



YORKSHIRE DALES
National Park Authority



Arcow Quarry, Ribblesdale

Minerals and Waste Development Plan Document Issues and Options June 2007

Part of the Yorkshire Dales Development Framework
2006 - 2021

INTRODUCTION

Changes to the planning system, introduced by The Planning and Compulsory Purchase Act, 2004, mean that the National Park Local Plan and the separate Minerals and Waste Local Plan have to be replaced by a group of development plan documents that will together form the new Local Development Framework (LDF).

The existing planning policies for minerals and waste are contained in the Yorkshire Dales Minerals and Waste Local Plan adopted in 1998. These policies have worked well for the assessment and control of development proposals, but some now need to be updated to take account of new national legislation and guidelines, and regional planning policies. Other policies in the Minerals and Waste Local Plan remain appropriate and could be retained.

The first stage in the preparation of development plan documents is a survey and data gathering exercise with the identification of issues and alternative options for future policy. This paper provides information and data on minerals and waste development in the National Park and identifies a number of issues and options.

Parish Councils and other local groups, quarrying, waste and recycling companies and statutory bodies will be invited to comment on the issues and options raised and to raise any further matters they consider to be relevant.

These consultations will lead on to the preparation of preferred options and detailed policies, which will be subject to further consultation and will then be considered by an Independent Planning Inspector at a formal public examination.

BACKGROUND INFORMATION ON MINERALS

Mineral Working in the National Park

In the Yorkshire Dales, Swinden, Horton, Arcow, Dry Rigg, Giggleswick and Ingleton Quarries, produce crushed rock aggregate for use in the construction industry. Threshfield Quarry is not operating at present and Old Ingleton Quarry is classified as dormant. Since the adoption of the Minerals and Waste Local Plan in 1998, Ribblehead and Cool Scar Quarries have been closed and restored to nature conservation.

There is only one active quarry producing building and roofing stone in the Yorkshire Dales and this is at Hill Top near Keld. The locations of these quarries are shown on Drawing No 1.



The end dates of the existing planning permissions and the type of rock being worked are shown in Table 1.

TABLE 1 – QUARRIES IN THE YORKSHIRE DALES NATIONAL PARK

Quarry	Rock	End Date of Existing Permission
Swinden	Limestone	2020
Threshfield	Limestone	Not operational
Giggleswick	Limestone	2007*
Dry Rigg	Gritstone	2009
Arcow	Gritstone	2011
Horton	Limestone**	2042
Ingleton	Gritstone	2013
Old Ingleton	Gritstone	Dormant
Hill Top	Sandstone	2015

* *Estimated exhaustion of permitted reserves.*

** *Working limestone but also has reserves of gritstone.*

The surface effects of the former lead mining industry are evident in many parts of the National Park, but there is no current production of minerals from the veins or surface heaps.

Sales and Reserves

Information on sales and reserves in the region's aggregate quarrying industry are published annually by the Regional Aggregate Working Party (RAWP), a technical working group with membership drawn from local, regional and national government and from the minerals industry. The information in this section is taken from the RAWP annual reports.

Sales

Table 2 shows crushed rock sales throughout the Yorkshire and Humber Region for the 6-year period from 2000 – 2005.

TABLE 2 – SALES OF CRUSHED ROCK IN YORKSHIRE AND THE HUMBER REGION 2000-2005 (million tonnes)

	2000	2001	2002	2003	2004	2005
Yorkshire Dales NP	3.9	4.0	4.0	4.0	3.8	4.0
North York Moors NP	0.2	0.3	0.3	0.3	0.2	0.1
North Yorkshire CC	3.8	3.9	4.1	3.7	4.2	3.9
South Yorkshire	3.1	3.4	3.2	3.1	3.1	3.0
West Yorkshire	1.0	1.2	1.1	1.2	1.2	1.2
E Riding	0.5	0.5	0.6	0.5	0.3*	0.4*
North Lincolnshire	2.3	2.4	2.5	1.9		
TOTAL	14.9	15.8	15.8	14.7	12.7*	12.7*

**The 2004 and 2005 figures exclude just under 2mt of sales of industrial minerals from 5 sites in the East Riding and North Lincolnshire that were included in previous surveys.*

Total sales from Yorkshire Dales' quarries have been fairly consistent over the period at around 4 million tonnes (mt) per year. In 2005, the 4mt total sales from quarries in the Yorkshire Dales was made up of 3mt of limestone and 1mt of gritstone. The end-uses of crushed rock sales from Yorkshire Dales Quarries in 2005 are shown in Table 3.

TABLE 3 – THE END USES OF CRUSHED ROCK SALES FROM THE YORKSHIRE DALES IN 2005

	Coated Roadstone	Uncoated Roadstone	Concrete Aggregate	Other Screened and Graded Aggregates	Constructional Fill and Armourstone	Aggregate Use	Non-Aggregate Use
Percentage of sales of crushed rock	33%	19%	27%	8%	11%	98.4%	1.6%

Gritstone is worked at Dry Rigg, Arcow and Ingleton Quarries. It has a high skid resistance and is used principally for road surfacing. Limestone is produced from Swinden, Giggleswick and Horton Quarries and is mostly used in road construction and repair and for aggregate in concrete.

Only a very small amount, around 1.6%, is used for non-aggregate purposes, principally limestone for flux in the iron and steel industry with small tonnages used for building stone and in agriculture. This is in sharp contrast to the position in the past when lime burning was the main activity at the limestone quarries in the Yorkshire Dales.

Destination of Sales

A survey of the destination of sales of aggregate is undertaken by the RAWP every four years. The latest figures are from 2005 and the destination of sales in that year are shown in Table 4.

TABLE 4 – THE DESTINATION OF SALES OF CRUSHED ROCK AGGREGATE FROM THE YORKSHIRE DALES IN 2005

Destination Region	Percentage
Yorkshire and the Humber	65%
North West	31%
North East/East Midlands/Other	4%

Just under two thirds of sales in 2005 were within the Yorkshire and the Humber Region, with Leeds, Bradford and the other towns in West Yorkshire providing major markets. There is also a significant level of sales into Lancashire, Greater Manchester and other parts of the North West Region, particularly from the quarries in Ribblesdale and Ingleton.

Reserves

Permitted reserves are made up of the total tonnage of mineral, with planning permission for working that remains in the ground. Mostly because of historic permissions, there are extensive permitted reserves in the Yorkshire Dales. At the end of 2005 these amounted to 132mt, equivalent to around 32 years of life. The 132mt of permitted reserves is made up of 120mt of limestone and 12mt of gritstone.

Employment

Over recent years, the levels of employment in quarries has declined with an increasing emphasis in the industry on large scale, mechanised units. There has also been a move to locate bitumen coating plants and ready mixed concrete plants at centralised, rail-fed, depots in the main urban areas. These moves, together with the end of lime-burning at quarries in the Yorkshire Dales, have led to a steep decline in employment in National Park quarries.

From the 1991 census it has been calculated that, at that time, approximately 200 national park residents were employed in mining and quarrying (this figure was calculated from a 10% sample only). By the 2001 census the number had declined to 94.

In August 2006 a total of 88 people were directly employed at the quarries in the Yorkshire Dales. This figure is the total number employed in the working quarries, irrespective of where they live. It is therefore not directly comparable with the figures derived from the census.

MINERALS STRATEGY

Strategic policies and objectives relating to minerals development are contained in the following documents:

Minerals Policy Statement 1 (MPS1)

The Department for Communities and Local Government (DCLG) published MPS1 and its four annexes in November 2006. MPS1 sets out the core policies and principles for minerals planning in England. Annexes 1 and 3 cover aggregates and natural building stone and roofing stone provision.

The Government's objectives for minerals planning include:

To protect internationally and nationally designated areas of landscape value and nature conservation importance from minerals development, other than in exceptional circumstances.

The policy statement on supply includes:

Provide for the maintenance of landbanks, i.e. appropriate levels of permitted reserves, for non-energy minerals as far as is practicable from outside National Parks, the Broads, Areas of Outstanding Natural Beauty and World Heritage sites.

(Note: The landbank is the sum of all permitted reserves with valid planning permission and is the measure used to assess whether additional resources may need to be permitted)

National and Regional Guidelines for Aggregates Provision in England, 2001 – 2016

In 2003 the Government published guidelines for the production of aggregate in each of the English regions. These are for the period to 2016. The regional figures are sub-divided between the mineral planning authorities in the region. The agreed share for the Yorkshire Dales is 66mt over 16 years, an average of 4.13mt per year. This is in line with the current levels of production and represents a pragmatic approach in a situation where there are very high levels of permitted reserves, so that existing levels of production are likely to be maintained in the short to medium term.

Yorkshire and Humber Regional Spatial Strategy, Draft 2005 (RSS)

The draft RSS was issued for consultation in December 2005. Following adoption, it will become the upper tier of the development plan. Part of Policy ENV4, the policy on aggregate minerals, covers production from National Parks:

*Minerals plans, programmes, strategies and decisions will:
Seek a progressive reduction in aggregate production from National Parks and Areas of Outstanding Natural Beauty, noting that there is no strategic justification for the provision of any new crushed rock sites within these areas within the plan period.*

The Yorkshire Dales National Park Management Plan 2006-2011

The National Park Management Plan, approved in November 2006, forms the strategic document for the National Park. The following two objectives are of direct relevance to mineral working.

L4. Prevent the introduction of significant new development “detractors” from the landscape, notably:

- a) new quarries (other than for local use of building stone and roofing slate;*
- b) extensions to existing quarries (except where the environmental and amenity benefits would clearly outweigh the impact on the landscape) – and implement agreed landscaping and restoration schemes for all existing quarry sites.*

HE7. Encourage use of local building materials and, by 2009 assemble and make available information on where these can be sourced.

MINERALS ISSUES AND OPTIONS

Permissions for the quarrying of aggregate.

A Government objective set out in MPS1 is to protect nationally designated areas of landscape from mineral development other than in exceptional circumstances. In addition, one of the supply policies in MPS1 is to provide for the maintenance of landbanks, i.e. appropriate levels of permitted reserves, for non-energy minerals as far as is practicable from outside national parks. These national policy statements are reflected at a regional level by Policy ENV4 in the Yorkshire and Humber Plan that mineral planning authorities should seek a progressive reduction in aggregate production in National Parks. Because of the high level of permitted reserves in the Yorkshire Dales this is likely to be achievable only in the medium to long term.

Issue 1: What steps should be taken to comply with national guidelines and with regional planning policy ENV4 to seek a progressive reduction in aggregate production from the Yorkshire Dales National Park?

Development plan policies must not conflict with national and regional policies and the available options for future quarry working in the Yorkshire Dales are therefore limited. Existing quarries can continue to operate within the time period of their existing planning permissions, but new aggregate quarries or significant increases in the overall level of permitted reserves would be contrary to national and regional policy.

It is considered that possible options extend from adopting a strict policy with no further grant of planning permissions for the working of aggregate minerals to a more flexible approach where developments at existing quarries could be permitted provided the proposals meet specified criteria. Options for the criteria that could be considered in this case could include some or all of the following:

- The proposed development or time-limit extension would provide demonstrable overall environmental and community benefits, which are considered to outweigh any harm
- There would be no net increase of permitted reserves
- The proposed development would be entirely within the existing quarry footprint.

A strict policy line would be likely to lead to compliance with regional policy ENV4 within a shorter period of time, but a more flexible approach would allow for negotiated improvements at some existing sites, which could be beneficial to local residents and visitors and to the environment of the National Park. In practice, because most of the quarries operate under permissions with modern conditions and detailed restoration schemes, the scope for improvements is likely to be limited to those sites which operate under old planning permissions. Options which could result in the closure and restoration of the site at Threshfield and options for the development of Horton Quarry are discussed later in this paper.

Building and Roofing Stone

The Authority has taken the view that it is beneficial to have local sources of building and roofing stone for use in the National Park. Two reports have been commissioned and investigations of potential sites have been encouraged. However, at present there is only one local source of stone in the National Park at Hill Top near Keld, where sandstone for building and walling stone and for roofing slates is quarried. In addition, there is a quarry near East Witton, just outside the park boundary, producing building sandstone. There has been increasing pressure to use stone imported from India and China, which is generally cheaper than locally produced material.

There are a number of areas in the Yorkshire Dales that, from a geological point of view, could provide building stone. Some of these are likely to be acceptable from an environmental point of view, but working has to be seen to be commercially viable before a company or individual will open a new site.

Issue 2: How should the small-scale working of building and roofing stone for local use continue to be encouraged?

The existing policy is to support proposals at a scale appropriate to serve the local market. Working at the quarry at Hill Top has continued and new planning permissions have been granted for small extensions to the site. A number of discussions have been held about other potential local sources of building and roofing stone. None of these have progressed to the submission of a planning application and the indications are that this was principally because of lack of confidence in the commercial viability of the development.

The Impact of Mineral Working

The extent to which mineral working has an impact on communities and on the environment is largely dependent on the manner in which the development and its associated activities are operated. Control over approved development is obtained through formal means, principally planning conditions and legal agreements, but can also be influenced through local liaison meetings. Most of the quarries in the Yorkshire Dales have established liaison meetings with Parish Councils.

The total number of complaints about quarrying activity in the National Park is low with the majority of comments or complaints connected with road transport. The Yorkshire Dales Local Plan contains a policy (Policy TA15) that encourages the use of rail transport to carry quarry products. At present only Swinden Quarry is rail linked, with approaching 50% of sales from Swinden transported by rail. Rail transport is only possible where a site is close to an existing railway and benefits are achieved only if there is a corresponding decrease in road transport.

The 1995 Environment Act provides for the review of all old mineral permissions and requires a periodic review of all permissions every 15 years. This gives an opportunity for planning conditions to be updated and is an effective method of reducing the impact of existing workings.

Issue 3: Which aspects of quarrying have the biggest impact on local communities and visitors to the National Park and how could adverse impacts be reduced? What steps should be taken to reduce the environmental impact of mineral working in the National Park?

Quarrying in Wharfedale

The only active quarrying operation in Upper Wharfedale is at Swinden, located between Linton and Cracoe, where limestone is worked and the existing permission is valid until 2020. The large quarry area at Threshfield, to the north-west of Threshfield village, is not at present operational. Discussions have been held with Tarmac, the company controlling these sites, about the closure and restoration of Threshfield. A planning application has been submitted to extend the life of Swinden Quarry, with working remaining within the existing quarry footprint. If this application is successful, the company would permanently close and restore their Threshfield site. It should be stressed that, there will be full publicity and consultation on this application.

Issue 4: Should there be an extension to the life of Swinden Quarry in Wharfedale, if this can be achieved without additional harm to local communities or to the environment, in return for the permanent closure and restoration of Threshfield Quarry? If so, what restrictions ought to be imposed on quarrying operations and transport and what are the most appropriate restoration schemes for the two sites?

In practice this issue is most likely to be considered through the processing of the planning application to extend the life of Swinden Quarry, before the stages of producing a new development plan document have been completed.

Quarrying in Ribblesdale and Chapel-le-Dale

From Table 1, it can be seen that Horton Quarry at Horton-in-Ribblesdale is the only active operation in Ribblesdale or Chapel-le-Dale with long-term planning permission. This is also the only quarry in the Yorkshire Dales that has not yet reached the full lateral extent of its existing permissions. Dry Rigg, Arcow and Ingleton Quarries are worked under recent permissions with modern conditions and Giggleswick Quarry has limited remaining reserves. Old Ingleton Quarry is a dormant permission located in the heart of Chapel-le-Dale. It is considered that the re-opening of this quarry would be highly detrimental to the environment of this part of the National Park. An application to restore the Old Ingleton site, using quarry waste brought from the main Ingleton Quarry was received in May 2007.

Issue 5: Should the permanent closure and restoration of the Old Ingleton site in Chapel-le-Dale be sought?

The quarry at Horton is worked under extensive planning permissions granted in the 1950s and 60s. At present the quarry works limestone, but gritstone has been exposed, beneath the limestone, in the base of the quarry. An existing planning permission covers part of the gritstone resource, but a new permission would be required to work it to its full extent. Unworked parts of the quarrying permissions overlap on to areas designated as Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC). These cover 9.3ha designated as SSSI, of which 3.4ha is also SAC.

In the past, stone was exported from the site by rail, but the rail sidings were removed some time ago. The reinstatement of the rail link has been under consideration by the operators for a number of years. It has also been suggested by local residents that a new access road should be constructed to the quarry to join the B6479 south of Horton-in-Ribblesdale. This would remove traffic from Horton, but construction could have adverse environmental impacts and would not improve the situation for villages south of Horton or through Settle. There is an existing limit of 600,000 tonnes per year on the mineral transported by road through the village. There are therefore a number of important and linked planning issues at the site that need to be addressed.

The Environment Act Review of the site has been “stalled” because the formal Environmental Impact Assessment had not been submitted. However, Hanson, the operating company, has recently submitted the EIA and this will enable updated conditions to be considered.

Issue 6: How should Horton Quarry be developed and what steps should be taken to minimise any adverse effects of the quarrying and quarry transport on local communities and on the environment?

The more detailed issues and options for Horton Quarry include:

- Should quarrying at Horton continue broadly as at present, but with updated conditions as a result of the Environment Act Review?
- What operating and transport hours are appropriate for Horton quarry? Should road transport be operated from Monday to Friday only, as at Arcow and Dry Rigg Quarries and not on Saturday mornings as at present? If this was the case, there would be no quarry traffic at weekends from the three Ribblesdale quarries on the B6479 or through Settle.
- Should the introduction of rail transport be encouraged and, if so, should there be a decrease in road haulage?
- Should the building of a new access road to the quarry be encouraged? How could a road scheme be designed so that it is environmentally acceptable?
- In addition to seeking protection for SSSI and SAC designated land, should agreement be sought to limit quarrying in other, at present undisturbed parts of the permission areas?
- Should the extension of gritstone working in the base of the quarry be permitted? If so, to what extent should this be dependent on a reduction in the permitted reserves of limestone and protection for SSSI and SAC designated land and other undisturbed areas?
- What is the most appropriate restoration scheme for the site?

The scale of working at Horton Quarry and future levels of production are dependent on commercial decisions of the operating company and obtaining any further planning permissions that may be necessary. The operator will assess whether to reinstate the rail sidings or to seek approval for a new access road to remove quarry traffic from Horton village. If, in the future, the company wishes to increase production at the site above the 600,000 tonne limit, it would be necessary for them to re-introduce rail transport. The combined impact of increased production and the use of rail transport would need to be fully assessed.

BACKGROUND INFORMATION ON WASTE

Waste Management in the National Park

Collection and disposal of household and commercial wastes

The collection of household and commercial waste in the Yorkshire Dales is undertaken by Richmondshire, Craven and South Lakeland District Councils and waste requiring disposal is taken to landfill sites located outside the National Park. Following the closure of the household waste disposal site at Langcliffe Quarry in Ribblesdale in 1993, there has been no disposal of household, commercial or industrial waste in the National Park.

The Regional Spatial Strategy (RSS) and the Municipal Waste Strategies for North Yorkshire and Cumbria contain data on waste arisings, together with forecasts of amounts of waste to be managed in the future. The figures are shown for the county and district level, but do not give an assessment for the national parks.

Recycling of Household Wastes

These are household waste recycling sites at locations around the margins of the National Park at Leyburn, Skibeden near Skipton, Settle and Kendal. Throughout the National Park itself, there are smaller scale facilities for the collection of materials such as glass and paper, which are then recycled. In addition, the District Councils operate a number of schemes to collect materials for recycling.

Mineral Wastes

Mineral wastes are produced at the active quarries in the Yorkshire Dales. Waste may be overburden, weathered rock or clay or other un-saleable materials, resulting from the quarrying and processing. Overburden and mineral waste is, in almost all circumstances, used on site as part of the approved landscaping and restoration scheme. This position is not expected to change.

Agricultural Wastes

Until recently, agricultural wastes were exempt from the Environment Agency's licensing requirements. The on-farm disposal or burning of these wastes is now under the Agency's regulatory control. It is not yet clear whether this will result in the need for additional sites for managing these wastes.

Construction and Demolition Wastes

There are relatively few development schemes of any significant scale within the Yorkshire Dales and as a result only small volumes of construction and demolition (C and D) wastes are produced. There is increasing emphasis on minimising the waste of materials on building sites and the bulk of C and D wastes can potentially be re-used or recycled.

WASTE MANAGEMENT STRATEGY

Strategic policies and objectives relating to waste management are contained in the following documents:

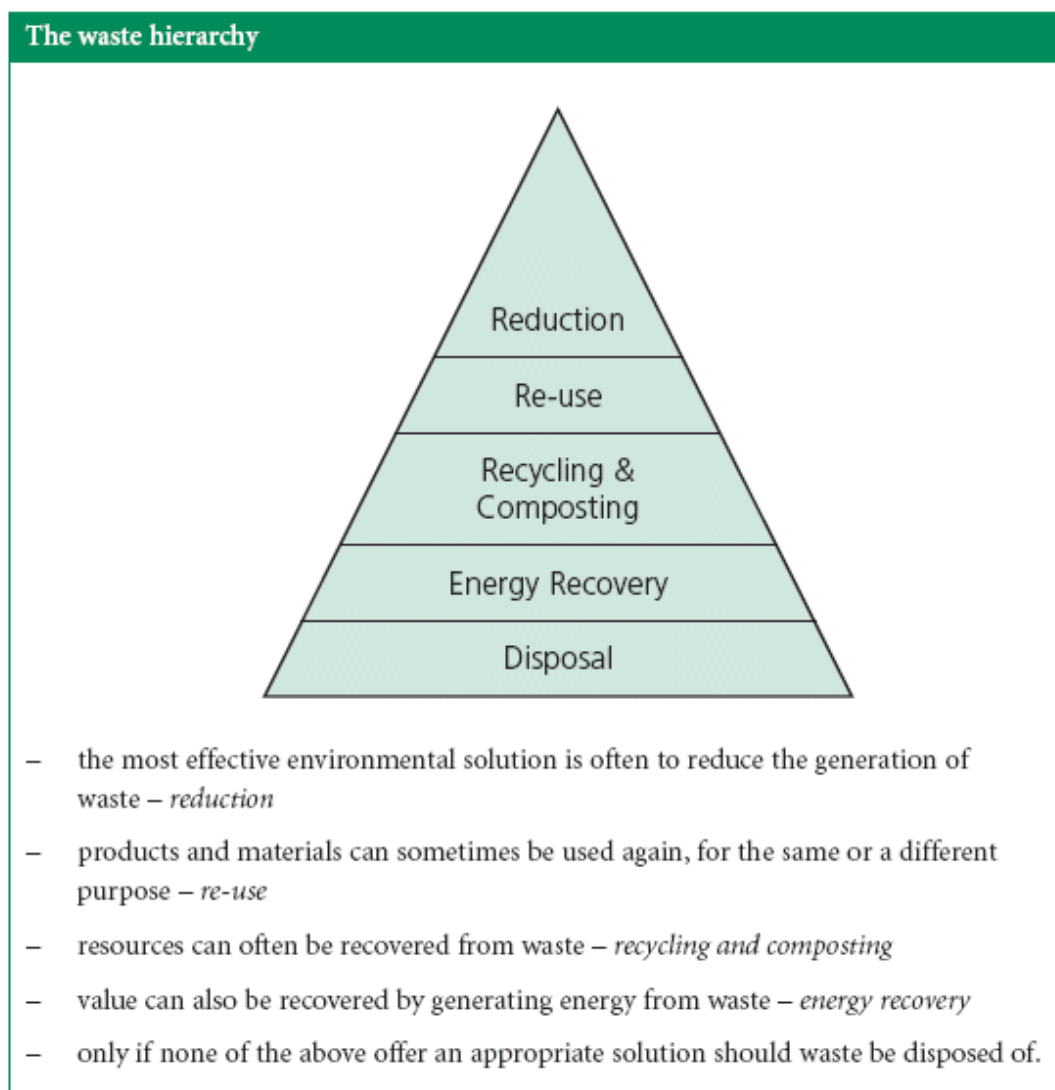
Planning Policy Statement 10: Planning for Sustainable Waste Management, July 2005 (PPS10)

Two of the key planning objectives of PPS10 are that all planning authorities should, to the extent appropriate to their responsibilities, prepare and deliver planning strategies that:

help deliver sustainable development through driving waste management up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option, but one which must be adequately catered for; and

provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision of waste management facilities to meet the needs of their communities.

The waste hierarchy has waste reduction as the most environmental solution with re-use, recycling and composting and energy recovery as successive steps down the hierarchy. Only if none of these offers an appropriate solution should waste be disposed of. A diagram of the waste hierarchy, taken from PPS10 is shown below.



Yorkshire and Humber Regional Spatial Strategy, Draft 2005 (RSS)

The draft RSS was issued for consultation in December 2005. Following adoption it will become the upper tier of the development plan.

Policy ENV 12 sets out the regional waste management objectives and reflects national policy. It says the region will reduce, re-use and recycle as much of its waste as possible and local planning authorities should support facilities and initiatives to move the management of all waste streams up the waste hierarchy.

Policy ENV 12 goes on to say that all Local Development Documents will require significant development proposals, such as large housing estates, to consider the provision of space and facilities for the storage and collection of materials for recycling from premises. In addition, all significant development proposals should include as part of the planning application, details of potential waste materials, proposals to re-use waste materials and the steps to be taken to minimise the use of raw materials and maximise their replacement with recycled materials.

A Municipal Waste Management Strategy for the City of York and North Yorkshire, 2006 – 2026

The strategy contains targets and policies focused on reducing waste arisings and improving the re-use, recycling, composting and recovery of waste. It has the target, as a minimum, of diverting 75% of municipal waste from landfill by 2013.

Cumbria Joint Municipal Waste Management Strategy

The strategy promotes the waste hierarchy and sets out proposals and targets for waste minimisation and recycling.

WASTE MANAGEMENT ISSUES AND OPTIONS

The national strategy for the management of waste has changed fundamentally since the preparation of the existing Yorkshire Dales Minerals and Waste Local Plan (1998). The existing plan assumes that landfill will be relied upon for the disposal of the majority of household and non-inert wastes in the two county areas. With the publication of PPS10, the overall strategy is now very different. Reducing waste and maximising re-use, recycling and composting are the priorities. Waste should now only go to disposal if there is no other appropriate solution and there are demanding targets for the diversion of waste from landfill. The Waste Management Strategies of North Yorkshire and Cumbria reflect national policy and adopt a presumption against landfilling. The very significant reduction in the amount of waste going to landfill will mean that the life of existing landfill sites will be extended and there are no proposals to seek landfill capacity in the National Park.

Complementary to the reduction in landfill is the obligation for communities to take more responsibility for their own waste and to provide waste management facilities to meet the needs of their communities. Household waste recycling sites (previously called civic amenity sites) are provided by the County Councils and collection of wastes for re-use or recycling are part of the District Councils' waste collection responsibilities.

The North Yorkshire and Cumbria Waste Management Strategies set the overall policy framework for the management of waste in the two county areas. The formal planning process in the National Park will become involved at the point where planning permission is required for waste management facilities, such as sites for the collection or storage of materials. However, it is clear that all authorities need to work together to achieve the fundamental changes necessary to divert waste away from landfill.

Issue 7: How should the National Park play its part in co-operation with the District and County Councils, in the provision of measures and facilities to minimise waste arisings and to maximise re-use and recycling?

There is a relatively small amount of construction and demolition waste from projects in the Yorkshire Dales. Policy WLP2 in the existing Minerals and Waste Local Plan supports the provision of small scale sites for the disposal of locally produced inert waste. However, there have been very few proposals for this type of site and none are at present active. The bulk of wastes from construction and demolition activity could be recycled.

Issue 8: Should proposals for small scale sites for the disposal of construction and demolition wastes produced within the National Park continue to be supported? If so, should permission be granted only where materials could not be re-used or recycled or where proposals would result in the beneficial restoration of a site?

Alternative Methods of Waste Treatment

There are a range of alternative waste treatment methods some of which involve relatively new or developing techniques. These include:

Composting

In composting, biodegradable wastes are decomposed in the presence of air. This can take place in the open or within an enclosed building or vessel. The most common process is to place garden and similar wastes in windrows in the open to produce compost.

Anaerobic digestion

In this process, biodegradable wastes, which may include food wastes, are placed in an enclosed vessel and heated to break down in the absence of oxygen. The solid and liquid end products may be used as a fertiliser and the methane gas produced may be burnt to generate electricity. Industrial style buildings with storage and plant areas are likely to be required for this type of process.

Issue 9: Could alternative types of waste treatment techniques be acceptable at sites within the Yorkshire Dales and, if so, should they be restricted to taking only waste originating from within the National Park?

When considering these types of facilities, the need to encourage innovative techniques has to be balanced against potential disadvantages, such as inappropriate buildings or use of land, smell or other “bad-neighbour” impacts.