



CUMBRIA MINERALS AND WASTE DEVELOPMENT FRAMEWORK

CORE STRATEGY CHAPTER 8 – RADIOACTIVE WASTES

POST SUBMISSION CHANGES AS DISCUSSED AT THE HEARING IN PUBLIC 11 TO 21 NOVEMBER 2008

(With track changes)

Key

The latest, post Hearing, recommended changes (November 2008) are shown highlighted in yellow; the previously recommended changes (October 2008) are shown in red; and the original text (March 2008) is shown in black, ie:-

- Changes resulting from discussions at the Hearing are shown highlighted in yellow, these include deletions, which are shown yellow and strikethrough (~~yellow and strike through~~).
- Previously recommended changes that are now recommended to be deleted are shown in red, strikethrough and highlighted yellow (~~text~~).
- Previously recommended changes that are recommended to be retained, are shown in red.
- Previously recommended changes that are recommended to be deleted, are shown in red and ~~strikethrough~~.

RADIOACTIVE WASTES

CHAPTER 8: RADIOACTIVE WASTES

- 8.1 The UK has accumulated a substantial legacy of higher activity level radioactive wastes and more radioactive material will become waste over the next century or so as nuclear facilities are decommissioned and cleaned-up. The categories of radioactive waste that are defined in the UK^(xii) are set out in the Glossary.
- 8.2 The Nuclear Decommissioning Authority (NDA) is responsible for planning and delivering the management of the country's radioactive wastes and owns most of the nuclear sites and most of the waste. West Cumbria has, by far, the largest concentration of nuclear facilities in the UK. The Sellafield complex covers an area of approximately four square kilometres and comprises more than two hundred nuclear facilities. Actions over the last thirty years have reduced radiation doses, to even the most exposed groups, to a small fraction of that associated with natural background radiation.^(xiii) This process needs to continue to ensure that nuclear decommissioning and other developments do not prejudice this success. Representations have pointed out that radiation doses to local sea food eaters have increased.

HIGHER ACTIVITY WASTES

Where we are now

- 8.3 Liquid High Level Waste (HLW), mostly from reprocessing, is stored to cool at Sellafield and is then subject to a process of vitrification. Most of the UK's Intermediate Level Waste (ILW) ~~is transferred into passive storage at Sellafield, from operational activities, arises at Sellafield, where it is being made passively safe.~~ Small amounts of ILW from other UK licenced sites are also transferred for storage at Sellafield. ~~The Ministry of Defence sends small volumes of ILW to Sellafield for storage. Except for this, no ILW from other nuclear sites is sent to Sellafield.~~ Future decommissioning of all Nuclear Decommissioning Authority and British Energy sites may give rise to ILW. The destination for this is currently not determined.
- 8.4 The Government regulators and the NDA requires organisations that have responsibilities for radioactive wastes to develop plans for their management. These "Integrated Waste Strategies" (IWSs) have to be prepared in a form and to a level of detail that is suitable for consideration by the regulatory bodies. They have implications for the policies in Local Development Frameworks and Regional Spatial Strategies throughout the country, including the Cumbria MWDF. ~~Any need to review the Core Strategy, as a result of the Integrated Waste Strategies, would be identified in the Minerals and Waste Development Scheme (MWDFS) Annual Monitoring Reports.~~ Consultations were carried out in 2007 by Sellafield Ltd about its ~~Integrated Waste Strategy.~~

Where we need to be

- 8.5 The Core Strategy has been prepared during a period when national policy for the long-term management of radioactive wastes has been evolving. The Government has now published White Papers on managing both higher activity and low level radioactive wastes.^{(xiv) (xv)}

xii CM2919 - Review of Radioactive Waste Management Policy: Final Conclusions, July 1995

xiii Sellafield Integrated Waste Strategy Consultation July 2007.

xiv Managing Radioactive Waste Safely - A Framework for Implementing Geological Disposal June 2008.

xv Policy for the Long Term Management of Solid Low Level Radioactive Waste in the UK. March 2007

However, the detailed means of implementing these policies have not yet been determined. Also, the siting process for implementation of geological disposal of higher activity wastes is in its very early stages and the extent of engagement with this process in Cumbria is not yet known. In these circumstances, the policies in the Core Strategy relating to the management of radioactive wastes can only be regarded as interim policies until the situation becomes clearer. Consequently, the policies will be subject to timely review if they are no longer consistent with, or reflect progress on the detailed implementation of national policy. This will be identified through the Minerals and Waste Development Scheme (MWDS) Annual Monitoring Reports and included in a future MWDS.

- 8.6 National policy for the long term management of these higher level wastes is still evolving, which presents difficulties for this plan. The County Council has supported the findings of the Committee on Radioactive Waste Management (CoRWM), that higher activity wastes should be dealt with by geological disposal. However, the Council considers that this should be phased ie keeps open the option of retrievability for as long as is practicable. The principle of such disposal is to place waste in an engineered containment facility, deep inside a suitable rock formation, to ensure that no significant quantity of radioactivity ever reaches the surface. It is anticipated that underground vaults and tunnels would be at depths somewhere between 200 and 1000 metres, depending on geology.
- 8.7 Other countries have already made good progress towards implementing geological disposal and it should be possible to benefit from their experience. The Waste Isolation Pilot Plant (WIPP) in New Mexico, USA, is the only geological disposal facility that is known to be operational; it is used for the disposal of ILW., although a repository for these wastes No geological disposal facility for HLW or spent fuel has yet been to be built and operated.
- 8.8 Disposal would be preceded by safe and secure interim storage until a geological disposal facility deep repository can be developed. That storage period could be several decades. The Integrated Waste Strategy for Sellafield includes a the Nuclear Decommissioning Authority's assumptions of key dates that the facility deep repository will be available by 2040, for Intermediate Level Waste, and 2075 for High Level. The Managing Radioactive Waste Safely consultation paper (June 2007) estimates that it will take until around 2120 for all Intermediate and High Level wastes to be available in packaged form for disposal, following the decommissioning of the existing nuclear plants.
- 8.9 With regard to the size of facility that would be needed, it is estimated that nearly 500,000 cubic metres of packaged wastes, from existing facilities could, possibly, require geological disposal. The inventory of wastes takes the prudent approach that some materials which are not currently classified as wastes, including spent fuel, could, possibly, come to be regarded as waste in the future. Government anticipates that if new nuclear power stations are built, their wastes and spent fuel could be accommodated in the same geological disposal facility(ies). It may be premature to assume this, and such co-disposal could alter the nature of a geological disposal facility repository and extend the timeline for its completion.
- 8.10 The CoRWM proposals related to legacy wastes. The Committee stressed the uncertainties associated with new build and observed that the public assessment of any proposals should consider a range of issues and build on the CoRWM process. It estimates that extensions to the lives of some existing reactors, and a possible "new build" programme of ten new reactors (the size of any new programme has not yet been determined), would increase the total volume of material for disposal by about 8%, but total radioactivity by a factor of nearly three. The NDA advise Government that the 'footprint' (size) of a

RADIOACTIVE WASTES

geological **disposal facility repository** is difficult to predict, but that the addition of new build waste to legacy waste could increase the size of a joint **facility Repository** by around 50%, depending on design and site issues.

8.11 Government has broadly endorsed the CoRWM recommendations but has reserved its views on the detail of implementation. The UK Government and the devolved administrations for Wales and Northern Ireland have consulted ^(xvi) about proposals for :-

- the technical programme and aspects of design and delivery of a geological disposal facility; and
- the process and criteria to be used to decide the siting of that facility, including:

8.12 - development of a volunteerism/partnership approach; and
- the assessment and evaluation of potential disposal sites, including the initial screening-out of areas unlikely to be suitable for geological disposal.

8.13 Government policy on the implementation of the siting process is still evolving, it is difficult, therefore, to include detailed policies in this plan. However, it seems reasonable to assume that the planning system will need to make provision for a staged process, involving:-

1. Facilities for storing vitrified High Level Waste for at least fifty years, until it is judged to have cooled sufficiently for emplacement in a **geological disposal facility repository**. **Stores could be built with a 100-year lifetime.**
2. Facilities, with a proposed service life of 100 years or more, for the interim storage of Intermediate Level Wastes.
3. Site(s) characterisation boreholes.
4. Excavation of shafts and tunnels several hundred metres deep for underground investigations and possibly construction of an underground research laboratory.
5. Subject to satisfactory investigations, construction of surface facilities and an underground **geological** disposal facility(ies) that would remain open for at least 100 years, or longer if provision is made for waste retrieval.
6. Developing transport links between storage and disposal facilities.
7. **Engagement with communities beyond the immediate locality about transport and other issues.**
8. ~~7~~-Closure and restoration.
9. ~~8~~-Monitoring facilities.

8.14 The planning system itself is likely to be changed. In the Planning Bill, which was introduced in November 2007, the Government is proposing that decisions on nationally significant facilities should be taken by an Infrastructure Planning Commission and not by local planning authorities. Whether this arrangement would apply for a **geological disposal facility repository** proposal is not yet clear. The County Council consider this type of decision should be taken at the local level given the Government's proposal for a local siting partnership to develop a thorough understanding of a proposal in their area. **There are different views about the consenting process for a geological disposal facility repository.**

Policy

- 8.15** The uncertainties about national policy for managing the higher **activity level** wastes, and about who would make the decision to grant or refuse planning permission for any proposed facilities, have been outlined above. In the light of such uncertainties, it has been necessary to consider the appropriateness of including detailed policies, in this plan, for the staged process that is likely to be involved for managing these higher **activity level** wastes. It is likely that further planning applications will be submitted in connection with interim storage of the higher **activity level** wastes at Sellafield. A policy for such proposals is therefore, appropriate and Structure Plan Policy ST4 has been used as the basis for this policy. **With regard to community needs, Core Strategy Policy 3 on Community Benefits is also relevant.**

Core Strategy Policy 10

HIGH AND INTERMEDIATE LEVEL RADIOACTIVE WASTES STORAGE

Developments involving the interim storage of these wastes at Sellafield will only be permitted where criteria are satisfied relating to :-

- benefit clearly outweighing the detrimental effects;
- compliance with national and international standards and best practice for environment, safety and security, which, if appropriate, are publicly and independently reviewed;
- reasons are explained for rejecting alternative locations and methods that have been considered; and
- that there are no overall adverse impacts on the local economy.

Permission will be granted only if :-

- all **practicable possible** measures are taken to minimise the adverse effects of development and associated infrastructure; and
- where appropriate, provision is made to meet local community needs;
- acceptable measures are in place for decommissioning and site restoration; and
- arrangements are made for suitable local community involvement during the development, decommissioning and restoration.

- 8.16** This plan does not propose the development of a geological disposal facility within Cumbria for the higher level wastes. It is not even known if there are areas of the county where the geology is suitable for such a facility, further research is needed on this critical aspect. **However, the Government has published the Managing Radioactive Waste Safely White Paper and commenced the siting programme by inviting expressions of interest. However, the Government intends to commence the siting programme in 2008 and a.** A policy is, therefore, included that relates to that programme and to the procedures that will be involved. The Generic Development Control Policies will also be relevant to the consideration of any proposals. **It is recognised that considerable amounts of further research are still needed on issues relating to the geological disposal of radioactive wastes. One particular issue that has been raised in representations is how much radioactivity would dissolve underground and where the contaminated water would go.**

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- 8.17** More than one planning permission would be needed during the investigations for, and development of, a geological disposal facility. The following policy relates to the stages of developing such a facility, reflects the stages at which the community would have the opportunity to exercise its Right of Withdrawal and also the stages at which approvals would be needed from the Environment Agency and/or the Nuclear Installations Inspectorate. The policy sets out the criteria which would be used to assess proposals at each of the stages when planning applications would need to be submitted. **The policy would only come into play if a community in Cumbria volunteered to participate in the process of finding a site, and, if any possible site(s) passed the initial screening out of areas of unsuitable geology.**

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HIGH AND INTERMEDIATE LEVEL RADIOACTIVE WASTE GEOLOGICAL DISPOSAL

If an area of suitable geology within Cumbria is volunteered for consideration as a possible geological disposal facility, separate planning applications **may will** be expected to be submitted at three stages:-

1. **Proposals for surface based site investigation including boreholes.** At this stage, the planning criteria will be similar to those for exploratory works for other types of development. These relate to the usual environmental impact considerations including traffic, working hours, noise, visual impact, period of operations, water resources and wildlife.
2. **Proposals for underground rock characterisation shafts and tunnels and an underground research laboratory.** Planning considerations at this stage will need to include not just the environmental impacts of the proposed operations themselves, but also the details of a generic design for a **geological** disposal facility and of its likely impacts. The planning criteria will relate to the inventory of wastes; environmental impacts; benefits clearly outweighing detrimental impacts; compliance with best international standards and best practice for the environment, safety and security; the offset benefits package; impacts on the local economy; and community needs.
3. **Proposals for a disposal facility and transport links, monitoring, site closure and restoration.** At this stage, there will be a reasonable expectation that planning permission will be granted. That is unless new information or material considerations demonstrate otherwise, or there are material differences from the scheme that has been developed over a considerable period of time up to this stage. Planning criteria will relate to the environmental impacts of the proposed construction and operation of the facility; the inventory of wastes to be brought to the facility; to transport matters; arrangements for local community involvement; monitoring and reporting; contingency and emergency planning issues; the offset benefits package; site decommissioning, clean-up and closure proposals; and restoration/afteruse of the site.

- 8.18** A substantial amount of work is being undertaken in conjunction with **the other regulators** and the Nuclear Decommissioning Authority ~~and the other regulators~~ in connection with geological disposal. Some of this work relates specifically to the permissioning process and may require the policy to be reviewed.

LOW LEVEL WASTE

Where we are now

8.19 Much of the UK's Low Level Waste (LLW) is sent to the Nuclear Decommissioning Authority's Repository near Drigg in West Cumbria. Around two thirds of the LLW emplaced in the Repository is from the Sellafield complex. A very small proportion has been from industries and hospitals within the county, including arisings from nuclear submarine commissioning at Barrow in Furness. The rest of the waste has been from other nuclear sites and radioactive waste producers throughout the UK. The Integrated Waste Strategies mentioned earlier will set out individual sites' proposals for managing the wastes they produce.

8.20 On the basis of recent consignments the sources of waste are:

Table 8.1 Sources of LLW

Sources of Low Level Waste sent to the Repository near Drigg	
• Sellafield	66%
• MoD Faslane, Aldermaston, Devonport	14%
• Nuclear Power Stations	8%
• Hospitals, universities, oil industry	5%
• Radio isotope manufacturing sites, eg GE Healthcare	4%
• Other sites previously owned by British Nuclear Group sites	3%

8.21 The UK Offshore Producers Association has commented that LLW arisings from drilling operations are likely to increase. This is because, from the end of 2008, new disposal routes will need to be found for the Naturally Occurring Radioactive Materials (NORM) Scales which are an unavoidable by-product of hydro-carbon production. At present, these are macerated and disposed of in the sea. Information has been provided that these may only be around 36 tonnes/year.

8.22 The present facility, Vault 8, is likely to be full by the end of 2008. Temporary planning permission, until the end of 2019, was granted in January 2008 for emplacing wastes in a new Vault 9. This vault was estimated to provide capacity until 2016. However, new methods of managing the waste, greater emphasis on moving waste up the waste hierarchy and more intensive efforts at diverting wastes away from the Repository mean that the permitted capacity is likely to last for a longer period.

Where we need to be

8.23 The Defra policy for the long term management of Low Level Wastes (LLW) was published in March 2007. This states that Government expects the Nuclear Decommissioning Authority to develop and publish a plan for the optimal use of the Low Level Waste Repository near Drigg and to assess the extent to which other Low Level Waste disposal options might be employed. **The Defra policy promotes the search for new LLW disposal sites in the UK.** The County Council ~~will be~~ is a member of the National Low Level Waste Strategy Group which will be looking at these options.

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- 8.24** The NDA's strategy and plans, together with the proposals of the **new** operator of the Repository, demonstrate that a very substantial proportion of the wastes that would, in the past, have been consigned to the Repository will be managed elsewhere. In the future it will only be used for those wastes that require management within a multi-barrier containment system. One implication of these initiatives is that less than half of the estimated maximum physical capacity of the Repository site would be likely to be needed for wastes from Sellafield. Previously it had been understood that an additional Repository would be needed just for those wastes, irrespective of future developments at the existing site.
- 8.25** It seems likely that the recently permitted additional capacity for storing waste at the Repository will last until 2019 or even beyond the plan period. It is possible that proposals for additional capacity may need to be considered towards the end of that period. Other development proposals, not involving additional capacity, are expected to come forward in the next few years associated with the proposed new methods of managing the waste at the Repository. **Wastes that do not require multi-barrier containment will continue to arise, including substantial quantities from nuclear decommissioning. The nature of these wastes, their quantities and how much of them will require off-site provision for disposal is not yet clear from the Integrated Waste Strategies. The matter will be kept under review in the MWDFS Annual Monitoring Reports.**

Policy

- 8.26** Recent practice, where all types of LLW from around the UK were brought to the LLWR near Drigg, is not considered to be sustainable. This is particularly with regard to "waste miles" and the need for communities to take responsibility for their own wastes. That practice has been brought to an end by the NDA. Its strategy for the optimal use of the Repository, in accordance with Government policy, is that it will only be used for those wastes with a higher intrinsic hazard that really have to **be** managed in this type of engineered facility.
- 8.27** In these circumstances of much reduced projections of waste volumes that would be consigned to the Repository, the County Council accepts that it will continue to be an essential component of the UK's national waste management capability. This accords with national policy and also the aim that West Cumbria should be the centre of excellence for radioactive waste management.
- 8.28** The policy **relates to Low Level Waste only, and not to its sub-category of Very Low Level Waste, and** provides for the continued role of this Repository, but no other, within Cumbria. The NDA's strategy and plans are, by their nature, aspirational. It is essential that the assessments of the performance of this policy, and the need to review it, take account of performance in achieving the NDA's assumptions regarding moving waste up the waste hierarchy and diverting it away from the Repository. The planning permission for Vault 9 requires that this performance is reported annually to the County Council. The Annual Monitoring Reports will identify any requirement for the policy to be reviewed

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LOW LEVEL RADIOACTIVE WASTE

Provision will be made for the Low Level Repository, near Drigg to continue to ~~fulfill~~ fulfil a role as a component of the UK's radioactive waste management capability. Proposals for very long term storage or disposal of waste will have to demonstrate that they are feasible in relation to the long term integrity of the site with regard to sea level rise and coastal erosion. Proposals for additional storage or disposal facilities will have to demonstrate that they are within the site's radiological capacity.

The acceptance, by the County Council, of a national role for the Repository is on the basis of the NDA's and the ~~new~~ site operator's initiatives for reducing the proportions of waste that are consigned to it. The success of those initiatives will be monitored closely, in part through the Council's membership of the national Low Level Waste Strategy Group.

- 8.29** No policy for the Very Low Level Wastes that will arise in Cumbria is included. This is because of the uncertainties relating to their volumes, the way they may need to be managed and what off-site facilities may need to be provided. Any proposals for managing these wastes in the interim, before a review of the Core Strategy, would be considered in the context of the relevant Core Strategy and Generic Development Control Policies. These would include CS Policies 1 and 2 and GDC Policies 1, 2, 3 and 4.

CHAPTER 9: MINERALS CORE STRATEGY

PURPOSE

- 9.1** The Development Framework has to provide a clear guide to the public, and to mineral operators, about the locations where mineral extraction may take place. It has to set out clear and appropriate development control policies. These have to include ones for safeguarding both sensitive environmental features and mineral resources with potential for future extraction. The policies have to cover all aspects of environmental and resource protection as well as extraction.
- 9.2** Within this context, the Minerals Core Strategy makes an appropriate contribution to national, regional and local requirements for minerals. It seeks to ensure that the minerals that need to be provided from Cumbria's mineral resources can be worked in appropriate locations and at acceptable social, environmental and economic cost.

Where we are now

- 9.3** The location and size of Cumbria, its dispersed settlement pattern and its pattern of road and rail networks, have implications for how it meets its needs for minerals. Not only does the county as a whole tend to be self-sufficient, but there are also recognisable areas within the county which have traditionally met their own needs from local sources.
- 9.4** There are fourteen active crushed rock quarries within Cumbria, three of these are partly within the Lake District National Park. Limestone, igneous and sandstone rocks are quarried. In addition to producing aggregates, four of the limestone quarries supply industrial markets, mostly for burnt lime. There are also fourteen active sand and gravel quarries, none of these are within the National Park. Lists of the quarries are included in the Background Information section of the Issues and Options Discussion Paper. All of the sandstone and igneous rock quarries are in the south of the county, whilst the majority of the limestone ones are in the east, relatively few quarries supply the north and west of the county. There are around seven processing plants producing aggregates from recycled or reused materials. There are currently no active surface or underground coal mines in the county, **but there are extensive deep and shallow coal resources.**
- 9.5** There is a large licenced area for marine dredged aggregates in Morecambe Bay, approximately twenty miles off the coast. Sand from this is landed at Barrow docks, small amounts are also provided by harbour channel maintenance activities at other ports and harbours. There is no demand, at present, for marine dredged gravel. There are an underground gypsum mine near Long Marton, seventeen building stone quarries, a slate quarry near Broughton-in-Furness, a quarry for a brickworks near Askam in Furness and commercial peat workings near the Solway coast.
- 9.6** In addition to meeting Cumbria's own needs, these mineral workings provide high and very high skid resistance roadstones, gypsum, peat, slate and bricks to regional and national markets.
- 9.7** The North West Regional Aggregates Working Party (RAWP) Annual Reports provide details of sales and remaining reserves of sand and gravel and crushed rock. The North West, as a whole, meets only around half of its aggregates consumption from within the

region. Cumbria helps to meet the needs of other parts of the region, but most of the shortfall is met from other regions; for example, from quarries in Derbyshire. The figures that the Working Party publishes for Cumbria include the Lake District National Park.

- 9.8** The 2006 Annual RAWP Report indicates annual average sales over the three year period 2002 to 2005 were 3.8 million tonnes/year of crushed rock and 800,000 tonnes/year of sand and gravel. Just over 20,000 tonnes of marine dredged sand were landed at Barrow in 2005. Remaining reserves with planning permission at the end of 2005 were 156.6 million tonnes of crushed rock and 9.18 million tonnes of sand and gravel.
- 9.9** Reserves of gypsum at Birkshead mine in 2005 were estimated to be around 5 to 6 million tonnes, sufficient for around 15 or 16 years. The brick making mudstones quarry had estimated reserves of around 160,000 cubic metres. This would be sufficient for around eight years, but the planning permission runs out in 2013. The two commercial peat sites have reserves that will last until the expiry of their planning permissions in 2042. No reliable or publicly available details are available of the production figures or reserves for the secondary and recycled aggregates plants.

Where we need to be

- 9.10** The main issues for the Minerals Core Strategy concern the provision that should be made for working specific minerals and for safeguarding mineral resources for future generations. The provision that the plan makes for working a mineral are determined by the annual production levels and the appropriate length, in years, of the "landbank" of permitted reserves that will be maintained throughout the plan period. The safeguarding of existing and potential rail and wharf facilities will be addressed in the Site Allocations Policies Development Plan Document.
- 9.11** Broader spatial planning issues that could affect the need for mineral extraction include those of the Cumbria Economic Plan and the West Cumbria Spatial Masterplan. Specific examples are the regeneration schemes that are proposed for Barrow-in-Furness, Whitehaven and Workington, nuclear decommissioning at the Sellafield/Windscale complex, improvements to transport links, housing renewal, pressure for increased house building rates to meet local needs, higher environmental performance standards for buildings and proposals for improved flood defence works. Policies for areas outside the plan area may also have implications. An example is that there could be pressure on Cumbria to make up for shortfalls that would result from policies for reducing quarrying in the Lake District and Yorkshire Dales National Parks.

9 MINERALS CORE STRATEGY

STRATEGY

9.12 The choices for the minerals strategy involved balancing:-

1. the need to keep the number of operations and permitted reserves to a minimum to reduce environmental damage, with
2. meeting local, regional and national needs without disruption of supply, and
3. maintaining local jobs in a traditional rural industry (rural proofing).

Having taken account of these the Minerals Core Strategy is:-

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MINERALS STRATEGY

The Minerals Core Strategy of this plan is:-

- to make provision for a steady and adequate supply of minerals, in accordance with national and regional policies;
- to balance the economic potential of its mineral resources with the protection of the environment, and with prudent use of them in environmentally sensitive ways; and
- make provision to enhance the scope for using alternative re-used or recycled materials.

9.13 Site specific assessment work will be undertaken in the Site Allocations Policies.

Alpha Activity (radioactivity) This takes the form of particles (helium nuclei) ejected from a decaying atom. Alpha particles cause ionisations in biological tissue which may lead to damage; this is more significant if inhaled or swallowed. The particles have a very short range in air, typically about 5 cm.

Annual Monitoring Report (AMR) Part of the Local Development Framework, this assesses the implementation of the Local Development Scheme and the extent to which policies in the Local Development Documents are being successfully applied.

Areas of Coal Working Notified by the Coal Authority These are the areas that have been notified to local planning authorities for the purposes of Article 10 of the Town and Country Planning (General Development Procedure) Order 1995. The Coal Authority has provided Standing Advice about potential hazards for development proposals within these areas and wishes to be consulted about planning applications accompanied by Environmental Impact Assessment or for mineral working.

Area of Outstanding Natural Beauty (AONB) A designation made, under the National Parks and Access to the Countryside Act 1949, to an area of countryside, the natural beauty of which it is desirable to conserve and enhance.

Areas of Search Areas, that are broader than Preferred Areas, where knowledge about mineral resources may be less certain, but within which planning permissions for particular sites could be granted to meet any shortfalls in supply, if suitable planning applications are made.

Becquerels (Bq) This is the standard international unit of radioactivity equal to one radioactive transformation or decay per second. The multiples of becquerels that are commonly used to define radioactive waste activity are - kilobecquerels (kBq) equal to one thousand Bq; megabecquerels (MBq) equal to one million Bq; and gigabecquerels (GBq) equal to one thousand million Bq.

Beta Activity (radioactivity) This takes the form of particles (electrons) emitted during radioactive decay from the nucleus of an atom. Beta particles cause ionisation in biological tissue which may lead to damage. Most beta particles can pass through the skin, but a few millimetres of light material such as aluminium, will generally shield against them.

Biodiversity The range and diversity of life (including plants, animals and microorganisms), ecosystems and ecological processes.

Brownfield Land/Sites Previously developed land which can be redeveloped for other uses.

Carbon offsetting. A net reduction in carbon emissions resulting from a project undertaken to compensate for emissions elsewhere.

Core Strategy A Development Plan Document which sets out the spatial vision and objectives for a specific period, with the strategic policies necessary to deliver that vision.

Cumbria Local Strategic Partnership (LSP) The Cumbria Strategic Partnership (CSP) is made up of all partnerships working in the County towards the Sustainable Community Strategy, overseen by a few key partners.

Development Plan For the Plan area this will comprise the Joint Cumbria and Lake District Structure Plan, the Minerals and Waste Development Framework and the Local Development Frameworks for each district in Cumbria. The North West Regional Spatial Strategy will replace the Joint Structure Plan once it has been adopted.

GLOSSARY

Evidence Base The Evidence base is a collective term for the documents, studies, reports and community feedback used to support the Framework.

Flood Zone Flood zones refer to the probability of flooding (ignoring the presence of defences).

- Flood Zone 1 = low probability
- Flood Zone 2 = medium probability
- Flood Zone 3a = high probability
- Flood Zone 3b = within functional flood plain.

Front Loading Engaging/consulting with the community at the start of the plan preparation process.

Gamma Activity (radioactivity) An electromagnetic radiation similar in some respects to visible light, but with higher energy. Gamma rays cause ionisation in biological tissue which may lead to damage. These rays are very penetrating and are attenuated only by shields of dense metal or concrete, perhaps some metres thick. Their emission during radioactive decay is usually accompanied by beta or alpha activity.

Government Office for the North West (GONW) The regional office for central government departments.

Greenfield Land/Sites Land or sites which have not previously been developed or which were developed but have been restored and/or now blended back into the landscape.

Greenhouse gas (GHG) Emissions Greenhouse gases "trap" energy radiated by the Earth within the atmosphere. They include carbon dioxide, methane, nitrous oxide and fluorinated gases. Carbon dioxide is the main greenhouse gas in the UK.

High Level Radioactive Waste Radioactive waste that is so active that it is self-heating and requires cooling.

Infrastructure Basic services necessary for development to take place, for example, roads, electricity, sewerage, water, education and health facilities.

Intermediate Level Radioactive Waste Is sufficiently radioactive to require shielding during its handling and transportation.

Ionisation This process occurs when radiation (alpha, beta and gamma activity) interacts with matter, which can cause atoms and molecules to become unstable. Ionisation from radiation is the first stage in possible change or damage within biological tissue.

Life cycle analysis (of greenhouse gas emissions) An approach to measuring the impact on climate change across the supply chain for a product, including those from fossil fuel burnt in extraction, processing, transport, and disposal.

Local Area Agreement LAAs set out the priorities for a local area agreed between central government and a local area (the local authority and local strategic partnership) and other key partners at the local level e.g. Cumbria LAA

Low carbon energy supplies Use technology that can help reduce carbon emissions. They can include combined heat and power plants and the use of heat that would otherwise be wasted. They are usually referred to in conjunction with renewable energy supplies.

Local Development Document A collective term given to the Development Plan Documents and Supplementary Planning Documents.

Local Development Framework (LDF) The name for the portfolio of Local Development Documents. These consist of Development Plan Documents, Supplementary Planning Documents, a Statement of Community Involvement, the Local Development Scheme and Annual Monitoring Reports, produced by the Local Planning Authority. The Minerals and Waste Development Framework is an LDF dealing only with minerals and waste issues.

Local Development Scheme (LDS) This sets out the programme and timetable for the preparation and production of Local Development Documents.

Low Level Radioactive Waste. has activity levels not exceeding 4 gigabecquerels/tonne (GBq/te) of alpha or 12 GBq/te of beta gamma activity. One bequerel is equal to the disintegration of one radionuclide per second. A GBq is 1000,000,000 bequerels.

Mineral Safeguarding Areas Areas intended to safeguard proven deposits of minerals which are, or may become, of economic importance within the foreseeable future, from unnecessary sterilisation by surface development.

Mineral Consultation Areas Land with potential for mineral extraction, where county and district councils in two-tier planning areas need to co-operate in the exercise of their planning powers. They are a mechanism for consultation between the county and district councils, about development which would be likely to affect the winning and working of minerals, and also about how mineral working could affect other existing or proposed land uses. They can cover all, parts of, or marginally more than a Mineral Safeguarding Area. It is anticipated that they will include the Minerals Safeguarding Areas plus a buffer zone around them.

National Park An area designated under the National Parks and Access to the Countryside Act 1949 (as amended). The Cumbria Minerals and Waste Development Framework does not cover land within the county of Cumbria that is within either the Lake District National Park or the Yorkshire Dales National Park.

North West Development Agency (NWDA) The body that oversees the economic development of North West England, and also supports regeneration activity across the Region.

North West Regional Assembly (NWRA) The Regional Planning Body that considers regionally important planning matters for North West England, and produces the North West Regional Spatial Strategy. It is expected to combine with the NWDA in 2008/9.

Preferred Areas Areas of known mineral resources where planning permission for minerals extraction might reasonably be anticipated, subject to tests of environmental acceptability.

Radioactive Wastes

The categories of radioactive waste that are defined in the UK are:-

- High Level Waste (HLW), more than 12,000 Becquerels/gram and significantly heat generating
- Intermediate Level Waste (ILW), more than 12,000 Becquerels/gram but not significantly heat generating

GLOSSARY

- Low Level waste (LLW), having a radioactive content that does not exceed 4,000 Becquerels/gram (4 gigabecquerels per tonne) of alpha or 12,000 Becquerels/gram (12 gigabecquerels per tonne) of beta/gamma radiation
- Very Low level waste (VLLW), is waste at the lower end of the LLW scale that is contaminated with a very small amount of activity (<4Bq/g).

Regional Aggregates Working Partnership (RAWP) A Regional Assembly organisation which includes representatives of central and local government and the minerals industry that considers the production and need for aggregates in the region. It produces annual reports and a more comprehensive survey is conducted and reported every 4 years.

Regional Spatial Strategy (RSS) This sets out the region's strategic policies, in relation to the development and use of land and forms part of the development plan for each local planning authority area. The current RSS was originally published as Regional Planning Guidance. For the North West Region the proposed changes to the draft review RSS are expected to be published in July 2008. When adopted the review RSS will replace the Regional Planning Guidance and the Cumbria and Lake District National Park Joint Structure Plan.

Regional Technical Advisory Body (RTAB) A Regional Assembly organisation that includes representatives of central and local government and industry. It considers waste management in the region, producing a comprehensive report each year to inform planning authorities at all levels.

Renewable Energy/Resources Energy forms/resources that occur naturally and repeatedly in the environment, such as wind, waves and solar power and also bio-mass. Combustible or digestible waste materials are also regarded as renewable sources of energy.

Spatial Planning This moves the focus from a traditional land-use planning approach based on the regulation and control of land to a more inclusive approach which aims to ensure the best use of land by assessing competing demands. To carry this forward social, economic and environmental factors are taken into account in producing policies or decisions which promote sustainable development and influence the nature of places and how they function.

Statement of Community Involvement (SCI) Sets out the standards which local authorities will achieve with regard to involving individuals, communities and other stakeholders in the preparation of Local Development Documents and in development control decisions. The Council's Statement of Community Involvement was adopted in January 2006.

Strategic Environmental Appraisal (SEA) A generic term used to describe environmental assessment, as applied to plans, policies and programmes. The European 'SEA Directive' (2001/42/EC) requires a formal 'environmental assessment of certain plans and programmes, including those in the field of planning and land use'.

Strategic Flood Risk Assessment Highlights the potential level of risk of flooding on land throughout the area.

Sustainable Development There are numerous definitions of sustainable development. The most widely agreed definition comes from the 1987 Brundtland report, namely: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

Sustainability Appraisal (SA) A tool for appraising policies and proposals, to ensure that they reflect sustainable development objectives based on a range of social, economic and environmental factors. This is required for all Local Development Documents.

Sustainable Community Strategy The high level visioning document for an area, dealing with wide social, economic and environmental issues that affect the County or District. In Cumbria the Cumbria Strategic Partnership produces the Cumbria Sustainable Community Strategy, and this builds on the Sustainable Community Strategies produced by Local Strategic Partnerships in each District. These documents guide the direction of all Local Development Frameworks including the Minerals and Waste Development Framework.