# Minerals Planning Guidance 6: Guidelines for aggregates provision in England

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## Introduction

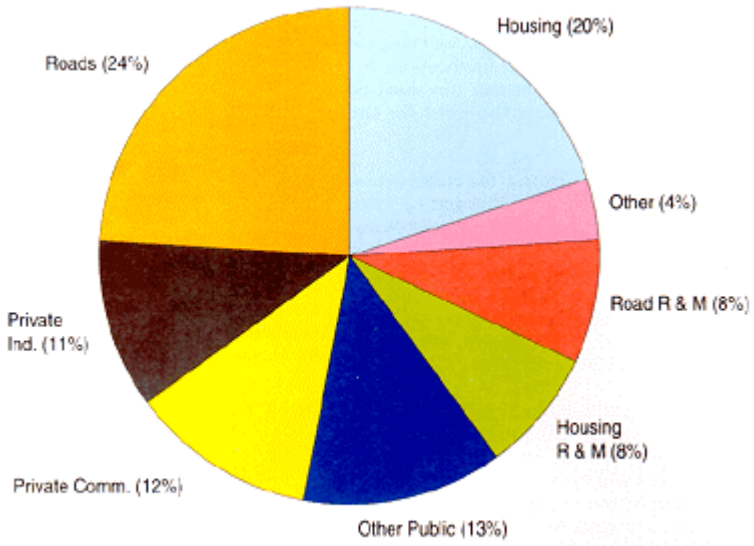
This Guidance Note provides advice to mineral planning authorities and the minerals industry on how to ensure that the construction industry receives an adequate and steady supply of material at the best balance, of social, environmental and economic cost, whilst ensuring that extraction and development are consistent with the principles of sustainable development. Development Plans provide the essential framework for planning decisions and it is important that mineral planning authorities should work towards ensuring there is complete coverage of Development Plans as soon as possible and by no later than the end of 1996. The Secretary of State attaches importance to the effective and speedy implementation of the policies contained in this Guidance Note. MPG 6 published in 1989 is hereby cancelled in relation to England.

### *Background*

**1** Construction aggregate materials principally consist of primary aggregates - sand and gravel and crushed rock. In addition a number of secondary and recycled materials are used for construction purposes. These include mineral wastes such as china clay sand, colliery spoil and slate waste; other industrial wastes including pulverised fuel ash (PFA) and blast furnace slag, and recycled materials such as demolition arisings (eg. crushed concrete) and asphalt road planings.

**2** Aggregates are used in a wide variety of projects required by the community to support economic growth and maintain the standard of living. Roads, housing, schools and commercial and industrial buildings all depend to varying degrees on the supply of these materials. **Figure 1 below** illustrates the end uses of construction aggregates. It is important therefore that an adequate and steady supply of aggregates is available for the construction industry. But the working of aggregates has environmental implications for communities and landscapes and this must be carefully balanced against the need for the material.

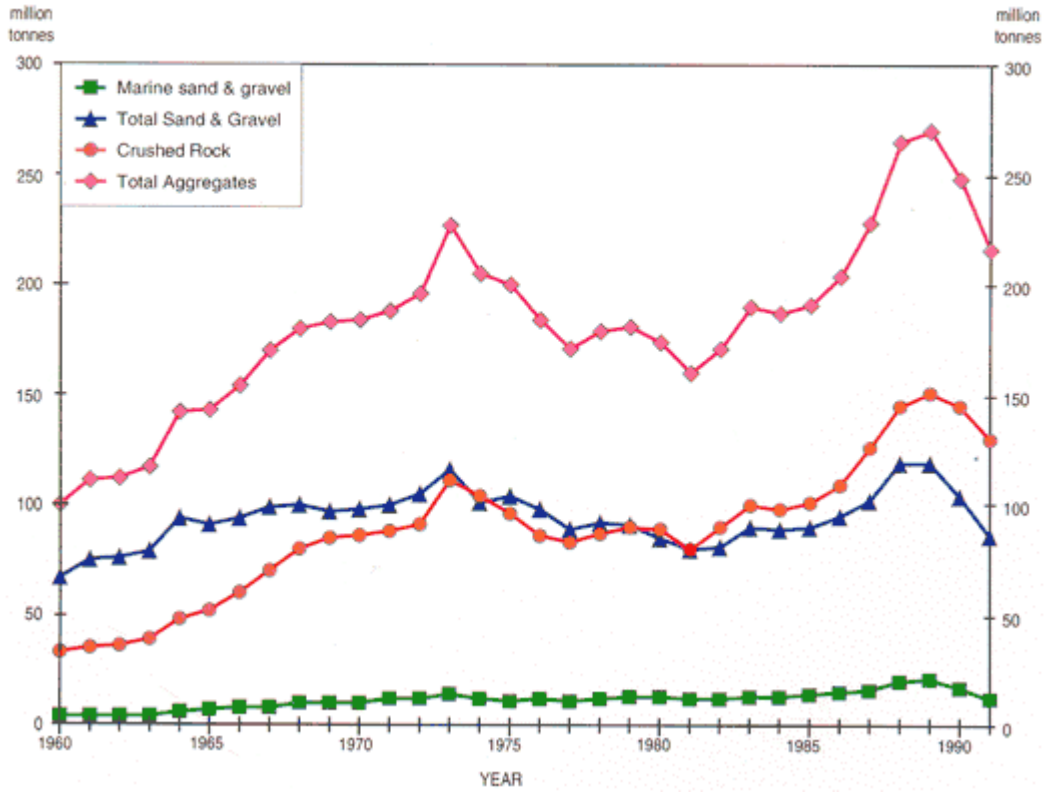
**Figure 1: End Use of Primary Aggregates**



*Source - Ecotec research project: Aggregates in Construction

**3** During the 1980s demand for construction aggregates increased by over 50% and by 1989 total annual consumption in England and Wales rose to about 300 million tonnes (mt). Since then consumption has declined and in 1991 England and Wales consumed an estimated 240mt of aggregates in construction (Figure 2 below). It is estimated however that demand will rise to between 330mt and 365mt by 2006.

**Figure 2: Primary Aggregates Consumption, England and Wales 1960 - 1991**




**4** Because mineral deposits suitable for use as aggregates are not evenly distributed there are often imbalances between where the demand for aggregates arises and the location of the resources which can meet those demands. This means that considerable amounts have to be transported from where they are found to where they are used. The planning policies in one area may therefore need to reflect the demands of neighbouring areas or of areas even further away. Even where suitable resources are found in apparent abundance, their extraction may be constrained by consideration of such matters as landscape, amenity, nature conservation, agriculture, cultural heritage and water interests. Figure 3 and Figure 4 illustrate the movement of primary aggregates in England and Wales in 1989.

**5** Because of the geographical imbalances between supply and demand, an important feature of aggregates planning since the early 1970s has been the work of the Regional Aggregates Working Parties (RAWPs) in the preparation of guidelines for the provision of aggregates in England and Wales. The RAWPs draw their membership from the Mineral Planning Authorities (MPAs), the minerals industry and central Government. They provide valuable technical information and advice. A National Coordinating Group (NCG) guides the work of the RAWPs. This is chaired by the Department of the Environment (DoE), and includes senior representatives of industry and local government (Annex D).

**6** The preparation of this Guidance Note and the Regional Guidelines at Annex A has been informed by the advice provided by the RAWPs in the form of their Regional Commentaries which provided a technical analysis of how supply and demand might be met over the period of these guidelines to 2006. The Commentaries were published in 1992.

**7** The Guidelines have also been informed by long term projections of demand for primary aggregates. These provide an indication of the long term trend in demand but they do not represent Government targets for aggregates production. The Guidelines are not based on the projections alone matters. Annex C explains the methodology used to prepare the projections.

**8** The purpose of this Guidance Note and the Regional Guidelines is to provide advice to MPAs and the minerals industry on the provision for aggregates that needs to be made in development plans over the period to 2006. They supplement the general policy guidance in Mineral Planning Guidance Note 1 -"General Considerations and the Development Plan System".

## Policy and Objectives

**9** The Government wishes to see indigenous mineral resources developed within its broad objectives of encouraging competition, promoting economic growth, and assisting the creation and maintenance of employment. The Government believes that for the economic well being of the country it is essential that the construction industry continues to receive an adequate and steady supply of aggregates so that it can meet the needs of the community and foster economic growth.

**10** At the same time, the Government recognises that aggregates extraction can have a significant environmental impact and often takes place in areas of attractive countryside. The Government White Paper "This Common Inheritance"(Cmmd 1200 (see other publications 1))'stresses the importance of combining economic growth with care for the environment in order to attain sustainable development.

**11** The objectives of sustainable development for minerals planning are:

i. to conserve minerals as far as possible, whilst ensuring an adequate supply to meet the needs of society for minerals;

ii. to minimise production of waste and to encourage efficient use of materials, including appropriate use of high quality materials, and recycling of wastes;

iii. to encourage sensitive working practices during minerals extraction and to preserve or enhance the overall quality of the environment once extraction has ceased; and

iv. to protect areas of designated landscape or nature conservation from development, other than in exceptional circumstances where it has been demonstrated that development is in the public interest.

## Aims

**12** The aims of this Guidance Note are:

i. to provide guidance on how an adequate and steady supply of material to the construction industry, at a national, regional and local level, may be maintained at the best balance of social, environmental and economic cost, through full consideration of all resources and the principles of sustainable development;

ii. to provide a clear framework within which MPAs can develop aggregates policies in development plans and carry out development control;

iii. to serve as a national framework for the Secretary of State:

a. when formulating Regional and Strategic Planning Guidance in England;

b. when exercising his functions under the Town and Country Planning Act 1990, as amended by the Planning and Compensation Act 1991 in respect of development plans; and

c. when considering individual planning applications on appeal and any applications called in for determination;

iv. to help reduce the number of planning appeals; and

v. to provide the basis for informed consideration at national, regional and local level of the implications for aggregates working of other policies.

## National Overview

### *Consumption*

**13** To provide an understanding of the pattern of regional and national consumption of aggregates, surveys are undertaken every 4 years in England and Wales. These are collated by the DoE and the results of the 1989 survey are summarised in Table 1, Table 2 and Table 3. The results of the next survey will be published in 1994.

**14** Regional and national consumption of primary aggregates showed a consistent increase between 1985 and 1989 with an overall increase in England and Wales of 42%. Since 1989 aggregates sales have fallen back to 1986 levels of around 200 million tonnes per annum (mtpa). In regional terms the proportions of national primary aggregates consumption have remained consistent between survey years. South East England continues to be the major aggregates user accounting for over 27% of primary aggregates consumption. Two other regions together account for more than 20% of national consumption: East Midlands (12%) and South West (13%). Wales as a whole accounts for 8% of total primary aggregates consumption, the same proportion as in 1985.

**15** The surveys show that over the 12 year period from 1977 there has been a consistent proportional shift from sand and gravel to crushed rock. This is reflected in a change in the balance of supply patterns between 1985 and 1989 in all regions except the East Midlands. Proportions of the National primary aggregate consumption in 1989 were around 44% for sand and gravel and 56% for crushed rock, which is now the largest single source of primary aggregates used in England and Wales.

**16** In most regions land won sand and gravel and crushed rock are the dominant sources of aggregates. They are of similar importance in East and West Midlands and in England as a whole. In the South East and East Anglia, sand and gravel is the dominant source of aggregates supply, over 70% of consumption. However land won sources of sand and gravel supply only 50% of the South East consumption, 21% being marine dredged. Crushed rock dominates supply in the other six regions of England and in Wales. South Wales has the highest proportion of crushed rock consumption (82%) and the lowest proportion of land won sand and gravel consumption (3%) in England and Wales.

**17** Marine dredged sand and gravel was used in all regions except East and West Midlands in 1989. However 73% of the material landed in England and Wales was used in the South East. It is also important in South Wales, which used 10% of national landings to provide 14% of the region's primary aggregates consumption.

**18** Virtually all primary aggregates supply in England and Wales comes from internal sources. However there are large supply/demand mismatches between regions. The North West relies on imports from other regions to make up 55% of its consumption, and the South East and East Anglia import 25% and 12% respectively of their primary aggregate requirements. North Wales, the East Midlands and the South West are significant exporters, producing 74%, 56% and 32% respectively more than they consume.

**19** Recorded production of secondary aggregates (waste and recycled material) in 1989 was 4% of total aggregates consumption in England and Wales. However this is known to be an incomplete picture and research (see other publications 2) indicates that secondary aggregates account for about 10% of national aggregates consumption.

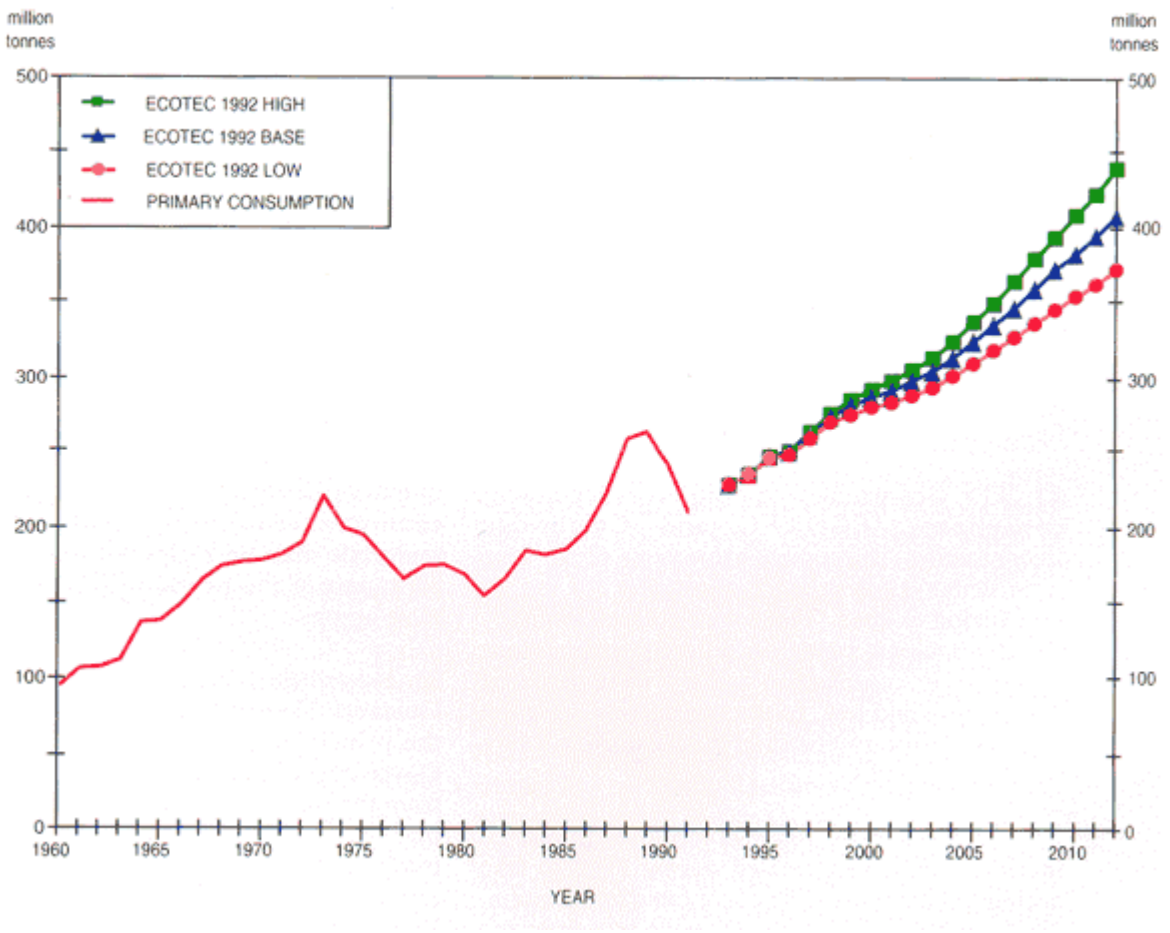
### *Future demand for aggregates*

**20** It has been a long standing practice for the Government to commission long term projections of primary aggregates demand. An understanding of the long term trend in demand for aggregates assists with decisions needed about future levels of supply. There will be significant fluctuations around the overall trend and it is necessary to subject the projections to regular reviews to ensure the Regional Guidelines remain up to date. They cannot be used to provide precise figures for a single year or small group of years.

**21** The Government appointed independent consultants, ECOTEC and Cambridge Econometrics, to produce projections of the long term demand for primary aggregates for the 20 year period to 2011. These are for Great Britain (see Endnote). Three scenarios, based on different assumptions in respect of construction activity, were prepared - high, base and low. In the consultants' view the "base" scenario represented the most likely future trend in demand.

**22** The consultants' findings were first published in 1991. They were revised during 1992 to take account of the most recent economic information. These showed a reduction of about 10% from the previous estimates and now indicate that primary aggregates demand in England and Wales could be between 370 and 440 mtpa by 2011 (**Figure 5 below**). This indicates that the approximate total demand for primary aggregates in England could be between 5,500 and 5,900mt for the 20 years to 2011. In addition, for the purpose of the long term projection of demand a further 10% has been added for secondary aggregates which reflects recent levels of use on the basis of recent proportions of consumption (see other publications 3), this implies an overall demand for construction aggregates in England in the range of 6,000 and 6,500mt over the 20 year period and 4,200-4,500mt over the 15 year period to 2006. These ranges have been used as a starting point in the preparation of the Guidelines.

Figure 5: Consumption and Projections, England and Wales Primary Aggregates




***Future supply of aggregates***

**23** At present it is estimated that the traditional sources of supply in England and Wales (sand and gravel pits, quarries producing crushed rock) have existing levels of consented reserves totalling some 6,400mt, of which over 4,000mt could be worked in the next 15/20 years. However, whilst the aggregate resource base is not finite in any geological sense the Government takes the view that future sources of aggregates are likely to become increasingly constrained in terms of the areas of the country where they can be acceptably worked.

**24** The Government has therefore considered a number of alternative supply sources. These include marine dredged aggregates, coastal superquarries and secondary and recycled aggregates. And it has considered the views which have been expressed about the merits and availability of the alternative sources of supply. Whilst these alternative sources of supply may offer some environmental advantages, the Government recognises that they too have environmental implications which need to be considered. Furthermore for technical and economic reasons the availability of such materials may be restricted particularly in the early part of the period to which this Guidance Note applies.

**25** Nevertheless, in order to meet the aims of this Guidance Note in a way which is consistent with the principles of sustainable development, the Government has concluded that a gradual change from the present supply approach is called for, so that over time less reliance will be placed on the traditional land won sources. The Government recognises that over the period of this Guidance Note a substantial proportion of aggregates demand will need to be met from the traditional sources. But alternatives are expected to make an increasing contribution to supply. So that options for future supply from alternative sources are not foreclosed by long term land won provision, the

Government has concluded that provision should be made now for the period to 2006 only. In the light of this assessment the Government has concluded that the provision to be made is as set out in **Table 4**.

**Table 4**

| **Source** | **1992-2006** | |
|---|---|---|
| **Guideline** | **Supply** (Billion Tonnes) | **Percentage of Total** |
| Land won provision in England | 3.11 | 73 |
| **Assumption for Other Sources** | | |
| Marine dredged sand and gravel | 0.32 | 7 |
| Imports from outside England and Wales | 0.16 | 4 |
| Imports from Wales | 0.16 | 4 |
| Secondary and Recycled | 0.53 | 12 |
| **Total** | 4.28 | 100 |

**26** It is important to note that future levels of demand are inevitably uncertain and the balance between land won provision and other sources of supply cannot be predicted with any certainty, neither can the balance between the various other sources such as marine dredged sand and gravel, secondary and recycled material imports from Wales, and imports from outside England and Wales. It is also important to note that the planning system provides flexibility and scope for the market to respond. Thus if circumstances change, requiring a change in assumptions, the provision to be actually made can be adjusted. Consequently the figures contained in these Guidelines are not targets but are indicative figures for the purposes of preparing development plans and the administration of development control. Nevertheless a broad objective of this Guidance Note is to reduce the proportion of supply from primary land won sources in England from 83% to 74% by 2001 and 68% by 2006.

**27** The Regional Guidelines at Annex A reflect this approach and are an integral part of the mineral planning guidance on aggregates.

### *Efficiency of use*

**28** In accordance with the Government's commitment to a sustainable approach to aggregates supply it is necessary to use all construction aggregate materials efficiently. Unnecessary wastage of mineral resources should be avoided as such wastage can increase the volume of extraction and overall level of environmental impact. The aim should therefore be for the best use of the total aggregates resource by minimising wastage and avoiding the use of higher quality materials where lower grade materials would suffice. Ways in which the demand for primary materials can be minimised also need to be considered.

**29** Research carried out for the Government ("Efficient Use of Aggregates and Bulk Construction Material: the `Role of Specifications") (see other publications 4) has identified that while specifications need to accommodate an adequate margin of safety to ensure that unsuitable materials are not used and that structures are fit for purpose, in some cases these margins appear to be excessive. Examples of such over specification were found in most types of aggregates use but the most prevalent were for fill, hardcore and capping layers in road construction where the Department for Transport (DoT) specification was exceeded, or where better quality material was supplied more cheaply where lesser quality would have been sufficient. There is also often reluctance on the part of specifiers, clients and contractors' to use innovative design and materials, including some lower grade and secondary ones, because of a lack of incentive to bear risks. The research also found that the relatively low price of primary aggregates, including those of high grade, discourages the most efficient use of all available resources. There is also wastage of bulk material during construction. The Building Research Establishment also recommended the establishment of an Aggregates Efficiency Office to promote the more efficient use of aggregates resources and promote the use of secondary and recycled materials.

**30** The Government believes that producers, specifiers and consumers of aggregates all have a role to play in achieving a more efficient use of all aggregates resources. The Government intends to encourage practical measures to promote greater efficiency of use. It also proposes to initiate an action research project to set up an Advisory Service for a period of up to 3 years. The function of this research will be to provide practical advice on specifications and advise on measures to achieve the greater use of secondary and recycled materials. This will also address emerging European Standards to ensure that these provide the optimum opportunity for the use of all available material. The remit will also extend to examining how public sector projects can make more use of waste and recycled materials in construction. The Government will seek to involve a wide range of participants, including the aggregates producers, specifiers and the construction industry during the course of this study.

**31** The Government also looks to both the aggregates and construction industries to identify ways of minimising waste and achieving greater efficiency. Local authorities should also examine how they can contribute to greater efficiency of use in construction contracts for which they are responsible.

***Secondary aggregates and recycled materials***

**32** In 1989 it was estimated that only 10% of aggregates used in construction came from secondary and recycled materials. But research has shown that these materials could contribute further to the overall supply of aggregates. Annex E provides a brief summary of these materials and indicates their broad locations. More information can be found in the report "Occurrence and Utilisation of Mineral and Construction Wastes" (see other publications 2), and in a report shortly to be published on demolition and construction wastes in the UK. These reports identify various obstacles which currently reduce the ability of secondary and recycled materials to replace primary aggregates. However, they suggest that it will not always be economically or technically feasible to use all the stockpiles and arisings of these materials; and the working of these materials also has environmental implications which need to be carefully addressed.

**33** But in keeping with the Government's commitment to a sustainable approach to the supply of aggregates it is in the national interest that aggregates, and products manufactured from aggregates, should be recycled wherever possible. It is also important that where they are technically, economically and environmentally acceptable as substitutes for primary materials, mineral and construction wastes should be used. This can afford considerable savings of raw materials and can

reduce the areas worked for new materials as well as those used for the dumping of wastes. Government policy therefore is to encourage the use of secondary and recycled materials in construction and it is committed to increasing significantly the level of use.

**34** At present the largest use of waste materials is for bulk fill. DoE Circular 20/87 sets out Government policy on the use of alternative materials for road fill and asks planning authorities to identify alternative potential sources of suitable fill for trunk road schemes. Highway contractors should discuss with planning authorities at an early stage whether there are likely to be environmental constraints in the use of locally excavated primary fill materials, and to consider the use of waste materials where these are competitive. Local Highway Authorities also need to make greater use of waste and recycled materials in their road construction projects to help reduce the demand for primary aggregates. The Government intends to review the effectiveness of these arrangements in a review of Circular 20/87.

**35** The Government has supported extensive research into ways of making more use of these materials and the DoT have been active in this. DoT Specifications (see other publications 5) permit the use of certain waste materials in roads construction, providing that performance requirements are met. Up to 10% recycled bituminous material can be used in any bituminous layer. Crushed concrete from demolition, slags, PFA and other wastes can also be used instead of natural aggregates in any pavement layer providing they meet the performance requirements.

**36** Considerable research is in progress but the DoE and DoT intend to undertake a joint research project on how to increase the use of these materials in roads which should lead to the widening of opportunities in future. This further work will build on previous research for DoE and DoT on waste materials arisings and the opportunities for re-use/recycling. It will ascertain current levels of use of these materials in roads and the key factors which influence whether or not they are used in practice, at both national and local authority level. Recommendations will be made to Government on policy initiatives which could be adopted to increase use. The emphasis will be on practical solutions for Government to implement.

**37** The measures taken by the Government under the Environmental Protection Act 1990 will mean that as landfill becomes more expensive it will become more economic to recycle and worthwhile to develop improved technologies for recycling. Such changes will, over time, have an impact on the volumes of new aggregates required.

**38** To assist with this, the Government believes that planning authorities will need to take a more positive approach. They should include policies in their development plans which aim to facilitate the use of secondary and waste materials where this is environmentally and economically acceptable. They should also include policies for the control of recycling operations and identification of sources of raw waste materials on which the construction industry can draw. MPAs should liaise with Waste Regulation Authorities with regard to their policies on recycling of wastes for use as aggregates. Planning authorities should also recognise that provision for the siting of long term or semi-permanent recycling plants may be needed. To accommodate such facilities, sites are likely to be a minimum of 4-6 hectares (ha) in size, to allow feedstock and products to be adequately separated.

**39** Planning authorities should also encourage the recycling of demolition and construction wastes arising from demolition and redevelopment schemes. Planning authorities should consider how they might give advice and guidance to developers and others so that they are made aware of the benefits which can accrue from recycling waste materials.

**40** Some producers of primary aggregates are already involved in the production and use of secondary and recycled materials. The Government welcomes this but considers that the primary aggregates industry should seek further opportunities in this area. It should also continue its efforts to ensure that quarry waste is used in the most effective way. The Secretary of State is therefore inviting the appropriate trade associations to advise him on the steps that should be taken to improve the use of these materials.

**41** The Government considers that the steps outlined above will over time lead to an increase in the use of secondary and recycled materials. It is important that progress is monitored and this Guidance Note therefore sets the following targets for the use of secondary/recycled material in England:

40mtpa by 2001;
55mtpa by 2006.

This is reflected in the Guidelines at Annex A. Progress towards this target will be reviewed as described in paragraph 106. An improved statistical base will be required for monitoring and arrangements will be put in place for this.

***Coastal superquarries***

**42** Coastal superquarries can be broadly defined as those being capable of producing at least 5 mtpa and with reserves of at least 150mt. One such quarry has already been established at Glensanda (Loch Linnhe) Scotland. As the Verney Report said as long ago as 1976 coastal superquarries have a number of potential advantages in relation to traditional land won sources.

**43** Research (see other publications 6) undertaken for the Government indicates that sufficient rock with suitable qualities exists in a number of remote coastal locations in North West Europe which could contribute to the aggregates requirements of south-east England and possibly other regions. Geological opportunities for the establishment of coastal superquarries exist in Norway and Scotland and possibly in Northern Spain. The research also indicates that port facilities for the importation of this material into the South East region could be achieved at various places along the Thames Estuary. But substantial wharf and port development would be required to accommodate significant volumes of material.

**44** The Government believes that subject to tests of environmental acceptability an increasing level of supply can be obtained from coastal superquarries during the period covered by this Guidance Note. It recognises that the cost and long lead times needed before such quarries can be brought on stream mean that it is difficult to quantify the extent of this contribution which, in any event, will be determined by the market. It is unlikely, however, that the potential sources will contribute greatly to the demand in the first 10 years of these Guidelines. Initially the region most likely to use this source is South East England.

**45** Within Great Britain only Scotland may offer potential suitable locations for the development of coastal superquarries. Individual proposals for extraction will therefore need to be considered in line with guidance to be issued by the Scottish Office.

**46** The facilities needed for the unloading, processing and onward shipment of large volumes of imported material will need to be the subject of a very thorough examination. To accommodate such facilities, sites are likely to cover a minimum of 5ha but are more likely to cover 8ha or more; they may need to handle an annual throughput of 3.5mt (see other publications 7). Such sites will need to provide adequate suitable storage space and it is likely they will need to have, or be

adjacent to, water access which can accommodate ships of between 35,000-70,000 dead-weight tonnage (dwt). Road access should be available, or capable of provision, which minimises the effect on environmentally sensitive land areas and communities, and with the shortest feasible distance to the primary road network. It will be important to ensure that facilities for onward transport of aggregates by rail and barge are provided where feasible and that these are used to the maximum economic extent.

**47** Research has identified a number of potential landing areas in the Thames Estuary. Not all will become available and other alternative sites may emerge. Local planning authorities should, jointly or individually, make every effort to identify and safeguard in their development plans suitable locations for these facilities. Proposals in the Thames Estuary will need to be consistent with the East Thames Corridor Initiative.

***Marine dredged aggregates***

**48** Marine dredged sand and gravel is an important source of aggregates for the construction industry. In 1989 it made up 18%(20mt) of the total consumption of sand and gravel in England and Wales. It is a particularly important source of supply for south-east England. This source reduces the pressure to work land of agricultural or environmental value and it can often be landed close to the point of demand. The Government is aware of the special need for marine aggregates in soft coastal defence schemes, where it is often impossible to make use of material from non-marine sources. Where appropriate sources of supply can be identified, marine aggregates will continue to contribute to maintaining supplies of aggregates for the construction industry.

**49** The present knowledge on the extent of the resource suggests that there is a finite supply of coarse aggregate suitable for current concrete specifications. But it is recognised that improvements in technology may mean that over the period of the Guidelines other areas of the sea bed, not currently considered as reserves, may be capable of exploitation for aggregate materials. However the Government acknowledges that dredging may cause disturbance to fisheries and damage to the marine environment, particularly where there is a concentration of licences. In areas of special sensitivity the industry will need to provide a very convincing case before a licence will be permitted. Proposals to dredge must therefore have full regard to the impact on the marine environment, sea fisheries and the potential effects on the coastline. There is a presumption against extraction unless the environmental and coastal impact issues are satisfactorily resolved. The dredging industry will find it helpful to produce a formal Environmental Statement to support most applications for a production licence. The Ministry of Agriculture Fisheries and Food (MAFF) has issued guidance (see other publications 8) on the content of environmental assessments for marine dredging.

**50** Licences to dredge marine aggregates are subject to the Government View procedure, operated by the DoE. This process allows for a careful evaluation of the environmental impact of dredging. Licences for extraction will not be granted by the Crown Estate, as owners of the resource, unless there has been a favourable Government View. The Government is currently undertaking a review of marine aggregate licensing arrangements and will be consulting on how regulatory controls should be applied in future. All applications will continue to be considered on their merits and will be subject to assessment against the following matters:

i. the contribution to aggregates supplies enabled by the application;

ii. the effect on coastal interests;

iii. the effect on commercial fisheries;

iv. the effect on marine ecosystems;

v. the effect on navigation;

vi. the effect on archaeological sites; and

vii. the effects on other sea users.

**51** To meet the policy of developing marine aggregates supplies local planning authorities where appropriate should, jointly or individually, make every effort to identify and safeguard, in their local plans, suitable locations for aggregates wharves. Efforts should also be made to retain or improve existing facilities where these are environmentally acceptable and serve, or have potential for, a useful function.

**Development Plans**

***General considerations***

**52** The planning system provides a means of examining and reconciling the conflicting claims on land of mineral working, agriculture, amenity, building and other forms of development. The system also affords a means of preventing unnecessary sterilisation of mineral resources. As part of the overall planning process, the policies for the provision of particular minerals such as those for aggregates must be balanced with other Government policies for such matters as the protection and conservation of the natural environment and the preservation of the national cultural heritage. The policies which are likely to be of most importance are mentioned below. It is necessary to refer to the source documents in each case for the full context within which these policies have been developed.

**53** Policies for the development and use of land, including the extraction of minerals, are set out in statutory development plans drawn up under the Town and Country Planning Act 1990, as amended by the Planning and Compensation Act 1991 . Section 54A introduces what is in effect a presumption in favour of proposals that are in accord with the development plan. Plans are not prescriptive. They are an important framework for sound effective development control, within which the market can bring about appropriate development. Plans must make adequate provision for development and at the same time take account of the need to protect the natural and built environment. Planning Policy Guidance Note 1 -"General Policy and Principles"(PPG1) sets down the principles that applications for development should be allowed, having regard to the development plan and all material considerations, unless the proposed development would cause demonstrable harm to interests of acknowledged importance.

**54** MPAs in non-metropolitan areas are required to draw up a structure plan and a minerals local plan. In London and metropolitan areas Unitary Development Plans (UDPs) should contain minerals policies. These plans should cover the whole of the local planning authority's area.

**55** PPG 1 gives guidance on how planning applications and appeals should be determined. Planning Policy Guidance Note 12 -"Development Plans and Regional Planning Guidance"(PPG 12), provide advice on the preparation of development plans. Mineral Planning Guidance Note 1 (MPG 1 )(currently under review) provides further advice on planning policy for both the MPAs and the minerals industry.

**56** The Government is committed to a development plan-led approach to the supply of minerals and attaches considerable importance to up to date plans. The Government therefore looks to MPAs to ensure that minerals local plans and UDPs are prepared as a matter of priority and kept up to date.

Plans should cover a minimum period of 10 years and should be reviewed every 5 years. The Government has asked local authorities to aim for full coverage of all kinds of development plan as soon as possible and no later than the end of 1996.

### *Aggregates provision policies in development plans*

**57** Structure Plans and Part 1 of UDPs set out the overall strategy for the development and use of land and should include land use policies on mineral working (including disposal of waste) and protection of mineral resources. In preparing structure plans MPAs are required to have regard to regional guidance issued by the Secretary of State.

**58** In preparing Mineral Local Plans and Part II of UDPs, local authorities should take into account the policies contained in this MPG. They should also make provision in their development plans for the appropriate local apportionment of the Regional Guidelines at Annex A for the local authority area in question. This will provide an indication of the likely demand but the apportionment figure should not be regarded as inflexible. The preparation of development plans provides an important opportunity to test the practicality and environmental acceptability at the local level of the Guidelines figure. The provision to be made in each plan will need to be justified not only in relation to this Guidance, but also in relation to all other relevant considerations affecting planning for the area. Taking all these factors into account the Secretary of State will, however, be prepared to intervene in development plans that do not pay due regard to the Regional Guidelines at Annex A.

**59** The provision for aggregates to be included in development plans can be made in several ways - by specific sites, preferred areas or areas of search. Areas of search offer a prudent approach to balancing the needs of the industry and local concerns about possible blight in respect of at least a proportion of the provision to be provided. Further advice is given in MPG1.

**60** To ensure that the areas identified in the development plan can be translated into workable reserves, MPAs should make reasonable efforts to satisfy themselves that the land is:

i. underlain by economically workable deposits of mineral; and

ii. likely to become available to the minerals industry within the plan period.

Where these points cannot be resolved satisfactorily, development plans should be sufficiently flexible to make allowance for any uncertainty.

**61** In order to assist in the delineation of these areas in development plans, the minerals industry are asked to co-operate with MPAs wherever possible by providing information about the location of mineral resources in their areas.

### *Landbanks*

**62** A landbank is a stock of planning permissions for the winning and working of minerals. Policies providing for the maintenance of landbanks are an important feature of minerals planning and should be included in development plans. Landbanks are necessary to enable the aggregates supply industry to respond speedily to fluctuations in demand. The period of the landbank reflects the lead times that may be involved in obtaining planning permission and bringing a site into full production.

**63** MPAs should therefore include policies in their development plans which provide for the maintenance of a landbank. Landbanks should be maintained for all aggregate minerals. In the case

of sand and gravel MPAs should aim to maintain a landbank for an appropriate local area, sufficient for at least 7 years extraction, unless exceptional circumstances prevail. A longer period may be appropriate for crushed rock. Paragraphs 81 and 82 provide advice on the calculation of landbanks. It is recognised that landbanks can only be maintained in practice if the industry come forward with planning applications in the right place at the right time.

**64** In preparing development plans MPAs should be able to demonstrate that sufficient resources have been identified or can be identified to ensure that the landbank can be maintained at the requisite level throughout the plan period (see advice in paragraphs 58-61 above). There should also be a commitment included in the plans to ensure that a landbank can be maintained at the end of the development plan period in line with the policy at paragraph 63 above. However it is not the intention of this Guidance Note that MPAs should, at the start of the plan period, make full provision for the maintenance of a landbank for the period beyond the plan period. Consequently it will not be necessary for resources to be identified at the time of plan preparation for this purpose. But MPAs will need to be able to demonstrate that such resources can be brought forward should this be necessary.

**65** MPA boundaries constitute a suitable area basis on which to base a landbank policy, but MPAs are given the flexibility to adopt either a sub-regional or a sub-county approach as appropriate. In the London boroughs and the metropolitan districts the administrative areas or the number of planning applications may be too small, and the presence of a workable reserve too limited, for the successful application of individual landbank policies. In such circumstances authorities should make every effort to agree a joint approach. Where mineral resources exist and continued or future extraction is likely to be practicable, UDPs should include policies for making contributions towards a landbank for the wider area. Where such an approach is not practicable UDPs should explain why.

**66** Whatever area is chosen for landbanks, it is essential that data on annual production; production capacity; and reserves, disaggregated by material type where possible, for the area constituting the landbank unit should be publicly available. The industry and MPAs are asked to work together to facilitate this through the RAWPs. This will be especially important where the landbank is comprised of a mixture of aggregate types which are not interchangeable eg building sand and concreting sand and gravel. In such circumstances separate landbanks may be appropriate providing that the reserves of the different aggregate types may be identified separately and unambiguously.

### *Safeguarding*

**67** Planning authorities should make every effort to safeguard resources of all types of construction aggregates which are, or may become, of economic importance, against other types of development which would be a serious hindrance to their extraction. This also applies to sites for wharves and depots which may be needed for the importation of materials.

**68** It will usually be necessary to consider the need for aggregates over a longer period than for most other land use planning issues. When considering the need to extract the mineral as opposed to letting surface development proceed, it will be necessary to consider the timescales of the proposed mineral working in order to prevent undue delay. Where it is possible to extract minerals prior to some other more permanent forms of development this should be encouraged unless there are good planning reasons for not doing so.

### *Extensions*

**69** It may be generally preferable, as a means of minimising environmental disturbance, to adopt a policy of allowing extensions to existing mineral workings rather than allowing mineral workings at new greenfield sites. However, this will not always be the case as some existing mineral workings may be unsuitably located and it may do less environmental harm to open a new mineral working than to grant a permission for an extension. A general preference for extensions to existing workings should not be construed as a policy for protecting existing suppliers and a constraint on competition. Each case will need to be considered on its own merits.

### *National Parks, the Broads, the New Forest and Areas of Outstanding Natural Beauty (AONBs)*

**70** Planning Policy Guidance Note 7 -"The Countryside and the Rural Economy"(PPG 7 ) provides detailed Government planning policies for all forms of development in National Parks, the Broads and AONBs. The Government considers that major developments should not take place in these areas and the New Forest save in exceptional circumstances. Because of the serious impact that mineral developments may have on the natural beauty of these areas the Government considers that all minerals applications must be subject to the most rigorous examination, and all mineral developments should be demonstrated to be in the public interest before being allowed to proceed.

**71** Consideration of mineral applications in such areas should therefore normally include an assessment of:

i. the need for the development, in terms of national considerations of mineral supply; and the impact of permitting the development, or refusing it, on the local economy;

ii. whether alternative supplies can be made available at reasonable cost; and the scope for meeting the need in some other way;

iii. any detrimental effect of the proposals on the environment and landscape and the extent to which that should be moderated; and

iv. in the case of extensions to existing quarries, the extent to which the proposal would achieve an enhancement to the local landscape.

### *Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs)*

**72** Mineral proposals within or likely to affect SSSIs should be the subject of the most rigorous examination. When considering such proposals, planning authorities are required to consult English Nature (EN) and should take account of the advice in DoE Circular 1/92. Some SSSIs are of particular importance and have additional designations conferred upon them. NNRs, established by EN under the Wildlife and Countryside Act 1981, are areas of national importance, where the primary use is for nature conservation. Some SSSIs are of international importance and have been designated Special Protection Areas (SPAs) under the European Community Directive on the Conservation of Wild Birds (Directive 79/409/EEC). Others have been identified as potential SPAs. In addition some SSSIs are likely to be considered of international importance as Special Areas of Conservation (SACs) under the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Directive 92/43/EEC). DoE Circular 1/92 advises that the Secretary of State will normally call in planning applications which are likely to significantly affect sites of international importance and recognised national importance. Further guidance will be given in the forthcoming PPG on Nature Conservation.

**73** The UK is a signatory to the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (Cmmd 6465) (see other publications 9). Contracting parties are required, inter alia, to designate sites which satisfy certain criteria. The total area of listed wetlands should be maintained wherever possible, if necessary by compensatory measures to offset any loss. There is also a general obligation for the contracting parties to include wetlands conservation considerations within their national land-use planning system.

**74** It is recognised that there are many cases where mineral workings have been beneficial in the establishment of new wildlife habitats and in the exposure of important geological features. MPAs and the industry should bear in mind opportunities for habitat creation and enhancement even where nature conservation may not be the primary end use of a site.

***Other environmentally important areas***

**75** Planning authorities may designate in their development plans other environmentally significant areas, such as special landscape areas, or areas of great landscape or nature conservation value. These areas may be important locally and mineral extraction proposals which fall within them will need to be given careful consideration, although the degree of protection given to such areas should not be as high as that given to the nationally designated areas referred to above. When considering the extent of such areas MPAs will wish to bear in mind that minerals can only be worked where they are found and their responsibility for making adequate provision for minerals in accordance with this Guidance Note.

***Ancient monuments and archaeological and other cultural interests***

**76** Mineral exploration and working may damage or destroy irreplaceable sites, structures and remains of historic archaeological interest that are of importance to the national heritage. The industry should, wherever practical, ensure the physical preservation of important archaeological and historic remains or features, and MPAs, when determining applications for extraction, should have regard to the desirability of preserving historic buildings and landscapes, conservation areas, ancient monuments and their settings. Planning Policy Guidance Note 16 -"Archaeology and Planning"(PPG 16), and the revised CBI Minerals Environment Charter10 underline the importance of identifying as early as possible the likely presence and importance of any archaeological sites liable to be affected by proposed development. This should involve early consultation with the County Archaeological Officer or equivalent (listed in PPG 16 ). Where remains are scheduled under the provisions of the Ancient Monuments and Archaeological Areas Act 1979, the consent of the Secretary of State for National Heritage is needed before works may proceed. As such activity may cause irrevocable damage, this consent should be sought before mineral exploration is started and may well require a separate planning permission or Scheduled Monument consent. Where buildings are listed, listed building consent is required before they may be altered or demolished.

***Agricultural land***

**77** The Government's policy, as set out in PPG 7, is that the best and most versatile agricultural land (Grades 1,2 and 3a of the MAFF Agricultural Land Classification) is a national resource for the future and considerable weight should be attached to protection of such land because of its special importance. However, unlike most other forms of development, land from which minerals have been extracted can be restored either to its former use, or to an acceptable new use. Therefore, when considering the allocation of land for minerals development, and deciding any application for planning permission affecting agricultural land, the agricultural implications must be considered together with the environmental and economic aspects. Such considerations will include whether

the land should be restored to an agricultural after-use and the standard of reclamation likely to be achieved. Restoration and aftercare conditions are intended to achieve land fit for the intended use. Where restoration to agriculture is proposed, the objective will normally be to restore the land to its previous agricultural quality or better if reasonably practicable. Amenity or forestry afteruse may be an appropriate alternative to agricultural use, but where the best and most versatile agricultural land is involved the restoration and aftercare steps should enable the retention of its longer term potential as a high quality agricultural resource.

### *Green Belt*

**78** Proposals for mineral working also arise within Green Belts. The Government's policy is set out in Planning Policy Guidance Note 2 -"Green Belts"(PPG 2). Minerals can only be worked where they are found and extraction need not be incompatible with Green Belt objectives. As with all mineral development high environmental standards should be applied and similarly sites must be well restored.

## Considering Individual Planning Applications

### *General*

**79** MPAs should have regard to all material considerations when determining applications, including this Guidance Note and relevant policies in development plans. MPAs will need to consider in detail matters such as the economic, environmental, nature conservation, agricultural, landscape, traffic, site restoration and other effects of the proposal that are relevant to the planning decision. For its part, the industry will need to demonstrate that it has considered these potential effects when preparing planning applications and has sought to mitigate them as appropriate.

### *Assessment of need and supply*

**80** Authorities should have regard to the balance of real need and real supply. But landbank calculations and estimates of real supply can seldom be exact and decisions on individual applications should not be determined on an over precise calculation of whether supply matches the requirement.

**81** The landbank requirement, for the appropriate time period, will be determined in the following way.

i. Where a mineral local plan (or UDP) has been adopted which reflects the local apportionment of the Regional Guidelines (Annex A and Annex B) the landbank requirement should be calculated using the provision included in the development plan expressed on an annual basis. Unless otherwise expressly provided for, the assumption should be that the provision will be spread evenly across the plan period.

ii. Alternatively in those circumstances where the plan does not reflect these Guidelines the landbank requirement should be calculated using the average of the last 3 years production for which figures are available (in the South East this would continue to be the apportionment set out in the appropriate guidance from SERPLAN [currently SERPLAN RPC 1446]11).

iii. The landbank requirement is calculated by multiplying the base requirement (the annual provision included in the development plan in (i) or the average of the last 3 years production or SERPLAN guidance in (ii)) by the appropriate number of years. For sand and gravel this will be 7 years (paragraph 63).

**82** The actual landbank at any point in time is the sum of all permitted reserves with valid planning permission at that time, with the following provisos:

i. it includes the estimated quantities of reserves with valid planning permission at dormant or currently non-working sites;

ii. it includes all reserves with valid planning permission irrespective of the size of the reserves and production capacity of particular sites;

iii. it does not include estimated quantities of material allocated in development plans but not having the benefit of valid planning permission; and

iv. it does not include any estimate for the contribution that could be made by marine dredged, imported or secondary materials. This is because the contribution these materials make will be assessed and taken into account in the consideration of the regional supply pattern and should not be confused with the calculation of landbank which is concerned solely with local land won primary aggregates.

**83** In considering the extent to which the landbank requirement and the actual landbank represent real need and real supply the MPA should consider:

i. the actual levels of production in recent years as compared with the local apportionment of the Regional Guidelines or the provision included in the development plan;

ii. the local apportionment of the Regional Guidelines where this has not yet been included in the development plan;

iii. whether the particular nature and qualities of the aggregate concerned, such as suitability for particular end use not met by other available sources in the area or region, justifies granting permission; and

iv. whether there are any known constraints on the availability of the consented reserves that would significantly limit output for the period of the landbank. Although a detailed examination of the productive capacity of individual sites in the landbank area would not generally be appropriate major factors having a bearing on supply should be considered. These would include matters such as:

    a. restrictions imposed in planning conditions, such as output limits or the number of lorries leaving the site;

    b. where physical characteristics limit the amount of material which can be extracted; and

    c. whether production of materials is limited by major infrastructure constraints.

**84** Market conditions or minor elements of plant infrastructure should not be regarded as having a bearing on supply, though if production is dominated by one outlet this would be a factor to be considered.

**85** It is important to draw a distinction between the reasons for a landbank as discussed in paragraph 62 above and the need for the size of a particular permission to reflect the levels of capital investment required at specific sites. Some quarrying operations involve simple methods of working and processing which do not involve major capital expenditure. On the other hand, some quarries necessitate a lengthy period of planning and development work, plus a high investment in

plant and equipment, which requires a long operating life to provide a return on investment. It is important to recognise that development proposals may come forward which involve extraction over a long period because of this or perhaps related to phased schemes for reclamation and restoration.

**86** It should be noted that the general commitment to maintain a landbank does not remove the discretion of a mineral planning authority, or the Secretary of State, to refuse planning permission should there be overriding objections.

### *Environmental effects*

**87** Mineral development can have a considerable impact upon the environment. For example, visual intrusion of a site, any permanent changes to the landscape, noise, vibration and dust, both from the workings and any associated heavy lorry traffic, can give rise to objections by local communities.

**88** The industry should demonstrate that it is taking all practicable steps to satisfy the environmental concerns on site operation and restoration. The objective must be to ensure that any environmental damage or loss of amenity caused by mineral working is kept to a minimum. It should also be noted that ancillary operations, such as crushing, grading and screening, may require authorization under Part I of the Environmental Protection Act 1990.

### *Operators' proposals*

**89** In considering proposals for minerals development, authorities will wish to satisfy themselves that the operator's proposal for managing the site in accordance with planning conditions, and the restoration of the site and aftercare, are acceptable. Operators may therefore wish to call attention to, and authorities will wish to consider, any evidence as to how their proposed methods of site management, restoration and aftercare are likely to work out in practice. This might be done by providing evidence about the way a similar site is currently being managed, or how restoration and aftercare have been achieved on a similar site. MPAs should thus have regard to the practicality of the proposal before them.

**90** Environmental codes or Codes of Practice prepared by the aggregates industry trade associations provide useful information about the standards member companies have agreed to follow. The Government encourages the use of environmental codes and welcomes the steps taken by the trade associations representing the aggregates industry in preparing these.

### *Environmental Assessment*

**91** Environmental assessment (EA) is an important technique for ensuring that the likely effects of new development are fully understood and taken into account before development is allowed to go ahead. Where proposals for mineral development are likely to have significant effects on the environment, applications will need to be subject to EA under the Town and Country Planning (Assessment of Environmental Effects) Regulations 1988. Whether or not a particular mineral development proposal will warrant an EA will depend upon such factors as the sensitivity of location, size, working methods, proposals for disposing of waste, the nature and extent of processing and ancillary operations, the arrangements for transporting products away from the site and proposals for restoration and aftercare. The duration of the proposed workings is also a factor to be taken into account. DoE Circular 15/88 explains the provisions of the Regulations and gives advice on their implementation. Further advice is given in "Environmental Assessment: A Guide to the Procedures"(DoE 1989) (see other publications 12).

### *Transport*

**92** Aggregates are mainly transported from sites by road and rail. Most travel by road and are delivered within a radius of 30-35 miles from the quarry or pit. Rail may be used for longer distances and in 1991 about 13mt of aggregates were moved by this method.

**93** The effect of the heavy goods vehicles used to move aggregates is often of major concern to the local community. Where possible, consideration should be given to the movement of material by rail as this can offer environmental advantages and for longer distances may be more economic. However problems may arise in the local area surrounding rail distribution depots. Planning authorities should, individually or collectively, have regard to these factors when drawing up policies in their development plans on such matters as transport modes and routeing.

**94** When preparing proposals for aggregates extraction sites the industry should aim to minimise the impact of the traffic which will be generated through careful consideration of distribution networks. Discussions should take place at an early stage with MPAs on how traffic generated by the proposal will be managed to minimise environmental disturbance. Advice on access and road safety considerations is given in paragraphs 76-79 of MPG 2 . The report "The Environmental Effects of Surface Mineral Workings" (see other publications 13) also provides advice on traffic. General advice on transport and planning is given in PPG13 . The DoE will commission research during 1994 to assess the environmental effects resulting from on-site and off-site traffic (including road, rail and water) associated with mineral workings. It will identify how transport practices can be improved, and give advice on the formulation of planning conditions where these are appropriate. The research will inform the preparation of minerals planning guidance on this subject.

**95** The aggregates industry should keep in mind that grants continue to be available from the DoT to assist towards the capital cost of constructing rail freight facilities. Grants under section 8 of the Railways Act 1974 have, in the past, been used effectively to reduce the movement of aggregates by road. From 1 April 1994 these grants will be enhanced under the powers in section 139 of the Railways Act 1993. Similarly, the former Transport Act, section 36 grants (for movement of freight by inland waterway) will be replaced by grants under section 140 of the 1993 Act. The main change is the inclusion of wider and social benefits of lorry removal through the addition of motorways and dual carriageway trunk roads in environmental assessments. Both types of grant can be used for the movement of secondary aggregates. This may help to overcome one constraint on the utilisation of waste materials as they are often located at considerable distance from centres of demand. Additional assistance will also be available from 1 April 1994 with the introduction of a new Track Access Grant to assist rail freight operators in meeting charges levied by Railtrack for access to the track. This may help aggregates producers contracting for rail haulage where the cost of rail would otherwise be unfavourable when compared with road transport. The grant will be administered centrally by the DoT.

**96** Planning authorities should make efforts to safeguard existing rail head facilities and may need to identify further potential sites to accommodate increased levels of imports in the future. These may also need to be safeguarded.

### *Water interests*

**97** There is a substantial body of legislation in relation to water supply, pollution control and land drainage. MPAs and the industry should take into account the need to protect the flow, level and quality of surface waters and groundwater to ensure that changes in the water table as a result of minerals extraction do not cause environmental damage or adversely affect water resources. The National Rivers Authority (NRA) should be consulted about all new mineral development

proposals and regard paid to NRA policies. Where working would take place below the natural water table, applications will need to include proposals for a suitable after-use and reclamation scheme. As advised in MPG 7 , there is a range of possible after-uses for water filled voids; the NRA may consider it acceptable for a reclamation scheme to include landfilling with controlled wastes. In some cases, an option may be to consider restoring land to agricultural use at a lower level, with a requirement for the site to be adequately drained by continuous pumping DoE Circular 25/85 and MPG 7 refer.

**Working Practices, Restoration, Aftercare and After-Use**

**98** It is established Government policy that restoration and aftercare will be required to make mineral workings fit for beneficial after-use and environmentally acceptable. This may include restoration to agriculture or forestry, management for nature conservation, provision of public open space, recreation or other development. Standards of restoration have generally improved over recent years. Continuation of this trend will enable a wider range of sites to be restored to appropriate standards, leading to the release of land which has not so far been made available for mineral working. Applications for extraction of minerals such as aggregates need to include information which demonstrates that the site will be restored satisfactorily; and MPAs should consider whether to grant permission if there is serious doubt whether a new extraction proposal can meet this requirement. Wherever practicable, MPAs and mineral operators should agree schemes of working and reclamation of sites which provide for progressive restoration, unless to do so would be likely to affect adversely the standard of restoration achieved. Advice on restoration and aftercare is given in Minerals Planning Guidance Note 7 -"The Reclamation of Mineral Workings", including a general review of the essential technical requirements which need to be considered when planning conditions are drawn up.

**Speeding up the Planning System**

**99** The Government accepts that quarrying proposals are often complicated and can arouse local controversy, and that it is important that all material considerations receive careful attention. Nevertheless, the Government expects MPAs to determine applications expeditiously. The industry itself can help to reduce possible delay by entering into pre-application discussions about its development proposals with the authority, the local community, relevant local bodies such as County Wildlife Trusts and the appropriate statutory bodies at an early stage before formal submission of the application. Applicants should aim to provide authorities with as much information as possible to help them determine the application. If the authority needs further information, every effort should be made to ensure that such requests are comprehensive at the outset. Mineral Planning Guidance Note 2 -"Applications, Permissions and Conditions"(MPG 2 ) provides further guidance on the drawing up and determining of planning applications.

**Implementation**

**100** This Guidance Note will provide the basic framework for the planning for provision of aggregates. It will be taken into account by the Secretary of State when considering development plans and individual planning applications which come before him for decision.

**101** The Secretary of State considers that the apportionment of the Regional Guidelines should be completed within 6 months of the publication of this Guidance Note. Annex B provides detailed guidance on how the exercise may be conducted. Where agreement cannot be reached the Department will attempt to facilitate agreement.

**102** MPAs should take this Guidance Note into account when preparing development plans. Development plans should recognise the need to make provision for a continuing supply of aggregates in a manner compatible with environmental objectives. The plans should also provide guidance on these environmental objectives and the development control criteria which will be applied. The development plans should also enable a landbank compatible with this Guidance Note to be maintained.

**103** The aggregates industry has an important role to play in co-operating with, and contributing to, the development plan process. For example, the successful application of landbank policies depends upon the ready availability of information on reserves and production. The industry should endeavour to ensure that proposals for mineral development reflect this Guidance Note and that they are brought forward at the right time. The industry is also responsible for achieving a high standard of operation while the site is being worked and for restoring the site when working has finished.

**104** It would also be useful if the MPAs and industry produced, through the RAWPs, agreed published reports on a regular basis to cover the landbank position.

## Monitoring and Review

**105** This Guidance Note has been based on the best information currently available. It will need to be kept under review and updated regularly to reflect changes in demand, technology and environmental standards, but the provision of up to date mineral local plans and landbanks will provide flexibility and continuity of supply.

**106** There is a need for regular detailed monitoring surveys at a national level of aggregates production, sales, distribution and reserves. These should be comprehensive and reliable and will be undertaken every 4 years. The Secretary of State regards the continuing co-operation of the industry and MPAs as being of the greatest importance in monitoring and reviewing the supply and demand for aggregates. The Department also proposes to publish biennial monitoring reports which will cover the effects of these policies to inform the next review of the Regional Guidelines. At the local level the RAWPs should monitor qualitative information on such matters as the nature and success or otherwise of planning applications, changes and review of development plans, the resource base, material requirements and standards and the level and type of construction industry activity. The results of this monitoring should be published by the RAWPs in their Annual Reports.

## Future Role of Rawps

**107** The Secretary of State takes the view that the NCG/RAWP arrangements have been valuable and helpful in the formulation of policies and their monitoring. However he believes it would be desirable to review their future role, particularly in the context of Local Government reorganisation. Consequently the work and membership of NCG and the RAWPs will be reviewed after the publication of this Guidance Note.

## Long Term Issues and Research

**108** The implications of the demand projections for primary aggregates and the consultations on the Regional Commentaries indicate that continued research into aggregates supply and demand and environmental implications of mineral working is required. In addition to the research projects which have been mentioned in this Guidance Note (see items 2, 4, 6, 7 and 13 in Annex F) the Government will maintain its ongoing research programme. New projects which are expected to start include an evaluation of the environmental costs of mineral extraction; consideration of the

interrelationship between quarrying and hydrogeology; the examination of the marine sand and gravel resources in the Bristol Channel; and an appraisal of the sand and gravel resources of south west Leicestershire and north west Northamptonshire. Resource assessments of the potential sand and gravel supplies both on land and on the seabed will also be continued and further work on the uses of aggregates is planned. The Government also notes that during the public consultation on this Guidance Note concern has been expressed about the overall approach to aggregates planning. It proposes to examine this by way of a research project.

## Local Government Review

**109** The Government also recognises that during the period covered by this Guidance Note the reorganisation of Local Government will come into effect. The Government has already issued guidance to the Local Government Commission about the role of the planning system and will consider whether further advice is needed as changes take effect.

**110** The possible changes which may come about from the reorganisation of local Government should not delay the preparation of local plans. The Government will introduce transitional arrangements which will ensure that any preparatory work on such plans will not be lost where reorganisation takes place.

## Endnote

The figure for England and Wales has been assumed to be 90% of the total GB demand. This is based on the historic share of consumption over time.

## Annex A: Regional Guidelines for Aggregates Provision in England

**A1.1** The following sections set out Regional Guidelines which indicate how provision for the supply of aggregates should be made to meet anticipated needs to 2006. The purpose of these guidelines is set out in paragraphs 23-27 of the Guidance Note and their role in the preparation of development plans is described in paragraph 58. The guidelines are presented for England as a whole and for the eight Aggregates Planning Regions (Regional Aggregates Working Party areas) in England.

**A1.2** The guidelines acknowledge an increase in the demand for aggregates over the 15 year period to 2006 and set out how the planning system should respond to this requirement. These guidelines are consistent with the policies expressed in the Guidance Note. They reflect the Government's view that land won sources of primary aggregates from within England will remain the principal component of supply. However other sources such as secondary and recycled material and imports from outside England and Wales will make increasingly important contributions.

**A1.3** These guidelines supplement the policies contained in the main paragraphs of this Minerals Planning Guidance Note and should be read in conjunction with those policies, which take precedence should any apparent conflict arise between the interpretation of the policy and the Guidelines.

**A1.4** The regional guidelines make provision for aggregates end uses only. Some reserves are used for both aggregates and non-aggregate purposes. Where applicable, it is important that allowance is made for non-aggregate uses when considering landbanks.

### England

#### *Current patterns of supply and production*

**A2.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), England produced about 80% of its aggregates consumption from onshore sources (about 45% from crushed rock sources, 35% from land sourced sand and gravel) and 10% from secondary/recycled material. Of the remainder, marine dredged sand and gravel provided about 7% and imports of crushed rock from Scotland and Wales a further 3%.

#### *Future demand*

**A2.2** The Government takes the view that for the purposes of preparing planning guidelines over the period from 1992 to 2006, demand for aggregates in England is likely to be in the order of 4.2 billion tonnes(bt). There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets.

#### *Future supply*

**A2.3** The future supply of aggregates is expected to come from a variety of sources. It is not possible to be precise about this as supply responds to demands and the pattern of provision in any particular region will be determined by the detailed operation of the planning system and market forces. The Guidelines for land won provision therefore reflect a judgement about the scale of provision that it is appropriate to make from land won sources, but the planning system operates in a flexible way and in practice the guidelines represent neither a target nor a ceiling.

*Guidelines for land won primary aggregates*

**A2.4** Over the period 1992 to 2006 planning authorities in England should make provision for some 3.1bt of primary aggregates comprising, 1.2bt of sand and gravel and 1.9 bt of crushed rock.

*Assumptions about other sources of supply*

**A2.5** So that the context of the guidelines in paragraph A2.4 can be understood, the Department has made a number of broad assumptions about supplies from other sources. These are that approximately 1,165mt of aggregates supply will come from sources other than primary land based production in England. Of this supply it is assumed that up to 315mt may be provided from marine dredged sources, 160mt may be provided by imports from outside England and Wales, 160mt by imports from Wales and 530mt may be provided from secondary and recycled material. However the overall level of provision from these sources and the pattern of supply will be determined by market forces.

**South East**

*Current patterns of supply and production*

**A3.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), the South East produced almost 40% of its aggregates consumption, 4% of which is from crushed rock sources, 24% from land sourced sand and gravel and an assumed 10% from secondary/recycled material. The remaining 63% of consumption was met from: imported crushed rock (42%); marine dredged sand and gravel (18%); and imports of sand and gravel from adjoining regions (3%). 5% of sand and gravel production and 9% of crushed rock production was exported to other regions.

*Future demand*

**A3.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 1270mt of aggregate materials. Other regions are likely to make demands on the region for an additional 30mt of primary aggregates.

*Guidelines for land won primary aggregates*

**A3.3** On the basis of the anticipated demand in the region and demands from other regions the South East will need to produce 450mt of aggregate material from primary won land sources within the region. 420mt of this is anticipated to be sand and gravel and 30mt crushed rock. About 7% of the sand and gravel production is anticipated to be exported, principally to the South West region. **MPAs in the region should make provision in their development plans for 420mt of sand and gravel and 30mt of crushed rock over the period 1992 - 2006.**

*Assumptions about imports from other regions*

**A3.4** The Department has assumed that 300mt of the region's aggregates supply will be imported from other regions of England, principally the South West and East Midlands. The majority of these imports will be crushed rock.

### *Assumptions about other sources of supply*

**A3.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. These are that 550mt of aggregates supply will come from sources other than primary land based production in England. Of this supply it is assumed that about 260mt may be provided from marine dredged sources, 145mt may be provided by imports from outside England and Wales, 5mt by imports from Wales, and 140mt may be provided from secondary and recycled material.

### *Landbanks*

**A3.6** Landbanks in the South East will be based on the provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures made by SERPLAN as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the apportionment set out in the appropriate guidance from SERPLAN (see other publications 11).

East Anglia

### *Current patterns of supply and production*

**A4.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), East Anglia met about 70% of its aggregates consumption from land sources in the region, 5% from crushed rock sources, over 60% from land sourced sand and gravel and an estimated 2% from secondary/recycled material. The remaining 30% of consumption was met from: imported crushed rock (17%); marine dredged sand and gravel (6%); and imports of sand and gravel from adjoining regions (7%). About 7% of crushed rock production and 18% of sand and gravel production was exported to other regions.

### *Future demand*

**A4.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 225mt of aggregate materials. There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets.

### *Guidelines for land won primary aggregates*

**A4.3** On the basis of the anticipated demand in the region East Anglia will need to produce 145mt of aggregate material from primary land sources within the region. 135mt of this is anticipated to be sand and gravel and 10mt crushed rock. MPAs in the region should make provision in their development plans for 135mt of sand and gravel and 10mt of crushed rock over the period 1992 - 2006.

### *Assumptions about imports from other regions*

**A4.4** The Department has assumed that 45mt of the region's aggregates supply will be imported from other regions of England, principally the East Midlands. The majority of these imports will be crushed rock.

### *Assumptions about other sources of supply*

**A4.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. These are that 35mt of aggregates supply will come from sources other than primary land based production in England. Of this supply it is

assumed that 10mt may be provided from marine dredged sources, 10mt may be provided by imports from outside England and Wales, and 15mt may be provided from secondary and recycled material.

### *Landbanks*

**A4.6** Landbanks in East Anglia will be based on the annual provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures made by the Regional Forum as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the average of the last three years' production for which figures are available.

## East Midlands

### *Current patterns of supply and production*

**A5.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), the East Midlands produced 54% more aggregates than it consumed. Over 80% of the region's consumption was met from primary aggregates produced in the region: nearly 50% from crushed rock; and over 30% from land sourced sand and gravel. Imports of primary aggregates accounted for about 10% of consumption: 5% as land sand and gravel and 4% as crushed rock. An assumed 10% of supply was from secondary/recycled material. 28% of sand and gravel production and 49% of crushed rock production was exported to other regions.

### *Future demand*

**A5.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 540mt of aggregate materials. There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets. Other regions are likely to make demands on the region for an additional 265mt of primary aggregates.

### *Guidelines for land won primary aggregates*

**A5.3** On the basis of the anticipated demand in the region and demands from other regions the East Midlands will need to produce 715mt of aggregate material from primary land sources within the region. 210mt of this is anticipated to be sand and gravel and 505mt crushed rock. About 21% of the sand and gravel production and about 44% of the crushed rock production is anticipated to be exported. Exports of sand and gravel are anticipated to be principally to Yorkshire and Humberside. Crushed rock exports are anticipated to be to the South East, East Anglia, West Midlands, North West and Yorkshire and Humberside. MPAs in the region should make provision in their development plans for 210mt of sand and gravel and 505mt of crushed rock over the period 1992 - 2006.

### *Assumptions about imports from other regions*

**A5.4** The Department has assumed that 20mt of the region's aggregates supply will be imported from other regions of England, principally the Yorkshire and Humberside and the West Midlands. These imports will be crushed rock and sand and gravel.

### *Assumptions about other sources of supply*

**A5.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. Principal amongst these is that about 70mt of

aggregates supply will be provided from secondary and recycled material. It is assumed that marine dredged sources and imports from outside England will not contribute directly to the region's aggregates supply.

### *Landbanks*

**A5.6** Landbanks in the East Midlands will be based on the provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures made by the Regional Forum as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the average of the last three years' production for which figures are available.

## West Midlands

### *Current patterns of supply and production*

**A6.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), the West Midlands met about 80% of its aggregates consumption from land sources in the region, just over 40% from crushed rock sources, almost 40% from land sourced sand and gravel and an estimated 3% from secondary/recycled material. The remaining 20% of consumption was met from imported crushed rock (17%) and imports of sand and gravel from adjoining regions (about 3%). 13% of sand and gravel production and 8% of crushed rock production was exported to other regions.

### *Future demand*

**A6.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 490mt of aggregate materials. There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets. Other regions are likely to make demands on the region for an additional 30mt of primary aggregates.

### *Guidelines for land won primary aggregates*

**A6.3** On the basis of the anticipated demand in the region and demands from other regions the West Midlands will need to produce 330mt of aggregate material from primary land sources within the region. 180mt of this is anticipated to be sand and gravel and 150mt crushed rock. About 8% of the sand and gravel production and 10% of crushed rock production is anticipated to be exported, principally to the North West and East Midlands regions. MPAs in the region should make provision in their development plans for 180mt of sand and gravel and 150mt of crushed rock over the period 1992 - 2006.

### *Assumptions about imports from other regions*

**A6.4** The Department has assumed that 45mt of the region's aggregates supply will be imported from other regions of England, principally the East Midlands and the South West. The majority of these imports will be crushed rock.

### *Assumptions about other sources of supply*

**A6.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. Principal amongst these is that some 90mt of aggregates supply will be imported from Wales and about 55mt of aggregates supply will be

provided from secondary and recycled material. It is assumed that marine dredged sources and imports from outside England and Wales will not contribute directly to the region's aggregates supply.

### *Landbanks*

**A6.6** Landbanks in the West Midlands will be based on the provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures made by the Regional Forum as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the average of the last three years' production for which figures are available.

## South West

### *Current patterns of supply and production*

**A7.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), the South West produced 35% more aggregates than it consumed. Almost 90% of the region's consumption was met from primary aggregates produced in the region: about 70% from crushed rock; and almost 20% from land sourced sand and gravel. Imports of primary aggregates accounted for 4% of consumption: 3% as land sand and gravel and 1% as crushed rock. At least 5% of supply was from secondary/recycled material. The remaining 4% of consumption was met from marine dredged sand and gravel. 3% of sand and gravel production and 33% of crushed rock production was exported to other regions.

### *Future demand*

**A7.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 610mt of aggregate materials. There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets. Other regions are likely to make demands on the region for an additional 210mt of primary aggregates.

### *Guidelines for land won primary aggregates*

**A7.3** On the basis of the anticipated demand in the region and demands from other regions the South West will need to produce 715mt of aggregate material from primary land sources within the region. 105mt of this is anticipated to be sand and gravel and 610mt crushed rock. About 14% of the sand and gravel production and about 32% of the crushed rock production is anticipated to be exported, principally to the South East region. MPAs in the region should make provision in their development plans for 105mt of sand and gravel and 610mt of crushed rock over the period 1992 - 2006.

### *Assumptions about imports from other regions*

**A7.4** The Department has assumed that 30mt of the region's aggregates supply will be imported from other regions of England, principally the South East. The majority of these imports will be sand and gravel.

### *Assumptions about other sources of supply*

**A7.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. These are that 75mt of aggregates supply will come from sources other than primary land based production in England. Of this supply it is

assumed that 15mt may be provided from marine dredged sources, and 60mt may be provided from secondary and recycled material. It is assumed that imports from outside England will not contribute directly to the region's aggregates supply.

### *Landbanks*

**A7.6** Landbanks in the South West will be based on the provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures made by the Regional Forum as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the average of the last three years' production for which figures are available.

## North West

### *Current patterns of supply and production*

**A8.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), the North West met about 50% of its aggregates consumption from land sources in the region, just over 25% from crushed rock sources, almost 15% from land sourced sand and gravel and an assumed 10% from secondary/recycled material. The remaining 50% of consumption was met from imported crushed rock (over 45%) and imports of sand and gravel from adjoining regions (about 4%). Marine dredged sand and gravel provided less than 1% of supply. Less than 1% of crushed rock production and about 4% of sand and gravel production was exported to other regions.

### *Future demand*

**A8.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 440mt of aggregate materials. There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets.

### *Guidelines for land won primary aggregates*

**A8.3** On the basis of the anticipated demand in the region the North West will need to produce 175mt of aggregate material from primary land sources within the region. 55mt of this is anticipated to be sand and gravel and 120mt crushed rock. MPAs in the region should make provision in their development plans for 55mt of sand and gravel and 120mt of crushed rock over the period 1992 - 2006.

### *Assumptions about imports from other regions*

**A8.4** The Department has assumed that 100mt of the region's aggregates supply will be imported from other regions of England, principally Northern Region, Yorkshire and Humberside, the East Midlands, and the West Midlands. The majority of these imports will be crushed rock.

### *Assumptions about other sources of supply*

**A8.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. These are that some 165mt of aggregates supply will come from sources other than primary land based production in England. Of this supply it is assumed that 65mt may be provided by imports from Wales, 7mt may be provided from marine

dredged sources, 5mt may be provided by imports from outside England and Wales, and 90mt may be provided from secondary and recycled material.

### *Landbanks*

**A8.6** Landbanks in the North West will be based on the provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures agreed by the Regional Forum as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the average of the last three years' production for which figures are available.

## Yorkshire and Humberside

### *Current patterns of supply and production*

**A9.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), Yorkshire and Humberside met over 80% of its aggregates consumption from land sources in the region, just over 50% from crushed rock sources, almost 20% from land sourced sand and gravel and an estimated 11% from secondary/recycled material. The remaining 17% of consumption was met from imported crushed rock (7%) and imports of sand and gravel from adjoining regions (about 9%). Marine dredged sand and gravel provided about 1% of consumption. About 13% of crushed rock production and 12% of sand and gravel production was exported to other regions.

### *Future demand*

**A9.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 430mt of aggregate materials. There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets. Other regions are likely to make demands on the region for an additional 50mt of primary aggregates.

### *Guidelines for land won primary aggregates*

**A9.3** On the basis of the anticipated demand in the region and demands from other regions Yorkshire and Humberside will need to produce 340mt of aggregate material from primary land sources within the region. 60mt of this is anticipated to be sand and gravel and 280mt crushed rock. About 25% of the sand and gravel production and about 13% of the crushed rock production is anticipated to be exported, principally to the North West, Northern and East Midlands regions. MPAs in the region should make provision in their development plans for 60mt of sand and gravel and 280mt of crushed rock over the period 1992 - 2006.

### *Assumptions about imports from other regions*

**A9.4** The Department has assumed that 65mt of the region's aggregates supply will be imported from other regions of England, principally the East Midlands. Over half of these imports will be sand and gravel.

### *Assumptions about other sources of supply*

**A9.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. These are that some 70mt of aggregates supply will come from sources other than primary land based production in England. Of this supply

it is assumed that 7mt may be provided from marine dredged sources and 65mt may be provided from secondary and recycled material. It is assumed that imports from outside England will not contribute directly to the region's aggregates supply.

### *Landbanks*

**A9.6** Landbanks in Yorkshire and Humberside will be based on the provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures made by the Regional Forum as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the average of the last three years' production for which figures are available.

## Northern

### *Current patterns of supply and production*

**A10.1** In 1989, the last year for which Aggregate Minerals Survey information is available (see other publications 3), Northern region met almost 90% of its aggregates consumption from land sources in the region, about 60% from crushed rock sources, almost 20% from land sourced sand and gravel and an assumed 10% from secondary/recycled material. The remaining 12% of consumption was met from imported crushed rock (3%) and imports of sand and gravel from adjoining regions (about 4%). Marine dredged sand and gravel provided about 5% of consumption. About 18% of crushed rock production and 5% of sand and gravel production was exported to other regions.

### *Future demand*

**A10.2** Over the 15 year period to 2006 there is likely to be a demand from within the region for approximately 275mt of aggregate materials. There is inevitably considerable uncertainty about projections over such a long period of time and the figures should not be regarded as targets. Other regions are likely to make demands on the region for an additional 35mt of primary aggregates.

### *Guidelines for land won primary aggregates*

**A10.3** On the basis of the anticipated demand in the region and demands from other region the Northern region will need to produce 245mt of aggregate material from primary land sources within the region. 50mt of this is anticipated to be sand and gravel and 195mt crushed rock. About 8% of the sand and gravel production and about 15% of the crushed rock production is anticipated to be exported, principally to the North West region and also to Yorkshire and Humberside. MPAs in the region should make provision in their development plans for 50mt of sand and gravel and 195mt of crushed rock over the period 1992 - 2006.

### *Assumptions about imports from other regions*

**A10.4** The Department has assumed that 15mt of the region's aggregates supply will be imported from other regions of England, principally Yorkshire and Humberside. The majority of these imports will be sand and gravel.

### *Assumptions about other sources of supply*

**A10.5** So that the context of the guidelines can be understood, the Department has made a number of broad assumptions about supplies from other sources. These are that 50mt of aggregates supply

will come from sources other than primary land based production in England. Of this supply it is assumed that 15mt may be provided from marine dredged sources and 35mt may be provided from secondary and recycled material. It is assumed that imports from outside England will not contribute directly to the region's aggregates supply.

***Landbanks***

**A10.6** Landbanks in the Northern region will be based on the provision in minerals local plans that reflect the sub-regional apportionment of these guideline figures made by MPAs as described in paragraph 81 of this Minerals Planning Guidance Note. Alternatively where plans do not reflect these guidelines the landbank should be based on the average of the last three years production for which figures are available.

## Annex B Sub-Regional Appointment of the Guidelines

### Introduction

**B.1** The revision of MPG 6 makes it necessary for the regional guidance given in Annex A to be disaggregated within regions so that it may be used by MPAs in the preparation of development plans as described in paragraphs 101 and 102 above.

### Area for apportionment

**B.2** It will generally be the case that the appropriate area to which the regional guidance should be apportioned will be the mineral planning authority area in shire counties and in the London Boroughs and metropolitan districts the former metropolitan county area. However, as with landbanks, other sub-regional or sub-county areas may be used as appropriate so long as they correspond to landbank areas and areas covered by development plans.

### Responsibility for apportionment

**B.3** MPAs will be responsible for facilitating the apportionment. This may best be achieved thorough the region's Regional Forum/Conference. In regions where such a regional body is not in existence MPAs will need to seek the advice of the RAWP on an appropriate apportionment. In any case MPAs are expected to seek the guidance and technical advice of the RAWP on the basis of the apportionment.

### Methods for apportionment

**B.4** It is for the Regional Forum/Conference or MPAs collectively, with the advice of the RAWP, to decide how the regional guidelines are to be apportioned between MPAs and over time.

**B.5** The method most commonly adopted for the sub regional apportionment of the 1989 guidelines between MPAs was proportional split on the basis of recent production (dividing the regional guidelines figure using the ratio of MPA area production to regional production). However there may be local circumstances which require a different approach.

**B.6** The MPA guideline figures from the sub-regional apportionment will be used in the preparation of development plans. The Government recommends to MPAs that sand and gravel provision should remain at similar levels throughout the period covered by these Guidelines. Crushed rock provision may increase over the Guidelines period within the general trend of the demand projections. However local circumstances such as availability of resources, planning constraints and present levels and capacity of production should be taken into account when apportioning the MPA guidelines over time. If authorities choose to extend plans beyond 2006 provision for the additional period may be determined from the MPA guideline figures on a pro-rata basis.

**B.7** In areas where imports of aggregate materials and/or landings of marine dredged aggregates are significant MPAs may wish to consider sub-regional apportionment of guideline figures for marine landings and imports into the region in terms of provision of wharves and depots.

### Timescale

**B.8** The Secretary of State expects sub-regional apportionment of the MPG 6 Regional Guidelines to be completed within six months of the publication of the revised MPG 6. RAWPs should

monitor progress and inform Minerals Division of DoE of the sub-regional apportionments when apportionment is complete.

## Annex C: **Projections of Long Term Demand for Aggregates**

**C.1** To provide guidance on the long term trend in demand for aggregates, the Department employed independent consultants, ECOTEC Research and Consulting Ltd, to prepare a methodology to provide projections of demand for aggregates over the 20 year period to 2011.

**C.2** As a first step, the Department asked ECOTEC to undertake a review of the methodology used in preparing the projections for the previous MPG 6. This methodology consisted of two stages: Stage 1 involved judgements about the relationship between economic activity, particularly Gross Domestic Product (GDP) and Gross Domestic Fixed Capital Formation (GDFCF) and construction investment; Stage 2 modelled the econometric relationship between construction investment and the demand for primary aggregates.

**C.3** ECOTEC reported in October 1989 that the earlier judgements taken in Stage 1 on the economic indicators (GDP, GDFCF) had not proved entirely accurate; and, that the Stage 2 econometric modelling did not fully reflect the increase in the intensity of use (ie the amount of aggregates used per £1000 of construction output) which occurred during 1984-1988.

**C.4** To improve the projection ECOTEC proposed that the first stage of the methodology should use a projection of construction activity obtained from an independent economic forecasting house; and, that in the second stage there should be a revision to the modelling to reflect the increasing intensity of use of aggregates.

**C.5** Accordingly, long term projections of construction activity were commissioned from Cambridge Econometrics. These projections were then incorporated into the ECOTEC forecasting model which produced projections for future demand for aggregates. Initially, projections to 2011 were published in May 1991, and it was these projections which were used as a basis for preparation of the RAWPs' Regional Commentaries. However, the Department asked the consultants to produce revised projections in mid-1992 to take account of the most recent economic situation. Both projections are summarised below.

**C.6** The projections which have been produced by the consultants essentially represent trends in possible demand over the period of the guidelines. They cannot be used to denote the level of demand over the short term or in any one year or a small group of years. Nor do they represent targets for production.

### The role of Cambridge Econometrics

**C.7** Cambridge Econometrics (CE) regularly produce long term projections for the British economy based on the Cambridge Multi-sectoral Dynamic Model (MDM). Version 8 of MDM, used in this work, is disaggregated into 43 sectors of British industry of which construction is one. The projections are normally published for 10 years ahead (presently to the year 2005), but the model has been extended to the year 2011, and projections to this horizon are produced for some subscribers.

**C.8** The projections of construction activity which CE produce are based upon a detailed examination of long term trends in economic activity combined with analyses of specific major factors influencing construction activity. This includes consideration of the national house building and road building programmes. Their projections are the result of a major "bottom-up" exercise combined with strategic judgements about the overall growth rate of the economy. This projection of construction activity can be measured as construction output or construction investment. For the

purposes of the present exercise it was decided to use construction investment (referred to as "investment in buildings and works").

**C.9** CE were asked to produce 3 scenarios of construction activity. The base projection represents their most likely estimate of growth. The two other CE scenarios involve different policy assumptions which lead to alternative long term economic growth rates; these are the high and low projections.(Note: base does not imply a mid-point between the high and low projections).

**1991 demand projections for aggregates**

**C.10** The CE construction activity projections produced in 1991 included projections of average annual growth rates (base forecast) for investment in buildings and works as follows:

**Table C1**

| | 1980-85 | 1985-90 | 1990-95 | 1995-2000 | 2000-05 | 2005-11 |
|---|---|---|---|---|---|---|
| Investment in buildings and works | 1.3 | 5.5 | 1.3 | 2.6 | 3.3 | 2.8 |

**C.11** CE also produced a high growth scenario based broadly on assumptions of higher world growth, particularly as a response to European integration which leads to higher productivity in GB, and a low growth scenario derived from assumptions of a continued deterioration in GB economic performance with a longer recovery period.

**C.12** ECOTEC's projections of long term demand for aggregates adopt a "top-down" approach, based largely on the projected demand for end-products (construction).

**C.13** The 1991 projections of primary aggregates demand up to 2011 used the 3 scenarios of long term construction investment prepared by CE together with the revised input on the intensity of use. These projections indicated that over the period to 2011 total demand for primary aggregates in GB would be in the range 7300-7900mt. The base projection, which is derived from the scenario which CE considered to be the most likely, showed total demand of some 7600mt to 2011.

**C.14** NCG agreed that the 1991 base projection should be used by the RAWPs in the preparation of new Regional Commentaries (see below). To facilitate this, the 1991 national demand projection was broken down into regional figures. These were calculated from each region's proportional share of the total consumption of primary aggregates in England and Wales in 1989 derived from AM89. This is consistent with the practice adopted in developing the Regional Guidelines in the previous MPG 6.

***1992 demand projections for aggregates***

**C.15** In 1992, the Department asked ECOTEC and CE to update the projections to take into account the continued downturn in the economy. CE was asked to produce a revised long term projection of construction activity, and ECOTEC were asked to take this into account in producing revised projections of aggregates demand.

**C.16** Revised projections of construction activity were produced by CE in June 1992. They were more pessimistic for short term prospects than those produced in 1991. However CE concluded that over the long term period there will be little actual difference to the growth rates previously

projected. The average annual growth rates for the base projection for investment in buildings and works are:

**Table C2**

| | 1980-85 | 1985-90 | 1990-95 | 1995-2000 | 2000-05 | 2005-11 |
|---|---|---|---|---|---|---|
| Investment in buildings and works | 1.2 | 7.0 | -1.0 | 3.1 | 2.9 | 3.3 |

**C.17** The factors which CE considered would influence the recovery from the prevailing economic situation included: further increases in exports; renewed growth in consumer spending; upturn in house building; increase in manufacturers' stock building for the whole economy.

**C.18** As before, uncertainties in the projection mean that it is important to have a view of the possible range of the outcome, and so CE have produced alternative high and low scenarios. The high growth scenario assumes increasing exports; the impacts of higher world growth and the Single European Market; and increased innovation by industry. This indicated that construction investment could be 7% above the base level by 2011. The low growth scenario is derived from a continued deterioration in GB economic performance with a longer recovery period, and lower growth in exports. This indicated construction investment at 8% below the base by 2011.

**C.19** ECOTEC generated revised long term projections of demand for aggregates in June 1992 using the new CE projections of construction activity. The revised projections for aggregates demand were lower than those produced in 1991, mainly because of the change in the historical time series of construction investment published by the CSO, and, to a lesser extent, because of the reduction in the construction projections produced in 1992. The effect of these changes was to reduce average annual demand by 34mt in the base case over the period 1991 - 2011.

**C.20** The revised projections indicated that the total demand for primary aggregates in GB to 2011 could be in the range 6600-7100mt, the base projection being 6900mt.

**Monitoring and review**

**C.21** These projections are clearly dependent upon a number of assumptions. It is the intention that these will be monitored and the projections kept under regular review.

**C.22** Copies of the consultants' reports used in preparing the long term projection of demand for aggregates can be seen at, and obtained from, the offices of the Department of the Environment (C15/13, 2 Marsham Street, London, SW1P 3EB: tel 071-276-3948).

## Annex D The Regional Aggregates Working Parties and National Coordinating Group

**D.1** The Regional Aggregates Working Parties (RAWPs) and National Coordinating Group (NCG) provide advice to the Secretary of State for the Environment and the Secretary of State for Wales in relation to the supply of, and demand for, aggregate minerals.

### Regional Aggregates Working Parties

**D.2** The RAWPs were established in the early 1970s to identify and consider likely problems in the supply of aggregate minerals. The Advisory Committee on Aggregates, established in 1972, and led by Sir Ralph Verney, was appointed by Government to consider the future supply of aggregates for the construction industry. The Committee report, "Aggregates: The Way Ahead", was published in 1976 and many of its recommendations were subsequently accepted by the Government.

**D.3** The terms of reference under which the RAWPs were established are listed at Annex D.(A). The RAWPs operate under contracts between the Secretary of State for the Environment and the Chairs of the RAWPs, and receive funding from the Department to prepare papers, reports, and data collations as recommended by NCG.

**D.4** Each RAWP is chaired by a County Planning Officer or the equivalent, and draws members from the MPAs, the aggregates industry (by representation from the trade federations, namely BACMI and SAGA), and the Department/Welsh Office, along with the Department's regional offices, other Government bodies, e.g. MAFF, and other appropriate interested parties. There are eight RAWPs in England, covering the following regions: South East, South West, East Anglia, East Midlands, West Midlands, North West, Northern, and Yorkshire/Humberside. Two further RAWPs cover North and South Wales.

### National Coordinating Group

**D.5** The National Coordinating Group (NCG) is chaired by the Department, and comprises the Chairs of the RAWPs, representatives of the aggregates industry, the Welsh Office, and other appropriate Government departments (a list of the current membership of NCG is at D.B). The NCG provides a national forum for discussion of the work undertaken by the RAWPs, and gives guidance to the RAWPs.

**D.6** A Technical Sub-Group of the NCG provides detailed technical advice on specific issues. The sub-group is chaired by the Department and draws representatives from the Chairs and Secretaries of the RAWPs and from the aggregates industry.

### Annex D.(A): Regional Aggregates Working Parties: Terms of Reference

In general, the RAWPs were established with terms of reference as follows:

**1** to assess the reserves of sand, gravel and hard rock which are available in the region and which are suitable for aggregate production;

**2** to assess the demand for aggregates likely to arise within the region;

**3** to indicate whether there is likely to be a regional surplus of aggregates production or a shortfall in supply without further planning permissions being granted for mineral working;

**4** to consider the potential contribution which synthetic and waste materials could make to meeting the demand for aggregates;

**5** to consider, where applicable, the contribution which the region could make to meeting demand arising in other parts of the country, taking into account environmental and agricultural considerations; and

**6** to monitor the supply and demand for aggregates.

**Annex D.(B): Current Membership of the National Coordinating Group (NCG)**

| | |
|---|---|
| Chair: | **Mr J Ballard**<br>Director,<br>Planning Directorate,<br>Department of the Environment |
| **Aggregates Working Party Chairs** | |
| South East | **Mr M Gwilliam**,<br>County Planning Officer, Bedfordshire County Council |
| East Anglia | **Mr M Shaw**<br>Director of Planning and Transport, Norfolk County Council |
| East Midlands | **Mr P Clark**<br>Chief Planning and Highways Officer, Derbyshire County Council |
| West Midlands | **Mr L Rendell**<br>Director of Planning and Transport, Warwickshire County Council |
| South West | **Mr M Oakley**<br>Deputy County Planning Officer, Avon County Council |
| North West | **Mr I Gilfoyle**<br>County Planning Officer, Cheshire County Council |
| Yorkshire & Humberside | **Mr J Rennilson**<br>County Planning Officer, North Yorkshire County Council |
| Northern | **Mr C Offord**<br>County Planning and Environment Manager,<br>Northumberland County Council |
| South Wales | **Mr M Flynn**<br>County Planning Officer, Mid-Glamorgan County Council |
| North Wales | **Mr P Eyton-Jones**<br>Director of Architecture Planning and Estates, Clwyd |

| | |
|---|---|
| | County Council |

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|---|---|
| **Representing Aggregates Working Party Secretaries** | |
| Secretary, East Midlands Working Party on Aggregates, National Stone Centre | Mr I Thomas |
| **Industry Representatives** | |
| British Aggregate Construction Materials Industries (BACMI) | Mr D Pollock<br>Mr I Reid<br>Mr P Rothwell<br>Mr A Shearer<br>Mr D Thomas |
| Sand and Gravel Association (SAGA) | Mr S Fidgett<br>Mr B Frost<br>Mr T Higgins<br>Mr T Macintyre |
| **Department of the Environment** | |
| Minerals Division | Mr R Mabey<br>Mr S Bland<br>Mr P Bide<br>Dr M Scott<br>Miss L Barnett |
| Construction Industry Directorate | Ms J Bishop<br>Mr J Lithgow<br>Mr D Williams |
| **Welsh Office** | |
| Planning Services Division | Mr B Courtier |
| **Scottish Office Environment Department** | |
| Planning Services | Mr B Spiers |
| **Ministry of Agriculture, Fisheries and Food** | |
| Land Use Planning Unit | Mr P Samuel |
| Land Use and Tenure | Mrs E Close |

## Annex E Secondary Materials

### Colliery spoil

**E.1** This is the waste material from the process of mining underground coal. The largest volumes are found on tips in Yorkshire, Nottinghamshire and South Wales. Stockpiles comprise c 2000mt on un-reclaimed tips and c 45mt per annum is generated for land disposal.

**E.2** The main uses have been as fill material for road embankments and building sites, where it may compete with local borrow pits, pfa, slag wastes and construction wastes. The main constraints on its use are its variable quality reflected in a low price and geographical location which limits the markets which can be reached.

**E.3** There is some scope for increasing the amount used, but the biggest potential is probably in lower grade end-uses, eg fill.

### China clay waste

**E.4** China clay wastes result from the production of china clay in Cornwall and Devon, with the largest concentration being in the St Austell area. The stockpiles are estimated at more than 600mt. Approximately 27mt arise each year, of which c 12mt is china clay sand.

**E.5** The sand is the only fraction of the waste for which significant secondary uses have been found and about 1.5mtpa are used in the local construction industry as aggregate for concrete block making, building mortar, structural concrete, unbound road sub-base, and as a general fill material.

**E.6** Increasing the use of china clay sand would require a widening of the geographical market area, and therefore, considerable financial support to overcome the transport cost barriers involved. And there are some limits imposed by the variable quality of the stockpiled material. There may be potential for use as bulk fill.

### Slate waste

**E.7** Stockpiles of slate wastes amount to 400-500mt, located largely in North Wales, but with other sources in mid Wales, Scotland, the Lake District, and Cornwall. Approximately 6mt are generated each year.

**E.8** Until recently, there was little use of this material, but it has been used as sub-base aggregate for major roads in Wales (both Type 1 and Type 2 aggregate).

**E.9** The main constraint on use is the cost of transportation to areas of substantial demand.

### Power station ashes

**E.10** Stockpiles of power station ashes amount to more than 13mt, mainly concentrated in North Yorkshire, Nottinghamshire and Derbyshire. Virtually all the furnace bottom ash is sold as an aggregate in blockmaking. Approximately 45% of the pulverised fuel ash (c 4mtpa) is sold as a blockmaking aggregate, although other uses include lightweight fill and cement substitute. Lightweight aggregates are also produced.

**E.11** The major constraint on utilisation is the location of the main arisings away from centres of demand. Other problems include variable rate of production. The high cost of lightweight aggregates constrains competition with primary aggregates.

**Blastfurnace and steel slags**

**E.12** Approximately 4mt of blastfurnace slag arises annually, and these are fully utilised in asphalting and as roadstone. Some of the older stockpiles are also being utilised. The use of steel slags (2mt arising each year) is constrained by technical and economic factors.

**Demolition and construction wastes**

**E.13** Arup Economics and Planning (see other publications 2) estimated that approximately 24mt of "hard" demolition and construction wastes arise each year, the method of disposal depending largely on the costs to the demolition contractor.(This is the part of a total of 70mt inert arisings including excavated soil, clay etc.) Arups reported that the material is often hauled to landfill sites, but estimated that more than 11mt are re-used on building sites for levelling purposes. Approximately 1mt were estimated to be recycled to produce graded aggregates.

**E.14** The Department of the Environment has research in hand, due for completion in spring 1994, on demolition and construction wastes. This will provide more up to date and detailed information on arisings and re-use/recycling/disposal. It will include a review of current operations, the planning and legislative tools which govern such operations, an analysis of the constraints on recycling, and a draft Code of Practice for the demolition/recycling industry. It will include recommendations for action by national Government, local authorities, and industry to encourage recycling.

**E.15** Preliminary results from this new study suggest that a high proportion, perhaps 60% or more, of demolition and construction wastes are currently recycled. The research estimates that of the total of 70mt inert arisings estimated by Arups3, some 21mt are deposited in landfill. A further 21mt is used for construction of access, hardstanding etc at landfill sites. Some 20mt are used in an unprocessed form or coarsely crushed for use on demolition/construction sites and for sale/disposal offsite. Some 2.8mt are crushed to produce a graded product, and possibly 5mt is disposed of for agricultural purposes or illegally tipped. These estimates are based on limited data and further detailed surveys will be required in the future to establish reliable data.

**Asphalt road planings**

**E.16** Currently, 80% of asphalt road planings are used. Until recently, none was recycled back into asphalt for use on road surfaces. However, the current Department for Transport specification will allow up to 10% of recycled material in any bituminous layer, provided there is no loss of performance.

## Annex F Bibliography

### Primary legislation

Ancient Monuments and Archaeological Areas Act 1979
Railways Act 1974
Environmental Protection Act 1990
Town and Country Planning Act 1990
Planning and Compensation Act 1991

### Statutory Instruments

Town and Country Planning (Assessment of Environmental Effects) Regulations 1988 (SI 1988 No. 1199)

### DoE Circulars

16/87: Development Involving Agricultural Land
27/87: Nature Conservation
15/88: Environmental Assessment
20/87: Use of Waste Material for Road Fill
25/85: Mineral Workings - Legal Aspects relating to Restoration of Sites with a High Water Table

### Minerals Planning Guidance Notes

MPG 1 General Considerations and the Development Plan System
MPG 2 Applications, Permissions and Conditions
MPG 7 The Reclamation of Mineral Workings

### Planning Policy Guidance Notes

PPG 1 - General Policy and Principles
PPG 2 - Green Belts
PPG 7 - The Countryside and the Rural Economy
PPG 12 - Development Plans and Regional Planning Guidance
PPG 13 - Transport
PPG 16 - Archaeology and Planning

### Other Publications

**1.** This Common Inheritance (Cm 1200) HMSO ISBN 010 112002 8 (£24.50)

**2.** Arup Economics and Planning: Occurrence and Utilisation of Mineral and Construction Wastes: HMSO 1991

**3.** National Collation of the 1989 Aggregate Minerals Survey, Department of the Environment, 1991

**4.** Efficient Use of Aggregates and Bulk Construction Materials: the Role of Specifications, Building Research Establishment 1993

**5.** Manual of Contract Documents for Highway Works - volume 1 - Specification for Highway Works, HMSO (revised annually)

**6.** Coastal Superquarries to Supply South-East England Aggregate Requirements: Arup Economics and Planning: HMSO 1992

**7.** Coastal Superquarries: Options for Wharf Facilities on the Lower Thames: Arup Economics and Planning: 1993

**8.** Guidelines for Assessing Marine Aggregate Extraction: MAFF Directorate of Fisheries Research, Laboratory Leaflet No. 73, Lowestoft 1993 ISBN 0143-8018

**9.** Convention of Wetlands of International Importance Especially as Waterfowl Habitat (CM 6465) HMSO 1976

**10.** CBI Minerals Environment Charter

**11.** The Apportionment of the Production of Construction Aggregates in the South East up to 2006. SERPLAN RPC 1446 June 1989

**12.** Environmental Assessment: A Guide to the Procedures HMSO 1989

**13.** The Environmental Effects of Surface Mineral Workings, HMSO 1991