction already difficult when the location is an AONB or a National Park.

Option 2 - Extension of the IDO Procedures

One of the comments made by organisations such as BACMI, when the IDO procedures were introduced in 1991, was that it created inequalities between mineral operators' permissions. An illustration where this might be true is that whilst those with mineral permissions granted before 1 July 1948 were affected by the IDO legislation of 1991, those who had applied during the same pre-1947 Act period but where the grant of planning permission was for one reason or another delayed until after the introduction of the 1947 Act were not affected. This was despite the fact that both sets of permissions were made using the same pre-1947 requirements for application content.

In Bedfordshire, 17 sites had applications made during the Interim Development Order period that were subsequently granted planning permission after 1 July 1948. In some cases the permission was granted by the local council in late 1948 or 1949 but in other cases the decisions were made by the Minister of Housing and Local Government. In these later cases the Minister had directed in 1947 that the application, which might have been made back in 1946, should be referred to him for decision. Some of these Ministerial decisions were made in 1949 but others took until 1952 before they were issued.

As with the IDO permissions and other post-1948 permissions, there was variation in the number of conditions (3 to 6) and the quality of their phrasing. Several included a version of the 'reasonable' landfilling condition referred to in Chapter 2 (p. 22). Therefore in terms of controlling such developments in 1993 the problems can be equal to those of the IDOs or even worse. This makes it essential that measures to update these planning permissions are introduced quickly but not so hurriedly that the revised procedures create their own difficulties. Otherwise the situation could become one where the very old and very new permissions are modernised and those in between remain potential environmental 'nightmares'.

Option 3 - Revised Compensation Regime

Without actually proceeding to do the review of mineral sites for Bedfordshire, it is not possible to comment in depth on the implications of even the current compensation regime let alone those of any changed regulations. However in the present economic and political climate it is likely that any action that might generate a risk of compensation payments by the authority would be resisted by members of the County Council. They would wish to have an extremely strong case justifying why the payments should be made, especially when cuts in services and jobs are being made elsewhere; such a position is not unique to Bedfordshire.

Option 4 - Phased Review

Table 4 below suggests the possible impact of some of the various phased review approaches put forward by the DoE's option paper consultees. It illustrates the range of suggestions and therefore the difficulty in deciding which method to adopt. The NFCI and CPO's Society set a deadline of 1998 to achieve the first review but use two alternatives to reach that stage. However English Nature's proposal would only reach the permissions of the 1970s after 2005 and this is not ideal as some permissions from that decade have as many problems as the earlier consents. Most of the rest would achieve a full review by the year 2000. However what these figures do not show is the impact of the difficulties and delays that an MPA might encounter in the review process.

Table 4 - Impact of the Phased Review Process on Bedfordshire's Permissions for Extraction

	Organisation						
Stage	BACMI	CCA	NCFI	SAGA	CPRE	EN	CPO's
1	122 by 1995	164 by 1996	All 268 to be reviewed by 1998	130 by 1996	All 268 to be reviewed by 1997	44 by 1996	157 by 1995
2	63 by 1997	Rest (104) by 1999		61 by 1998		33 by 1997	57 by 1996
3	39 by 1999			34 by 2000		22 by 1998	42 by 1997
4	32 by 2001			36 by 2002		17 by 1999	Rest (12) by 1998
5	Rest (12) by 2003			Rest (6) by 2004		14 by 2000	
						15 by 2001	
						12 by 2002	
						13 by 2003	
						12 by 2004	
						9 by 2005	
						Still 77 to review	

Note: This table does not include the IDO consents nor all the associated permissions for plant, buildings, access, waste disposal etc. that would contribute to the workload.

Key: BACMI - British Aggregates Construction Materials Industries
CCA - China Clay Association
NFCI - National Federation of Clay Industries
SAGA - Sand and Gravel Association
CPRE - Council for the Protection of Rural England
EN - English Nature
CPO's - County Planning Officers Society

Source: Bedfordshire County Council

The effect of a phased review is difficult to assess. If the requirement to commence the review was introduced with the start date of tomorrow then this would have severe implications for the MPA. In particular the authority is busy with the statutory requirement to produce county-wide minerals and waste plans and has to allocate sufficient resources to cover the Public Inquiry costs. Even after the Inquiry there is no guarantee that there will be enough resources to proceed through full order-making procedures. As explained earlier staff already have difficulty monitoring sites and their restoration.

Other Issues in the DoE Paper - SSSIs

If new procedures were introduced to address sites of nature conservation importance then Bedfordshire would be affected. Nine workings are wholly or partly designated as SSSIs and this is out of the 40 SSSIs designated in the County. Eight more sites are adjacent to SSSIs. Three of the SSSI sites are currently being worked for minerals, as are 4 of those adjacent to SSSIs, therefore any modifications to the legislation could potentially affect the County's sites. The most fundamental impact would be on the Kensworth site as this is the only source

of cement supply in the county and, as was explained earlier, any changes to the permission would have an effect in Warwickshire as well. In addition, revocation of the planning permission might not be the best way of preserving the site's special character. The designation is for geological interest and geological exposures are often most interesting in the un-weathered state so require new faces to be exposed by further working. However the recent restoration scheme now formalises the preservation of several faces on the site as geological exposures.

It is important to mention that in addition to the SSSIs the County has many non-statutory sites of wildlife value, that form the main part of Bedfordshire's nature conservation resource. A number of Prime Sites of Nature Conservation Importance (PSNCI) have been identified based on analysis of a Habitat Survey by English Nature. Of the 350 plus PSNCIs in Bedfordshire, 63 have developed on mineral sites and 6 others are adjacent to PSNCIs. These sites represent the top tier of the county's own wildlife sites. The MPA therefore has the opportunity through the review to ensure the longevity of these sites but there may be a dilemma that modern restoration methods can replace habitats lost through mineral extraction with an interest of possibly higher quality. Hence sites of nature conservation importance are associated with mineral working in Bedfordshire but they do not necessarily contradict each other especially when most operators are willing to examine protecting areas. Too many formal proceedings may conflict with preservation of some areas by discouraging operators from co-operating with the MPA.

Water Resources

A comparison of Figure 1 with Figure 3 indicates that there is a possibility that mineral working might affect the aquifer bearing strata of the Lower Greensand and Chalk. However it is difficult to comment on whether strengthened powers under revised review provisions could be justified to help groundwater protection in Bedfordshire. This could only be properly established following detailed hydrogeological studies of the area to assess the groundwater flows through the strata and this takes time and comes at a cost (which the MPA cannot afford). Furthermore there is dispute over the ability of such studies to predict flow patterns during and after mineral working especially when the detailed geology of large parts of Bedfordshire has not been mapped - Figures 1 and 2 are simplified geology maps and are not based on detailed borehole surveys. This can be enough to mask the variations likely to affect groundwater flows and the potential for contamination.

Even today the MPA has had to employ consultants to do the research and advise on these matters, as it does not have its own hydrogeological expertise. At the moment deep working is not a prominent issue in the County, but questions were asked regarding the recent application at Broom over the impact working would have on properties in the village, and at Kensworth over the impact on the aquifer. However, just because this is not usually a problem in Bedfordshire, this does not mean that measures to revoke permission should not be considered to protect other parts of the country such as the limestone aquifers of the Mendips, currently a major source of aggregates.

Bedfordshire has yet to be examined by the Local Government Commission so the impact on mineral control is not clear. However if smaller authorities are adopted there may be a shortage of experienced staff, unless the present County Minerals Section is retained as a pooled resource. History has also shown that records get lost during reorganisations (as in 1974), so it is important that any sorting of the files is made by the minerals staff.

This chapter has addressed some of the issues that would affect Bedfordshire however without completing a full review it is not possible to assess the complete impact or the diversity of problems that might occur. All mineral types will be affected by revised review procedures. In Bedfordshire chalk and fuller's earth extraction will be complicated by national need for the mineral and elsewhere other minerals affect the local economy. Both good and bad practices occur on sites but operators are not the only ones who need to change; MPAs need to monitor and enforce planning conditions and review those sites with poor controls. Some changes to the review procedures would help MPAs particularly the use of a phased review and revised compensation regime but it is essential that whatever is introduced, the views of all parties are considered and a clear, sensible mechanism adopted and implemented. The Government must also consider that its review of local government will affect MPAs competence and therefore they should ensure that the two procedures do not conflict and prevent the control of mineral sites, thereby affecting protection of the environment.

7. Conclusions and Recommendations

Conclusions

The aim of this study was to examine possible ways of ensuring that the mineral workings of today and in the future are worked and restored by the most environmentally compatible methods. This has entailed a review of the mineral planning legislation, its ability to cope with bringing mineral workings up to today's standards and the potential alternatives and possible solutions to that problem.

The legislation introduced to update the IDOs was a possible substitute for the provisions brought in by the 1981 Minerals Act, but the intention was to explore whether other mechanisms could be found to achieve the stated aims of bringing mineral planning permissions and their controls up-to-date. The study has attempted to demonstrate the complexity of the subject and therefore illustrate how difficult it will be for the Government to develop a scheme that is fair and acceptable to all parties. Not only is it hard to accommodate the opinions voiced by the mineral operators, with those of mineral planning authorities, environmental bodies or other interested parties as collective groups, but there is some disparity within the groups. For example, within the mineral operators: a solution acceptable to a sand and gravel extraction company may be untenable for a limestone or a clay extraction company that relies on longer term permissions.

The study of planning conditions in Chapter 2 confirms that this is a complex problem. It is not possible to have standard permissions because geological variations give rise to different requirements for operations and restoration. Even for a single mineral type local conditions can necessitate changes. Nevertheless a list of 'sample' conditions would help as a guide to best practice, but they cannot be 'standard' conditions because of the need for variation to cope with local situations. For example one site may require wheel washing facilities whilst another merely requires the use of a surfaced haul road. The scale of problem also varies: some permissions may have one poor condition that may, depending on the nature of the difficulty, be possible to remove or minimise using a minor modification order. Other permissions may, in very extreme cases, have such flaws that the whole basis of the existence of the permission is questioned and hence to solve that difficulty may require the use of more fundamental formal powers, including revocation orders.

However, it is important to realise that, although some permissions have flaws in their wording, the vast majority do not require any legal action. An operator may already work to

the highest standards and codes of practice adopted on all their sites regardless of the permission details. Most problems that arise on these sites are solved by negotiation with the mineral planning authority. Likewise, it is not possible to say that the situation of those permissions issued in the early 1950s is any worse than those issued later that decade or since, examples occur throughout. Similarly no particular mineral type or MPA has a monopoly of poor consents; 'gremlins' occur throughout the country.

Another fundamental point that has to be recognised is that whatever the problems, actual and perceived, with existing mineral planning permissions, they are, valid consents, with the same security and rights given by law as other planning permissions until new legislation is introduced. Therefore any proposal to change the permissions, that may infringe the rights of property, must be carefully considered and justified against the rights of others to enjoy an area. Mineral operators and landowners should not be excessively penalised for the mistakes made by previous governments or planning authorities. The Planning Acts and Orders were passed to ensure that future developments were properly controlled and the special nature of mineral extraction development has long been recognised, as shown by the 1981 Minerals Act. In this context it is worth recalling that in 1976 the Stevens Committee discussed similar issues to those being examined now. Consequently there exists the very real danger that political expediency could lead the government to introduce a system that will show the commitment to 'This Common Inheritance', but disregard the time, research and consideration of the future needed to derive a system that will not stumble at the first obstacle.

Although the 1981 Minerals Act imposed a duty on MPAs to review all mineral sites little substantial progress has been made. The legislation that came into force in 1985 has not proved very effective and few MPAs have issued modification, suspension, revocation or prohibition orders. Such orders could improve operation of some sites or, in the case of revocation or prohibition orders, prevent further environmental damage to a site or its surroundings. Each MPA has its reasons for not undertaking a review: ranging from lack of staff, fears over compensation implications at a time when budgets are constrained, other priorities such as preparation of minerals and waste local plans (another statutory function), through to minerals not being a big issue in the county! Other MPAs prefer to obtain their improvements by negotiation rather than through formal procedures. The complex order making and compensation procedures, described in Chapter 3, are blamed but some counter this by saying that such comments arise from a lack of familiarity with the procedures, they say it takes time to understand but it can be done. Another reason for inactivity in the past, but fundamental to the success of any new proposals, is the lack and therefore the need for a deadline for action. Mineral operators complain that the 1981 Act mechanism might have

worked if only MPAs had been forced to undertake the review by a particular date. They feel that if members' attention was drawn to the importance and urgency of this task then the requisite resources, both staffing and financial, would be found from somewhere and at least then, even if other problems occur later, the initial momentum would be there. Various solutions have been proposed but none appears likely to be viable on its own. A combination of options is needed to cope with the complexity of mineral extraction processes.

Option 1 - Time Limits

In terms of the options proposed by the DoE, it is apparent that there does need to be a change to the time limit on planning permissions because it is generally agreed that 60 years is too long. What shorter time limit should be given instead is harder to decide. Ten year time limits seem impractical both because of the repercussions they would have on company investment and the impact on the forward planning of mineral supply in mineral local plans. It would also increase the workload for both MPAs and operators as each tenth year results in a group of permissions undergoing a fresh application, consultation and decision process. Such a concentration of work might mean that MPAs cannot consider the restoration schemes in sufficient detail to identify future problems. Alternatively operators may only submit simplified schemes because they have no guarantee that the site will obtain an extension to its life and so they do not want to make an excessive investment in a complicated scheme. Both of these scenarios may potentially result in a lower standard of restoration.

Option 2 - Extension to the IDO Procedures

The 1991 IDO provisions will soon illustrate what may be achieved through the submission of revised schemes of working and restoration but it is vital that the procedures are not simply extended to cover all planning permissions. This is because the 1991 legislation was introduced quickly and the schemes for working and restoration are only now beginning to be submitted, so it is not yet clear whether there are flaws in the system. Hence the request by some organisations to wait a few more years before radically changing the 1981 review powers, just in case the IDO solution is as bad or even worse than that set out in the 1981 Act. As the IDO procedures have still to be fully applied there is every reason for counselling caution over the suggestion that the procedures should or could be applied to all permissions.

Option 3 - Revised Compensation Regime

The current mechanism for assessing compensation is complicated but some say that this is solely because authorities and operators have not studied it enough to familiarise themselves with the details. However the majority of people recognise that simpler instructions and calculations would be beneficial both in speeding up the exercise and reducing the scope for legal arguments over the intricacies of the phrasing of the Act and regulations. There is little agreement on how to achieve the simplification: operators wish to minimise their losses and MPAs their costs, whilst some environmental groups feel that no compensation should be payable under any circumstances or only for specific cases. There was general agreement that payments should be made from a national fund rather than from the budgets of individual MPAs, if the payments were requested because of restrictions imposed by national policies, such as the protection of sites of special landscape, wildlife or archaeological importance or as a consequence of the NRA wishing to ensure groundwater protection. However, will the Treasury agree to making funds available from the central Exchequer because otherwise the regime cannot be changed.

Option 4 - Phased Review

The proposal for phased implementation of the review process was welcomed, but as with the other DoE options, it was generally agreed that phasing could not operate on its own, changes to other sections of the powers were required. A deadline for the initial review is essential to ensure that some action is taken regardless of whether the review is undertaken by MPAs or operating and restoration schemes are prepared by mineral operators. It might mean that MPAs Members can be persuaded to make sufficient resources available to do the review properly. Without such financial backing problems may arise later, that could be more costly for the authority. For operators it should clarify when action will be taken, rather then the present 'this year, next year, sometime...' However because every MPA a different number of consents in any decade or other time span (with different minerals and associated problems), and each operator has a different number of sites, sometimes with different minerals, but frequently with different conditions, it is virtually impossible to devise a programme for phasing the reviews that will suit everyone. The compromise based on the amalgamated views of all interested parties appears to be to undertake an initial review within 5 years, followed by further reviews every 10 years based upon the date of the original consent. This would hopefully mean that the sites do not come forward for review in unmanageable numbers.

Other Issues

It is essential that any review proposed by the government should pay realistic attention to the financial, staffing and resource implications for both the industry and planning authorities. Additional resources must be forthcoming to ensure that permissions are properly assessed and updated. MPAs must be encouraged to implement any new procedures if they are introduced during the current period of local government reorganisation. Likewise the government must ensure that whatever unitary authorities emerge afterwards are competent to be mineral planning authorities, and have staff with adequate expertise and resources to make informed decisions on mineral issues. Otherwise poor permissions might be issued due to for example, lack of knowledge of mineral issues or the time or resources to consider application details fully. If individual unitary authorities cannot manage, then an alternative mechanism will be required. Either the new MPAs could agree to pool their resources as some metropolitan authorities already do, or an organisation such as a regional minerals unit will be needed to provide advice to local authorities or even take the decisions. If decisions are made by members who are unfamiliar with mineral issues they will be in greater need of experienced advisors.

Case Study

The study has made a start at collating information that will be needed by the county to undertake a review of mineral sites and their permissions. An extension of the case study process to other counties might clarify the scale of the issue in the country, as some say that there is no need for action. Likewise a study of individual operators would illustrate the effects on them of revised procedures, such as requiring them to submit revised schemes of working and restoration. Together these might show what timings of the phased review would be preferable to avoid overloading MPAs and mineral operators. It would be interesting to investigate how much staff and financial resources the review process actually entails, (though naturally this will vary with the number of sites and problems in a county). As in 1992, Goodman reported that the review by Kent County Council had taken twice as long as anticipated to complete due to loss of staff and increases in other applications to process. He said that both the actual review and serving the 9 prohibition orders had been very time consuming for staff.

Whether this is an accurate reflection of the work involved in the review will become more apparent as more councils complete their reviews. It might also demonstrate a need for greater DoE help. However it might provoke even more arguments about the value of making

environmental improvements when related to the cost to the community of making the improvements. This is particularly difficult as landscape or wildlife value or the 'peace of the countryside' are hard to quantify in financial terms. Another issue that is linked to the subject of planning control over mineral working is whether coal sites should be brought under the same powers as the rest of the mineral industry. This is a controversial aspect that is capable of being a separate study on its own but may be resolved if, or when the industry is privatised.

Recommendations for the Future

To the DoE

1. Introduce clear legislation and regulations with up-to-date guidance.

2. Introduce a deadline of 5 years for the completion of an initial review, starting at the date of the enactment of the new legislation. (This should allow MPAs and mineral operators time to clarify the problem sites.)

3. Reduce the time limit on permissions to a maximum of 20 years, for those sites currently in receipt of a permission with a 60 year time limit. (This should retain the viability of the long-term sites whilst still giving scope to review.)

4. Require operators to submit the schemes of working and restoration and consider whether these should including an environmental assessment for a particular size or scale of development. This would be done on a phased basis starting in year x with the groupings decided following further research on the number of consents and sites in each time span. (Tables 3 and 4 illustrate a simple assessment of Bedfordshire.)

5. Modify the compensation regime to make the calculations of the compensation threshold simpler and clarify the definition of terms such as 'to a substantial extent'. (If definitions are not given by the DoE then the issue will be decided by the High Court, not necessarily in the way the legislators anticipated.)

6. Introduce a national fund to supply compensation payments where the site is designated an SSSI or other site of national importance, or where restrictions on the depth of working are due to the intervention of the NRA to protect groundwater.

7. Require further reviews at 10 year intervals using a rolling schedule related to the date of the original consents.

8. Provide adequate financial and staffing resources to enable MPAs to process applications accurately; monitor and enforce planning conditions and undertake their part of the review procedures.

To MPAs

1. Urge the Government to consider the impact of local government re-organisation on MPAs and ensure that the new authorities have sufficient resources and expert staff to undertake the reviews as well as other mineral planning functions.

2. Press for action from the DoE to revise the review process: especially time limits for consents and the compensation regime. They should introduce a phased implementation for the review and a national fund for payment of compensation claims on sites of national importance.

3. Members should ensure that sufficient expert staff, and financial resources are available to undertake the review process, as well as monitoring and enforcement of conditions.

4. Commence and complete the review.

5. Specify in their mineral and waste local plans the environmental issues that will be considered in the county. (It should be sufficient to identify the issues that will be considered in applications, as this should indicate to the industry and other interested parties what may be at issue during the review process.)

To the Industry

1. Press for action from the DoE on revising the review process, (as MPAs above).

2. Urge the Government to consider the impact of local government re-organisation on MPAs and ensure that the new authorities have sufficient resources and expert staff to undertake the reviews.

3. They should ensure that they employ expert staff, allocate sufficient resources to undertake their part of the review process, and press for MPAs to do likewise.

4. Ensure that they adhere to the conditions of planning permissions and inform the MPA as soon as possible of any difficulties with the requirements so that action can be discussed.

To the Public and Amenity Groups

1. Urge the Government to consider the impact of local government re-organisation on MPAs and ensure that the new authorities have sufficient resources and expert staff to undertake the reviews.

2. Press for action from the DoE to revise the review process: especially time limits for consents and the compensation regime. They should introduce a phased implementation for the review and a national fund for payment of compensation claims on sites of national importance.

3. Lobby MPA Members to ensure that sufficient expert staff, and financial resources are available to undertake the review process, as well as monitoring and enforcement of conditions.

4. Be realistic in their aspirations and acknowledge the economic importance of the mineral industry.

These measures should be supplemented by:

1. Relevant research into best practices along the lines of BATNEEC (Best available technology not entailing excessive cost). This research should be widely publicised in a suitable format to enable operators and MPAs to rapidly incorporate the recommendations into their activities.

2. Publication and circulation, following research, of a set of sample planning conditions and reasons so that everyone has a reference point to check their phrasing and requirements. This should be regularly updated to keep up with best practice. (The text could be derived from the collection of examples of conditions and reasons from

throughout the country using consultants appointed and paid for by the DoE.) Such a guide would help standardise the basic text for phrases so that vital words are not omitted, whilst leaving freedom to cope with local needs.

3. The development of codes of best practice by operators should be encouraged to promote internal good operations. Negotiation should continue be used, where appropriate, to facilitate good relations between operators, MPAs and the public but this should not be allowed to excuse non-compliance with legal planning conditions.

Finally, whatever mechanism is chosen it is paramount that the Government ensures that the process can be implemented by the unitary authorities following local government reorganisation, otherwise poor control of mineral workings may continue or even become worse. This would cause a loss of faith in MPAs by the industry, environmental groups and the general public, so it is essential that clear procedures are introduced and used to their fullest extent.

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9. Appendices

Appendix 1 - Notice to Lorry Drivers

August, 1990

TO ALL: COMPANY DRIVERS
OWNER DRIVERS
HIRED HAULIERS
REGULAR COLLECT CUSTOMERS

Dear

Following recent discussion with the Local Authorities and residents in the vicinity of ***** Quarry, it has become apparent that in the interests of safety and the prevention of nuisance "transport instructions" are required. It is extremely important that we safeguard our existing and future operations by keeping the impact of our vehicular traffic on local residents to a minimum.

We have drawn up a list of rules to be observed by all vehicles using our ***** Quarry and would ask you please to ensure that all of your drivers are informed of them and conform.

Our action on this matter will be closely monitored by ***** personnel and by the **** and ****** residents and we will not hesitate in refusing to supply sand from the site to any drivers failing to comply with these requirements.

We are sure you will understand the sensitivity of the matter and appreciate your co-operation.

.....

***** QUARRY - TRANSPORT STANDING INSTRUCTIONS

1. Loading at ***** will not in any circumstances commence before 7.00 am and drivers are to avoid arriving at the site or parking up in the vicinity of the quarry before that time.
2. Heavy goods vehicles are to avoid travelling to and from the quarry in groups or in convoy.
3. All heavy goods vehicles are to observe the statutory speed limits travelling through **** and *****.
4. Drivers are to exercise extreme caution at all times and especially when passing through the villages of **** and *****.
5. Drivers of HGV's using routes to and from the ***** Quarry should pay due regard to the narrow roads and afford consideration to all other road users.

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Appendix 2 - List of Consultees for Letter Survey

Minerals Industry Interests

British Aggregates Construction Materials Industries

British Ball Clay Producers Federation

British Calcium Carbonates Federation

British Cement Association British Ceramic Confederation

British Ceramic Confederation

British Drilling Association

British Flourspar Development and Research Association

British Gas Corporation

British Nuclear Fuels Ltd

British Steel Corporation

CBI Minerals Committee

China Clay Association

China Clay Council

Coalfield Communities Campaign

Confederation of UK Coal Producers

Construction Industry Research & Information Association

Cornish Chamber of Mines

Federation of Civil Engineering Contractors

Federation of Small Mines of Great Britain

Institute of Mining and Metallurgy

Institute of Mining Engineers

Institute of Quarrying

Institution of Civil Engineers

Institution of Mining Engineers

Minerals Industry Research Organisation

Mining Association of the UK

National Association of Licensed Opencast Coal Operators

National Federation of Clay Industries

National House Building Council

Peat Producers Association

Sand and Gravel Association

Silica and Moulding Sands Association

The Brick Development Association

The Stone Federation

UK On-Shore Operators Group

Local Authority Interests

Association of County Councils

Association of District Councils

Association of London Authorities

Association of Metropolitan Authorities

Lake District Special Planning Board

London Boroughs Association

London Planning Advisory Committee

National Association of Local Councils

National Planning Forum

Peak Park Joint Planning Board

SERPLAN

Other Interests

Association of Drainage Authorities

British Geological Survey

Byways and Bridleways Trust

Civic Trust

Council for Environmental Conservation

Council for National Parks

Council for the Protection of Rural England

Country Landowners Association

Countryside Commission

English Heritage

English Nature

Friends of the Earth

Institution of Environmental Health Officers

Geological Society

MAFF

National Farmers Union

National Rivers Authority

Ramblers Association

Royal Institute of British Architects

Royal Institution of Chartered Surveyors

Royal Society for Nature Conservation

Royal Society for the Protection of Birds

The Landscape Institute

The Lands Tribunal

The Law Society

The National Trust

Town and Country Planning Association

Water Authority Association

Water Companies Association

57, Warwick Avenue
Bedford
MK40 2EG

9 February 1993

Dear

Survey for M.Phil Thesis: 'Review of the Provisions of Mineral Planning Legislation: the Problem of Updating Old Permissions

I am currently studying for an M.Phil (Town Planning) at University College London and as part of the course I have to submit a thesis. I have chosen to 'Review the Provisions of Mineral Planning Legislation: the Problem of Updating Old Permissions'

My aim is to examine whether the current measures available under the Review Powers of the 1981 Minerals Act are sufficient to ensure that planning conditions and hence quarry operations are brought up to today's environmental standards, or whether they need revising, as is currently being considered by the Government in its consultation paper. I also intend to investigate whether there are any possibilities not already being considered.

As I understand that you were a consultee for the DoE paper, dated 2 March 1992, would it be possible to have a copy of your response in order to help me with my research. I would also appreciate any observations on the following issues: whether there should be a) some variation in the regulations to adapt to special methods or plant used to extract different minerals or b) adjustments for need for rare minerals such as fullers earth.

I would be grateful for your assistance in this matter and would appreciate a response by 19 February 1993.

Your sincerely,

Miss Rachel Pillar