



Sustainability appraisal of the Bedfordshire & Luton Minerals & Waste Development Framework

Report of Scoping Consultation

ENVIRON[®]



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Bedfordshire County Council Report of Scoping Consultation


A report by **CAG Consultants** as part of the ENVIRON / CAG / C4S (Centre for Sustainability) consortium

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Introduction

Aim of the consultation

Consultation has been conducted as part of the scoping phase for the sustainability appraisal of the Bedfordshire & Luton Minerals & Waste Development Framework (MWDF). The aim of the consultation was to allow a wide range of organisations to contribute to the scoping of the key sustainability issues for minerals planning in Bedfordshire. This scoping work will then inform the development of the sustainability appraisal framework.

Consultation methods

Two consultation methods were utilised during the scoping phase:

1. A facilitated scoping workshop, to which a wide range of stakeholder organisations were invited. This workshop included small group and plenary work exploring the key sustainability issues for minerals planning in Bedfordshire.
2. A scoping questionnaire, which was made available to download from a dedicated sustainability appraisal web page. The opportunity to contribute in this way was advertised in the three free local newspapers distributed in Bedfordshire and via the front page of the Bedfordshire County Council website. All those stakeholders unable to attend the scoping workshop were also asked to complete the questionnaire.

Although consultation during this phase of the consultation was concentrated primarily on key stakeholders, the use of the widely-advertised questionnaire provided the opportunity for any interested members of the wider public to contribute to the process.

Stakeholders

A list of key stakeholders was drawn up for the purposes of the scoping consultation, all of whom were invited to the workshop. The list consisted of:

- representatives from various departments of Bedfordshire County Council;
- representatives from various departments of Luton Borough Council;
- representatives from Bedford Borough Council, Mid-Bedfordshire District Council and South Bedfordshire District Council;

- representatives from the following statutory and other public agencies
 - English Heritage
 - English Nature
 - The Environment Agency
 - Government Office for the East of England
 - The Highways Agency
 - East of England Development Agency
 - East of England Regional Assembly
 - The Countryside Agency
 - Bedfordshire Heartlands Primary Care Trust;
- the chairs of the five Local Strategic Partnerships in Bedfordshire;
- representatives of the British Aggregates Association and Quarry Products Association; and
- representatives of the following non-governmental organisations
 - Bedfordshire & Luton Friends of the Earth
 - Council for the Protection of Rural England
 - Bedfordshire Wildlife Trust
 - Bedfordshire Rural Communities Charity
 - Royal Society for the Protection of Birds.

Scoping workshop

The following people attended the scoping workshop on Tuesday 13 September 2005:

- Colin Bambury, Highways Agency;
- Sarah Barker, Luton Borough Council;
- Simon Briggs, Arnold White Estates Ltd;
- Michael Brookes, English Nature;
- Andrew Brown, Bedfordshire County Council;
- Cllr Tony Brown, Mid Beds District Council;
- Elizabeth Burt, Luton Borough Council;
- John Comont, Bedfordshire County Council;
- Alice Davies, Royal Society for the Protection of Birds;
- Tim Deal, Lafarge Aggregates;

- Tim Earthy, Bedfordshire County Council;
- Joanna Faul, Bedfordshire County Council;
- Adam Ireland, Environment Agency;
- Melanie MacLeod, Bedfordshire County Council;
- Leslie-Ann Mather, Bedfordshire County Council;
- Charlotte Morbey, Bedfordshire County Council;
- Stephen Morris, Luton Borough Council;
- Martin Tidy, Bedford Borough Council;
- Martin Towlson, Council for the Protection of Rural England;
- Cllr Tricia Turner, Mid Beds District Council;
- Cllr Tom Wootton, Bedfordshire County Council; and
- Nick Horsley, WBB Minerals (representative of the Quarry Products Association).

The workshop was facilitated by Tim Maiden (CAG Consultants) and Jo Curran (Environ).

Some initial scoping of sustainability issues for minerals planning in Bedfordshire and Luton was undertaken prior to the scoping workshop, through reviewing a range of relevant strategy documents and other economic, social and environmental information about the area. This research identified key issues under 17 topic areas. Following presentations about the MWDF and the sustainability appraisal process, participants in the scoping workshop were split in to small groups and asked to complete a table containing the following questions in relation to the sustainability issues:

- are these the key sustainability issues under this topic area? or are there others?
- what are the main implications of these issues for minerals and waste planning?
- what sustainability objectives do you think should be set for each of these topic areas?
- can you suggest any data sources for monitoring the impact of the plan on these issues?

There were five small groups, which covered the following topic areas:

- group 1 – noise/air pollution and health/social inclusion;
- group 2 – biodiversity and landscape;
- group 3 – economic growth and transport;
- group 4 – water and waste;
- group 5 – land use and cultural heritage.

The key findings from each group were presented to the wider group and opened up for brief plenary discussion.

The remaining topic areas were covered by displaying large format tables on exhibition boards. These tables included the same four questions addressed in the small group sessions and participants were asked to add their entries to the tables during the break in the workshop and at the end of the session.

Questionnaire

The questionnaire asked respondents to identify the key issues for minerals planning in the County in relation to the following subject areas:

- issues relating to the supply of aggregates;
- issues relating to the supply of minerals for non-aggregate uses;
- issues relating to direct and indirect employment from minerals activities;
- issues relating to wider economic impacts;
- issues relating to impacts on other land uses;
- issues relating to landscape value;
- issues relating to nature conservation and biodiversity;
- issues relating to cultural and heritage value;
- issues relating to pollution – land, air, water and noise;
- issues relating to leisure and recreation; and
- issues related to health.

In addition, respondents were asked whether there were any other kinds of issues that should be considered, whether they knew of any data sources or ongoing studies which could be used to monitor these issues and which policies, plans and programmes the MWDF needs to take account of.

6 completed questionnaires were received, from representatives of:

- East of England Regional Assembly;
- Countryside Agency;
- RSPB;
- Bedfordshire Rural Communities Charity;
- Bedford Partnership Board; and
- British Aggregates Association.

Findings

This section summarises the findings from the scoping workshop and questionnaire. They are presented in tabular form, with a table for each topic area identified in the desk-based scoping work.

Biodiversity, flora and fauna

Key issues identified through desk-based scoping:

- Many older mineral workings exist where after-use and restoration have never been satisfactorily resolved and where the sites are now SSSIs or County Wildlife Sites (CWS). In some cases these cover large areas and are unmanaged and any proposed end-uses for these sites will need to be sensitive to the existing biodiversity, flora and fauna.
- There are sixteen BAP habitats and twenty-four Nature Reserves, in Bedfordshire and Luton. English Nature has identified Natural Area profiles for The Chilterns, The West Anglian Plain and The Greensand Ridge.
- Opportunities should be taken to enhance existing sites of importance e.g. the valley of the River Great Ouse and the ancient semi-natural woodlands as well as to mitigate any harm caused to nature conservation interests.
- The County has a number of protected, vulnerable, endangered and rare species. The placement, expansion and emissions from mineral activities should be designed in such a way so that they avoid the habitats of such species. Certain protected species may however benefit from quarrying and mineral extraction, e.g. species of reptile, moths and butterflies.
- The refurbishment of disused quarry areas can be designed to make an ideal habitat for many species.
- There are forty SSSIs in Bedfordshire and Luton. However, the area of designated SSSIs is below the average for the SE region. The quality of SSSI's in Bedfordshire is above the English average. Developments that might impact a SSSI will need to be located appropriately so as to minimise any impacts.

Are these the key sustainability issues under this topic area? or are there others?

- The existing list needs clearer expression as a set of issues rather than statements of fact:
 - where should sites be located?
 - how do you manage while working?
 - how should they be restored?
 - is there scope for increasing biodiversity value of existing sites?
- New mineral workings should be sited with care. Impacts on areas of biodiversity importance should be avoided wherever possible. These may be direct (by giving permission for extraction on important sites) or indirect (where extraction is permitted adjacent to or in close proximity to important areas). This should be on a sliding scale with work on and near internationally and nationally designated sites being avoided at all costs, through county wildlife sites and local nature reserves to unprotected sites of biodiversity

interest. These should not be chosen if there is a less damaging alternative available. Where impacts are unavoidable, these should be minimised through mitigation measures. This should involve discussion with experienced ecologists and wildlife organisations. Compensatory habitat may also need to be provided. Consideration should be given to what is to happen once the alternative sites have been used up and pressure increases to use sites of biodiversity, whether protected or otherwise.

- Need to balance mineral resource hierarchy and nature conservation and people's quality of life
- Geodiversity is another key issue (see PPS9) – consider under soil and geology?
- Need to avoid disrupting hydrological patterns, especially on wetland sites
- Land identified for future extraction, or that owned by minerals companies but not in operational use, can be managed for nature conservation in the interim, providing valuable temporary refuges for wildlife
- Need to promote integrated/holistic landscape-scale approach to restoration rather than the usual site-by-site assessment. This can provide larger areas of given habitats, as well as allowing effective management for different uses
- Need to ensure that the restored habitats are naturally functioning systems rather than intensively supported or managed for example in connection with river/ appropriate groundwater levels rather than pumping water onto a site.
- Currently active sites, including those about to close, can offer the opportunity for substantial habitat creation for nature conservation. This can contribute to the Government's habitat creation targets as part of the UK Biodiversity Action Plan. In many cases, this may require reviewing current restoration plans, and seeing if habitat creation would be a viable alternative end-use. This is the subject of an England-wide project by the RSPB (leaflet supplied)
- Developments that might impact SSSI's – need to factor in consideration of any haulage routes that will be needed to service new sites or increased use of transport infrastructure.

What are the main implications of these issues for minerals and waste planning?

- Policies needed to avoid features of high biodiversity value, designated sites but also other sites of substantive wildlife value, or isolating and breaking up habitats. Where working is proposed that would damage nature conservation interests, and the need for mineral working is considered to override the nature conservation case, then suitable high quality restoration should be proposed. The implementation of the nature conservation afteruse, and its long-term management must be assured.
- During their working life (which can be >40 years), mineral sites can develop biodiversity interest in both worked and uncorked areas, including the presence of protected species. Work plans should try and be flexible enough to take these colonisers into account and mitigate to minimise any negative impact. Include policy which encourages phasing and interim restoration to allow transient wildlife interest.
- Policy targeting BAP species and habitats.
- Restoration to an appropriate and well-designed and managed nature conservation habitat should be considered as a priority from the initial application stages of a new site. By doing so at an early stage, the benefits for biodiversity can be maximised. Such an end-use will be of considerable value to local communities - both in terms of amenity and employment.

- Before considering resuming activities on inactive workings, assess any nature conservation interest that may have developed. Consider whether working can be modified to avoid damaging this interest.
- Wherever possible, promote a suitable nature conservation afteruse for the site. This should ensure high standards of restoration and future management. This will require a comprehensive ecological management plan and funding for the site and any adjacent land that is owned. Large areas of habitat are preferable to smaller patches of very different habitat types within one site, since these will be more appealing to key species and support larger populations.
- Liaise with the statutory conservation agency and other conservation groups from a very early stage. This consultation should be maintained throughout the duration of the project.
- Consider undertaking an environmental assessment (EA) even where there is no statutory requirement to do so. The EA process can help to ensure cost effective nature conservation benefits in both site selection and project design.
- Allow sufficient time for investigation and planning, and for surveying affected habitats and species at the right time of year, e.g. for nesting or wintering birds. Investigation needs to include consideration of transport infrastructure, e.g. will new infrastructure sever existing habitats?
- Carry out ecological surveys and impact assessment objectively: follow high scientific standards, use recognised methodology and personnel qualified in the particular field.
- Research any mitigation measures that have been described for the project thoroughly and seek professional expertise as to the best approach.

What sustainability objectives do you think should be set for each of these topic areas?

- Minerals operations should lead to net increase in biodiversity
- Avoid allocation of land of high biodiversity value (in accordance with scale of priorities – European, national and local)
- Avoid indirect impacts on species or habitats of high biodiversity value
- Maximise potential biodiversity value of existing minerals sites
- Restoration to biodiversity a priority end use for mineral sites and should contribute to realising local and national biodiversity action plan targets

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- Biodiversity Action Plan monitoring
- English Nature SSSI conditions
- Need for LPA's and Industry to contribute more information
- Targets in Minerals Plan

Cultural heritage

Key issues identified through desk-based scoping:

- Presence of Statutory Listed Buildings: avoid damage/destruction of listed buildings from plan

activities.

- Presence of Conservation areas: avoid impact on recognised conservation areas and look for opportunities remove listed buildings from the at risk register.
- Presence of Scheduled Monuments: plan should seek to preserve ancient monuments.
- Presence of Archaeological sites: Ensure mineral or waste workings protect or record archaeological sites.

Are these the key sustainability issues under this topic area? or are there others?

- Bullet 2 is too specific – planning gain should be broader and look at a range of issues. Need to insert ‘avoid “and mitigate” impact’.
- Bullet 3 needs clarification – not all SAM’s are real. Need for full archaeological information to make informed decisions.
- Bullet 4 – need full information, i.e. evaluation to be provided with applications. Need this before you can decide whether to permit or not.
- Need to recognise mineral, industrial and agricultural archaeology – definition of cultural heritage is too narrow.
- Scope for enhancement of cultural heritage should not be at expense of biodiversity – need to ensure cultural and heritage value and after-uses are integrated with biodiversity. Enhancement of archaeological sites and features is difficult though improvements to their management and interpretation can certainly be achieved. This issue needs to be considered as preservation of sites within mineral workings is increasing and proper long term provision needs to be made for sites preserved in situ. There may on occasion be conflict between protecting archaeological remains and biodiversity interests. Neither should assume primacy in all cases. The relative merits of each case must be considered and appropriate balances struck depending on the nature and value of the resources.
- Mining itself is part of national and local heritage and culture.
- The Historic Landscape, covered by neither built environment or archaeology, is also a key issue. The identification, protection and management of this must be considered.

What are the main implications of these issues for minerals and waste planning?

- Uncertainty is a major concern – needs forward planning.
- Change in archaeological requirements over time – constantly evolving.
- Need to obtain information from relevant bodies for full assessment of sites.

What sustainability objectives do you think should be set for each of these topic areas?

- Use of archaeological information obtained from minerals extraction for wider public dissemination to provide wider awareness in the community of their heritage.
- To identify important areas of archaeology and possibly seek to avoid them, or enhance them through mineral extraction.
- What is needed is a strategic approach to managing the historic environment in the face of mineral extraction. It has to be based on a strategic understanding of the resource. This will provide the context for the archaeology of individual sites and allow its value and significance to be assessed more effectively.

Can you suggest any data sources for monitoring the impact of the plan on these

issues?

- The County's Historic Environment Record (maintained by the County Council's Heritage and Environment Section) can provide data for monitoring the impact of the plan, but it will require the identification of the criteria to be measured. It is important that monitoring addresses qualitative issues as well as quantitative ones to truly assess the impact of the plan.

Landscapes

Key issues identified through desk-based scoping:

- Most of the mineral deposits in South Bedfordshire lie in areas of high landscape quality or immediately adjoining them. The plan should pay close attention to ensuring that developments respect landscape designations.
- The plan should pay close attention to ensuring that developments are in keeping with the character of the landscape as identified by the Countryside Agency.
- Proposed end-uses for the sites and restoration programmes need to be sensitive to the landscape character and designations and look for opportunities to enhance the landscape character.

Are these the key sustainability issues under this topic area? or are there others?

Yes, but:

- Landscape Character Assessment of Beds will define character – Beds CC 2003 & 2004 Draft.
- Can restoration be sufficiently flexible to accommodate changes in surrounding landscape character?
- Cumulative impact of all operations on landscape needs to be considered.
- Potential to create new landscapes of value needs to have regard to what has gone before.

What are the main implications of these issues for minerals and waste planning?

- Major impacts on site allocation.
- Impact on operations before, during and after extraction.

What sustainability objectives do you think should be set for each of these topic areas?

- Avoid damage to valued features of landscape.
- Avoid introduction of alien features to landscape or incorporate sufficient mitigation measures where this is unavoidable, both during and after extraction.
- Enhance landscape through restoration.
- All schemes should seek to enhance the local landscape value, with retaining of existing value to be the lowest acceptable option – i.e. for no scheme to ever have a net detrimental impact.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- Use landscape character assessment as a baseline.

Land use

Key issues identified through desk-based scoping:

- Pressures on land to deliver residential development may lead to challenges in protecting mineral deposits from sterilisation where they are workable and there is a demand for them.
- Limited areas designated as natural habitat and woodland exist within the County and therefore these will need to be protected.
- The county contains areas of high quality agricultural land (grades 1, 2 and 3a) that current local planning policy recommends should be avoided for development. This could lead to conflict if mineral deposits are within these areas.
- Large active workings and further reserves of sand exist around Leighton Buzzard and chalk and lime south and west of Dunstable. These raise major issues in terms of their restoration and after use.
- Many of the sand deposits are variable in quality and are only worked intermittently as demand dictates. This means the workings will be a long-term feature in the countryside.

Are these the key sustainability issues under this topic area? or are there others?

- After-use of sites.
- Restoration – tie in with other aims and objectives, such as biodiversity, leisure (PPS17) etc.
- Phasing of mineral extraction – can be tied to development planning to provide sustainable solution.
- Sand and brick production, if local, can be linked with the growth area to reduce transport distances.
- Bullet 1 too narrow – not just a threat from residential development - other threats such as forestry, industrial.
- General comment – bullet points are too judgemental.
- Bullet 5 – should possibly come under landscape topic area.
- Bullet 4 – coordinated strategy for restoration, i.e. greensand. Development of strategic masterplans for the planned restoration/afteruse of concentrations of mineral sites, e.g. river valleys such as Ivel, to avoid ad hoc, piecemeal approach.
- Bullet 5 – major issue which needs to be clarified.
- Flooding – flood control/enhance land uses, irrigation can improve poor land.
- Flooding issues in Upper Ouse Valley – consider imaginative restoration. Possible future uses of Minerals Sites to mitigate against flooding elsewhere, i.e. in Urban Areas through use of former mineral working sites as floodwater retention areas (see 'water', below).
- Loss of agricultural land, and therefore local productivity, is an issue and should be a consideration but also suggested that this shouldn't necessarily be a major constraint. The drive to avoid and restore the best and most versatile farmland is not so important as it once was – policies seeking protection and restoration of grade 1/2/3a land should be flexible. However, need to factor in the potential to grow food locally and minimised import distances, as well as impact on rural economy and jobs.
- Restored river valley sites could be used for biomass production (sustainable energy

coppice).

What are the main implications of these issues for minerals and waste planning?

- Will create conflicts and pressures.
- Development may need to be focused on old sites rather than sterilising new. Potential for landscaping that will mitigate visual impact of residential development and transport infrastructure will already be in place.
- Need to be used with imagination, i.e. coordinated strategy, to create improvements in the long term.
- Coordinated strategy using all spheres of influence - biodiversity, historic environment, local groups not just a narrow range, i.e. planners need a broader vision.
- Use of land for mineral extraction is extremely low (under 0.5%) so land use may not be a particularly significant issue.

What sustainability objectives do you think should be set for each of these topic areas?

- No suggestions received.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- No suggestions received.

Air quality and noise

Key issues identified through desk-based scoping:

Air quality

- Air quality is not likely to be a large issue in relation to mineral extractions in Bedfordshire and Luton. The main air quality issues are derived from transport within urban areas and proximity to the M1 Motorway.
- PM10 exceedences can result from excess dust from mineral extraction but no problems are known to have been reported within Bedfordshire.

Noise

- Continuous Noise (particularly at night) from the operation of dumper trucks, the processing plant, conveyors stock piling material and crushers.
- Intermittent Noise (particularly at night) from HGV pass-bys, and empty HGV butts passing over potholes.
- Vibration causing damage to buildings and general annoyance (particularly at night). Likely to arise from HGV movements on public highways and haul roads in close proximity to sensitive receptors, and the operation of any processing plant or associated manufacturing facilities.
- Potential cumulative impacts due to the fact that mineral extraction sites tend to be concentrated in small areas and this may lead to the operation of more than one site in proximity to sensitive receptors.
- Long term issues due to the end use of the site. The restoration of the site to a landfill site, or a recreational facility may give rise to long-term impacts such as, noise from gas venting plant, increased HGV movements, or increased traffic from users of recreational facilities.

Are these the key sustainability issues under this topic area? or are there others?

Air quality:

- Dust should be considered as an air quality issue.
- Agree transport is a major factor, N.B. also new A421.
- Air quality problems are likely to get worse in the context of the growth areas.
- Air Quality Action Zones.
- The possible emissions from different waste management methods should be taken into account.
- Reference to landfill issues in restoration is not appropriate – landfill should be considered as a separate issue under waste plans but agree long term restoration issues need to be considered.
- Need reality check regarding available resources for addressing issues (improves credibility of whole SA process) – also consideration of relative costs now versus in the future.
- As growth area progresses Leighton Buzzard will grow in size and may develop problems with PM10 exceedences. Current routing of mineral haulage will contribute to this. View is too short sighted and must think of the situation 2020 and beyond.

What are the main implications of these issues for minerals and waste planning?

- Proper application of planning conditions.
- Monitoring arrangements – need to be more proactive rather than relying on complaints.
- Excessive air pollutants or dust may damage plants and alter the surface pH of the soil, reducing fertility. This can be controlled and should be addressed in the MWDF.
- The industry has high obligations in these areas and a good record of compliance.
- Vibration issues - reason for planning conditions code of practice to secure all loose fastenings. Noise from HGV butts over pot holes can be reduced through re-engineering vehicles to have vibration dampening in panels.

What sustainability objectives do you think should be set for each of these topic areas?

Air quality:

- See national Air Quality Standards.

Noise:

- Reduce number of complaints but link to hard-to-reach.
- Ensure that all mineral sites operate according to national guidance (MPG's) and good practice guidance.
- Link to pro-active site monitoring.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- Number of complaints – MPA, EHO.
- Monitoring – breaches of thresholds.
- Make correlation between health complaints and air quality/noise etc.

Water

Key issues identified through desk-based scoping:

- Areas at risk of flooding are chiefly those adjacent to, or within a few hundred metres of the County's rivers. Areas away from these rivers do not appear to be at risk.
- Only a small part of Bedfordshire lies within a groundwater Source Protection Zone, therefore these areas need to be protected from potential impact.
- The water resource for much of Bedfordshire is under pressure from a variety of sources, in particular agriculture and urban development, and the entire county has been designated a nitrate vulnerable zone.
- Mineral workings often present good opportunities for recreation and if the pit is a wet pit lying below the water table there is scope for developing the lake for water recreation, a type of recreational resource which is very limited in throughout much of Bedfordshire at present.

Are these the key sustainability issues under this topic area? or are there others?

Yes, but:

- Need to separate out water quality and water supply issues.
- Bullet 1 – this is a statement of fact. It should be clarified to confirm the presence of floodplains at each proposed allocation location (for site specific proposals).
- Bullet 2 – agree.
- Bullet 3 – greater emphasis on the 'urban development' issue, as a drain on the water resource. Agriculture and Nitrite issue could be undertaken as a separate point (water quality).
- Bullet 4 – on-line with main rivers where possible (biodiversity benefits).
- Restored river valley sites can play a role in flood alleviation.
- Potential use of sites for public water supply – dependent on location and geology.

What are the main implications of these issues for minerals and waste planning?

- Water pollution can be controlled through careful design and location of sites, management, restoration, mitigation, compensation, clear conditions and consideration of enforceability. All these need to be dealt with in the MWDF.

What sustainability objectives do you think should be set for each of these topic areas?

- Reduce the risk of flooding through development of ex-mineral extraction sites (potential) to enable the reduction in levels of flooding in urban areas. Also, recouping the floodplains within urban areas is a move to reduce the impact of flooding (*although, admittedly this cannot be addressed through this plan*).
- Deterrence of minerals extraction sites within Groundwater Source Protection Zones. Direct to minor/non-aquifer locations.
- Improvement of water quality, or is this outside the scope of the minerals plan? Consider nitrate vulnerable areas and agricultural activities?
- Increase areas for restoration and biodiversity, particularly located within close proximity to urban areas. Marrying the need of the industry with the provision of social ends.

- Seek to ensure water tables are maintained or raised, rather than lowered.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- EA flood maps and Strategic Flood Risk Assessments by Local Authorities.
- EA Groundwater Source Protection Zone maps/data.
- Water quality monitoring data.
- BAP monitoring.

Health and social inclusion

Key issues identified through desk-based scoping:

Health

- The trends indicate that there are no significant issues identified in relation to human health. The population is generally in good health with a low percentage not in good health. Of the population not in good health a moderate percentage has limiting long-term illness. In Luton this affects a greater percentage of the population of working age compared with other areas of the county.

Social inclusion

- The trends indicate that there is a potential issue associated with rural deprivation. Although the county scores relatively highly on the multiple deprivation index this does not consider the spread of deprivation between wards. Rural deprivation can often be masked.

Are these the key sustainability issues under this topic area? or are there others?

Social inclusion:

- Potential for mineral workings to affect those who are less able to communicate objections (i.e. those who are less able to form action groups, make formal representations etc).
- Local liaison groups have already been set up – need to encourage greater participation.

Health:

- Opportunities to increase recreational activities (i.e. restoration to parkland etc).
- Pollution potential, e.g. brickworks using brick clay cause emissions – link to air quality.
- Less advantaged people may be less willing to communicate illness (i.e. go to doctors).
- Potential for anxiety as a result of mineral working (e.g. will it become a landfill?).
- Opportunities to improve wellbeing through environmental improvements.
- The health implications of all proposed methods of managing waste should be taken into account. This includes the health and safety of those working in the waste industry as well as those living and working in proximity to waste management activities.
- Creating new wildlife habitats provides public benefits; including amenity for local people, improved quality of life and enhanced health and well being. Time spent in natural environments is known to increase people's ability to recover from stress, illness and injury. Accessible green space also encourages regular physical activity which provides considerable benefits for public health.

- Health implications of transporting minerals, especially by road and through congested towns. Affects social inclusion if the routes are through less affluent areas.

What are the main implications of these issues for minerals and waste planning?

- Need to ensure that the less able to communicate are not disadvantaged in terms of site selection etc.
- Ensure inclusivity, i.e. make sure that hard-to-reach groups are not disadvantaged.
- May be under-reporting of health issues from less-advantaged groups.

What sustainability objectives do you think should be set for each of these topic areas?

- Should they be outcomes rather than objectives? below are outcomes rather than objectives:
- Improve quality of environment (amount of land restored).
- Find a mechanism for reporting potential health issues relating to mineral working back to MPA.
- Seek out the less able to communicate (hard to reach) to improve consultation – not just reactive to complaints.
- Strong links to air quality (including transport), noise and all other areas.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- Contact Jo Faul and Ian Melville (Social Inclusion Officer) at BCC.
- Contact 3 PCT's in Beds – they have done work on Health Impact Assessments (HIA). There is also a HIA paper associated with the Milton Keynes Sub Regional Strategy.
- Beds CC website – About Bedfordshire/County Stats.
- Possible indicator: Degree of social deprivation (using Index) in areas where minerals sites are identified.
- RSPB report 'Natural Fit'.

Economic growth – minerals

Key issues identified through desk-based scoping:

- Balance of future reserves and current developmental needs.
- Consider encouraging mineral working capability for the provision of a local resource for building stone.
- Monitor use of aggregates and Silica to maintain landbank.

Are these the key sustainability issues under this topic area? or are there others?

- 2021 growth – land banks not based on future growth.
- Development shouldn't happen just because it can.
- Regional level plan growth rates much higher than in past.
- If not enough aggregates then will have to be imported.
- Approximately what aggregates needed for new build and infrastructure? Overall resource

use should be considered within the context of the development framework.

- Local sustainability versus national targets, e.g. borrow pits versus recycling.
- Use of local materials preferred including building stone.

What are the main implications of these issues for minerals and waste planning?

- Greater efficiency in the use of resources is more economically sustainable and improves the competitiveness of local economic activity.
- Promoting local sources of supply to local markets will reduce transportation impacts including greenhouse gas emissions.

What sustainability objectives do you think should be set for each of these topic areas?

- Seek to maintain local character in new build/extensions.
- Maintain aggregate monitoring through RAWPs.
- Ensure supply for growth balanced against environmental concerns.
- Environmental protection.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- ONS
- WRAP
- LA house build and planned build
- British Geological Survey (BGS) data
- Mineral Yearbook 2004

Transport

Key issues identified through desk-based scoping:

- Potential need of mineral resources for major infrastructure improvements and housing developments.
- Identify opportunities for use of railways and waterways for mineral movements.
- Consider the potential for changes in transport patterns, modes and vehicle type depending on the end use of the site.
- Identify opportunities to maximise on-site recycling through planning requirements.

Are these the key sustainability issues under this topic area? or are there others?

- Impact of extraction on local and strategic road network.
- Rail distribution centres?
- Minimising empty running.
- Reducing mileage through local production and distribution.
- Highways authorities competing to get trucks off their roads (local versus strategic).
- Cherry-picking criteria not just economic.

- Routing.
- Where new houses built near quarries new local infrastructure must provide for existing movements that may not be residential.
- Potential to offload on to smaller trucks?
- Problem of nature prioritised over people.

What are the main implications of these issues for minerals and waste planning?

- No suggestions received.

What sustainability objectives do you think should be set for each of these topic areas?

- Limit mineral delivery mileage within the County and Luton.
- Identify opportunities for rail and water freight.
- HGVs on rail with loads rather than loads in wagons.
- All parties agreeing routing (LA, HA, haulier) at County/Unitary level or higher (sub-regional).

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- LA and HA traffic monitoring.

Waste

Key issues identified through desk-based scoping:

- Large amounts of hazardous waste are imported into Bedfordshire.
- Large amounts of municipal waste are imported into Bedfordshire therefore need to ensure that the recycling and recovery infrastructure is adequate to meet targets.
- Opportunity to minimise recycled and secondary aggregates at source using the Demolition Protocol.

Are these the key sustainability issues under this topic area? or are there others?

- General point – hard to address this issue when focusing on minerals aspect of MWDF without crossing in to waste DPD.

Others:

- Need to minimise waste generation within the County.
- Importation of waste into the county should not continue.
- Excessive production leading to the generation of waste.
- The employment impacts of different methods of managing waste should be taken into account. For example, some methods are capital intensive and others are labour intensive and the latter might be more appropriate for areas where there is significant unemployment.
- Landfill should not be an option for future use of these sites. Alternative waste strategies should be developed. Use of land for landfill is a poor use of a scarce resource. The sorting and reprocessing of waste materials in industrial areas is a more appropriate use of land and should not have detrimental impacts on neighbouring occupiers.

- Highway safety implications of hazardous waste importation into County.

What are the main implications of these issues for minerals and waste planning?

- Importation of hazardous waste? Requires appropriate site location. Site issues.
- No reason why municipal waste should be imported from elsewhere – other local authorities should ‘consume their own smoke’.
- New site required (Waste Development Plan?).
- No new waste site is likely to arise from new mineral production for foreseeable future – existing sites utilised where possible.

What sustainability objectives do you think should be set for each of these topic areas?

- Hazardous waste:
 - only imported if suitable facility
 - nationwide proximity issues
 - reduced as much as possible
- Municipal waste:
 - is appropriate void available for this waste?
 - reduce imported waste
 - what is the lifetime for the site? (is it sustainable?)
- Recycled and secondary aggregates:
 - what percentage of demolition waste can be recycled/re-used? (is this measurable?)

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- The East of England Regional Technical Advisory Body (RTAB) on waste has recently commissioned a study from consultants on the capacity of waste management facilities in the region – will be available in October 2005.
- Emerging East of England Plan.
- Regional Waste Management Strategy (2003).

Climatic factors

Key issues identified through desk-based scoping:

- Potential future requirement to cool properties in summer increasing energy use.
- Increased risk of vegetation fires in summer.
- Increased flooding risks during winter periods and the drainage of sites may become more difficult and expensive.
- Water resources reduced during summer periods, need to consider water recovery and recycling in new developments.

Are these the key sustainability issues under this topic area? or are there others?

- Mineral removal allows water storage for run off from new developments and flash floods caused by climate change.
- Impact of transportation on local and global environment.

What are the main implications of these issues for minerals and waste planning?

- Negligible!
- Use of flooded pits as water resource for urban areas and/or agriculture; also potential for flood control.

What sustainability objectives do you think should be set for each of these topic areas?

- No suggestions received.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- No suggestions received.

Soil and geology

Key issues identified through desk-based scoping:

- Balance of extraction for current needs and conserve resource for future generations.
- Groundwater bearing strata “at risk” or “likely to be at risk” in Luton and in parts of Bedfordshire. Soil and groundwater must be protected from damage by mineral activities.

Are these the key sustainability issues under this topic area? or are there others?

- Need to add restoration potential.
- Education/awareness – social inclusion?
- Protection of environment from transport operations. Need for properly maintained vehicles.
- Geological and geomorphological feature conservation and enhancement: exposure/ retention of outcrops; opportunities for fossil search/ examination; links with Beds RIGGS group – education and research.

What are the main implications of these issues for minerals and waste planning?

- No suggestions received.

What sustainability objectives do you think should be set for each of these topic areas?

- Increase recycling.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- Environment Agency Groundwater Source Protection Zone maps
- Datasets at County Council
- Beds RIGGS group

Employment

Key issues identified through desk-based scoping:

- Luton has the highest percentage of unemployment with the greater percentage indicated as long-term unemployed.
- The percentage of employment in the mining and quarrying sector is very low (0.23%) in comparison to other industry sectors in Bedfordshire and Luton. However it is equal to the percentage employed in the sector for England and Wales.
- Within Bedfordshire and Luton, Bedford has the highest proportion employed in the mining and quarrying sector and Luton has the lowest.
- There is a greater proportion of males working in the mining and quarrying sector in Bedfordshire and Luton.
- The trends indicate that a very small proportion of the economically active population is employed in the mining and quarrying sector.

Are these the key sustainability issues under this topic area? or are there others?

- Local employment must continue to be a major priority for the sub-region and the strategy must support and protect local jobs
- Employment is a key sustainability issue – the question is how to encourage society to employ more people rather than machines using fossil fuels.
- Need to recognise employment benefits of nature conservation after-uses.

What are the main implications of these issues for minerals and waste planning?

- No suggestions received.

What sustainability objectives do you think should be set for each of these topic areas?

- Assisting local workforces to get to jobs, e.g. from Luton by providing a shuttle service.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- AMRI data on output and employment (ONS).

Population

Key issues identified through desk-based scoping:

- The trends indicate that there are no significant issues identified in relation to population. The population is showing a steady rate of growth. Birth and death rates show no dramatic increases or decline.

Are these the key sustainability issues under this topic area? or are there others?

- New populations/communities will come into being.
- People are living longer.

What are the main implications of these issues for minerals and waste planning?

- No suggestions received.

What sustainability objectives do you think should be set for each of these topic areas?

- No suggestions received.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- No suggestions received.

Material assets

Key issues identified through desk-based scoping:

- Need to encourage maximum recycling during road maintenance operations.
- Need to encourage maximum recycling during airport maintenance operations.
- Encourage the use of council-owned waste management sites by the general public and provide further facilities if necessary.

Are these the key sustainability issues under this topic area? or are there others?

- Isn't bullet point 3 a waste rather than minerals issue?
- These may well all be waste issues.

What are the main implications of these issues for minerals and waste planning?

- No suggestions received.

What sustainability objectives do you think should be set for each of these topic areas?

- No suggestions received.

Can you suggest any data sources for monitoring the impact of the plan on these issues?

- No suggestions received.

Other issues were raised in relation to leisure and recreation:

- The potential impact of minerals workings on the rights of way network – causing severance, providing opportunities to extend network.
- Opportunities for opening new areas for recreation, especially in relation to the Growth Areas development, but also making up for current deficiencies.
- Important not to try to achieve too many objectives on one site. Nature conservation and intensive recreation (e.g. watersports) are not always compatible. Afteruses of adjacent sites need to be planned in an integrated way to achieve the desired mix of uses whilst allowing separation where necessary. May need to explore scope for cross-subsidy between sites to ensure that lower revenue afteruses are not the least favoured option on every site – and that therefore nature conservation does not always lose out or is compromised. Need for leisure and recreation after uses to be integrated with other uses through an integrated management plan; which avoids detrimental impacts/ user conflicts.

- Need for financial resources to ensure that where 'conservation' or 'recreation' is part of a restoration/ after use, sustainable business plan is in place to cover ongoing maintenance as well as establishment costs. Also, the viability of agricultural restoration schemes should be demonstrated through a business plan.
- Need to ensure that where restoration allows for increased public access, it is tied in well with the existing, wider, RoW network; and caters for cyclists/ horseriders as well as walkers. Options to create new paths to fill 'missing links' in the RoW networks should be explored. Benches, viewing platforms, hides and, where appropriate, dipping platforms, should be included.
- Where individuals/organisations stand to make money from a restored site (i.e. fishery, sailing etc), substantial subsidies should be offered to local users – particularly the young/ disadvantaged.
- Potential for the recycling of these "development" sites to be exploited for both social leisure and economic benefits, e.g. rowing facilities for the Olympics.
- Transport to the sites for recreation/leisure should be considered. How will people get to them? Will the local road network take intensive leisure activities at all or particular sites or should the sites be left to go wild with little encouragement to use them because of inaccessibility? Where subsidies are proposed could these be used to fund public transport to the site to improve accessibility for disadvantaged groups and to encourage sustainable transport use.