
Chapter 3

Environmental Protection



Starting from top left and moving clockwise. Screening of the haul road at Dorket Head Clay Pit; access at Nether Langwith Quarry and Trent Washlands Landscape Character near Shelford.

Introduction

- 3.1 Mineral extraction by its very nature can destroy the existing fabric of the land. Agriculture, woodland, wildlife habitats and archaeological features can all be affected. Even when reclamation is rapid and progressive, this rarely compensates for the loss of features such as woodland, wildlife habitats and mature landscapes which have taken many years to evolve. Beyond site boundaries the amenity of the surrounding areas can be affected by visual intrusion, noise and dust from both extraction and associated plant. Transport of minerals, especially by road, can have implications many miles away from the site. Nevertheless, mineral extraction can bring environmental benefits and contribute to a sustainable environment. For example, derelict or degraded land can be reclaimed, and reclamation to nature conservation can help replace the loss of habitats and biodiversity that has resulted from modern agricultural practices and drainage improvements.
- 3.2 The Structure Plan Review (Chapter 3) sets out the broad/ strategic policies which protect the environment from the harmful effects of all forms of development. Mineral extraction, however, differs from other development in that minerals can only be worked where they occur, thus increasing the potential for conflict. Whilst the environmental impact of mineral extraction can never be totally eliminated, careful planning can ensure that adverse effects are minimised.
- 3.3 This Chapter addresses the main environmental issues associated with mineral working proposals, with the exception of reclamation which is considered separately in Chapter 4.

Information in Support of Planning Applications

- 3.4 Applicants are advised to discuss their proposals with the County Council, prior to the submission of an application. Such pre-application consultations can enable early identification of potential constraints and are encouraged in Government mineral planning guidance, MPG 2 'Applications, Permissions and Conditions'.
- 3.5 Applications for minerals development should provide sufficient information to allow a balanced assessment to be made between the possible advantages of the proposed development (including, where appropriate, the need for the mineral) and the environmental disruption which may arise. A detailed list of the information that may be required is set out in Policy M3.1 below.

POLICY M3.1 INFORMATION IN SUPPORT OF PLANNING APPLICATIONS

Planning permission for minerals development will not be granted unless sufficient information is provided to enable a balanced assessment of all relevant factors. Such information should include as appropriate details of:

- (a) present use of the site;**
- (b) geology;**
- (c) estimated mineral content, output and life of workings;**
- (d) quality of material;**
- (e) need for the mineral;**
- (f) measures taken to maximise the potential for re-use and recycling of materials on site;**
- (g) method of extraction with depth, direction and phasing of working;**
- (h) surface drainage and hydrogeology;**
- (i) layout and design of buildings and operational areas (including haul roads);**
- (j) soil survey and soil conservation measures;**
- (k) transport arrangements (including access, traffic generation and routeing);**
- (l) hours of operation;**
- (m) employment;**
- (n) measures to minimise pollution and environmental disturbance;**
- (o) impact on existing and adjacent land uses;**
- (p) an assessment of the landscape and ecological value of the area and the potential impact of the development;**
- (q) an assessment of archaeological remains and historic features and measures for their preservation and recording;**
- (r) impact on public rights of way;**
- (s) an overall scheme of restoration;**
- (t) landscaping measures and boundary treatment of the site;**
- (u) integrated working and reclamation scheme;**
- (v) aftercare;**
- (w) after-use;**
- (x) long term management provisions.**

Environmental Impact Assessment

- 3.6 Environmental Impact Assessment (EIA) is an important procedure for ensuring that the likely effects of major new development on the environment are fully understood and taken into account before the development is allowed to go ahead.
- 3.7 The current EIA regulations, The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, specify two categories of development. These are Schedule 1 projects, for which an EIA is required in every case, and Schedule 2 projects, for which an EIA is required only if the particular project in question is judged, by the MPA, likely to give rise to significant environmental effects.
- 3.8 For mineral extraction, Schedule 1 projects include quarries and opencast mining where the surface of the site exceeds 25 hectares.
- 3.9 For Schedule 2 projects the need for an EIA will rely on the likelihood of significant effects. This will tend to depend on the scale and duration of the works and the likely consequent impact of noise, dust, discharges to water and visual intrusion. All new opencast and underground mines will generally require an EIA. For clay, sand & gravel, and limestone quarries, an EIA is more likely to be required where they cover more than 15 hectares or involve the extraction of more than 30,000 tonnes per annum.
- 3.10 Where there is a possibility that a proposed mineral development will require an EIA, developers are advised to consult the County Council well in advance of a planning application, and formally request an opinion on whether an EIA is required. This procedure ensures that developers can obtain a clear ruling on the need for an EIA well before they reach the stage of lodging a planning application.

Planning Conditions and Obligations

- 3.11 When planning permission is granted, a comprehensive set of conditions is normally attached to ensure the satisfactory working and reclamation of the site. The information required under Policy M3.1 forms an important basis for considering what detailed conditions and other controls are required. Further guidance is provided in the text and policies of this Plan.

Planning Conditions

- 3.12 Planning conditions are used to control how a development takes place, and normally most matters can be adequately covered. Broadly, conditions can only relate to the use of land and are imposed in order to allow development where it would otherwise be refused. General guidance on the use of conditions is contained within Circular 11/95, PPG 1 and MPG 2. The MPA can exercise powers to enforce compliance with planning conditions where appropriate.

Planning Obligations

3.13 The County Council may also wish to control certain matters which lie beyond the legal scope of planning conditions. Planning obligations would normally cover such matters and can often secure a more sustainable form of development. These comprise either a legal agreement between the County Council, the applicant and any relevant third party, or unilateral undertakings made by the applicant. Circumstances where planning obligations may be sought include:

- the provision of off-site works such as highway improvements (see paras 3.48-53), landscape treatment and planting;
- where funding is required, such as to facilitate the preservation by record of archaeological remains;
- to secure the delivery of Local Biodiversity Action Plan targets where relevant to the site;
- where third parties are involved, such as in long-term management provisions;
- where financial guarantees are exceptionally required.

POLICY M3.2 PLANNING OBLIGATIONS

The County Council will seek to negotiate planning obligations as measures for controlling mineral operations and securing sustainable development objectives which cannot be achieved by the use of planning conditions.

Visual Intrusion

3.14 The Structure Plan Review recognises that certain forms of development, including mineral extraction, are appropriate in the countryside providing they do not have an unacceptable impact on the environment. Visual impact is often a major consideration.

3.15 The effects of mineral working can be to:

- destroy or change some of the existing landscape, or landscape character, eg. a hill, or distant view, or skyline; this may be addressed as part of a restoration plan;
- introduce an alien feature into the landscape, e.g. quarry faces, overburden mounds, machinery, lighting and screening fences;
- screen from view some of the landscape that is otherwise unaffected, e.g. by an overburden mound or plant/ equipment.

POLICY M3.3 VISUAL INTRUSION

Planning permission for minerals development will only be granted where any adverse visual impact can be kept to an acceptable level. Where appropriate, conditions will be imposed to ensure that plant, structures, buildings and storage areas are:

- (a) located in such a position as to minimise impact on adjacent land;**
- (b) kept as low as practicable to minimise visual intrusion;**
- (c) of appropriate colour, cladding or suitably treated to reduce their visual impact;**
- (d) satisfactorily maintained to preserve their external appearance;**
- (e) removed upon cessation of extraction and the site restored to an acceptable level.**

In addition, measure should be taken by sympathetic design and/or screening to avoid unacceptable light intrusion caused by extraneous light from the development.

- 3.16 Subject to specified limitations on their height, among other things, ancillary plant and buildings may also be erected at mineral extraction sites under permitted development rights granted by the General Permitted Development Order. Control over such developments by the County Council is limited. Provisions exist for these rights to be withdrawn, either by the issue of a direction under Article 4 of the Order, or alternatively by a condition imposed on a planning permission for a particular development. Permitted development rights are designed to be applicable in the great majority of cases. Circular 11/95 and MPG's 2 and 5 advise that their withdrawal should only be considered in exceptional cases and where there are compelling planning reasons for doing so.

Screening

- 3.17 Suitable landscape treatment, including tree planting and earth mounding, can help reduce visual impact. Planting carried out several years in advance of the development increases the effectiveness of these measures. The incorporation of physical screening barriers such as wall or fences may also need to be considered.

POLICY M3.4 SCREENING

Where planning permission for minerals development is granted, conditions will be imposed to ensure that screening and landscape proposals reduce visual impact. Such conditions should, where appropriate, include:

- (a) measures to retain, enhance, protect and manage existing features of interest and value for screening and their contribution to the reclamation of the site;
- (b) measures to screen the site by the use of walls, fences, earth mounding and/ or tree & shrub planting;
- (c) details of the method of working, and phasing to cause least visual intrusion;
- (d) details of the location, form, number, species, size, method of planting, site preparation and any necessary measures for replacing plant material which fails following initial planting.

Where appropriate, screening proposals should maximise the potential to enhance the landscape and wildlife potential through appropriate planting.

- 3.18 The above measures should also be considered in relation to the reclamation and long-term use of the site.

Environmental Pollution

- 3.19 The main environmental pollution impacts in connection with mineral working are:

- The various effects of road traffic, particularly where this is the primary means of transport;
- The effects of blasting, noise and dust, the level of which will vary according to the type of mineral and type and amount of overburden;
- The effects on the water environment, including contamination of surface water discharges by solids or oil and its derivatives and reduction of flow to wells and streams and occasionally settlement.

- 3.20 Legislation controlling these matters is contained within various Acts, notably:

- the Control of Pollution Act 1974;
- the Water Resources Act 1991;
- the Environmental Protection Act 1990;
- the Pollution Prevention and Control (England and Wales) Regulations 2000.

3.21 Planning guidance is contained within:

- Mineral Policy Statement 2, Controlling and Mitigating the Environmental Effects of Mineral Extraction in England (2005);
- Planning Policy Statement 23 – Planning and Pollution Control (2004).

3.22 MPS2 looks at the general environmental effects of mineral workings with specific environmental effects considered in individual annexes. These annexes will cover dust, noise, traffic, blasting, visual intrusion, landscape effects, mineral wastes and effects on the water environment. The first two annexes on dust and noise were published with MPS2 with further annexes to be published as soon as practicable.

3.23 Local Planning Authorities (LPAs) should not duplicate controls which are the statutory responsibility of other bodies. Policies M3.5 to M3.9 complement the pollution control regime and are designed to prevent harm to interests of acknowledged importance, such as amenity (including residential amenity) and highway safety.

3.24 The main categories of pollution, their cause and ameliorative measures are considered below:

Noise

3.25 The potential effects of noise from the mineral operations beyond the site boundary are to:

- Distract or annoy – a noise does not have to be loud to be intrusive. It may be different in character and identified as coming from an unwelcome source;
- Mask desirable ‘noises’, e.g. wildlife/ birds, and disturb tranquil places;
- Prevent or disturb sleep;
- Disturb animals and birds, particularly when sudden noises are involved.

3.26 Technical details of how noise is measured and guidance on acceptable noise levels are set out in Panel 3.1. MPS2 (Annex 2) advises that the minerals industry should keep noise emissions to levels that reflect the highest environmental standards and to work for continuous improvements.

Panel 3.1 How Noise is Measured and Government Guidance on Acceptable Levels

Noise is measured in decibels (dB)

dB(A) – decibels measured on a sound level meter incorporating a frequency weighting, 'A weighting', to correspond to how noise is perceived by the human ear. Measurements in dB(A) broadly agree with an individual's assessment of loudness. A change of 3 dB(A) is the minimum perceptible under normal conditions and a change of 10 dB(A) corresponds roughly to a doubling or halving of typical background noise.

$L_{Aeq,T}$ – the equivalent continuous sound level – the sound level of a steady sound having the same energy as a fluctuating sound over a specified measuring period (T). Used to describe many types of noise and can be measured directly with an integrating sound level meter.

Free-field – measurement taken at least 3.5m away from any façade that might reflect noise from the source.

What does the Government recommend to be an acceptable level of noise?

MPS2 advises that existing background noise levels should not normally be exceeded by more than 10 dB(A) subject to a maximum of 55dB(A) L_{Aeq} (free field). It is recognised that this may be more difficult to achieve in exceptionally quiet areas and the 55dB(A) L_{Aeq} 1hr (free field) limit should be used in such cases. Night time limits at noise sensitive properties should not exceed 42dB(A) L_{Aeq} 1hr (free field).

Increased temporary day time noise limits of up to 70 dB(A) L_{Aeq} 1hr (free field) for periods of up to 8 weeks in a year at specified noise-sensitive properties should be considered for activities such as soil stripping, the construction and removal of baffle mounds, soil storage mounds and spoil heaps, construction of new permanent landforms and aspects of road construction and maintenance.

3.27 When submitting a planning application operators may be required to provide a scheme for the control, mitigation, reduction or removal of noise emissions from a site. To do this, they will need to:

- provide a description of the main characteristics of the production process, and an assessment of measures and proposals to minimise, mitigate or remove noise emissions at source;
- carry out a survey of background noise to determine the existing noise level in the area, including that at nearby properties and open spaces affected by the noise which would arise from the development, and its effects on these areas.

POLICY M3.5 NOISE

Planning permission for minerals development will only be granted where noise emissions outside the boundary of the mineral workings do not exceed acceptable levels. Where appropriate conditions will be imposed to:

- (a) restrict hours of operation;**
 - (b) require the use of conveyors instead of dumptrucks;**
 - (c) sound-proof fixed and mobile plant;**
 - (d) set maximum noise levels at sensitive locations;**
 - (e) impose stand off distances between operations and noise sensitive locations;**
 - (f) require the use of acoustic screening such as baffle mounds or fencing.**
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3.28 Operators should take into account the Framework of Good Practice, detailed in Annex 2 of MPS2.

Blasting

3.29 When published, an annex of MPS2 will provide guidance on blasting. This will be based on research by Vibrock Ltd on 'The Environmental Effects of Production Blasting from Surface Mineral Workings' (TSO 1998). This guidance considers the impact of blasting and the factors affecting them, the statutory regime for controlling them, and provides advice on good practice in controlling and mitigating these effects. Technical details of how blasting is measured are set out below, (see Panel 3.2).

3.30 Blasting at mineral workings can give rise to the following effects:

- Vibration – the levels of vibration generated by mineral workings should be well below those required to cause structural damage to properties. However, vibration is transmitted through the ground and pressure waves through the air ('over pressure') can shake buildings and people, may cause nuisance, and can disturb wildlife habitats.
- Audible noise – this forms part of the pressure wave and may be augmented by the rattling of windows.
- Flyrock – fragments of rock propelled into the air by the explosion. This is clearly potentially dangerous to people and property both inside and outside the site.
- Dust.

Panel 3.2 How blasting is measured

Vibration from a blast is transmitted through the ground and through the air as pressure waves, (air overpressure). In order to ensure that blasting is kept within acceptable limits, specific monitors can be placed to measure both ground vibration and air overpressure.

When defining damage to residential type structures the following classifications are used:

Cosmetic/ Threshold Damage – the formation of hairline cracks or the growth of existing cracks in plaster on drywall surfaces or mortar joints.

Minor Damage – the formation of large cracks or loosening and following of plaster on drywall surfaces, or cracks through bricks/ concrete blocks.

Major Damage – damage to structural elements of the building.

Ground Vibration

Ground vibration from blasting events is measured in terms of particle velocity with the maximum or peak values of this motion are measured in 3 directions at any one location. This is called peak particle velocity and is measured in millimetres per second, (mms^{-1}).

Blast vibration frequency is a significant factor in determining magnification levels of both human and structural response to vibration. The more competent or solid the transmission medium, then the more the high frequency motions tend to be attenuated over shorter distances. Hence high vibration levels are more likely with blasting of softer rocks, such as opencast coal, compared to more solid rocks, such as limestone.

BS7835 1993, gives guide values with respect to all 3 damage classifications for residential structures. Cosmetic damage can be expected at vibration levels between 15 mms^{-1} and 50 mms^{-1} . To put this into perspective a door slam measured over a doorway ranges between 12 and 35 mms^{-1} .

Air Overpressure

Air overpressure is energy transmitted from the blast site within the atmosphere in the form of pressure waves. The maximum excess pressure in this wave is known as the peak air overpressure, generally measured in decibels linear (dB).

Human reaction to a blast will be in response to the resulting effects of both ground and airborne vibration and in particular the combined effects that these exhibit within a property.

Routine blasting operation regularly generate air overpressure levels at the closest of adjacent property of around 120dB.

Research by the United States Bureau of Mines (USBM) has found that poorly mounted windows that are prestressed might crack at around 150dB with most cracking at around 170dB. Structural damage would not be expected at levels below 180dB.

- 3.31 Over the years, standard maximum vibration levels have been established to avoid property damage and general disturbance. Techniques such as delayed detonation of multiple charges and burying detonation cables can do much to reduce maximum vibration and air over pressure levels. Restricting the hours when blasting can take place may also be appropriate in sensitive areas.
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POLICY M3.6 BLASTING

Planning permission for minerals development will only be granted if blasting levels can be kept within acceptable limits. Where appropriate conditions will be imposed to:

- (a) set a maximum vibration limit;**
 - (b) restrict the hours when blasting can occur;**
 - (c) limit air overpressure levels by the adoption of best practice blast design;**
 - (d) require the operator to monitor blast vibration levels in sensitive locations and to provide reports of blast levels on a regular basis to the County Council.**
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Dust

- 3.32 Residents can potentially be affected by site dust up to 1km from a mineral working, although continual or severe concerns about dust are most likely to be experienced where the dust source is within 100 metres.
- 3.33 The main potential affects of dust are:
- Visual – dust plumes, reduced visibility, coating and soiling of surfaces leading to annoyance, loss of amenity and a need to clean surfaces.
 - Physical and/ or chemical contamination and corrosion of artefacts.
 - Coating of vegetation and contamination of soils leading to changes in vegetation, growth rates, possibly reduced value of agricultural products, as well as coating of grass that may adversely affect grazing livestock.
 - Contamination of water courses.
 - Health effects – particulate air pollution is associated with a range of effects on health.
- 3.34 Many mineral operations are prone to generating dust especially when conditions are dry and windy. Processing areas, stockpiles, haul roads and the stripping and replacement of soil and overburden are likely to be amongst the worst offenders. Infilling operations can also present dust hazards. Accordingly, where potential dust nuisances are identified, these should be kept away from sensitive areas.

- 3.35 MPS2 recommends that a dust assessment study be undertaken for proposed development. The type and scale of workings and proximity of sensitive land uses in surrounding areas will influence the degree of assessment.
- 3.36 There are 4 key stages that a dust assessment should take into account. These are:
- (i) Establishing existing baseline conditions
 - (ii) Identifying site activities that could lead to dust emissions
 - (iii) Identifying site parameters which may increase potentials impacts
 - (iv) Recommending mitigation and site design modifications.

POLICY M3.7 DUST

Planning permission for minerals development will only be granted where dust generation will not lead to an unacceptable impact. Where appropriate conditions will be imposed to suppress dust generation. Such conditions may relate to the:

- (a) layout of the site, design of stockpiles;**
 - (b) containment of conveyors and processing plant and dust collection equipment;**
 - (c) use of bowsers, sprays, and vapour masts on haul roads, stockpiles, transfer points;**
 - (d) design of material – handling systems, drop heights, wind guards, loading points;**
 - (e) use of binders on haul roads and stockpiles;**
 - (f) limiting on-site vehicle speed;**
 - (g) soil handling strategies;**
 - (h) limiting levels of dust measured in a specific way; provision of monitoring facilities.**
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Water Environment

- 3.37 Rivers, lakes, ponds and flood meadows provide valuable wildlife habitats, areas of recreation and natural beauty. However, over the years drainage improvements, flood defences, intensive agriculture, industry and built development have significantly degraded the value of many of these features. Mineral workings can affect both the surface and ground water regime in a number of ways, ranging from physically removing the watercourse to chemical pollution, but also provide an important opportunity to recreate many of the above lost habitats through reclamation schemes.

- 3.38 MPS2 covers the environmental effects of mineral extraction in England. The main potential effects of mineral workings on the surface water regime are to:
- Alter the surface over which water flows,
 - Reduce surface water flow due to lack of recharge from groundwater or seepage from the stream bed or decreased catchment,
 - Increase surface water flow because of discharge or increased catchment which may increase scour or inundate points of limited capacity downstream (i.e. affecting floodplain storage capacity),
 - Change the quantity, and physical and chemical quality of these flows.
- 3.39 The potential effects on the groundwater regime are to:
- Alter the quality of the infiltration water recharging the aquifer,
 - Alter the timing and relative rates of aquifer recharge and surface water flows,
 - Change the supply of water to abstraction and spring fed surface water courses,
 - Settlement of ground surface, buildings, etc.
 - Change the quality of the water before discharging it,
 - Cause physical and chemical contamination.
- 3.40 The Environment Agency has a duty to protect all water resources under the Water Act 2003 and the EU Water Framework Directive which came into force in December 2000. The Agency's approach is set out in its "Policy Practice for the protection of Groundwater" 1992. This provides a technical framework to influence decisions which can affect the protection of groundwater. The Agency's policies, recommendations and requirements will be taken into account when making planning decisions. In addition to planning controls, Waste Management Licences, issued by the Environment Agency, normally impose conditions to prevent water pollution.
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POLICY M3.8 WATER ENVIRONMENT

Planning permission for minerals development will only be granted where:

- (a) surface water flows are not detrimentally altered;**
- (b) groundwater levels, where critical, are not affected;**
- (c) there are no risks of polluting ground or surface waters.**

Unless engineering measures and/ or operational management systems can adequately mitigate such risks.

Flood Defences

3.41 Mineral extraction within floodplains can reduce storage capacity, impede flows and thus increase the risk of flooding elsewhere. Potential obstructions include soil and overburden mounds and fixed plant. Storage mounds parallel to flood flows and ensuring reclamation does not exceed original ground levels are likely requirements in critical areas. Reclamation schemes which return the land below original levels, including water areas, may result in an increased flood storage capacity. Operators shall undertake a full risk assessment of the proposed development, in accordance with PPG 25 'Development and Flood Risk', 2001. Such assessment should take account of the:

- area liable to flooding;
- probability of it occurring, both now and over time;
- extent and standard of existing flood defences and their effectiveness over time;
- likely depth of flooding;
- rates of flow likely to be involved;
- likelihood of impacts to other areas, properties and habitats;
- potential effects of climate change; and
- nature and currently expected lifetime of the development proposed and the extent to which it is designed to deal with flood risk.

3.42 Mineral extraction can also disrupt local drainage systems by breaching or removing watercourses. Where small watercourses are to be removed, either temporarily or permanently, adequate diversions will need to be installed. For larger rivers and watercourses, where it is essential that the channel remains intact, adequate safety margins must be preserved between the mineral working, watercourse and/ or any related floodbanks. The Environment Agency and Internal Drainage Boards provide guidance on what flood defence measures are required.

POLICY M3.9 FLOODING

Planning permission for minerals development will not be granted where there is an unacceptable impact on flood flows and flood storage capacity, or on the integrity or function of flood defences and local land drainage systems, unless conditions can be imposed to protect flood defences from both the temporary and permanent adverse effects of the development.

Associated Industrial Development

- 3.43 The General Permitted Development Order (GPDO) allows certain types of industrial development to be located within or adjacent to mineral workings, without the need for a specific permission, although approval for details may still be required by the County Council. Broadly, these comprise industrial processes which largely depend on the mineral worked from the related mine or quarry, such as ready mixed concrete plants associated with sand and gravel quarries. Various criteria relating to height, appearance and other restrictions apply. All other industrial development associated with the mine and quarry requires planning permission in the normal way.
- 3.44 Proposals for industrial development that fall outside the scope of the GPDO will only be permitted where it can be shown that there are clear overall environmental advantages in a close link between the industrial and extractive operations. Particular regard will be given to environmental and transport effects, and the likely duration of working.
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POLICY M3.10 ASSOCIATED INDUSTRIAL DEVELOPMENT

Proposals for associated industrial development on or adjacent to mineral extraction sites will only be permitted where there are no significant environmental, transport or other disadvantages.

- 3.45 The continued use of such industrial development following exhaustion of the mineral reserve means it will become dependent upon the import of raw materials. This usually involves significant movements of heavy goods vehicles and will therefore normally be resisted.
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POLICY M3.11 REMOVAL OF ASSOCIATED INDUSTRIAL DEVELOPMENT

When granting planning permission for industrial development associated with minerals extraction, the County Council will impose conditions to ensure its subsequent removal and reclamation of the site upon cessation of mineral extraction unless there are overriding environmental advantages in retaining that industrial development.

Transport

- 3.46 The movement of minerals and/ or the importing of waste to infill mineral workings, can generate large volumes of traffic. Options include rail, road, water, pipeline or conveyor.

- 3.47 Coal used to supply power stations is ideally suited to rail transport where large quantities of mineral need to be conveyed between fixed points. Other minerals, such as sand and gravel, usually require the greater flexibility offered by road transport since markets are more local and scattered. However some sand and gravel operations in the Trent Valley are able to make use of barges to carry material to markets in Yorkshire and Humberside. Pipelines or conveyors may convey waste materials, such as colliery spoil and power station ash.

Road Traffic

- 3.48 The Highways Agency oversees the trunk road network and gives policy advice on other transport issues concerning their function, including the consideration of planning applications.
- 3.49 The potential off-site effects of traffic are:
- to add to the number and size of vehicles on the road. This may cause congestion, accidents, difficulties for pedestrians, particularly in rural areas near quarry sites, where the road network may not be suitable for concentrated movements of Heavy Goods Vehicles (HGVs),
 - damage to roads and verges,
 - spillage onto roads causing mud and dust,
 - to create visual intrusion, air pollution, dust, noise and vibration in areas adjacent to the roads,
 - damage to property, particularly historic buildings from vibration and spray eroding stone work.
- 3.50 On-site, the potential effects are largely noise and dust in neighbouring areas.
- 3.51 Detailed guidance on land use and transportation is provided in District Local Plans. In addition to development plan policies, there are two Local Transport Plans, one covering Greater Nottingham and the other the rest of the County. These are prepared by the highway authorities (i.e. the County Council and Nottingham City Council) and cover the co-ordination and improvement of all forms of transport, setting out proposals for future investment and the implementation of specific measures.
- 3.52 For mineral development, measures to limit adverse effects include:
- Sheeting of lorries;
 - Installation of wheel cleaning facilities;
 - Highway improvements and maintenance;
 - Hours of working.
- 3.53 These can be achieved by the use of conditions, or where appropriate, planning obligations. Under the Highways Act (1980) the MPA can also claim additional costs due to damage caused by heavy traffic.

POLICY M3.12 HIGHWAYS SAFETY AND PROTECTION

Planning permission for minerals development will only be granted where measures are in place to the County Council's satisfaction that prevents damage to the highway and also prevents mud and other deleterious material contaminating public highways. Such measures may include:

- (a) wheel cleaning facilities;**
 - (b) sheeting of lorries;**
 - (c) metalling haul roads near their point of access to the public highway.**
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3.54 Lorry routeing can also be a major consideration in assessing the acceptability of a mineral development proposal. Whilst a reasonable route may exist, which the mineral operator may well be willing to use, planning controls cannot be used to provide sufficient assurance that any given route will be adhered to. This is because planning conditions can do no more than simply require the mineral operator to post site notices or issue instructions to drivers to avoid certain routes. Planning obligations are not an option because, whilst they can secure highway improvements, they cannot restrict right of passage over public highways. Mineral operators can however give an undertaking to impose sanctions such as refusing to load those vehicles that do not comply with a particular agreed route.

3.55 An alternative remedy is possible, at least where there is agreement in principle between the mineral operator and the County Council over routeing. The mineral operator can offer to provide adequate legally binding assurances by entering into an agreement under Section 111 of the 'Local Government (Miscellaneous Provisions) Act', 1972.

POLICY M3.13 VEHICULAR MOVEMENTS

Planning permission for minerals development will only be granted where the highway network can satisfactorily accommodate the vehicle movements likely to be generated and would not cause unacceptable impact upon the environment and disturbance to local amenity.

POLICY M3.14 VEHICULAR ROUTEING

In granting planning permission for minerals development the County Council will as appropriate;

- (a) impose conditions requiring the posting of site notices and/ or the issuing of instructions to lorry drivers detailing any routes to be avoided;
 - (b) seek to negotiate planning obligations in order to secure highway improvements;
 - (c) seek to negotiate agreements under Section 111 of the Local Government (Miscellaneous Provisions) Act 1972 in order to specify agreed vehicular routes.
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Bulk Movement

- 3.56 Bulk movement of minerals by rail or water can help to reduce environmental impacts and improve the sustainability of minerals operations. They include the effect on the amenity of settlements along possible routes and reduced fuel consumption. The River Trent already plays an important role with barge transportation of sand and gravel from a number of quarries and has the capacity to be able to handle more. Facilities such as wharfs, which would make its use even more viable, should be encouraged. Where large amounts of material are involved, and the flexibility of road transport is not essential, alternative more sustainable means of transport will normally be preferred.
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POLICY M3.15 BULK TRANSPORT OF MINERALS

The bulk transport of minerals or minerals waste/ fill by rail, barge, pipeline or conveyor will be permitted, where this will result in an overall environmental benefit. Where major proposals rely on road transport, planning permission will not be granted until it has been demonstrated that more sustainable forms of transport are not viable.

The Countryside

- 3.57 Mineral extraction usually occurs in rural areas and therefore has a major impact on the countryside. In particular the following issues will need to be considered.

Green Belt

- 3.58 The Nottinghamshire Green Belt Local Plan (1988) defined a broad belt of countryside around the Greater Nottingham conurbation where great restraint was placed on development. This has subsequently been redefined and incorporated into the District Local Plans covering the county.

3.59 General guidance on development in the Green Belt is set out in the Structure Plan Review adopted in 1996. In accordance with PPG2, most forms of development are severely restricted within this belt, although mineral extraction is one of the few exceptions. The main requirement is that proposals do not adversely affect the Green Belt, in particular its open character. Accordingly, industrial development associated with the mineral extraction is likely to be unacceptable (see Policy M3.11) unless, if the development is judged to be inappropriate, there are very special circumstances which would justify approving it.

Agriculture

3.60 Agricultural land accounts for about three-quarters of the total area of the County and most mineral working proposals affect agricultural land.

3.61 PPS7: Sustainable Development in Rural Areas, requires the presence of best and most versatile agricultural land to be taken into account alongside other sustainability factors when determining planning applications. Our aim is the better protection of the environment and countryside as a whole.

Panel 3.3 Definition of best and most versatile agricultural land

The best and most versatile agricultural land falls into grades 1, 2 and 3a. This land ranges from excellent (grade 1) to good quality (grade 3a) and is the most flexible, productive and efficient in response to inputs.

Other grades comprise 3b, 4 and 5. This ranges from moderate (3b), poor quality (4) to very poor quality (5).

3.62 Where development of agricultural land is unavoidable, the County Council will seek to use areas of poorer quality land in preference to that of higher quality, except where other sustainability considerations suggest otherwise. These might include, for example, its importance for biodiversity, the quality and character of the landscape, its amenity value or heritage interest, accessibility to infrastructure, workforce and markets, and the protection of natural resources. Some of these qualities may be recognised by a statutory wildlife, landscape, historic or archaeological designation.

POLICY M3.16 PROTECTION OF BEST AND MOST VERSATILE AGRICULTURAL LAND

Planning permission for minerals development will only be granted in the best and most versatile agricultural land (grades 1, 2, and 3a) where it can be demonstrated that:

- (a) proposals will not affect the long term agricultural potential of the land; or**
- (b) there is no available alternative and the need for development outweighs the agricultural interest; or**
- (c) available land of lower value has sustainability considerations which outweigh the agricultural land quality.**

Where alternative options are limited to varying grades of best and most versatile land, the development should be located within the lowest grade.

Woodland

- 3.63 Woodlands are environmentally and commercially important and are becoming increasingly significant for recreation and tourism. Existing trees and woodlands can also be valuable in screening mineral operations.
- 3.64 Guidance on the protection of woodlands is provided in the Structure Plan Review. Ancient woodlands comprise areas of continuous woodland since at least 1600, other than underwood clearing and timber production. These represent an irreplaceable resource. Nearly all of these have been designated as being of either national or local importance and are therefore protected from mineral extraction by policies M3.18 – M3.20 below. Other woodlands, which may not be designated, will be important for biodiversity, providing habitats for protected species and form an essential part of the landscape character. Policies M3.21 – M3.23 covering these issues will protect woodlands with this value. Where it is acceptable to lose woodland to mineral extraction, the mitigation measures required by these policies will normally require woodland of at least an equivalent area to be re-instated.

Biodiversity

- 3.65 Biodiversity is the variety of life around us: our wild animals and plants, and the habitats such as woodland or heathland which support them. Conserving biodiversity is not just about rare and threatened plants and animals, but encompasses the whole of the natural world, from the commonplace to the critically endangered. Biodiversity is a key test of sustainability, passing a healthy and diverse environment on to future generations.
- 3.66 In 1992 the UK Government signed the UN Convention on Biological Diversity at the 'Earth Summit' in Rio. This committed the UK to producing a national plan, published in 1994, for biodiversity conservation, 'Biodiversity: The UK Action Plan'.

- 3.67 In order to implement the UK Biodiversity Action Plan (UKBAP) the Government has assigned lead responsibility for producing and implementing Local Biodiversity Action Plans (LBAPs) to local authorities. The Nottinghamshire LBAP was published in 1998 by a partnership of organisations including the County Council and Nottingham City Council.
- 3.68 Whilst designated sites continue to be important, Biodiversity Action Plans shift the emphasis towards action within the environment as a whole, both to protect the current resource and to restore past losses. This is in accordance with PPG9, 'Nature Conservation' (1994), which states that development plans should be concerned not only with designated sites, but also with other land of conservation value and possible provision of new habitats. This includes linear features such as riverbanks and hedgerows or stepping-stones such as ponds, which enable the migration and dispersal of wildlife and maintenance of viable populations. The priority habitats set out in the Nottinghamshire LBAP are listed below in Table 3.1.
- 3.69 Whilst minerals development can harm wildlife, mineral reclamation schemes can provide important opportunities for promoting biodiversity, by re-creating habitats such as woodland, wetland and heathland. For example, a new wildfowl reserve at Langford Lowfields sand and gravel quarry is being designed to attract the Bittern. Indeed many of the priority habitats in Table 3.1 occupy former mineral workings.

Wet broadleaved woodland	Lowland dry acid grassland
Oak-birch woodland	Lowland calcareous grassland
Mixed ash-dominated woodland	Reedbed
Lowland wood pasture and parkland	Fen
Lowland heathland	Marsh
Ancient and/ or species rich hedgerows	Pond and lakes
Ditches (species rich)	Rivers and streams
Cereal field margins	Canals
Lowland wet grassland	Saline lagoons
Unimproved neutral grassland	Urban and post-industrial habitats

POLICY M3.17 BIODIVERSITY

Planning permission will not be granted for minerals development which will adversely affect the integrity or continuity of habitats or features identified as priorities in the UK and/ or Nottinghamshire Local Biodiversity Action Plan, unless an overriding need for development is demonstrated which outweighs the nature conservation importance of the feature. If the loss of the habitat or feature cannot be avoided, provision will be made, where practicable, for the creation of an equivalent habitat or feature, either on the development site or under the terms of a voluntary agreement on a suitable alternative location within the county.

Designated Sites

- 3.70 In order to halt the decline in our biodiversity and restore past losses, it is essential to maintain our most important wildlife sites as reservoirs from which habitats and species can be restored to the wider environment. Certain habitats and species, such as heathland and green winged orchid, have declined to such critical levels in Nottinghamshire that they are now rarely found outside sites which have been protected by designation. The Nottinghamshire LBAP recommends that if these habitats and species are to survive in the long term, then key sites must be safeguarded and action taken to link and extend them in order to restore these habitats and species to areas from which they have been lost.
- 3.71 The nature conservation site designations in Table 3.2 below apply in Nottinghamshire.

TABLE 3.2 NATURE CONSERVATION DESIGNATIONS IN NOTTINGHAMSHIRE		
IMPORTANCE	DESIGNATION	DESIGNATED BY
Internationally Important	Special Area of Conservation (SAC) Designated under EC Habitats Directive 1992	European Commission
Nationally Important	National Nature Reserve (NNR) declared under S19 of the National Parks and Access to the Countryside Act 1949 or S35 of the Wildlife and Countryside Act 1981	English Nature
	Site of Special Scientific Interest (SSSI) Designated under S28 of the Wildlife and Countryside Act 1981	
Regionally/ County Important	Local Nature Reserve (LNR) Designated under S21 of the National Parks and Access to the Countryside Act 1949	Local Authorities in consultation with English Nature
	Site of Importance for Nature Conservation (SINC) Designated under criteria set by an expert local panel (non-statutory)	Nottinghamshire SINC panel

- 3.72 Sites of geological value include SSSIs, SINCs and those defined under the Regionally Important Geological Sites (RIGS) scheme.

International Sites

Special Areas of Conservation (SAC)

- 3.73 Development which would detrimentally affect a SAC or candidate SAC (cSAC) is prohibited under The Habitats Regulations 1994, unless it can be proven that there will be no adverse effect, or there are considerations of overriding public interest and there is no other possible location. Where the site concerned hosts a priority habitat or species, the development will also not be permitted unless it is necessary for reasons of human health or public safety and it can bring benefits of primary importance to the environment. All SACs are also designated as an SSSI. At present the only SAC in the County is the Birklands and Bilhough cSAC within Sherwood Forest.

POLICY M3.18 SPECIAL AREAS OF CONSERVATION

Planning permission will not be granted for minerals development which would destroy or significantly adversely affect a Special Area of Conservation or a candidate Special Area of Conservation unless:

- (a) there is no alternative solution; and**
- (b) there are imperative reasons of overriding public interest;**

and, if the site hosts a priority habitat or species:

- (c) there are overriding reasons of human health and public safety; and**
- (d) there are beneficial consequences of primary importance for the environment.**

The assessment of any adverse impact will take account of the scope for mitigation and/ or compensatory measures to replace the loss.

National Sites

National Nature Reserves (NNRs)

- 3.74 NNRs are areas of national, and sometimes international, importance which are owned or leased by English Nature or bodies approved by them, or are managed in accordance with Nature Reserve Agreements with landowners and occupiers. The essential characteristic of NNRs is that they are primarily used for nature conservation. At present the County has one NNR at Sherwood Forest, Edwinstowe. NNRs warrant the same level of protection as SSSIs, provided in Policy M3.19 below.

Sites of Special Scientific Interest (SSSIs)

- 3.75 The procedures for dealing with SSSIs are outlined in PPG 9. There is a strong presumption against development unless overriding need can be demonstrated, not just for the mineral but for the mineral in that location, or conditions imposed to prevent damage. Permission for development which would destroy or detrimentally affect an SSSI will not be granted. There are over 66 SSSIs covering 3061 hectares in Nottinghamshire.
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POLICY M3.19 SITES OF SPECIAL SCIENTIFIC INTEREST

Planning permission will not be granted for minerals development which would have an adverse effect, directly or indirectly, on the special interest of an SSSI or a candidate SSSI unless the reasons for the development outweigh the nature conservation considerations. The assessment of any adverse impact will take account of the scope for mitigation and/or compensatory measures to replace the loss.

Regional and Local Sites

Local Nature Reserves (LNRs)

- 3.76 LNRs are habitats of local significance that can make a useful contribution both to nature conservation and to the opportunities for the public to see, learn about and enjoy wildlife. There are currently 12 LNRs in the County.

Sites of Importance for Nature Conservation (SINCs)

- 3.77 Sites that do not have statutory designation but are important for biodiversity and geology are known as SINCs. In Nottinghamshire over 1200 SINCs, have been identified by the Nottinghamshire Biological and Geological Records Centre, at Wollaton Hall. The importance of SINCs is emphasised by the Government in PPG9. While SINCs are locally designated, their interest can be of a regional or national level.

Regionally Important Geological/Geomorphological Sites (RIGs)

- 3.78 Sites that are of regional geological or geomorphological interest and are worthy of protection for their education, research, historical or aesthetic importance are known as RIGS. There are presently around 130 RIGS in the county.
- 3.79 Permission for the development of local or regional registered sites will not be granted unless the developer can prove that the importance of the development outweighs the value of the site. In practice this means that the development must be of at least county or regional importance, depending on the site affected.

POLICY M3.20 REGIONAL AND LOCAL DESIGNATED SITES

Planning permission for minerals development in areas which are regional or local designated sites will only be granted where it can be demonstrated that the importance of the development outweighs the regional or local value of the site, taking into account measures to mitigate/compensate against any adverse impact.

Protected Species

- 3.80 Certain species are protected under the 1981 Wildlife and Countryside Act because of their vulnerability. Although not all are rare, these species are under threat in some way, and would be likely to become rare if protection was not in place.
- 3.81 In addition, the EU 'Directive on the Conservation of Natural Habitats and Wild Fauna and Flora' (The Habitats Directive) and the corresponding UK Conservation (Natural Habitats, &c.) Regulations 1994, (the Habitats Regulations) identify priority species and habitats which are afforded protection at the material level.
- 3.82 The presence of a protected species is a material consideration when assessing a development proposal which would be likely to result in harm to the species. For this reason it is essential that surveys are carried out and submitted with an application prior to determination. PPG 9 advises on the use of planning conditions and/ or obligations under which steps would be taken to secure the protection of the species. Such conditions or obligations could also secure their protection beyond the normal 5-year aftercare period where appropriate, due to the requirements of the protected species. This may include ameliorative measures to facilitate the survival of individual members of the species reducing disturbance to a minimum and, if necessary, the provision of alternative habitats.
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POLICY M3.21 PROTECTED SPECIES

Planning permission for minerals development likely to cause harm to protected species or their habitats will only be permitted if the protection and conservation of species can be secured by condition or planning obligations, or if there is an overriding need for the development. Planning permission for mineral development will not be granted until a full survey of the affected species has been carried out.

The Countryside Appraisal – Landscape Character

- 3.83 Nottinghamshire contains a number of distinct landscapes reflecting variations in its underlying geology and land-use. As part of the Countryside Appraisal, Nottinghamshire Landscape Guidelines were published in 1998 following a landscape assessment of the County. This document identifies 10 'regional character areas' and their component 'landscape types'. It examines the features that contribute to local distinctiveness and provides management guidelines in order to strengthen the character of the Nottinghamshire countryside.
- 3.84 In order to ensure that the mineral development and associated landscape proposals are firmly linked to the recommendations within the Nottinghamshire Landscape Guidelines, the structure and character of the existing landscape should be understood. The best way of meeting this is by a local landscape character assessment which identifies the potential landscape and visual impacts of the mineral development on the surrounding area.
- 3.85 Landscape proposals for the restoration of the site, such as earthworks, after-use and planting, should reflect the landscape type and regional character area within which the site lies.
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POLICY M3.22 LANDSCAPE CHARACTER

Operators must demonstrate that landscape character and local distinctiveness are fully taken into consideration within development proposals. Planning permission will not be granted for minerals development which is likely to adversely impact upon the character and distinctiveness of the landscape unless there are reasons of overriding public interest or where ameliorative measures can reduce the impact to an acceptable level.

Countryside Appraisal – Mature Landscape Areas

- 3.86 Mature Landscape Areas (MLAs) are a local countryside designation which seeks to identify and protect those parts of Nottinghamshire which have least been affected by adverse change.
- 3.87 MLAs were first identified in 1992, following a detailed countywide landscape assessment, as the first part of Nottinghamshire County Council's Appraisal project. This was carried out because, as elsewhere in the UK, over the last 50 years there has been a period of rapid change leading to the loss of many of the landscape features that give the Nottinghamshire countryside its character.
- 3.88 MLAs are areas of the countryside which have a strong landscape character, with a distinct sense of place and that have remained relatively unchanged over time when compared to the wider landscape and are often ecologically

important. They are areas, which have largely escaped the adverse effects of urbanisation, intensive farming, commercial forestry and mineral extraction having many of the characteristic features which are found within that particular landscape type as well as a definite sense of place.

- 3.89 The purpose of MLAs is to protect these valuable and vulnerable landscapes from harmful development which could damage, degrade, destroy or detract from the characteristic features for which the MLA was protected. Most MLAs defined are small, varying between 2.8ha and 423ha with areas of between 50 and 150ha being usual. The 8656ha Sherwood Forest/ Dukeries MLA is part of Sherwood Forest and is also afforded protection as a Special Landscape and Heritage Area in the Structure Plan Review. The total area of the county covered by MLAs is 9.5%, a figure which excludes the Sherwood Forest/Dukeries area.

POLICY M3.23 MATURE LANDSCAPE AREAS

Planning permission will not be granted for minerals development which is likely to cause harm to a Mature Landscape Area unless there are reasons of overriding public interest or where ameliorative measures and opportunities for enhancement can reduce the impact to an acceptable level.

Historic Landscape Character

- 3.90 Landscape is an integral part of the historic environment along with archaeological and historic sites, monuments, and historic buildings. This environment embraces all the physical elements from the past that exist in our surroundings.
- 3.91 Traditionally, the conservation of the historic environment has been based upon the preservation and management of individual sites, buildings or specially designated areas, such as Conservation Areas or Areas of Natural Beauty. However, this is partial and selective, based upon judgements of importance, with the inevitable consequence that many aspects of the historic environment are not considered in the making of policies and decisions.
- 3.92 Historic Landscape Characterisation is a relatively new approach to the description of parts of the historic environment. Based upon the Landscape Assessment techniques put forward by the Countryside Commission (1993), and developed by English Heritage, it gives expression to the varying degrees of historical depth which are visible in today's landscapes.
- 3.93 The Nottinghamshire Historic Landscape Characterisation project was completed in 1999 by the County Council in partnership with English Heritage. The Historic Landscape Character Map and report, extends and compliments the Countryside Appraisal work by presenting the historic dimension of today's landscape in Nottinghamshire in a compatible form.

- 3.94 The project has shown that if the character of many localities is to be maintained, means of conserving their historic landscapes, and the elements that define these, must be found. The Historic Landscape Character Map provides a basis for this and establishes a benchmark against which further change can be monitored.

The Historic Environment

- 3.95 The historic environment of Nottinghamshire is vast and ranges from major historic and nationally important buildings and grounds to the many thousands of archaeological sites that lie buried under the ground. The historic environment by its very nature is an irreplaceable resource and Government guidance in the form of PPG 15 'Planning and the Historic Environment' and PPG 16 'Archaeology and Planning' requires protection of the resource, whilst recognising the need for development.

Archaeology

- 3.96 There are over 8500 archaeological sites and historic features in Nottinghamshire currently registered on the County Sites and Monuments Record. Archaeological sites or remains also include ancient river channels (palaeochannels) and alluvial (river borne) or colluvial (surface wash, downhill slope movement) deposits. The preserved organic remains and geomorphological structures within these deposits provide critical evidence about the context and effects of post-human settlement and landuse. It is unlikely that the known archaeological resource will be the limit and there is a high probability that proposals for mineral extraction will affect known archaeological sites or areas of archaeological potential.
- 3.97 PPG 16, sets out the national approach to archaeology. The first part of this is to preserve Scheduled Ancient Monuments and their settings. Mineral extraction will not normally be permitted at such sites. In addition the CBI's revised Code of Practice for mineral operators on archaeological investigations provides advice on how mineral operators should consult archaeological interests in formulating planning applications.
- 3.98 The need for preservation in situ of other sites and remains will be assessed upon their importance and the impact that their loss would have upon the overall archaeological resource in the County. Although preservation of archaeological sites is a primary objective, it is clearly impracticable to preserve them all. Equally sites should not be destroyed without careful consideration and treatment. The second part of this approach is to ensure that, where preservation in-situ is not feasible, sites are surveyed, excavated or otherwise appropriately recorded. These provisions can only be assessed after the archaeological characteristics of proposed sites have been evaluated. An appropriate scheme of treatment must then be agreed, with the County Council.
- 3.99 It follows that archaeological constraints must be identified and addressed at the earliest possible opportunity, and ideally well before the planning application stage, if delays are to be avoided. With full prior discussion, a scheme of treatment covering all issues can be submitted as part of a

planning application to be secured through simple conditions and/ or a legal agreement with the minimum of delay. Arrangements for funding may need to be incorporated into planning obligations.

POLICY M3.24 ARCHAEOLOGY

Planning permission will not be granted for minerals development which would destroy or degrade nationally important archaeological remains and their settings, whether scheduled or not. Planning permission will only be granted for development which would affect archaeological remains of less than national importance where it can be demonstrated that the importance of the development outweighs the regional or local significance of the remains and where appropriate provision is made for the excavation and recording of the remains.

Listed Buildings and Conservation Areas

- 3.100 The historic environment also consists of a large number of Listed Buildings and Conservation Areas registered on the County Council Historic Buildings Record. Nottinghamshire also has a number of parks which are listed on the 'Register of Park and Gardens of Special Historic Interest in England, 1985' produced by English Heritage covering some 3,800 hectares of the County. Others are also registered on the County Sites and Monuments Record. PPG 15 provides for the protection and enhancement of the historic character of the County. Proposals for mineral development will often affect open land and may affect the setting of Listed Buildings, Conservation Areas, historic battlefields and the open countryside.
- 3.101 Although the harm caused by the extraction phase may be temporary, changes to the landscape once the site is reclaimed could result in permanent harm to the setting of historic environments. A further area of concern is the impact that lorry movements can have upon buildings in terms of vibration to foundations and spray from vehicles eroding stone work. It may therefore be necessary in some circumstances to secure vehicle routing agreements to avoid areas of conservation interest (see Policy M3.14).
- 3.102 With the use of careful design and stand off distances, it may be possible to accommodate mineral development in the vicinity of such features.

POLICY M3.25 LISTED BUILDINGS, CONSERVATION AREAS, HISTORIC BATTLEFIELDS, AND HISTORIC PARKS AND GARDENS

Planning permission will not be granted for minerals development which would cause an unacceptable level of harm to the character, appearance, condition or setting of conservation areas, listed buildings, historic battlefields and historic parks and gardens.

Public Access

- 3.103 The County Council's aim is to ensure the existing network of public rights of way are maintained, which is achieved through a close working relationship with landowners, occupiers and other organisations representing users. Where development results in the temporary or permanent loss of any public right of way, an appropriate alternative route of at least equivalent interest and quality should be agreed with all parties and then provided. Mineral operators should be encouraged, where possible, to enhance the public rights of way network through their development.
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POLICY M3.26 PUBLIC ACCESS

Where planning permission is granted for minerals development which would temporarily or permanently disrupt a public right of way, an alternative route should be chosen which aims to offer equivalent interest and quality, having regard to the length of time during which disruption would take place.

- 3.104 Consultation with the County Council on any public right of way affected by a proposed minerals development should take place at the earliest possible stage and well before an application is made to divert or extinguish a path. This is because the statutory process involved is separate from the application for planning permission. A delay or failure to secure the required amendments could therefore prejudice the implementation of any mineral development.

The Cumulative Effects of Workings

- 3.105 In some areas the extent of the mineral resource may result in a succession of applications for extraction. The impact, both real and perceived, of a concentration of workings close to, or even surrounding a community can be especially damaging to the general quality of life. It may also irrevocably and adversely alter the existing landscape character.
- 3.106 The stage may therefore be reached where it is the cumulative rather than the individual impact of a proposal that renders it environmentally unacceptable. This may also apply to the disposal of mineral waste, and reclamation schemes, which are unable to reclaim land back to its original condition or use.
- 3.107 Cumulative impact has been used as a constraint in defining the limits of allocated areas for mineral extraction. Cumulative impact is not perceived as a problem within allocated areas, otherwise they would not have been proposed.

POLICY M3.27 CUMULATIVE IMPACT

Planning permission will not be granted for minerals development which would result cumulatively in a significant adverse impact on the environment and/ or the amenity of local communities.
