# Natural Resources

## Forces for Change:

### Minerals

A key issue is future quarrying within the AONB. An overriding national need must be established to meet the requirements of Planning Policy Statement 7 and Minerals Planning Policy Statement 1.

Quarrying is a mineral operation and is subject to policies established by county and unitary authorities acting as Minerals Planning Authorities within Minerals Local Development Frameworks. Minerals planning applications are also determined by these authorities. They must balance the supply of minerals with safeguarding the environment.

However, quarries can have a considerable environmental impact both through their long-term effect upon the landscape and through working operations, which may themselves extend over many years. The latter include impacts arising from noise, dust and high volumes of lorry traffic to and from the quarry. Quarries may provide significant employment opportunities. When suitably restored, former quarries can provide valuable exposures of the geology of the area, and create special habitats which offer biodiversity benefits.

To ensure continued supplies of suitable high-quality building stone and in recognition of the basic principle that minerals can only be worked where they occur, existing quarries within the AONB must continue to operate effectively.

Not all seams that are quarried are of the quality of stone required for building projects, yet inferior stone often has to be removed to reach the high-quality seams. Such stone may well be crushed to provide stone aggregate products. Nevertheless, higher quality stone may also be being crushed and used for inappropriate purposes that could have been met from sources outside the AONB. There is therefore an need to ensure that valuable Cotswold stone is not wasted so that what is quarried meets demands for building stone to the maximum extent and conserves the long-term supply of these materials.

Within parts of the Cotswolds there can be limited supplies of suitable local walling stone of the right colour and texture to match local materials. Scarcity can increase both costs and access to suitable stone within the required timescales for projects. The result can be the use of inappropriate materials that do not fit the distinctive character of a particular place. Appropriate supplies of local stone need to be maintained to preserve the character of the historic landscape and its integrity. Small-scale quarries can also offer benefits for biodiversity if they are properly planned.

The Conservation Board has adopted a Position Statement on Minerals Planning.[1] This makes clear that the Board is opposed to the development of quarries predominantly for the winning of crushed limestone (aggregates) in / or which affect the setting of the AONB. The Board also wishes to see encouragement within Local Minerals Development Documents for the provision of small scale quarries and delves to supply natural building and roofing stone for predominantly local projects.

## Waste

The presence of a significant number of urban areas close to the AONB can result in pressure to import waste into the AONB, particularly to former quarry locations. Such action results in additional lorry traffic within the AONB and its immediate surroundings. There are implications for the groundwater resource because of the permeable nature of limestone. This represents a constraint to non-inert material unless clay is imported to line landfill sites, which is costly.

As sites for waste disposal generally become scarcer this will become an increasingly important issue.

The Conservation Board has adopted a Position Statement on Waste Planning. This makes clear that the Board supports initiatives to increase rats of reuse and recycling of waste, whilst resisting the importation of waste, including green waste, from adjoining urban areas into the AONB.[2]

## Energy

The Energy White Paper 2007 makes clear that the Government sees the use of energy efficiency and conservation measures will make a significant reduction in carbon emissions by both business and households. However, there will remain a significant demand for energy, some of which will be met by renewable sources.
The European Council of Ministers agreed in March 2007 to a legally binding " Energy Package" which includes 20% of all European energy requirements to be provided by renewable energy sources by 2020 (including heat and transport) .

There is a national drive towards more sustainable and renewable sources of energy. A key national target is to meet 10% of UK electricity generation from renewable sources by the end of 2010. The target suggested for the South West is to procure between 20% of its electricity from renewable sources by 2020. Planning Policy Statement 22 (PPS22), calls for local and regional policies to promote and encourage rather than restrict renewables development.
The guidance in PPS22 does not rule out renewable energy projects in AONBs. It indicates that they should only be granted where the objectives of designation will not be compromised and any significant adverse effects are

[1] http://www.cotswoldsaonb.org.uk/files/uploads/MineralsandWastestatement(1).doc
[2] http://www.cotswoldsaonb.org.uk/files/uploads/MineralsandWastestatement(1).doc

clearly outweighed by the environmental, social and economic benefits. Regional planning bodies and local authorities would be expected to set out criteria-based policies for AONBs.

The Board has issued guidance on renewable energy technologies it considers may be suitable for the Cotswolds AONB.[3] The Board encourages householders, businesses and community groups to use energy efficiency and conservation measures to reduce demand for energy. The Board considers that there is good potential for domestic or community scale wind turbines, hydro power, solar energy generation, ground source heat pumps, and wood fuel. These would make a contribution to local energy use and prove acceptable if carefully sited and designed. Increasing demand for wood fuel would have the benefit of improving woodland management.

The landscape impact of bio fuel crops such as Miscanthus needs careful consideration. The Board has issued a position statement setting out criteria to be considered when assessing the impact of a proposed Miscanthus crop on the AONB.

The area of oil seed rape being grown may increase to meet demand for bio fuel.

## Water

The AONB is characterised by rivers of high water quality that are fed from important aquifers deep in the limestone geology. As well as providing water to support the diverse ecology of the watercourses, the aquifers are also a vital source of drinking water for the AONB and the wider catchment. It is important to preserve these assets. The rivers often suffer from natural 'low flows' as levels in the aquifers drop during drought periods. Low flows can result in temporary impacts on ecology due to reduced velocity and can lead to increased pollution by loss of dilution. Over abstraction in the past has led to prolonged and increased low flows. However, schemes under the Asset Management Plan (AMP) agreed between the Environment Agency, Natural England and Thames Water have seen the closure of certain abstractions and significant reductions in others. The impacts of these reductions are being monitored and the potential impacts of other abstractions reviewed regularly.

All of the AONB is within a Nitrate Vulnerable Zone (NVZ). The aim of this is to prevent excess nitrate from entering drinking water but also protects rivers and the ecology from the damaging impacts of increased nutrient levels. Farmers are restricted in the amount of nitrate (as a fertiliser) they can spread on the land in these areas. This is monitored by regular visits by the Environment Agency.
Much of the AONB is also in a Source Protection Zone (SPZ), which is designed to protect drinking water from a range of damaging pollutants. Siltation of watercourses can also be an issue in places. Bad land

[3] http://www.cotswoldsaonb.org.uk/files/uploads/statementfinal07dec05(1).doc

management and badly designed urban development can lead to significant amounts of silt entering watercourses, smothering the natural gravel beds of the watercourses and damaging the sensitive ecology.

Climate change may well accentuate many of the above problems so measures to reduce run-off and conserve water should be pursued.[4]

## Soils

Government policy for England's soils is that they will be protected and managed to optimise the varied functions that soils perform for society (e.g. supporting agriculture and forestry, protecting cultural heritage, supporting biodiversity, as a platform for construction), in keeping with the principles of sustainable development and on the basis of sound evidence.[5]

Protection of the quality of soils is an issue within parts of the AONB because soils are often thin and vulnerable. Deterioration can occur as a result of inappropriate ploughing. For example, ploughing that is too deep brings an excess of stone to the surface, and not ploughing in line with the natural contours of the land can lead to more rapid run-off, diffusion of nutrients and erosion. Climate change leading to heavier rainfall may accentuate these problems. The Environment Agency and DEFRA provide best practice advice on these issues in accordance with the National Soil Strategy and Soil Action Plan.

[4] See Climate Change section.
[5] **The First Soil Action Plan for England: 2004-2006 DEFRA**