LANDSCAPE DESIGN ASSOCIATES

Landscape Character Assessment: Gloucestershire and Forest of Dean

Forest of Dean District LANDSCAPE STRATEGY

FINAL REPORT

June 2004

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CONTENTS

PREFACE

This Landscape Strategy suggests a range of possible uses for the wealth of information contained within the recent Landscape Character Assessment (LCA) of the Forest of Dean. The purpose of this report is to show how widely relevant the character assessment is, and to encourage local debate about how the report might be used to support 'building on what's special'.

The Landscape Character Assessment for the Forest of Dean was undertaken in 2002, as part of the Countryside Agency's Integrated Rural Development (IRD) Programme. The technical report on the LCA was made available to the public in early 2003, but at that stage the final text of this document was still being refined. Landscape Design Associates, using methods recently approved by the Countryside Agency for landscape assessments across England, undertook this new assessment. The beauty about LCA is that it considers everywhere within the Forest of Dean with a consistent approach. It does not say – 'this place is more attractive than that place, so we'll give more attention to the pretty places and ignore the rest'. The LCA explains what the landscape of each place consists of. It starts with the underlying form of the land, its rocks and soils, and with major permanent features such as rivers. It includes assessments of land cover – farming practices, woodland and trees, the kind of patterns made by small towns, villages and hamlets, and so on. It also takes account of the way people have written about, painted and experienced landscape. It assumes that every place is special and distinctive and sets out to show just how and where these special qualities and distinctive features occur.

This report starts from the above assessment and then invites the reader to consider the kind of ways in which all this detailed information might be used. The ideas are for communities and special interest groups, just as much as for local councils or other statutory bodies.

Please read, discuss and comment on this report. If you want to send your comments to us, please write to Emma Symonds or Rebecca Frost at the following address:

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Louise Thornhill
South West Regional Director
Countryside Agency

1.0 INTRODUCTION

1.1 Appointment and Brief

In February 2002 the Countryside Agency, in partnership with Gloucestershire County Council and Forest of Dean District Council, appointed Landscape Design Associates (LDA) to carry out a desk based landscape character assessment of the County of Gloucestershire, and a full landscape character assessment of the Forest of Dean District.

The overall study consists of three separate reports, comprising the *County Scoping Study*, the *Forest of Dean Landscape Character Assessment* and this report, the ***Forest of Dean District Landscape Strategy***.

1.2 The Scope and Context of the Study

The *Forest of Dean District Landscape Character Assessment* provides the basis for this landscape strategy document. The character assessment describes the evolution of the landscape, and the character of the fifteen landscape character types which have been identified within the Forest of Dean District. The study area is shown on *Figure 1*.

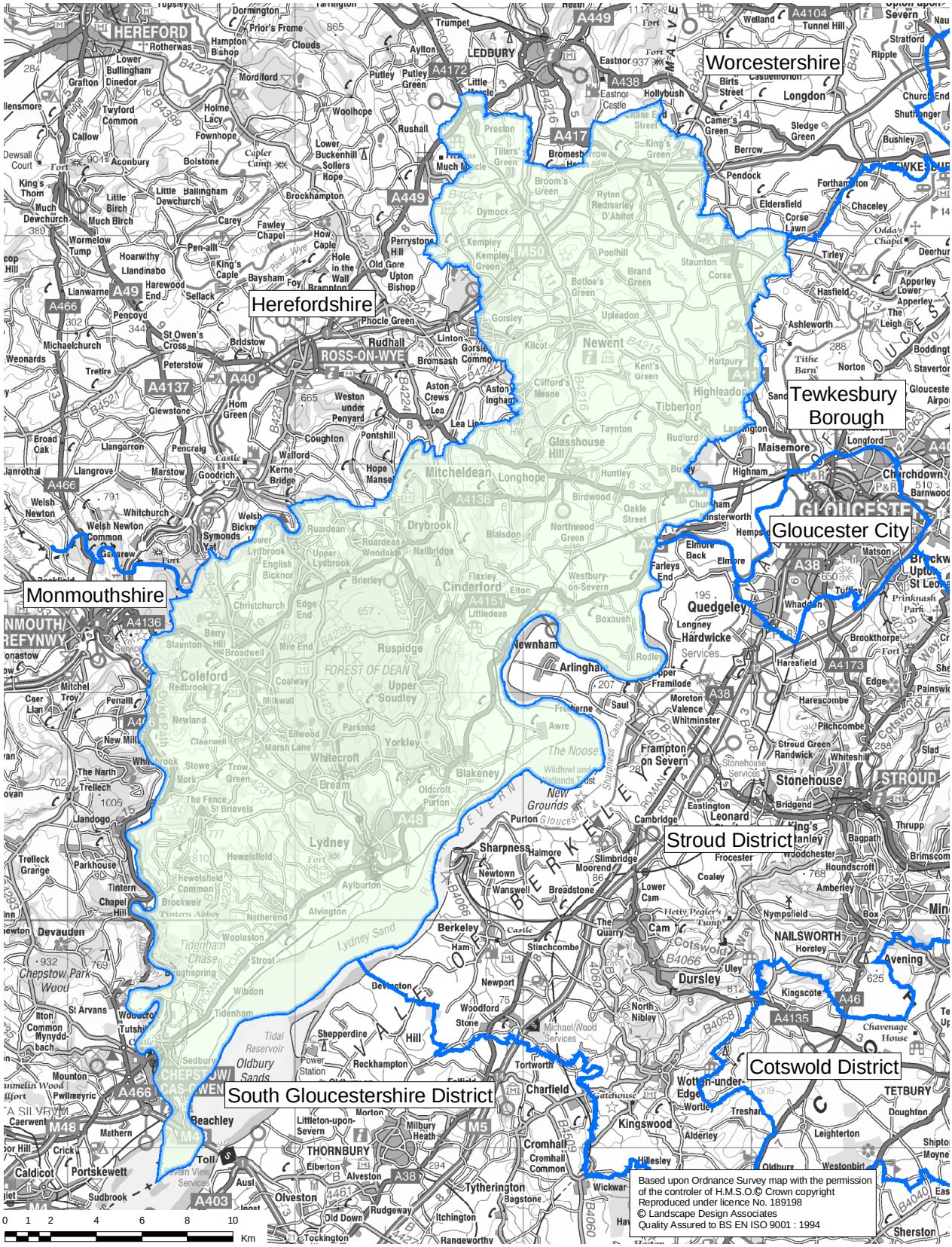
The landscape strategy provides an overview of the forces for change affecting the landscape of the district and presents a range of potential landscape and land management strategy ideas for the individual landscape character types.

The report also considers the full range of potential applications for the landscape character assessment and landscape strategy, and considers the potential for further work as part of future stages of the Integrated Rural Development (IRD) project.

The landscape strategy has five main objectives as follows:

- to identify the forces for change that have influenced the landscape of the Forest of Dean District in the past, or are likely to do so in the foreseeable future;
- to consider the implications of these changes on existing landscape character with particularly reference to the key environmental assets identified for the 15 landscape character types;
- To develop broad landscape and land use management strategy ideas to inform the decision making process and help manage change in a sustainable and positive manner and;
- to develop ideas for local landscape indicators that could be used to monitor landscape change in future and;
- to provide advice to partners and stakeholder groups on the range of potential applications for the landscape character assessment and landscape strategy, including advice on the full range of mechanisms and techniques that might be used in applying the results of the study to help inform policy and decision making processes at District, County and Regional levels.

Study Area



District and County Boundaries

Forest of Dean District

Figure 1

LANDSCAPE DESIGN ASSOCIATES

CHKD. SJD APP. IH DATE November 2003

SCALE 1:250,000 STATUS Final DWG.No. 1586LO/S01

Oxford
Tel: 01865 887050

X:\CAD\1586Glou\GIS\1586_GIS Figures\FOD Land Strat\1586_Fig S01 Study Area.mxd

1.3 Approach and Methodology

The landscape strategy has been completed in accordance with the most up-to-date methods of landscape character assessment[1] and has involved extensive research, analysis, evaluation and consultation. Workshops attended by the key representatives of the District Council, County Council and partner and local interest groups were held in order to gather baseline information and identify key trends and issues affecting the landscape of the district.

The main stages in preparing the strategy have been;

- to identify the changes in the landscape that have taken place in recent years and that are anticipated to influence the landscape into the foreseeable future. This has been achieved through a combination of field work, extensive research and analysis of existing policy and strategy documents and consultation with a wide range of local authority and government agency staff;

- to evaluate the key environmental features of each landscape character type such as key landscape features, historic sites, recreational opportunities and cultural and perceptual qualities;

- to explore the implications of land use change for each landscape character type and assess the potential effects on landscape character and key environmental features;

- to develop a range of strategy ideas to counter adverse landscape change and optimise beneficial landscape change and consider the means by which landscape change may be monitored in the future; and

- to provide general guidance on priorities, actions and responsibilities.

1.4 Parallel studies

The Forest of Dean District Landscape Character Assessment has been completed in parallel with a number of related projects commissioned as part of the Countryside Agency's national pilot Integrated Rural Development Project (IRD) in the Forest of Dean. These parallel projects have made a significant contribution to the Landscape Character Assessment (LCA) which supports this strategy and include:

- The 'By Definition' project – addressing the central question of 'What makes the Forest of Dean Special' through a range of community based initiatives;

- *The Forest of Dean Archaeological Survey* - a major archaeological survey of the Forest of Dean being undertaken by the Archaeology Service of Gloucestershire County Council;

- *The Biodiversity Survey of the Forest of Dean* –being carried out by the Gloucestershire County Wildlife Trust in partnership with English Nature.

[1] Countryside Agency and Scottish Natural Heritage (2002) Landscape Character Assessment Guidance, CAX 84/F

Further details of these parallel projects can be found within Section 1.3 of the Forest of Dean District Landscape Character Assessment.

1.5 Nature Conservation and Biodiversity

The Forest of Dean Biodiversity project (which is ongoing) has focused to date on the retrieval and collation of existing nature conservation data for the Forest of Dean District into a series of GIS layers and core datasets. The project supports the wider *Integrated Rural Development Project* and will provide data necessary to securing the effective protection and enhancement of the district's natural heritage.

Data from the Biodiversity project has informed the preparation of the Landscape Character Assessment and a number of issues have been incorporated into the Landscape Strategy ideas presented within this report following further consultation with English Nature. A summary of the significant habitats within the Forest of Dean prepared by the Biodiversity Project, is provided in Appendix 1, and a summary of the nature conservation interest within each of the fifteen landscape character types is included as Appendix 2.

Whilst the strategy ideas presented within this report include some reference to nature conservation issues, these matters can only be fully addressed following completion of the Forest of Dean Biodiversity project, including the preparation of biodiversity targets and strategies. Once complete, it is anticipated that the biodiversity strategies will be considered against the landscape strategy ideas presented within this report in order to allow consideration of an holistic and integrated approach to land management and land use change and help define a new way forward for the Forest of Dean.

1.6 Structure of the Report

Following this introduction Section 2 of the report identifies the principal and ongoing forces for change that continue to influence the landscapes of the Forest of Dean District. These are identified under seven topics and the key issues for each are summarised.

Section 3 introduces the key environmental features, local forces for change and potential strategy ideas for each of the fifteen district landscape types and presents possible indicators to help monitor landscape change in each of them.

The overall sensitivity of each of the landscape types is also considered although it should be noted that in most cases, landscape sensitivity varies significantly within each landscape character type. The conclusions should therefore, be regarded as a broad overview within which more detailed assessments of sensitivity would need to be completed, particularly in areas where there is greatest potential for landscape change. This section also identifies, wherever possible, the opportunities for community involvement in the delivery of landscape strategies. The capacity of the landscape to accommodate particular types of change or built development has not been considered within this report.

Section 4 presents a range of potential uses of the landscape character assessment and landscape strategy and sets out ideas on how the strategy could be taken forward.

The report concludes with a glossary of key terms, and a list of core references. The acknowledgements section identifies members of the steering group, stakeholders and individuals who made a valuable contribution to the study.

1.7 Limitations

The landscape Character Assessment and Landscape Strategy Reports were originally completed during 2002 and the information, recommendations and ideas presented below reflect information and documents available at that time. The report has been updated in part to take on board the initial comments of the BOWS Management Group.

It is acknowledged however, that certain elements of the report (particularly Section 2 on Forces for Change) need to be updated to take account of the Forest of Dean Local Plan, and to reflect other documents, strategies and initiatives published and conceived since completion of the original report in 2002. It is anticipated therefore, that this document will be updated if appropriate, following a period of further consultation and review.

2.0 FORCES FOR CHANGE

2.1 Introduction

Chapter 2 of the Forest of Dean District Landscape Character Assessment traced the evolution of the district's landscape from the Palaeolithic period up to the approximately 1945. It is clear from this, that changes in food procurement practices, industry, society and the environment have had a profound and lasting influence on the landscape. However, the landscape continues to evolve. Indeed it is clear that since the Second World War, change has been more rapid that at any time in the district's long history and driven by a diverse and increasingly international range of forces.

Landscape change is often difficult to assess. Changes which may be regarded as negative by some may be seen as positive by others and perceptions can change with time. For example new elements introduced into the landscape which were initially unpopular may, after time, be regarded as valuable landscape features and worthy of protection.

It is therefore essential that those who are responsible for steering or initiating landscape change are well informed and the decision making process that they employ is both democratic and transparent. Decisions should also ensure that whenever and wherever possible, change is managed to retain and enhance the intrinsic qualities of the varied landscapes which make the Forest of Dean District so special.

This section of the Landscape Strategy examines the driving forces behind change in the district and places it in a long-term context by analysing trends for the foreseeable future. It represents the culmination of a desk-based review and upon wide consultation with representatives of the District Council, County council and local agencies and interest groups. Forces for change have been considered under the following topic headings:

- Built Development;
- Infrastructure;
- Mineral Extraction and Landfill;
- Agriculture and Land Management;
- Forestry and Woodland;
- Tourism and Recreation; and
- Climate Change.

2.2 BUILT DEVELOPMENT

2.2.1 Introduction

The post-war period has witnessed a rural revolution. Increased personal mobility, improvements in public transport provision and advances in telecommunications technology have made rural areas relatively accessible. These trends, coupled with an enhanced perception of rural life and the decline in the profitability of agricultural land, are placing increasing pressures on the countryside to accommodate built development. In parallel to this, existing towns and villages and in particular brownfield sites within them and their undeveloped fringes, are also under considerable pressure to accommodate housing and employment sites.

2.2.2 Summary of Key Issues

- The expansion of existing towns and villages and the disproportionate growth of settlements with good transport links.
- Infill development in towns and villages which may be at odds with traditional settlement patterns.
- Standardised housing designs on the fringes of existing settlements which may compromise their distinctive characteristics and landscape setting and threaten to consume the characteristic intra settlement open spaces which define individual settlements, particularly those surrounding the central forest core.
- The introduction of a profuse variety of building materials and styles and the lack of reference to traditional rural styles of siting and design.
- Barn conversions in rural areas which may detract from local landscape character.
- New employment areas in rural areas and on the edge of existing settlements placing additional pressure on the urban fringe and open spaces.
- The positive impact of regeneration/ renaissance schemes in rural and urban locations arising from RDA funding. Opportunities will arise for the creation of 'new' landscape character.

A detailed review of the main topics is presented below.

2.2.3 Residential Development

Housing represents the main pressure for built development in the district and although the Forest of Dean has the second lowest figure for net additional dwelling provision for the Plan period 1991-2011 in Gloucestershire (second only to Cotswold District) it needs to accommodate approximately 6,950 dwellings[2]. This represents approximately 13% of the County total of 53,000 dwellings.

[2] Gloucestershire County Council (Adopted 1999) Structure Plan

In rural areas Regional Planning Guidance (RPG) 10[3] advises that emphasis should be placed on providing housing in locations which have, or can provide, an adequate range of employment and community services. It also acknowledges that the landscape needs to be protected and that the loss of good quality farmland should be minimised. However, the national trend towards smaller household units, as a result of the growing number of elderly people and their increasing propensity to live independently in their own homes, the dissolution of marriages and increasing numbers of young people living alone, places massive pressure on greenfield sites.

Regional Planning Guidance for the South West also indicates that the location, scale and rate of housing development should be in accordance with the principles of sustainable development and that the bulk of new housing should be concentrated in and around the main urban areas, and that the best use of land needs to be balanced with the protection of the historic built environment and of valuable recreational and amenity space.

Forest of Dean District Council recognises two governing principles regarding the distribution of new housing[4]. The first is that new sites should be allocated within locations that are accessible to a good range of services and can take advantage of a variety of forms of transport. The second, is that priority must be given wherever possible to the use of land other than greenfield sites by promoting the use of previously developed land (brownfield sites). However, the council also recognise that in order to implement the regeneration strategy for the district, there will be a requirement for major new greenfield allocations for building and other development.

The County Structure Plan[5] (Policy H.4) indicates that development serving the needs of the district will mostly be provided within and adjacent to Cinderford, Coleford and Lydney. These towns, and indeed the majority of towns fringing the central forest core (landscape character areas 5b, 5c, 5d, 5f and 5g) are characterised by industrial age residential and civic buildings of local stone and dispersed layouts betraying their piecemeal expansion. These characteristics make them sensitive to ill conceived infill residential development, and to schemes that would result in the coalescence of the forest fringe towns, and/ or diminish their strong relationship with areas of forest, which often form a backdrop to the urban edge.

Local Plan Proposals Maps[6] confirm these towns as being the focus of the district's allocated housing land. In the majority of cases, land allocated for housing has been identified within the Defined Settlement Boundary of each town on both greenfield and brownfield sites. The large majority of allocated housing land is situated within landscape character areas 9a – Bledisloe Hundred, 5c – Cinderford and Ruspidge and 2c – Coleford and Christchurch Hills. A small area of land has been allocated fringing Newent situated in landscape character area 6c – The Severn Vale. Small areas of land within and fringing a number of larger villages have also been allocated for housing. Infilling, small groups of dwellings and single dwellings will also be permitted within a number of villages.

[3] Office of the Deputy Prime Minister (1994) The South West Regional Planning Guidance (RPG 10)
[4] Forest of Dean District Council (Revised Deposit Version 2002) Forest of Dean District Local Plan Review
[5] Gloucestershire County Council (Adopted 1999) Structure Plan
[6] Forest of Dean District Council (2000) 1st Deposits Proposals Maps and (2001) Changes to Proposals Maps

The development of land for housing, continues therefore, to be a major force for change within the district, particularly at the urban fringe where impacts on surrounding landscape character are most likely to arise.

The District Council recognise the need for high standards of residential planning and design that reflect the character and context of the site and the surrounding area and the Forest of Dean Residential Design Guide[7] adopted as Supplementary Planning Guidance, promotes the use of landscape appraisal and assessment as an integral part of the planning and development process.

This commitment is reinforced by Policy (R)FBE 1 of the Local Plan which makes particular reference to the requirement that the design and layout of new development should be compatible with its surroundings with respect to the character, building design, materials, scale density and mass of existing development and the character of the surrounding landscape.

However, within the district, as with many areas of the country, there are examples of housing developments which make little or no reference to local landscape character, building styles and materials. This is a particular issue on the fringes of existing settlements where new residential development has not always been compatible with existing forms and patterns of development and has resulted in some cases, in a loss of distinctiveness and a diminished sense of identity. Such 'urban fringe' developments can have a detrimental impact on landscape and townscape character but can also provide opportunities to enhance the appearance of the district's towns and villages.

2.2.4 Barn Conversions

Similar to many rural areas, the district retains a large number of traditional barns which have, as yet, not been converted to residential uses. These can be regarded as offering a positive opportunity to increase the district's rural housing stock, albeit on a relatively small scale.

Elsewhere, converted farm buildings have been used to provide a location for rural businesses which often act as a catalyst for training and employment. However, historic barns are often important historic, architectural or landscape features, and their conversion may lead to negative landscape impacts. Conversion may also impact upon local nature conservation interest, as a number are important to wildlife offering as they do nesting, feeding and roosting sites for bats, barn owls and swifts.

Whilst conversions of historic barns will be subject to stringent planning and design criteria, planning authorities may find it more difficult to control the incremental development of their immediate surroundings. Ornamental garden plants, garden fences, driveways, car parking, power lines and improved access provision all contribute to the suburbanised character that often accompanies barn conversions and such developments can be particularly damaging in strongly rural areas. Potential barn conversions are a particularly significant force for change in the Severn Vale (landscape character area 6b) where a large number of attractive barns, rural character and good roads make it an attractive place to settle.

[7] Forest of Dean District Council, Forest of Dean Residential Design Guide

2.2.5 Employment Provision

New employment provision is an essential part of maintaining and enhancing the health and prosperity of the district in the future. The Gloucestershire Structure Plan 1991-2011 states that 75 hectares are expected to be made available within the plan period for employment uses within the district. This represents approximately 22% of the overall figure of 347 hectares for the County. It is anticipated that the figures for each district will strike the correct balance with the proposed housing distribution.

Land for employment uses identified in the Structure Plan provides land for offices, light industry, general industry and storage and distribution and indicates that there will be particularly strong pressure on areas with good transport links and in close proximity to a potentially large workforce. Indeed the Structure Plan identifies that development serving the needs of the district will mostly be provided in and adjacent to Cinderford, Coleford and Lydney (in accordance with Policies S.1 and S.7).

Local Plan Proposals Maps[8] confirm these towns as being the focus of the district's allocated employment land. In the majority of cases, land allocated for employment has been identified within the Defined Settlement Boundary of each town on both greenfield and brownfield sites. The large majority of allocated employment land is situated within and fringing towns in landscape character areas 9a – Bledisloe Hundred, 7b – Ayleburton Newgrounds, 5c – Cinderford and Ruspidge, 2c – Coleford and Christchurch Hills and 6c – The Severn Vale.

Despite the recent trend away from a small number of large employers towards a larger number of small enterprises, the impact of industrial and office buildings has the potential to have significant effects on landscape character particularly in areas of high inter-visibility such as lower lying areas which are overlooked by neighbouring uplands for example, landscape character type 6 the Unwooded Vale and type 7, Drained Riverine Farmland and Grazed Saltmarsh. In these types of landscape, large buildings, particularly where these have reflective roofs, are likely to be highly visible in the landscape.

In general, the expansion, intensification or reconfiguration of existing sites is likely to have a lesser impact on landscape character than the establishment of new sites in rural areas. However, proposals for further development at existing sites should be carefully considered against the capacity of the landscape to accommodate further change, and the potential impacts on landscape character. It cannot therefore, always be assumed that consolidation of existing sites is preferable to development at new sites although this will generally be the case. Intensification of employment use has been proposed for a number of towns although large sites have been identified at Coleford and Cinderford.

2.2.6 Rural Regeneration

The Rural Development Area status of the Forest of Dean ceased to exist in March 2003 and since this time, regional regeneration has been led by the South West Regional Development Agency (SWRDA), with English Partnerships. SWERDA has developed a Rural Renaissance programme whose aim is to help rural communities in the South West respond to and influence economic change, by supporting the development and implementation of sustainable projects that use innovation and enterprise to:

[8] Forest of Dean District Council (2000) 1st Deposits Proposals Maps and (2001) Changes to Proposals Maps

- create prosperity and generate employment;
- improve delivery and access to services; and
- realise the value of the environment as an economic asset."

In order to turn these aims into practical action, a number of strategic priorities have been identified as follows:

Priority 1 - To assist the development of a dynamic and sustainable economy in rural areas.

Priority 2 - To improve access to work, education, training and retraining opportunities.

Priority 3 - To encourage innovative service delivery through the development of multi-use facilities, support for social enterprise and improved access to, and use of ICT.

The Rural Renaissance programme will be delivered through Delivery Partnerships operating within the strategic framework set by Sub Regional Partnerships for that area. The Sub Regional Partnership for Gloucestershire is Gloucestershire First, established in 2001 with the overall aim of driving forward the Gloucestershire economy. The partnership is an enabling organisation where partners in economic development share and co-ordinate their strategies and contribute to an overall economic plan for the County. Membership is drawn from businesses, local authorities, the voluntary sector, and other business support and community organisations. The Secretariat function for Gloucestershire First is provided by the Gloucestershire Development Agency.

2.3 INFRASTRUCTURE

2.3.1 Introduction

The term 'infrastructure' in the context of the landscape strategy has been used to describe those elements such as transport, energy provision and communication that are deemed essential to the stability and future growth of rural district's such as the Forest of Dean. The impact of infrastructure provision varies considerably depending on the nature and scale of development under discussion.

2.3.2 Summary of Key Issues

- Piecemeal road improvements such as widening and straightening. The proliferation of signs, road furniture and traffic calming measures can together, have a cumulative impact on landscape character.
- The homogenising influence of road landscapes on landscape character.
- Increased levels of rural traffic and in particular lorries, which impact on rural character and perceptions of remoteness and tranquillity.
- The opening of rural railway stations may have a positive impact by reducing traffic levels and bring other environmental benefits.
- Pressure for additional pylons and communication masts.
- Pressure to establish renewable energy initiatives such as wind turbines.

A detailed review of the main topics is presented below.

2.3.3 Road Expansion and Improvement

Since the Second World War there has been a tenfold increase in passenger travel by car and a five fold increase in freight movement by road. Government forecasts based on the assumption that these trends continue, indicate that in the period to 2011 traffic will increase by a further 17% to 39%[9].

This enormous rise in car and lorry traffic has resulted partly from economic growth and partly from transport and land use policies and indeed, the provision of additional road capacity to meet forecast demand has enabled, and in many cases stimulated, traffic growth. In parallel to this, the tendency for new development whether employment, retail and residential to locate on dispersed suburban or out-of-town sites has further stimulated car use.

It is now almost universally recognised that the environmental and social costs of increased road traffic on this scale are unacceptable. In line with this and following the Framework Convention on Climate Change agreed at Rio de Janeiro in 1992 and the Kyoto Protocol of 1997, the Government is committed to reduce C02 emissions by 2210 and to meet this, recognises the need to reduce the need for travel by car.

[9] Gloucestershire County Council (Adopted 1999) Structure Plan

Government policy therefore, favours the widening and improvement of the existing road network rather than the construction of new routes. Whilst such schemes are potentially less damaging to landscape character than 'new roads' there remains potential for them to have significant impacts on local distinctiveness and on ecological and historical resources.

It is also important to consider the wider implications of road improvement. Increased accessibility in one area may lead to a reduction in tourism, employment opportunities and services elsewhere, leading to a reduction in inward investment and general degradation of urban and rural landscapes. However, it is important in some sensitive areas, such as remote parts of the Wye Valley and central forest core, that their relative inaccessibility and perceived isolation are retained in order to protect their distinctive characteristics.

The Local Transport Plan[10] acknowledges that the district is still suffering from the effects of a previous economic dependence on coal-mining and heavy engineering and is striving to improve its accessibility in order to grow its economy. In order to achieve this the Plan seeks to improve access to the Forest of Dean to assist in promoting and increasing job opportunities and implement upgrading works to the A4136, one of the principal routes linking the forest to the wider transport network. In conjunction with this scheme, the Plan also seeks to divert lorry traffic away from the West of River Severn Corridor (comprising the A48 (T), A40 (T) the A4136 and B4215/B4211) onto the M4/ M48 and M5/M50 corridors in order to reduce congestion and lorry traffic through a number of settlements.

Road improvements far from being negative can often provide a positive opportunity for environmental enhancement. If managed and designed carefully modern road verges and embankments can introduce significant areas if semi-natural habitat into landscapes that otherwise may contain very little.

Minor road improvements in rural areas tend to have an urbanising influence as they bring additional lighting, signage, roundabouts, kerbs and engineered embankments. The resultant 'roadscape' brings a degree of standardisation to the countryside which can erode distinctive features of local character. Landscapes particularly sensitive to these kinds of changes are rural areas on the fringes of the district's larger towns, particularly in the Wooded Syncline and Settled Forest Margin (landscape type 5), Coleford and Christchurch Hills (landscape character areas 2c) and Tidenham Chase (landscape character area 3a).

Traffic calming and road safety measures designed to reduce rural speeding and improve sightlines also tend to have a homogenising influence. Whilst road safety is of the uppermost importance, creative and well designed solutions to traffic calming issues which reflect local distinctiveness and protect locally distinctive features should be sought wherever possible. In the Forest of Dean, locally distinctive features such as railings, way markers, hedges and hedgebanks should be protected as far as possible and reflected in new schemes.

[10] Gloucestershire County Council, Local Transport Plan

2.3.4 Railways

Rail travel has significant advantages over private road transport in terms of its impact on the environment, figures indicating that rail travel is between 2 and 3 times more efficient that car travel, and rail freight 9 times more efficient than road transport[11]. There is a single mainline railway corridor in the district with one station at Lydney on the Cardiff to Birmingham line. Enhancement of the rail network is planned[12], with both the Local Plan and the Local Transport Plan promoting the potential of Lydney station and the existing rail connection at Lydney to the Dean Forest Railway for both passenger and freight services. Such developments will give more opportunities for people to travel by train which in turn will have positive benefits to the landscape and the environment.

The maintenance and enhancement of the rail network will be promoted by, amongst other measures, the safeguarding of land for new or re-opened railway lines, stations and associated facilities such as car parks. It has been suggested that there is benefit in providing additional stations along the rail line which runs parallel to the A48. The station at Lydney is the only rail station in the district and with the number of commuters travelling to Gloucester and Cheltenham, there are obvious benefits in developing this part of the local rail network[13].

Rail lines are generally bordered by a corridor, improvement of which would make a valuable addition to wildlife and improve the physical appearance and setting of lines. Improvement of rail corridors for their nature conservation value could also be applied to disused rail lines in the district. There are numerous redundant lines in the district which are testimony to its industrial heritage. Local Transport Policy states that transport corridors which have the potential for future use should be protected from development which would impair such use. Conversion for use as cycleways or footpaths is the most obvious alternative use and development should, wherever possible, be accompanied by measures to improve visual amenity and nature conservation value.

2.3.5 Overhead Transmission Lines

Overhead transmission lines can be particularly prominent in open, low lying landscapes such as the Unwooded Vale (landscape type 6) and wherever they appear on ridge tops and prominent hills such as in the Ridges and Valleys (landscape type 10).

2.3.6 Communication Masts

Single high communication masts and towers are most usually associated with the telecommunications industry. Those associated with civil aviation and defence industries often have permitted development rights and are not necessarily subject to planning constraints.

[11] Railfuture, www.railfuture.org.uk
[12] Forest of Dean District Council (Revised Deposit Version 2002) Forest of Dean District Local Plan Review
[13] Local Agenda 21 UK, Towards a More Sustainable Future for the Forest of Dean

High points, such as Edge Hill (landscape character area 10c) and May Hill (landscape character area 11a) are under particular pressure and masts are particularly intrusive in landscapes such as these which are remote and rural in character. A number of masts are visible on the summit of Edge Hill for some distance and indicate the effect that such developments can have on landscape character. Relatively low hills are also under pressure if they are well placed to serve demand. For example prominent masts are located in close proximity to the M50 as it passes through Bromsberrow Heath.

The expansion of the mobile telephone network continues to have an impact although the rate at which new masts are appearing appears to have slowed. It is very difficult to predict whether the development of new masts will continue to be a significant force for change in the future as technology is constantly being updated.

Policy in the Gloucestershire Structure Plan seeks to minimise the impact of new development by encouraging careful sighting and giving regard to the use of materials and colours which would help to minimise obtrusiveness. The Plan also encourages the use of existing structures and buildings to avoid the unnecessary siting of masts and apparatus in the countryside. The Local Plan acknowledges Government advice which identifies the need for continuing investment and development in telecommunications and that the provision of infrastructure often requires to be close to transport links. Policy guidance in the Local Plan states the development will be permitted where the proposed siting, design and landscaping minimises visual impact and where proposals utilise existing structures.

2.3.7 Underground Cables and Pipelines

Extensive new and replacement cabling and pipeline schemes for digital technology, gas and electricity can pose significant threats to landscape character over wide areas by the removal of hedges, roadside vegetation, trees and occasionally other features and habitats. In the absence of detailed proposals, it is not possible to determine the full impact of cabling and pipeline schemes although it is anticipated that development within wooded landscapes will result in the most major impacts as 'scars' may be visible over wide areas and take a number of years to regenerate.

2.3.8 Renewable Energy

Most of Gloucestershire's energy is generated outside the County. However, studies have shown that there is potential to harness energy from, amongst other sources, wind, agricultural crops/waste, waste combustion, tidal power and solar power[14]. Such developments would be required to meet the Government's stated aim of generating 5 % of the UK's electricity requirements from renewable energy by the end of2003 and 10 % by 2010. Whilst renewable energy schemes are of obvious benefit to the environment, they have the potential to impact significantly upon landscape character.

As the finite resources of fossil fuels dwindle and technology improves, it is likely that wind turbines will become more commercially viable. The open, windswept landscapes bordering the Severn (landscape type 7) are the obvious location for such developments. Similarly, the use of tidal waters to generate electricity in the Severn (landscape character type 8) could also have impact on the character of the river.

[14] Gloucestershire County Council (Adopted 1999) Structure Plan

The Forest of Dean District Council through its Energy Agency analysed renewable potential of the district and found that the burning of wood biomass offers the greatest potential[15]. The construction of power stations which generate energy are likely to be sited in rural areas and have the potential to impact significantly on landscape character, especially when large industrial buildings are introduced to otherwise deeply rural landscapes. At present there are no known plans for major new power station developments in the district.

[15] Forest of Dean District Council (2002) Forest of Dean District Local Plan Review Revised Deposit Version January 2002

2.4 MINERAL EXTRACTION AND LANDFILL

2.4.1 Introduction

The Forest of Dean has a diverse geological base and contains minerals of actual and potential economic worth including hard rocks for aggregates and building materials, coal, iron ore and clay. Solid geology is also, often extensively, overlain by drift deposits comprising silts, clays, sands and gravels. These often yield important sources of sand and gravel for the construction industry.

2.4.2 Summary of Key Issues

- The impact of extractive industries during operation and following restoration on landscape character and historic and nature conservation features.
- Visual, environmental and noise impact of quarry traffic, especially traffic travelling along rural roads where perceived tranquillity and remoteness may be compromised.
- Positive impact of the Aggregates Levy Sustainability Fund with regard to mitigating the effects of aggregate extraction and increasing the wider benefits of restoration schemes.
- The implications of future waste management operations within the district.

A detailed review of the main topics is presented below.

2.4.3 Mineral Extraction

The policy framework for the control of new mineral developments is provided by the Gloucestershire Structure Plan and the Gloucestershire Minerals Local Plan. National Policy[16] has determined the level of aggregate provision to be made in each region in order to ensure an adequate and steady supply of construction material at the best balance of social, environmental and economic cost whilst ensuring that extraction is consistent with the principles of sustainable development.

The Gloucestershire Minerals Local Plan sets out the contribution to be made by Gloucestershire over the period 1992 – 2006. The plan identifies a County requirement to deliver 19.4 million tonnes (mt) of sand and gravel and 47.6 mt of crushed rock. The figure for crushed rock is further sub divided to indicate a requirement for 33.3 mt for Carboniferous limestone from the Forest of Dean District where harder and more durable Carboniferous limestone resources are found. This constitutes approximately 70% of the County requirement. The remaining 14.3 mt is derived from the younger and more variable Jurassic limestones of the Cotswolds. Both areas supply aggregate material for construction purposes. However, only the Carboniferous limestones of the Forest of Dean can be used for high specification and road based products such as asphalt and coated stone.

[16] Office of the Deputy Prime Minister (1994) Minerals Planning Guidance Note 6 (MPG6): Guidelines for Aggregates Provision in England

Minerals can only be worked where they are found to occur. Detailed policies for the control of new mineral workings are included in the Gloucestershire Minerals Local Plan and planning decisions on proposals will be made with regard to their environmental impact and landscape impact will be an important determining consideration. Impacts on landscape character can arise from both new minerals operations and the extension of existing sites and from quarry traffic.

A summary of the various resources available in the district are outlined:

Limestone

Within the Carboniferous Limestone Group in the district two horizons have substantial potential as an aggregate mineral resource. The least favoured resource lies within the Lower Limestone Shales where limestone is mixed with layers of shale. This is found to occur on the Limestone Plateau extending south from Clearwell to Bream and Hewlesfield (landscape character area 3a, Tidenham Chase). It is only in certain locations that limestones form the greater part of the formation and are of economic interest; for example in the vicinity of Clearwell the limestone may reach 18 m in thickness. Current quarrying has worked these horizons to a depth of 12m and there may therefore, be scope to work deeper to realise additional limestone reserves.

The more significant reserves of limestone are to be found in the Lower Dolomite which lies above the Lower Limestone Shales and outcrops around the periphery of the Forest of Dean Coalfield and extends southwards along the east flank of the Wye Valley (The Wooded Valleys and Limestone Hills landscape types). The resource represents a fine to medium grained dolomite up to 120 m in thickness with sufficient uniformity, quality and extent to be of value for modern aggregate production. Its attractiveness for quarrying is dependent on the angle of slope. Extensive outcrops where the bed is shallow exist to the west of Coleford. These areas offer the greatest potential for quarrying. Elsewhere the Dolomite slopes more steeply and consequently presents a narrow outcrop. Currently Dolomite is worked in two active quarries, Drybrook and Stowfield (landscape character areas 2e Ruardean Hills and 2b Highmeadow Woods and Staunton Hills) with a further three being inactive but with potential reserves. Approximately three quarters of the Dolomite reserves lie within the Wye Valley, AONB.

Sand and Gravel

The district has a wide variety and distribution of drift deposits, which potentially contain workable sand and gravel. Most are associated with the River Severn although little is known about their resource potential. Historically, a significant proportion of the County's sand and gravel reserves were worked in the terrace deposits of the Severn Vale and the Upper Thames. However, in 1996 some 97% of production came from seven pits all of which lay in south east Gloucestershire between Fairford and Somerfield Keynes. The remainder of production (mainly sand) came from three small pits in the Severn Vale and from one at Bromsberrow Heath in the Forest of Dean (landscape character area 14 a – Bromsberrow Heath).

Natural Building Stone

In the Forest of Dean Carboniferous sandstones and limestones together with Devonian Old Red Sandstone in one location, are in small measure, used as natural building stone. They are not of the same significance as those of the Cotswolds with no more than 10,000 tonnes of natural building stone (including walling stone, paving, rockery stone and masonry stone) being produced annually, principally from Coal Measure sandstones of the Pennant Group and the Old Red Sandstone. Reserves are mainly found in small quarries where stone is worked, often intermittently, by hand. Limestone aggregate quarries may also, from time to time, produce building stone. The continued supply of natural building stone will promote and maintain the local distinctiveness of areas of the district. The Forest of Dean District Council has prepared a Residential Design Guide[17] which seeks to promote and enhance the distinctiveness and quality of the built environment and encourages the use of local natural building stone as a means of achieving this.

Clay

The geological occurrence of clay in the district is generally confined to the Upper Coal Measures of the coalfield (landscape character type 5 – Wooded Syncline and Settled Forest Margin). These have been used for a variety of purposes including site cover at waste disposal sites, flood defence works and in the making of bricks. With the exception of clay extracted for brick making at one site in the district, planning permissions for clay working are generally granted for specific purposes and are strictly time limited.

Iron Ore

Iron ores of the Forest of Dean have been worked for many centuries and the manifestation of ancient workings (Scowles) form an important part of the heritage of the area. By the beginning of the twentieth century, mining had virtually ceased with the exhaustion of the workable reserves although there was a slight revival of activity during the two world wars. Further to this, the red and yellow earthy iron oxides (ochre) have also been worked in several localities for the manufacture of pigments and are still obtained in small quantities from Clearwell Caves.

Coal

The County Structure Plan Second Review recognises the unique character of the Forest of Dean, the constraints on coal extraction and the historic context of the activity. The Coalfield extends to some 90 km2 and is completely exposed outlined by the outcropping of the coal seams. The Coleford High Delf Seam, 1 to 1.5 m thick, has supplied virtually all output of coal since the Second World War.

Despite limited knowledge of the quantity, quality or disposition of remaining deposits, it is estimated that in the region of 12 million tonnes of potentially workable coal, recoverable by opencast or shallow underground mining, may be present. There is unlikely to be any realistic possibility of new mining operations due to the economics of present day coal mining. The resource has been extensively worked and the remaining resource represents a fraction of the coal reserve which at the turn of the twentieth century was around 180 million tonnes. Changing circumstances may however, lead to new mining operations by Freeminers.

[17] Forest of Dean District Council, Forest of Dean Residential Design Guide

The historic rights of inhabitants of the Forest of Dean to work coal are outlined in the landscape character assessment. Since the Second World War coal has been worked in relatively small amounts and it is estimated that only 0.75 million tonnes has been extracted by opencast methods. The majority of mines are now closed although a few are still operating producing a few thousand tonnes a year.

Shallow underground mining (which is currently employed on a small scale) has a relatively minor environmental impact. By contrast extraction by the opencast method can result in significant impact unless carefully controlled. New open cast mines (should they be permitted) would represent a significant force for change in the future.

2.4.4 Abandoned Mineral Workings

Large areas of abandoned opencast and underground workings and tramways are dramatic indicators of past mining activity in the district. The heritage of these areas can often contribute to exciting opportunities for positive restoration and protection and can be used as a catalyst for local economic regeneration. These areas also often represent niches for open space and ephemeral habitats in a largely forested environment and play an important role conserving the overall biodiversity of the central forest area. However, reclamation schemes which introduce permanent structures, infrastructure and facilities have the potential to erode rural character and nature conservation value. Former mining structures are also important evidence of an areas industrial heritage.

2.4.5 Colliery Tips

There are some eighteen old colliery spoil tips within the Forest of Dean Coalfield, many of which have become an integral part of the forest contributing to the qualities and interest of the landscape. Similar to abandoned mineral workings they also represent an important nature conservation resource. A report commissioned by the District Council and Forestry Commission identified five areas where tips represent an important part of the forests mining heritage. The Minerals Planning Authority will support initiatives to safeguard and sensitively manage such colliery tips. It also recognises the value of smaller tips and will seek to protect those currently derelict tips that once reclaimed may contribute to the interest of the area. Tips not considered important local or industrial archaeological features may be reworked in order to recover secondary materials. This has obvious benefits in reducing the need for primary minerals although reworking may have similar landscape impacts to primary working of materials although they do offer opportunities for environmental enhancement.

2.4.6 Landfill, Landraising and Waste Disposal

Approximately 1.4 million tonnes of waste is handled in Gloucestershire each year, the majority of which (approximately 900,000 tonnes) is driven straight for disposal by landfill or landraising. The remaining 500,000 tonnes is either treated or exported from the County. However, the European Union Landfill Directive has set mandatory targets for reducing the amount of waste going to landfill or landraising.

The National Waste Strategy introduces targets for reducing industrial and commercial wastes and for the recycling, composting and recovery of municipal wastes. The Revised Deposit Waste Local Plan[18] acknowledges that the heavy reliance on disposal to landraising or landfill as the principal method of waste management in the County is unsustainable and states that in the future waste must be considered as a resource rather than a problem.

In order to reduce the amount of waste entering landfill and landraising sites, the Plan identifies a range of waste management facilities that will be required to meet the demands for sustainable waste management in the County. A number of these facilities for example Civic Amenity Sites, Scrap yards, and Waste Transfer Stations have the potential to impact significantly on landscape character in the Forest of Dean District.

Government Guidance states that the identification of specific sites for development is the best way the planning system can make provision for waste management facilities. The Plan identifies a number of 'Preferred Sites' which provide the cornerstone of the Plan's provision and a principle mechanism for guiding waste management development. The Plan identifies 'Strategic Sites' and 'Other Sites'. No 'Strategic Sites' and three 'Other Sites' have been identified in the district, one at the Forest Vale Industrial Estate, Cinderford and two within the Lydney Industrial Estate.

Dependent on their scale and location, development of these sites has the potential to impact on a number of landscape character areas including landscape character areas 7b - Aylburton Newgrounds, 9a - Bledisloe Hundred, 8a - The Severn Sands, 5c - Cinderford and Ruspidge and 10b - Littledean Ridge. Impacts are likely to be minimised by proposals representing extensions to existing industrial areas and waste management facilities. Whilst individual sites are named, any development will be subject to the normal planning process.

2.4.7 Fly Tipping

Fly-tipping of household and garden waste is a growing concern. If it is allowed to become established in one location, tipping can result in more permanent degradation of landscape and landscape features. It is a particular force for change across all rural areas but perhaps is most significant in the countryside fringing the district's urban areas such as in the Wooded Syncline and Settled Forest Margin (Landscape Type 5).

2.4.8 Grant Aid

In April 2002 the Aggregates Levy Sustainability Fund (ALSF) was introduced with allocated Government funding of £35 million. The ALSF is intended to address the environmental and social costs of aggregate extraction and will be distributed via various agencies although a number of these will have specific remits. English Nature for example, will fund projects, with grants up to £350,000 to increase biodiversity and or conserve geological features. The Countryside Agency by contrast will fund projects to achieve local and wider landscape benefits for communities that have been affected by mineral extraction.

[18] Gloucestershire County Council (2001) Gloucestershire Waste Local Plan Revised Deposit Draft

2.5 AGRICULTURE AND LAND MANAGEMENT[19]

2.5.1 Introduction

As is the case with most of rural England, agriculture represents the major land use in the district and plays an important role in safeguarding the environment, landscape and rural economy.

2.5.2 Summary of Key Issues

- A wholesale fall in agricultural markets, the retirement of farmers and the industry not attracting the next generation of farmers, may lead to the diversification, the consolidation of farm holdings and the creation of fewer, larger farms.
- Specialisation and the tendency for farms to concentrate on a narrower range of activities in order to control and predict labour requirements and other inputs.
- Diversification and the tendency for farm enterprises to develop other sources of income from on-farm, non-agricultural activities.
- Loss and decline in features of the rural landscape which vary in materials, designs and species composition according to geographic location and therefore contribute to local landscape character. Examples include hedgerows, fences, gateways and gates stops.
- The influence of national policies, driven by the changing structure of agricultural and other rural development subsidies at a European level.
- The continued decline of traditional land management practices due to intensification leading to the loss of uncommon habitats such as hay meadows and natural wet grasslands.
- The influence of large retailers and supermarkets on agriculture by imposing restrictions and conditions on growers and producers.
- The impact of numerous grant schemes and initiatives on the rural landscape and economy offers many benefits to landscape character, the environment and the rural economy.

A detailed review of the main topics is presented below.

2.5.3 An Overview of Agriculture in the District

The total area of farmland in the district is approximately 32,251 ha across over 1000 holdings. Permanent pasture and rough grazing predominates and accounts for approximately 52% of the district's total farmed area. It is widespread although it is particularly extensive throughout the Unwooded Vale (landscape type 6) and the Limestone Plateau (landscape type 3). The predominance of permanent pasture is a reflection of the climate and suitability of soils for grassland. Sheep and beef farming are important and particularly in hillier areas such as the Wooded Hills (landscape type 11) and Undulating Farmland (Bledisloe Hundred). Rights of 'pannage' and 'estover' also exist in the woodlands of the central Forest Core (landscape character

[19] All figures from the DEFRA June Agricultural Census 2001 (http://farmstats.defra.gov.uk/cs/publication_search.asp)

area 5a). Dairying is important in the vale and in particular in areas of drained riverine farmland (landscape type 7).

Crop and fallow land is less extensive than pasture and grazing and constitutes approximately 28% if the total farmed area. It is generally widespread across the lowlands although particular concentrations are to be found in The Leadon Vale (landscape character area 6d) and the Low Hills and Orchards (landscape type 14). Setaside constitutes approximately 3.5% of the total farmed area.

Orchards and horticultural areas are localised features of the agricultural landscape particularly in the Low Hills and Orchards (landscape type 14) and to a lesser extent in the vale and the lower hillsides neighbouring the vale. Whilst not particularly extensive, these holdings make a significant contribution to local distinctiveness.

The distribution of dominant land cover corresponds closely to the quality of the underlying agricultural land and its versatility for agricultural production. For example, the distribution of arable and horticulture land uses closely corresponds to discreet areas of Grade 1 and Grade 2 agricultural land which is regarded as being of good or excellent quality with only minor limitations to its use.

Mixed pasture and arable farming is predominant across areas of Grade 3 land which is regarded as being of good to moderate quality and where a combination of factors can restrict the choice of crops and or the level of yield. There are relatively few areas of Grade 4 agricultural land. These areas are generally of poor quality and offer severe limitations to agriculture. As such, agricultural use is restricted to low output enterprises such as rough grazing and wet pasture. These areas are predominantly in the low lying areas bordering rivers and streams in the vale and on the steep sloping land associated with the Wooded Valley and Wooded Scarp and Lower Scarp Slopes (landscape types 1 and 4). No Grade 5 agricultural land has been identified in the district.

The size of holdings in the district is on average smaller than elsewhere in the County. Holdings of less than 50ha account for approximately 86% of all holdings in the district and approximately 51% of holdings are less than 5ha. This compares to Gloucestershire as a whole where approximately 28% of holdings are under 50ha. The relatively large percentage of smallholdings in the district may reflect the large number of horticultural holdings and holdings that date back to squatter settlements of the eighteenth century. The Forest of Dean has a high proportion of farm holdings in private ownership (83%) which compares to a figure of approximately 78% for the County. There are 634 full time and 1019 part time farmers in the Forest of Dean. This constitutes approximately 6% of the total workforce in the district

2.5.4 Review of Farming Types in the Forest of Dean District

The changing pattern of subsidies and market forces has had a varying impact on different types of farming in the district:

Dairy Farming

A decline in milk prices and the impact of BSE and the recent Foot and Mouth epidemic on calf and dairy stock values has led to a decline in the profitability of dairy farms. The strong pound continues to reduce profitability and force smaller producers out of business. This may result in the amalgamation of farm units although this may not necessarily lead to the intensification of production. The vast sheds are associated with intensive dairy farms have significant implications for visual amenity and landscape character particularly in open landscapes in the Unwooded Vale (landscape type 6) and in the Drained Riverine Farmland and Grazed Salt Marsh (landscape type 7). Intensive operations may also increase the risk of pollution from slurry storage and waste management.

Beef Cattle

The decline of dairy farming may encourage some farmers to change to beef and sheep. However the combined impact of BSE, the Foot and Mouth epidemic and cheap imports from overseas means profits are low. Former dairy farms close to markets and good transport links may force more remote beef and sheep producers to diversify or leave farming.

Sheep

Since the late 1990's finished lamb prices have fallen significantly with detrimental effects for sheep farmers. The expansion and possible intensification of operations may result in the amalgamation of farm units. In the central forest core, commoning is in decline as fewer young Badgers (graziers) with the will or expertise to manage flocks take over from older generations. The decline in common grazing during and indeed since the foot and mouth epidemic in the forest has resulted in bracken encroachment across open areas in the forest and along woodland rides.

Cereals

The arable sector is under pressure as market prices and therefore, profitability is low. The result may be a further intensification of production which may result in the loss of hedgerows and the increased use of chemical fertilisers. Equally however, change could be in an opposite direction in order to reduce input costs. A significant change in recent years has been the relative profitability of oilseeds and protein crops in comparison to cereals which often have the now well known consequences of introducing large fields of brightly coloured crops into the landscape. Recent genetically modified (GM) crop trials have enjoyed high profile media coverage. However, it is too early to predict how GM crops will influence the rural landscape and the wider environment.

Horticulture

Horticulture remains unsupported by grants and is threatened by the strong pound, increased input costs and a general oversupply in Europe. Further pressure on this sector of the agricultural economy has arisen out of the Climate Change Levy which requires glasshouse producers to pay tax on their use of electricity and coal in an effort to reduce CO2 levels. The influence of supermarkets has also reduced the viability of wholesale markets as they approach a small number of large producers forcing smaller producers out of the market. The implications of this may be the abandonment of horticulture in favour of other forms of output or the amalgamation into larger more intensive units.

Orchards

Orchards were at one time extensive across much of the district and indeed 75% of the Gloucestershire's orchards have been lost over the past fifty years[20]. The pace of change has accelerated recently as a result of a lack of demand for specialist varieties, foreign competition and the influences of large supermarkets on purchasing habits. Despite a decline, the district still has areas where orchards contribute to distinctive local character. For example the area around Dymock (landscape character area 6d) retains a large number of orchards.

An orchard revival was instigated in the early 1990's by the Great Storm leading to a widespread realisation that the district's remaining orchards were under threat. The 'Restoring Our Landscape Grant' and Countryside Stewardship Scheme have also been successful in halting the decline in the district's orchards and loss has now been stabilised. This has been helped along by renewed public interest in old apple brands and farm shops and local markets stocking traditional varieties.

2.5.5 *Rural Development Regulation*

The Rural Development Regulation (RDR) became operational in 2000 and is the latest phase of reform to the Common Agricultural Policy (CAP). The RDR is intended to establish a new framework for European Community support for sustainable rural development. It seeks to simplify the framework for supporting rural development by grouping regulations into 'accompanying' and 'non accompanying' measures:

- Accompanying measures cover Countryside Stewardship, organic aid, early retirement, and afforestation of farmland.

- Non accompanying measures cover investment in agricultural holdings, aid for young farmers and other forms of forestry.

RDR and the new package of grants associated with it will continue to encourage environmental measures as a fundamental part of the evolution of farming practices in the district.

2.5.6 Agricultural Subsidies

The economy of the agricultural sector is influenced heavily by the changing structure of economic subsidies available through central government and the European Union. A number of subsidy schemes are outlined below in order to give some indication of how schemes in the future may influence the landscape.

[20] Gloucestershire Orchard Group, www.orchard-group.uklinux.net/glos/overview

England Rural Development Programme (ERDP)

The seven year programme (2000-2006) provides funding (£1.6bn) will be available to for land or project based schemes that conserve and improve the environment and support the rural economy and communities.

The England Rural Development Programme (ERDP) underpins Government's New Direction for Agriculture by helping farmers and foresters to respond better to consumer requirements and become more competitive, diverse, flexible and environmentally responsible. It also provides help to rural businesses and communities which need to adapt and develop. ERDP funds a number of schemes including Land Based Schemes and Project Based Schemes.

Land Based Schemes

The Countryside Stewardship Scheme, funded through EDRP and administered by DEFRA, is an incentive scheme which aims to make conservation part of land management practice and increase sustainable management on a long term basis. The scheme offers payments to farmers and land managers to improve the natural beauty and biodiversity of the countryside, enhance, restore and recreate targeted landscape, their wildlife habitats and historical features, and to improve public access. The 10 year agreement also allows capital payments for various conservation works to contribute directly to the landscape, history, wildlife and access to rural areas.

Funding is available for a wide range of options including old orchards, field margins, arable reversion to grass, overwintered stubbles, wild bird seed strips, nectar and pollen areas, scrub control and extensive grassland management. The management of hedges and walls, and the provision of footpaths and cycleways is also supported.

The Organic Farming Scheme is designed to encourage farmers using conventional farming methods to convert their systems to organic production. Conversion to organic farming provides gains in terms of soil health and benefits for biodiversity and the wider landscape resulting from the use of crop rotations and the absence of synthetic pesticides, herbicides and fertilisers.

Other ERDP Land Based Schemes includes the Woodland Grant Scheme and the Farm Woodland Premium Scheme. These are introduced in the Forestry and Woodland Section.

Project Based Schemes

The Energy Crops Scheme is a DEFRA scheme run in partnership with the Forestry Commission. Energy crops are carbon neutral over their life cycle and therefore, in substitution for fossil fuels, have the potential to reduce carbon dioxide. They are a renewable source of energy that offer a new opportunity for rural areas. The Energy Crops Scheme (ECS) makes £29m available for the establishment of energy crops. The scheme will establishment grants for short rotation coppice and Miscanthus.

Grants are available towards the costs of establishing these energy crops. Short rotation coppice (either willow or poplar) and Miscanthus, are considered the most commercially ready for exploitation.

Short rotation coppice (SRC) consists of densely planted, high-yielding varieties of either willow or poplar, harvested on a 2 to 5 year cycle, although commonly every 3 years. SRC is a woody, perennial crop, the rootstock or stools remaining in the ground after harvest with new shoots emerging the following spring. A plantation could be viable for up to 30 years before re-planting becomes necessary. Miscanthus species are woody, perennial, rhizomatous grasses, originating from Asia. Once Established the crop can be harvested annually for at least 15 years.

2.5.7 Grants From Government Agencies and Gloucestershire County Council

A number of Government Agencies supply grants which have the ability to result in positive changes to the rural landscape, heritage and biodiversity features.

The Countryside Agency

Since 2000, the Forest of Dean has been the focus of a Countryside Agency targeted initiative - the pilot Integrated Rural Development programme. In addition, the Agency supports a range of conservation programmes for example; the Wye Valley AONB, and a number of community based programmes including Parish Plans.

English Nature

English Nature administer a number of schemes that seek to provide funding for projects that enhance aspects of the natural environment in rural areas. Schemes include:

The Wildlife Enhancement Scheme, a grant scheme targeted at landowners who farm Sites of Special Scientific Interest. Grant awards are offered for positive management work including capital payments (for example hedge restoration) and grants for ongoing work (for example grassland management).

The Biodiversity Grant Scheme, a scheme in which grants are made available for research and practical projects aimed at halting losses and declines in species and habitats which are currently under threat, based on biodiversity action plans. Grants are available to anyone managing a site that is either a priority habitat or has priority species within it.

The Traditional Birds Incentive Scheme, provides area based financial assistance to farmers to support grazing by traditional cattle, sheep and pony breeds to achieve favourable conditions on a range of special sites, including land within or adjoining SSSI, SPA, SAC or a Wetland of International Importance under the Ramsar Convention.

English Heritage

English Heritage make grants available under a number of schemes to help preserve or improve the character and appearance of designated conservation areas, historic buildings and ancient monuments.

Gloucestershire County Council

In 1992 the County Council introduced a grant scheme, 'Restoring Our Landscape'. Since its introduction over 3000 orchard trees have been planted. Many local varieties are endangered and in many cases only one tree remains. To stem the decline, local varieties have been identified, grafted or budded over the last ten years. Certified varieties are now been budded on to create a public bank of trees to be used as mother trees.

2.5.8 Lottery Funding

Since the National Lottery began in 1994 Over £11.9 billion has been raised for Good Causes. Money has supported a range of charities and arts, sports, heritage, education and environment projects. A number of schemes have the potential to influence landscape character in the Forest of Dean.

The Local Heritage Initiative (LHI) is a ten year scheme devised and administered by the Countryside Agency on behalf of the Heritage Lottery Fund and aims to help local groups investigate, explain and care for their local landscape, landmarks, traditions and culture.

English Nature is distributing more than £5 million to support local nature reserves. Grants will be awarded for capital works, land purchase and for the employment of community liaison officers.

2.5.9 Diversification

Poor profits across the agricultural sector are fuelling a general trend towards the diversification of farming activities. Farms are also becoming increasingly active in the fields of tourism and recreation.

The Non-Fossil Fuel Obligation (NFFO) requires regional electricity companies to obtain a proportion of their electricity from renewable energy sources. This represents an important opportunity for farmers, especially those in the vicinity of proposed energy facilities to diversify into energy crops. Grants are available to assist in the transition.

There is likely to be a continued transition to organic production, both of livestock and crops, particularly now that increased support and interest in organic products by the general public. Initiatives such as the Forest Food Directory, a guide to local food production in the Forest of Dean, will develop the growing market.

There is considerable scope in the district for the further development of accommodation and recreational facilities in rural areas, although this is a highly competitive sector. Unfortunately those farmers most in need of an additional income are often those least able to raise the high levels of capital required to establish accommodation, recreational and leisure facilities. Tenant farmers may also be inhibited from developing schemes due to the restrictions of their tenancy agreements. Other restrictions may also arise from the location of the farm and accessibility.

Farmers close to regional centres and large towns often have access to alternative forms of income. For example in the vicinity of settlements fringing the central forest core, 'horsiculture' and horse paddocks are a particular feature of the landscape. Jumps, fencing, floodlights and stables often lead to cluttered landscapes. The urban fringe is also at risk from hobby farmers which may bring problems of short term management regimes and a lack of traditional agricultural skills.

2.6 FORESTRY AND WOODLAND

2.6.1 Introduction

Approximately 25% of the land area of the district, which extends to approximately 52,666 hectares, is wooded. This represents a relatively high coverage when compared to the average national coverage for England which stands at approximately 8%[21]and Gloucestershire where the figure is 11.2%[22]. Certain areas are more heavily wooded than others, the central wooded core of the Forest of Dean for example, representing approximately 11,000ha of contiguous woodland cover[23]. Elsewhere in the district, such as in the Severn Vale, woodland is sparse and tends to be restricted to small farmland copses and shelterbelts. Despite their small size these can contribute significantly to local landscape character.

2.6.2 Summary of Key Issues

- The impact of woodland management on providing biodiversity and public access.
- The encouragement of sustainable woodland management through the development of markets for woodland products.
- Increasing the area of woodland cover as detailed in the England Forest Strategy and ensuring that Forest Design Plans are cross compliant and reflect variations in landscape character and local distinctiveness.
- Restructuring of existing woodlands to achieve multi purpose woodlands.
- Restructuring of woodlands and species composition by local design planning and Forest Design Plans.
- Increased tourist pressure on key sites in the central forest core and in the Wye Valley.
- Further reduction in grazing levels resulting in bracken encroachment.
- Decline in open habitats within the central forest core has long term implications for open habitat species populations.

A detailed review of the main topics is presented below.

2.6.3 An Overview of Forests and Woodlands in the District

The composition of the district's woodlands varies dramatically between areas, although across the Forest Enterprise 'Forest of Dean Forest District' (which covers 16000ha), the broadleaf component is unusually high at approximately 52%. This represents the second highest figure of any Forest Enterprise District in Britain. Indeed, community concern over the high proportion of conifer plantations led to a ministerial directive in 1971 stipulating that the proportion of broadleaves (then

[21] Forestry Commission (1999) England Forestry Strategy
[22] Forestry Commission (2002) National Inventory of Woodland and Trees – County Report for Gloucestershire
[23] Forest Enterprise, Forest of Dean Forest District Strategic Plan 2000-2005

42%) should not decrease. Specific legislation in the Forestry Act 1981 was also important and deemed that there should be no disposal of land used or proposed for forestry purposes.

There is a long history of conifer planting and management as a timber resource in the central core of the Forest of Dean and some of the first conifers ever planted, Weymouth Pine dating to 1781, still stand. The Statutory Forest of Dean (9,800 ha) was made over to the Forestry Commission by Act of Parliament in 1924. However Early in the 20th century, plantings were not always well suited to their site, for example oaks planted on exposed ridges failed to flourish and conifers were often planted in areas better suited to broadleaved trees.

Today forestry operations are coordinated by Forest Enterprise who manage woodlands across the district, the largest and most significant of which are in the central forest core and the Wye Valley (predominantly located in Landscapes 1 and 5). Forest Enterprise aim to manage woodland according to multi-purpose forestry principals and implement Forest Design Plans to address this. Within land managed by Forest Enterprise, timber production remains at a sustainable level of approximately 45,000 m3 per annum. The majority of this is derived from the thinning of coniferous plantations.

The main nature conservation value of the forests is associated with approximately 1000 ha of old oaks planted in the 19th century and often referred to as Napoleonic Oaks. This represents the largest area of mature oak woodland in England and over 300 ha of this resource are managed as a nature reserve in the Forest Core (landscape character area 5a). Beyond the central forest core, large woodlands, such as Dymock Woods, are also of high nature conservation value, primarily associated with the invertebrates in areas of coppice and, in the case of Dymock Woods, the carpet of daffodils, for which it is so well known.

Whilst the majority of woodland in the central forest core is protected by the Forest Act, areas of woodland in private ownership are offered less protection and are potentially more susceptible to development pressure. Falling timber prices and competition from foreign markets are placing increasing pressure on owners and managers to diversify in order to increase the returns from their woods and forests.

Currently unwooded areas of the Statutory Forest are also under pressure. The Statute protects wooded areas and areas suitable for woodland. However, former industrial sites which are perhaps less suitable for commercial forestry and woodland as a result of pollution and disturbance, are likely to be under increasing pressure for alternative uses, including development. Spoil heaps, pit buildings and areas of natural regeneration are typical features of these areas. Development of these areas has the potential to impact positively and/or negatively on these features. Permanently open areas, such as unimproved grasslands, heathlands and wetlands) within heavily wooded areas are particularly important for open habitat species and their continued loss as a result of development, abandonment, natural regeneration and loss of traditional grazing, would have long term implications on the biodiversity of the area.

The Forest environment, particularly the central forest core, is under pressure from damage from introduced mammals such as fallow deer and grey squirrel. Deer are managed by the Verderers in accordance with the district deer management strategy. Squirrels are a significant problem, particularly in late spring when they damage various species of trees.

The central forest core is also subject to ancient rights and customs. Sheep grazing is a traditional privilege long associated with the Forest and regulated under law by an Inclosure Commission which determines the area which can be enclosed for the regeneration of trees. In recent years, a reduction of grazing activity has resulted in bracken encroachment across areas of open woodland. The traditions of 'pannage' and 'estover' also exist. Freemining is another tradition and has a firm statutory basis which allows locally born miners the right to dig coal and other minerals. A number of small mines are active in the forest; the rights administered by the Deputy Gaveller. The central forest has a Verderers Court which meets regularly and oversees the management of the Forest and in particular the 'vert and venision'. Verderers are consulted on a wide range of management issues in the Forest and in addition to this, the general public are often consulted in relation to forest management issues in order to ensure that management accords with the consensus view of what is appropriate.

The central forest and Wye Valley were one of the cradles of the Industrial Revolution and there are many hundreds of largely unscheduled sites of archaeological importance.

Many of the woods in the district have a number of factors making them particularly sensitive[24];

- 80% of woodlands in the ancient Dean Forest are on Ancient Woodland Sites or are within Inclosures.
- A number of woodlands are contained within Wye Valley AONB.
- A number of woodlands are designated as SSSI.
- Large tracts of woodland have ancient rights and privileges associated with them.

2.6.4 Government Policy

Since the turn of the twentieth century successive governments have pursued policies of forest expansion through felling controls, planting incentives and afforestation. The Forestry Commission is the government department for forestry and current policies for forestry development in England are expressed in the England Forest Strategy[25], which focuses on the delivery of public benefit via four programmes for forestry:

- rural development;
- economic regeneration;
- access, recreation and tourism; and
- environment and conservation.

[24] Forest Enterprise, Forest of Dean Forest District Strategic Plan 2000-2005
[25] Forestry Commission (1999) England Forest Strategy

More detailed policies are contained in the Forest Enterprise Forest of Dean Forest District Strategic Plan[26]. Forest Enterprise is a self contained organisation within the Forestry Commission which manages the forest estate owned by the nation which currently extends to over 1 million hectares nationally. [27]

2.6.5 Incentives

The Woodlands Grant Scheme (WGS) is administered by the Forestry Commission and is the principal government incentive scheme encouraging new woodland planting and management on privately owned land. Incentives include payments to help with the cost of works such as planting, natural regeneration, restocking and improvement. Annual payments are also available for management and enhancing public access. Woods over 0.25 ha and at least 15 m wide are eligible. Various supplements for the WGS have been put in place and include;

- Better Land Supplement (BLS) for planting on arable, cropped or improved grassland.
- Community Woodland Scheme (CWS) encourages new woodlands close to towns for informal public use.
- Short Rotation Coppice (SRC) encourages the planting of willow and poplar for SRC on set-aside on non set-aside land.

The Farm Woodland Premium Scheme is specifically designed to encourage the creation of new woodlands on farms. Its objectives are to enhance the environment through the planting of farm woodlands, in particular to improve the landscape, provide new habitats and increase biodiversity. Land managers are also encouraged to realise the productive potential of woodland as a sustainable land use. Annual payments made under the scheme are designed to compensate for agricultural revenue foregone. Payments are for 15 years and are mainly for the planting of broadleaved trees.

Countryside Stewardship is also a grant scheme which provides assistance for the planting of small scale woodland planting on farms. Priority is given to projects which have the most to offer in terms of enhancement and public benefit within the schemes premise.

The Forestry Commission have introduced a scoring system for targeting WGS for woodland creation and is based on the provision of public benefit. The England Forestry Strategy also identifies four priorities for woodland creation:

- The creation of larger woodlands where they can deliver greater benefits;
- The creation of woodland on the urban fringe;
- The restoration of former industrial land; and
- The reversing of the fragmentation of ancient woodland.

[26] Forest Enterprise, Forest of Dean Forest District Strategic Plan 2000-2005
[27] Forest Enterprise (1992) Agenda for Forest Enterprise

2.7 TOURISM AND RECREATION

2.7.1 Introduction

Tourism is a significant economic activity in the Forest of Dean and the district's distinctive landscapes, cultural and historic associations contribute greatly to its appeal. This has been recognised for some time and in 1938 the Forestry Commission established the Forest of Dean as the first National Forest Park in Britain to address the growing public demand for outdoor recreation and access to the countryside.

2.7.2 Summary of Key Issues

- The erosion of tracks, footpaths and the wider landscape through walking, horse riding, mountain biking, particularly within the central forest core.
- Realising the tourism potential of the landscape and natural environment without detriment to the environmental resource
- Pressure for new amenity and recreational facilities such as golf courses, holiday villages and caravan parks, which have the potential for significant impacts on landscape character.
- Increases in road traffic, particularly on quiet rural roads which may erode local character.
- Significant impacts on the landscape arising from large scale multi purpose recreation developments on the outskirts of towns.
- The effect on water quality, riverine habitats and local character as a result of the rising popularity of riverine activities.

A detailed review of the main topics is presented below.

2.7.3 An Overview of Tourism and Recreation in the District

Over the past 35 years the recreational and tourism potential of the district has been increasingly recognised. The scale and depth of this area of economic activity was highlighted by a District Council survey which found that, prior to 2001, tourism was worth an estimated £40m to the local economy, 75% of which was derived from day visitors and that the industry directly or indirectly employs almost 2000 people, constituting 7% of employment in the district. However, in a recent Tourism Study[28] it was concluded that the district is under performing and that there has been little in the way of a significant investment in the district over the past twenty years and that, as a result much of the product is tired or out of date.

[28] RPS (2002) Forest of Dean Tourism Development Potential Study

The Heart of England Tourist Board confirms this belief and whilst it considers the district as a well-established domestic tourist destination, it acknowledges it as having the potential to develop further. However, it warns that further growth must be handled sensitively to safeguard and enhance the distinctive quality of the local environment and quality of life of local residents[29].

Visitor patterns are generally local and daily in nature and the area is perceived as a day visitor destination for residents of the Dean and inhabitants of places such as Gloucester, Bristol, Newport and the Midlands. In 1997 for example an estimated 2,782,200 day excursions visited the district. Such a high figure has potentially significant impacts on a rural district such as the Forest of Dean where the population stands at approximately 78,000. However, the dispersal of visitors across the district is an important factor. The focus of many visits is the central forest core, the majority of which is owned by Forest Enterprise. As a guiding principal Forest Enterprise encourages recreational access on foot through its woodlands and has continued to invest in recreational facilities. Together these initiatives have led to a relatively wide dispersion of visitors for outdoor recreation and ensures that the preferred attributes of the area, that is its peace and tranquillity, are retained at most locations throughout the year.

The wildlife rich landscapes of the central forest in particular, are an attractant for tourism; a significant number of visitors to the area doing so to actively watch or appreciate wildlife as part of their visit. Organised wildlife holidays and tours are limited at present but could be a future tourist venture.

2.7.4 Honeypots

Despite the wide dispersal of visitors throughout the district and in particular the central forest core, a limited number of sites are subject to heavy demand. Two 'honeypot' sites, each attracting over 100,000 visitors annually are Symonds Yat (300,000 visitors per annum) and Beechenhurst (250,000 visitors per annum). A number of other key recreational sites including Clearwell Caves, Speech House, Mallard's Pike and Wenchford, all attract between 50,000 and 100,000 visitors per annum. It is interesting that all of these attractions place much emphasis on the natural environment and landscape. By contrast, visitor attractions which feature crafts or heritage, tend not to enjoy similar levels of visitation with most receiving less than 40,000 visitors per annum. In this way it is clear that the district's landscape and its associated natural attractions including its wildlife, are in themselves highly important in economic terms through attracting tourists and visitors. It is these features and elements of the landscape that are most sensitive to ill conceived and un-sympathetic development.

The tourism strategy[30] identifies a number of major project opportunities including:

- Forest Lookout Towers;
- Spirit of the Forest Gallery;
- Outdoor Forest Theatre;
- Forest Science Centre;
- Lea Bailey Gold Mine;
- Dean Railway Extension; and
- Gunns Mill

[29] Land Use Consultants (1999) Forest of Dean Review of Special Status Report of Findings Volume 1
[30] RPS (2002) Forest of Dean Tourism Development Potential Study

These strategies whilst of obvious benefit to the tourist economy through increasing visitor numbers to the central forest core, will need to be carefully considered in terms of their location and design in order to protect the sense of tranquillity and remoteness of the central forest core.

2.7.5 Rural Diversification

Appropriate tourist development in rural areas can help to diversify local economies, enhance the countryside and create new jobs. Farm diversification is recognised as one of a number of ways of maintaining the viability of small farm holdings allowing farmers to remain on the land and continue to practice traditional farming activities. However, increases in traffic, litter, signage and built development may threaten visual amenity, landscape character and the very features of the district that attract visitors.

2.7.6 Staying Visitors

There are an estimated 240,000 staying visitors per annum in the district constituting approximately 696,000 visitor nights. It is well established that a strategy of increasing the number of short breaks has the strongest potential for stimulating the tourism sector. Such a strategy also has the dual benefits of increasing revenue per day from visitors and lessening the environmental impact of car borne day visitors.

The staying market can be crudely split into a number of sectors. Camping and caravanning is an important sector and in the district accounts for 52% of staying visitor trips. Currently a small number of large-scale sites exist in the district. The Serviced sector represents 15% of the market, with self catering representing just 3%.

The Forest of Dean Review of Special Status[31] identified there being considerable capacity in the serviced accommodation and camping/ caravan sector and little capacity in the supply of self catering accommodation.

Caravans, chalets and holiday villages have the potential to intrude on the rural, tranquil nature of some areas as they create a built environment often similar in scale to villages and introduce 'urban' elements such as infrastructure, buildings and domestic features such as manicured 'gardenesque' landscapes. Areas vulnerable to change include sites in the forest core which, though few in number, occupy attractive locations in or close to the principal tourist destinations. The Tourism Strategy identifies the possibility of 'forest log cabins'. Development of this nature will need to be carefully sited and designed in order to avoid significant impacts on landscape character.

2.7.7 Access to the Countryside and Informal Recreation

Walking is the major activity undertaken in the district and has been a traditional pursuit for both residents and visitors. The existing rights of way network is extensive and offers access to observe wildlife and fauna and all of the district's varied landscapes.

The Countryside and Rights of Way (CRoW) Act 2000 has the potential to have significant implications for public access across the district. In the next two years, the Countryside Agency will publish draft maps showing access land for each of the eight mapping regions, and will represent the first step in delivering the new right of access under the CRoW Act. The draft maps should

[31] LUC (1999) Forest of Dean Review of Special Status, Technical Report Volume 2

show all the registered common land and should also show all land which is wholly or predominantly mountain, moor, heath and down.

Following the publication of the draft maps there is an opportunity to comment on the content of the Maps. Following this period of consultation the Countryside Agency will publish provisional maps, against which only those with an interest in the land may appeal. The final conclusive maps will indicate those areas of open country and common land where the public will have a new right of access on foot. These rights will include activities such as walking, sight seeing, bird watching, picnicking, running and climbing but will have some built in limitations.

The effects of the Act on the landscapes of the district are as yet unknown. However, increased public access may bring pressures from greater levels of traffic and roadside parking and may result in erosion, littering and changes in agricultural practices.

Cycling is also popular recreational pursuit throughout the district and particularly in the central forest core. Here, where Forest Enterprise manages large areas of woodland, considerable investment has been made with the District Council to encourage appropriate recreational use of the forest by cyclists. However, in recent years the growth of off road cycling has caused some concerns and there has been some local resistance to further encouragement of recreational cycling. To address these concerns Forest Enterprise has instituted a number of measures to manage off road cycling including the zoning of cycling access with marked trails, the designation of off road mountain bike areas and setting down cycle exclusion zones.

Casual cycling (rather than off road cycling) is a major growth area and the existing infrastructure is regarded as a major asset. Other recreational pursuits such as orienteering, horse riding, caving and angling are important within a local context. However, these are regarded as having only limited implications for landscape character and the wider natural environment.

2.7.8 Golf Courses

Golf courses can be intrusive features in the landscape where they introduce uncharacteristic features such as formal ornamental planting, mown amenity grassland, bunkers and buildings to an otherwise rural landscape. They are often proposed as part of a recreational development in the grounds of historic country houses where they can represent a threat to the integrity of historic designed landscapes.

2.7.9 Water Based Tourism

The rising popularity of water borne activities such as canoeing, river cruises and boating holidays offers a positive opportunity to utilise the Severn and Wye, two of the most impressive rivers in the country. A number of activity centres, boat clubs and cruising companies operate on these rivers and provide opportunities for a range of tourism and recreation activities. As the popularity of such activities increases, the pressure for new marinas, quays and river traffic is likely to increase and there is a risk that there may be conflict with nature conservation interests and the visual amenity of the river and riverine landscapes. River borne activities also have the potential to disturb plant and bird life in particular and may cause localised bank erosion.

The peace, tranquillity and natural character of the rivers are their defining characteristics and are under particular threat from increased traffic and built development. Under particular threat are landscape types 7 - Drained Riverine Farmland and Drained Salt Marsh, 8 - Littoral Sands and Rock Outcrops, 6 - Unwooded Vale and 1 – Wooded Valleys.

The Tourism Strategy[32] identifies as one of its key development opportunities, a regeneration project at Lydney Docks and the introduction of an Observation Tower and Interpretive Centre for the Forest of Dean. Any detailed proposals should consider the impact on the landscape character and visual amenity of the Aylburton Newgrounds (landscape character area 7b).

It has been the long term aim of the Herefordshire and Gloucestershire Canal Trust to restore the canal between the Severn and Hereford, part of which runs through landscape types 6 - Unwooded Vale and 14 - Low Hills and Orchards. In order to achieve this goal the District Council will seek to protect the historic course of the canal where this has not been obstructed by permanent structures. When restored the canal will offer considerable formal and informal recreational opportunities[33].

[32] RPS (2002) Forest of Dean Tourism Development Potential Study
[33] Forest of Dean District Council (2002) Forest of Dean District Local Plan Review Revised Deposit Version January 2002

2.8 CLIMATE CHANGE

2.8.1 Introduction

Global climate change has been attributed to the burning of fossil fuels, methane and nitrous oxide from agriculture, industry and waste disposal. It is thought that its effects will influence weather patterns and result in stronger winds, heavier rains, rising sea levels and perhaps extended periods of drought.

Scientific evidence suggests that climate change is already happening and projections suggest that it will influence a great many physical, chemical, biological and human activities which have the potential to result in significant changes to the physical appearance and therefore the character of the landscape.

2.8.2 Summary of Key Issues

- The loss of inter-tidal habitats, farmland and biodiversity as a result of rising sea levels.
- Pressure on land away from areas at risk from flooding for built development.
- Loss of species on the edge of their range due to species competition and migration.
- Gradual changes in wildlife communities in response to climate change, pests and fire hazard.
- Increase in tidal surges and high waves will have implications for coastal and riverine defence works.
- Suitability of forest tree species (such as beech) may alter due to changes in climatic conditions.

A detailed review of the main topics is presented below.

2.8.3 Overview of the Implications of Climate Change

Global warming is accompanied by the prospect of world sea level rise which is expected to be 6 cm per decade over the next century[34] mainly caused by thermal expansion of the oceans and the melting of low level land ice. The Severn Estuary already presents a number of challenges, the tidal range being the second highest in the world and adverse weather conditions having the ability to raise water levels by more than two metres above predicted levels[35].

In the Forest of Dean the riverine landscapes bordering Severn will be subject to an increased risk of tidal inundation from a combination of higher tides and tidal surges. A significant area of the Severn Vale is already low lying and at risk from flooding indicating that small sea level rise will have a profound impact on agricultural landscapes and indeed settlements bordering the river. The loss of mudflats and salt marshes would also have a major impact on the internationally significant bird feeding grounds adjacent to the Severn.

[34] As stated by the Intergovernmental Panel on Climate Change 'Business as Usual' Scenario, 1990
[35] Severn Estuary Partnership (2001) Strategy for the Severn Estuary –Summary

2.8.4 Wider Implications

The wider landscape could also experience significant landscape change as a result of warmer, wetter conditions and more disturbed weather patterns. Major changes could affect fauna and flora adapted to their existing environment. There will be an inward migration of new species and an outward migration of marginalised species. Lengthy periods of drought and dry conditions may also lead to an increased risk of upland forest fires, particularly in landscape types 10 – Ridges and Valleys, 5 – Wooded Syncline and Settled Forest Margin and 11 – Wooded Hills.

3.0 LANDSCAPE STRATEGY IDEAS FOR THE FOREST OF DEAN DISTRICT

Outline Landscape Strategy Ideas have been suggested for each of the district's fifteen landscape character types. The distribution of landscape types and landscape character areas is presented in *Figure 2*.

Landscape strategies for each landscape type include consideration of the following:

- Key Environmental Features to Conserve, Restore and Enhance. These are the features of the landscape that make the most important contribution to the character of the landscape. The notes are based on the key characteristics identified in the Landscape Character Assessment but also explain why they are important. Key environmental features are specific and do not necessarily occur in each of the landscape types or component landscape character areas. It is anticipated that the Key Environmental Features identified for each of the fifteen landscape types will be the focus of conservation, restoration and enhancement initiatives in the future and that their protection will normally be sought.

- Assessment of Landscape Sensitivity. For each of the landscape types, a brief assessment of overall landscape sensitivity is presented.

- Local Forces for Change. These are the forces that have been assessed as being of greatest significance in each of the fifteen landscape types. They represent a refinement of the generic forces for change that were identified for the district as a whole.

- Landscape Implications. The same or similar forces for change may apply across a number of landscape types. However, the implications of change on each landscape may be very different as a result of their contrasting character, the nature of their key environmental features and their sensitivity to change.

- Outline Landscape Strategies. This section presents outline strategy ideas for each of the 15 landscape character types based on the key environmental features and consideration of the implications of each of the local forces for change. Strategies are presented under the general headings of Conserve, Enhance, Restore and Create in accordance with current guidance[37]. Where the outline strategies are preceded by an (*), this indicates an area in which it is anticipated Forest of Dean District Council would play a significant role.

- Indicators for Monitoring Landscape Change. A range of potential indicators are proposed as a means of measuring the effects of change on the landscape, and the success of initiatives which seek to conserve or enhance the character of the landscape.

- Opportunities for Community Involvement. Where relevant, opportunities for community involvement in the implementation of the strategy or monitoring landscape change are proposed. It is anticipated that the work of community groups, organisations and action groups would be co-ordinated by the District Council, County Council or agencies such as the Countryside Agency, DEFRA, and the Environment Agency, as part of their shared commitment to deliver the landscape strategy.

[37] Countryside Agency and Scottish Natural Heritage (2002) Landscape Character Assessment Guidance, CAX 84/F

1 WOODED VALLEYS

Character Areas

1a The Wye Valley – Common Grove to the Slaughter
1b The Wye Valley – Redbrook to Brockweir
1c The Wye Valley – Brockweir to Tutshill

Key Environmental Features to Conserve and Enhance

- Steep sided river valleys and dramatic bare rock faces forming dramatic relief features and channelling views along the valley.
- Densely wooded valley sides along main river channel and its tributaries containing ancient semi natural woodlands, areas of ancient coppice and veteran trees.
- Narrow floodplain pastures on the valley floor offering fertile grazing pastures.
- Linear settlements bordering valley floor pastures, often at ancient bridging points and small clusters of historic squatter settlement on valley sides surrounded by intricate pattern of small fields, narrow lanes and small deciduous woodlands, indicating differing patterns of settlement.
- Variations in building materials and hard rock outcrops indicating differences in the nature of the underlying bedrock.
- Long history as an important route way and boundary feature evident in the range of archaeological sites along the river and documentary evidence.
- Ancient meanders preserved as the course of tributary streams offering gentler more hospitable valley landscapes.
- Woodlands, including many ancient semi natural woodlands, and riverine landscapes of high ecological and scenic value offering a home to numerous important and protected species of flora and fauna.

o

- Long panoramic views from high vantage points emphasising the remoteness and inaccessibility of many parts of the landscape.

Landscape Sensitivity

The Wooded Valleys represent a quiet, rural landscape with strong associations with peace, tranquillity and a sense of remoteness. Landscape character is strong and readily identifiable. The Wooded Valleys are therefore, highly sensitive to changes that may compromise these characteristics.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Expansion and suburbanisation of existing valley floor settlements.	• Erosion of distinctive character of linear valley floor settlements. • 'Tidying up' of the landscape in and around existing dwellings resulting in the replacement of traditional features such as stone walls with uncharacteristic elements such as garden fences. • Upgrading of minor roads and lanes associated with new development and introduction of suburbanising features such as mini roundabouts, street lighting and kerbs eroding rural character.	* Conserve the distinctive linear character of the valley settlements and rural road network. * Seek to counteract the impact of degraded urban edges with new woodland planting that links to existing valley slope woodlands. • Promote the restoration of existing stone buildings and structures within settlements. • Conserve and restore traditional boundary features with particular regard to local styles, materials and construction methods.	• Number and distribution of new dwellings in existing valley settlements • Number of historic stone buildings converted and/or restored.	Monitoring and mapping village expansion. Village design statements. Photographic record of village growth.
Expansion and infilling of existing scattered settlements on valley sides.	• Erosion of distinctive dispersed settlement character, the pattern of small fields and network of narrow lanes associated with individual dwellings. • Illumination of existing dark skies.	* Conserve the distinctive dispersed character of the valley side settlements and rural road network, particularly the strong pattern created by narrow, winding hedged lanes between and linking smallholdings. * Conserve existing dark skies. * Promote the conservation and /or encourage restoration of existing stone buildings.	• Number of historic stone buildings sensitively converted and/or restored.	
A piecemeal decline in woodland cover.	• Impact on the wooded character of the valley and the setting of valley settlements. • Degradation and loss of woodland habitats, ancient semi natural woodland and wildlife corridors.	• Conserve, enhance and restore valley side woodlands through effective long term management and replanting. • Create wet woodlands and associated riverine habitats along the course of the river and tributary streams.	• Area of deciduous semi ancient natural woodland. • Area of new woodlands created.	Community woodland strategies and planting/ management.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Increasing visitor pressure.	• Erosion of existing footpaths, and cycle routes. • Erosion of the river edge • Provision of new facilities and attractions such as parking viewpoints, cafes, footpaths, cycleways. • Proliferation of signage and interpretation. • Loss of tranquillity.	• Create sustainable greenway routes linking sites of visitor interest along the valley. * Create opportunities for safe access to rivers edge for angling and walking (including disabled access) which protects the natural characteristics of the riverbank. • Promote sensitive and sustainable designs for parking, viewpoints and other visitor facilities. • Conserve the sense of tranquillity through the careful siting and design of recreational facilities.	• Length of natural riverbank. • Number and distribution of new recreational and visitor facilities.	Mapping the character and nature conservation value of the riverbank.
Decline in the agricultural sector, aging population of smallholders using traditional management regimes, and the influence of hobby farmers and horsiculture.	• Fragmentation of land uses. • Decline in traditional farming techniques resulting in a decline in species rich meadows. • Features typical of 'horsiculture' land uses such as jumps, fences and poached fields introduced to the landscape. • Reversion of former smallholders pastures to scrub.	* Promote the restoration of hedgerows giving priority to those close to settlements, roads and footpaths should be regarded as a priority. • Conserve existing species rich meadows. • Encourage traditional farming techniques amongst small holders and hobby farmers.	• Area of species rich grassland managed using traditional techniques. • Length of dry stone walls. • Length of hedgerows. • Area of scrub encroachment onto former smallholdings.	
Agricultural intensification along the valley and in neighbouring landscapes.	• A decline in the biodiversity of the River and tributaries as a result of increased agricultural run-off.	• Protect water courses from the impacts of eutrophication by encouraging farmers to adopt best practice for the application of fertilisers and pesticides and the creation of buffer zones • Encouraging programmes of nutrient removal within water courses. • Encourage initiatives that seek to restore or enhance river and stream networks and their habitats.	• Number and distribution of specific 'healthy river' indicator species. • River nutrient levels.	Establish local community wildlife records.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Climate change.	• Erosion of steep slopes bordering the river as a result of short duration, intense periods of rainfall. • May in time lead to an increase in the severity and frequency of storm surges and flooding along the valley.	• Protect unstable river banks and valley sides to avoid erosion as a result of storm surges through proposals which reflect the natural character of the riverbank. • Realign river defences to accommodate natural river erosion. • Restore the natural floodplain	• Monitor habitats and species in the river for signs of change.	Establish local community wildlife records.
Increased extraction of water from the River Wye.	• Impact on biodiversity of the river and landscapes bordering the course of the river downstream of extraction point.	• Conserve water levels that will be of greatest benefit to biodiversity.	• Monitor the impact of extraction upstream and encourage practices that consider the health of riverine habitats downstream of the extraction source.	
Impact of deer and squirrel populations and spread of non-native species such as sycamore, Himalayan balsam and Japanese Knotweed	• Impact on long term regeneration of woodland habitats and changes in natural species compositions.	* Protect areas of native woodland cover and encourage natural regeneration of native species by careful and active management. • Monitor and control deer and squirrel populations.	• Monitor the spread of invasive non-native species. • Monitor deer and squirrel populations.	Establish local community wildlife records.

2 LIMESTONE HILLS

Character Areas

2a Bicknor Hills
2b High Meadow Woods and Staunton
2c Coleford and Christchurch
2d Newland Hills
2e Ruardean Hills

Key Environmental Features to Conserve and Enhance

- **Rolling landscape of interlocking convex hills and dry valleys formed from Carboniferous Limestone's and Coal Measures** providing contrasting experiences. Hilltops are elevated and afford extensive views over the surrounding landscape. Valleys are intimate and sheltered.
- **Generally poor soils and hilly landform well suited to pasture** which is the dominant land use on the hills.
- **Fields defined by well maintained hedgerows** creating a patchwork landscape that emphasises hilly landform.
- **Hedgerow trees, copses on steeper slopes and large areas of mixed and coniferous woodland** giving the sense of a well wooded landscape.
- **Small villages are well integrated with their surroundings** and display vernacular building styles and the use of locally quarried stone. Village churches are often a prominent landscape feature and are visible from some distance away.
- **Large towns** exerting a strong urbanising influence over the landscape and containing many buildings betraying their industrial origins.
- **Scowles and other remnants of mining activity** representing important reminders of the areas industrial heritage.
- **Large areas of woodland on the Carboniferous Coal Measures** obscuring the underlying subtleties of landform and geology.

Landscape Sensitivity

The open hillsides are particularly visually sensitive to the effects of large scale built development and change due to a combination of their elevation, the absence of significant woodland cover, and a high degree of inter-visibility with surrounding landscapes. Sheltered valleys and areas which have a greater extent of woodland cover are perhaps less sensitive to change.

Visually exposed and prominent landscapes on the fringe of existing large settlements (Coleford and Christchurch) are particularly visually sensitive.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Agricultural diversification and intensification.	• Decline in traditional farming techniques resulting in the loss of species rich meadows. • Move toward arable production on small mixed farms resulting in the removal of hedgerows. • Proliferation of features typical of 'horsiculture' land uses such as jumps, fences and poached fields. • Reversion of former smallholders pastures to scrub. • Conversion of farm buildings to agricultural uses. • Increased erosion and run off from farmland bordering the Wye and its tributaries causing siltation and eutrophication of watercourses.	• Promote hedgerow restoration giving priority to those close to settlements, roads and footpaths. • Conserve existing species rich meadows and encourage traditional farming techniques amongst small holders and hobby farmers. * Seek to conserve and enhance 'rural' features and landscape character on the urban fringes of Christchurch and Coleford. * Conserve character of barns/ agricultural buildings when converted to domestic or small business use. Pay particular regard to ensuring character of surrounding landscape is not compromised. • Enhance quality of local rivers and in particular the Wye by introducing buffer strips.	• Area of species rich grassland managed using traditional techniques. • Length of hedgerows. • Number of barn conversions.	Undertake a Parish Map to record hedgerows and areas of grassland.
New housing and employment on the fringes of Coleford	• Expansion of urban area into the rural landscape and net loss of characteristic features (pasture, hedges etc).	* Conserve the landscape setting of Coleford and Christchurch. * Promote high quality residential development that respects local townscape and landscape character and reflects local vernacular building styles, layouts and materials. • Conserve existing landscape features (trees, hedges) as intrinsic part of new development. * Encourage a positive approach to new development and seek opportunities to create exciting new character in areas of degraded or declining landscape. • Seek innovative architectural/ landscape ideas to create new character and minimise impact on local landscape character such as the use of 'green roofs'.	• Areas of new peripheral development determined against baseline aerial photographic record.	

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Expansion of existing mining operations at Drybrook and Stowfield Dolomite quarries and currently inactive quarries	• Potential for further erosion of local perceptions of peace and tranquillity as a result of mineral operations and increased quarry traffic	• Maintain operations at existing quarries in favour of re-opening operations at currently inactive quarries. • Encourage mitigation schemes that reflect and enhance local landscape character by the use of appropriate species of trees and shrubs and patterns of planting. • Create new landscapes in former quarry workings where development would not compromise existing nature conservation or heritage features.	• Number of new mineral works permitted.	
Minor road improvements in rural areas surrounding Christchurch and Coleford.	• Urbanising influence and standardisation of rural roads reducing perception of 'ruralness'.	• Conserve existing character of rural road network with regard to minimum safety requirements.		Carry out photographic survey of locally distinctive features including signs, markers, lighting etc.
Introduction of telecommunications masts hill tops.	• Introduction of visually intrusive 'urban' features into rural landscapes.	* Conserve rural character of the limestone hills and local villages by siting masts away from visually prominent locations. Seek opportunities to minimise impact by reuse of existing masts or other structures. * Seek to maintain the sense of openness on the limestone hills and consider the impact of development on long distance views. * Conserve long distance views of village churches.	• Number of masts.	

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Pressure for new recreation and tourist development in the vicinity of Coleford and within Highmeadow Woods.	• Extension of existing, and the provision of new, camping and caravan sites in areas of open countryside and woodland. • Pressure for new golf courses in vicinity of Coleford.	* Conserve the rural landscape setting of Coleford and Christchurch. • Seek to minimise the encroachment of development into visually exposed landscapes. • Conserve and enhance areas of existing woodland/forest cover.	• Number and location of new recreation facilities.	

3 LIMESTONE PLATEAU

Character Areas

3a Tidenham Chase
3b St Briavels Common

Key Environmental Features to Conserve and Enhance

- **Gently undulating plateau with expansive views** giving a sense of exposure enhanced by the dominance and enormity of the sky.
- **Strong field pattern of large or moderately sized arable and pasture fields with distinctive stone walls and ancient hedgerows** enhancing landform and provide visual texture. The walls reflect the underlying geology and the close proximity of a quarry.
- **Dispersed isolated farms which are located at the end of lanes and often associated with modern barn complexes and villages sited at the edge of the plateau** contributing to a distinctive settlement pattern.
- **Active and redundant Limestone quarries located across the landscape** indicating nature of underlying geology. Redundant quarries are mostly small and heavily overgrown with trees and shrubs.
- **Tree belts and copses are widespread** and provide shelter for farms and for wildlife and add visual texture and punctuation in many views.
- **A potentially rich archaeological record** with extensive Neolithic and Bronze Age sites having already been identified on the plateau.
- **Colourful arable fields** proving a visual contrast to the verdent greens of improved pasture fields.
- **Small enclosures, winding lanes, small woodlands and 'squatter' cottages on St Briavels Common** representing features of a highly distinctive and intricate landscape.
- **Heathland landscapes at Poor's Allotment and semi-natural, unimproved grasslands associated with settlements on former commons**, highly valued for their nature conservation interest.

Landscape Sensitivity

The plateau landscapes are visually sensitive due to their elevated, open and relatively exposed character and sparse settlement patterns, particularly where landscape change may be viewed over a wide area. However, existing woodlands offer some screening in places and as such, may reduce visual sensitivity where present. Certain highly distinctive and/ or valuable landscapes, such as St. Briavels Common and Poors Allotment are considered particularly sensitive to change.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Incremental expansion and infilling of existing scattered settlements such as St Briavels Common and development on the open plateau.	• Erosion of distinctive dispersed settlement character and network of small fields. • Loss of characteristic features such as species rich meadows, woodlands and narrow lanes. • Development in rural areas and in currently open areas of the landscape.	* Conserve the distinctive dispersed character of St Briavels Common and its pattern of small detached cottages and smallholdings. • Conserve the open character of the plateau landscape and consider the impact of development on long distance views.	• Extent and distribution of species rich meadows managed using traditional techniques. • Number of traditional 'squatter cottages' associated with small holdings.	
Minor road improvements in the vicinity of St Briavels Common.	• Urbanising influence and standardisation of distinctive lanes in St Briavels Common.	• Conserve distinctiveness of rural road network. • Seek to protect the narrow, winding character of these roads and conserve roadside hedges and stone walls with regard to minimum safety requirements.		
New quarrying operations in the Carboniferous limestone.	• Erosion of local perceptions of peace and tranquillity as a result of mining operations and increased quarry traffic	• Maintain operations at existing quarries in favour of opening new quarries. • Encourage mitigation schemes that reflect and enhance local landscape character by the use of appropriate species of trees and shrubs and patterns of planting. • Create new landscapes in former quarry workings where development would not compromise existing nature conservation or heritage features.	• Number of new mineral works permitted.	Further survey and recording of archaeological features on the plateau.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Decline in the agricultural sector, aging population of smallholders using traditional management regimes, and the influence of hobby farmers and horsiculture particularly in St Briavels Common	• Fragmentation of land uses. • Decline in traditional farming techniques resulting in the loss of species rich meadows. • Features typical of 'horsiculture' land uses such as jumps, fences and poached fields introduced to the landscape. • Reversion of former smallholders pastures to scrub.	• Promote the restoration of hedgerows and stone walls giving priority to those close to settlements, roads and footpaths should be regarded as a priority. * Conserve existing species rich meadows. • Encourage traditional farming techniques amongst small holders and hobby farmers and seek to control the adverse effects of horsiculture.	• Area of species rich grassland managed using traditional techniques. • Length of dry stone walls. • Length of hedgerows. • Area of scrub encroachment onto former smallholdings.	Assistance with maintenance of stone walls. Clearance of encroaching scrub.
Intensification of agricultural operations on the plateau.	• Field amalgamation and hedgerow loss. • Construction of large industrial scale barns and outbuildings, typically using modern materials.	• Conserve and enhance existing hedgerow network and landscape pattern. • Consider the scale and siting of new farm buildings with regard to the impact on perceptions of openness. • Conserve long distance views across the plateau from prominent vantage points.	• Number of new large-scale agricultural buildings.	
Diversification away from traditional farming into provision of recreational/ tourist facilities such as quad bike tracks and clay pigeon shooting.	• Erosion of characteristic landscape features and introduction of new elements that may detract from rural character.	• Seek to conserve rural character and landscape features such as tree belts, copses and hedgerows as part of diversification schemes. • Consider the visual impact of new development and the ability to provide landscape mitigation which is consistent with landscape character.	• Number of new recreational sites.	

4 WOODED SCARP AND LOWER SCARP SLOPES

Character Areas

4a Lydney Park
4b Netherend Farmed slopes
4c Woolaston Scarp

Key Environmental Features to Conserve and Enhance

- **Steep, exposed and elevated scarp slope cloaked in semi natural broadleaved woodland and coniferous plantations** forming a dramatic relief feature visible from the Cotswolds escarpment and a dark wooded backdrop to neighbouring lowlands.
- **Generally poor soils and steep sloping relief of the scarp slopes well suited to pasture** which is the dominant agricultural land use.
- **Distinct sense of elevation and dramatic panoramic views over the Severn Vale to the Cotswold Escarpment** are possible from open areas of the upper scarp contrast to more intimate landscapes at lower elevations.
- **Gentler landform on lower slopes below the spring line** dissected by numerous streams draining the neighbouring plateau and better suited to more intensive settlement and agriculture. The lower scarp slopes are characterised by pasture and some arable fields on areas of calcareous soils.
- **Distinctive settlement patterns** including linear settlements bordering streams on the lower scarp slopes and dispersed pattern of whitewashed stone and brick dwellings on former commons and bordering roads traversing the scarp.
- **Roads and tracks, surrounded by dense vegetation, run parallel to streams and link the plateau and the lowlands across the scarp slope.** These are distinctive features of the scarp and are likely to preserve the course of ancient, possibly prehistoric tracks.
- **Historic designed parkland at Lydney Park is a significant landscape feature** containing a number of important archaeological sites and extensive areas of ornamental planting and woodland.

Landscape Sensitivity

The wooded upper scarp slopes are a distinctive, highly visible landscape and as such, these slopes are visually sensitive to change particularly where this would introduce built elements to otherwise agricultural landscapes, or interrupt the existing balance of rough pasture and broadleaved woodland on the upper scarp slopes.

The lower scarp slopes and the wooded area to the west of Lydney at Lydney Park, are visually less prominent and are more widely settled, and as a result, are considered less sensitive than the upper scarp slopes.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Expansion of existing linear settlements on the lower scarp slopes.	• Erosion of distinctive character of linear settlements. • Encroachment of development onto upper scarp slopes and into valleys draining the scarp towards the Severn. • Upgrading of minor roads and lanes in areas of new development and introduction of suburbanising features such as mini roundabouts, street lighting and kerbs.	* Conserve the distinctive linear character of settlements on the lower scarp slopes and their existing relationship to landform and landscape features. • Conserve the distinctive south east – north west orientation of linear villages on the lower scarp slopes. • Conserve rural road network and counteract the impact of degraded urban edges with woodland planting that links to existing scarp slope woodlands. * Seek to restore existing stone buildings and structures within settlements in preference to new built development. * Avoid development that may restrict or obscure views to the upper scarp slopes from the A48 and landscapes to the east.	• Number of new residential properties permitted on lower scarp slopes. • Number of redundant stone buildings.	Undertake photographic survey of key views to and from the scarp.
Ad hoc development such as new large single dwellings and barn conversions on the upper scarp slopes that compromise rural landscape character.	• Upgrading of minor roads and lanes in areas of new development and introduction of suburbanising features such as mini roundabouts, street lighting and kerbs. • Erosion of distinctive dispersed settlement character on the scarp slopes. • Proliferation of suburban building styles/ materials and the introduction of ornamental garden plants and boundary features.	* Conserve the distinctive dispersed character of settlements on the scarp slopes. * Seek to restore existing stone buildings and structures in preference to new built development. * Maintain the sense of openness and consider the impact of built development on views to and from the scarp slopes. * Seek to control the proliferation of building styles and materials.	• Number of historic stone buildings converted and/or restored to residential use.	

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Changes in Woodland cover as a result of piecemeal removal and/ or new planting.	• Degradation and loss of woodland habitats and wildlife corridors. • Impact on the wooded character of the scarp and lower scarp slopes. • Planting new coniferous plantations and area of broadleaved woodland obscuring long distance views over the Severn Vale.	• Conserve, enhance and restore existing woodlands on the upper scarp slopes. • Conserve existing woodlands on the lower scarp slope and seek to create woodlands and associated riverine habitats along the course of streams draining the scarp. • Consider the impact of woodland planting and seek to maintain existing views across the Severn Vale.	• Area of deciduous semi ancient natural woodland. • Area of new woodlands created that form part of green networks.	Seek opportunities for the creation of community woodlands.
Decline in grazing stock.	• Scrub encroachment on steep hill sides	• Conserve open areas of pasture and limit scrub encroachment by increased sheep grazing or management.	• Area of scrub on hillsides.	
Intensification of arable farming on the lower scarp slopes	• Hedgerow removal in order to accommodate large scale farm machinery.	• Conserve and enhance hedgerow network defining distinctive pattern of large hedged fields in the vicinity of Woolaston.	• Length of hedgerows.	Map and monitor the existing hedgerow pattern around Woolaston.

5 WOODED SYNCLINE AND SETTLED FOREST MARGIN

Character Areas

5a Forest Core
5b Lydbrook and Ruardean Woodside
5c Cinderford and Ruspidge
5d Soudley Brook
5e Littledean Ridges and Valleys
5f Ellwood
5g Bream and Yorkley

Key Environmental Features to Conserve and Enhance

- **Distinctive syncline structure occupied by extensive areas of coniferous plantation and deciduous woodland** creating secretive landscape with strong perception of remoteness and wilderness despite close proximity of development.
- **Dense vegetation cover** obscuring topographic features and localised differences in underlying geology as well as former mineral working sites and remnants of the areas industrial past.
- **Type, age and management regime of different woodlands varies** resulting in a wide variety of experiences in the forest.
- **Linear ponds and lakes along streams bordered by verdant lawns and riparian habitats** offering important respite within the woodlands, valued habitats and open areas ideal for picnicking.
- **Long history of mining, industrial activity and forest management.** Remnants are still visible in the landscape and tell the story of the areas industrial heritage.
- **Almost continuous belt of development encircling the central forest** reflecting industrial history of the area. Dense woodland often forms a backdrop to settlements and limits outward expansion. This has resulted in distinctive linear spread and the coalescence of numerous villages and towns into an almost continuous ring.

Landscape Sensitivity

Despite dense woodland cover, the central forest core is highly sensitive, particularly where change would result in the loss of woodland and compromise the peace and tranquillity for which the central forest core is well known and valued. Areas of former mining or industrial activity are perhaps less sensitive provided that change is sympathetic to features of industrial heritage value or nature conservation interest.

The forest fringe settlements are of limited visual sensitivity. However, change in these areas should recognise the unique character of each settlement, and the importance of areas of woodland and open space between settlements. Significant opportunities for restoration of derelict or damaged landscapes exist in these areas.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
New employment and housing land with associated infrastructure on the fringes of Cinderford.	• Potential visual impact of large scale industrial buildings on the fringes of existing settlement and the forest core. • Loss of existing landscape features such as pasture, trees and hedges.	* Promote high quality residential development that respects local townscape and landscape character and reflects local vernacular building styles, layouts and materials. * Conserve existing landscape features (trees, hedges) as intrinsic part of new development. * Encourage a positive approach to new development and seek opportunities to create exciting new character in areas of degraded or declining landscape.	• Areas of new peripheral development determined against baseline aerial photographic record.	
Incremental expansion and infilling of existing forest fringe settlements.	• Erosion of distinctive dispersed settlement layout and 'industrial age' character.	* Conserve the distinctive dispersed and industrial character of forest fringe settlements. * Conserve the existing open spaces between settlements to avoid further coalescence.		
Development of abandoned mineral working sites and colliery tips.	• Loss of features of industrial heritage such as pit buildings • Loss of regenerating scrub woodland which may be of nature conservation value. • Loss of open grassland and heathland habitats of nature conservation value.	* Promote appropriate, sensitive development which will add value to the local economic and social well being of the district, which can: i) Conserve, enhance and restore features of industrial heritage and; ii) Conserve features of nature conservation and landscape interest. • Where appropriate seek opportunities for innovative development that creates new landscape character in areas of degraded or declining character.	• Number of existing heritage sites retained.	Provide information on the location of abandoned mineral sites and colliery tips.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Increase in fly tipping of domestic waste in areas close to the forest edge.	• Degradation of the landscape and landscape features at the forest edge.	• Conserve and enhance the unspoilt character of the forest edge. * Improve local provision for disposal of domestic waste and litter.		Encourage local initiatives for clearance of debris at the forest edge.
Decline in commoning following the foot and mouth epidemic.	• Increased bracken encroachment into open areas of the forest and along woodland rides.	• Conserve numbers of common flocks in the forest.	• Number and size of common flocks in the forest.	Consider promotional material on importance of sheep in management of the landscape.
Increased tourism and recreation in the central forest.	• Erosion of perceptions of tranquillity and remoteness away from main visitor sites. • Proliferation of signage and furniture. • Increased pressure on sensitive habitats. • Increased erosion of forest tracks.	• Seek to conserve and enhance perceptions of remoteness and tranquillity throughout the central forest. * Conserve and restore features of the forests industrial heritage. • Conserve and enhance areas of high nature conservation value.	• Number of new recreational sites built.	
Forest Enterprise Woodland Restoration Programme and Forest Design Plan	• Restructuring existing forests to ensure species composition of woods are more closely related to local geology, landform and locality. • Loss of open areas within forest.	• Promoting continued conservation and enhancement of the forest. • Maintaining a minimum 10% permanently open habitats within forested areas.	• Species composition of woodlands.	

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Minor road improvements in rural areas surrounding forest fringe settlements and within the central forest core	• Standardisation of forest roads and loss of existing grazed verges and potential loss of trees. • Introduction of 'urban' roadscape features such as kerbs, lighting and roadside furniture.	• Conserve existing character of forest road network with regard to minimum safety requirements.		
Climate change	• Long periods of dry weather may result in an increased risk of upland forest fires.	• Monitor the long term effects of climate change on the forest.		

6 UNWOODED VALE

Character Areas

6a The Severn Vale - Stroat and Sedbury
6b The Severn Vale
6c The Leadon Vale

Key Environmental Features to Conserve and Enhance

- Soft rolling landscape formed from the district's youngest rocks and thick deposits of drift geology forming a wide, open, sparsely settled agricultural landscape of productive pastures, arable fields and orchards.
- Extensive areas of wet meadow and floodplain bordering numerous streams and rivers containing distinctive wetland species and used for rough, seasonal pasture.
- Well maintained, and often ancient hedgerows forming an extensive network throughout the vale, defining field patterns and indicating different episodes of enclosure.
- Numerous mature field and hedgerow oaks and small copses and shelter belts giving the impression of a well treed landscape.
- Quiet winding lanes linking numerous isolated farms and hamlets emphasising the rural character of the landscape.
- Remnants of medieval moated sites, ridge and furrow and water meadows indicating a long history of settlement and farming in the vale.
- Distinctive timber clad and half timbered barns associated with many farmsteads representing the local vernacular building style and are important historic features.
- Timber and brick are the prevalent building materials used throughout the vale indicating the lack of suitable building stone.

Landscape Sensitivity

The rural, sparsely settled Unwooded Vale is visually sensitive to change particularly, in agricultural areas where there is a notable absence of development. In these rural landscapes, hedgerows, mature trees, small copses and shelterbelts define a strong landscape framework. These elements are important landscape elements contributing to character and as such are considered particularly sensitive to change.

Vale landscapes bordering uplands such as the Wooded Hills landscape type to the west are particularly sensitive as these areas are often highly visible in the landscape and difficult to screen from elevated vantage points.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
New housing and employment on the fringes of Newent.	• Expansion of urban area into the rural landscape and loss of characteristic features (pasture, hedgerows etc).	* Conserve existing landscape features as part of new development. * Seek opportunities to create an attractive fringe to Newent through new development. * Create attractive housing developments that respect local townscape and landscape character and reflect local vernacular building styles, layouts and materials.	• Areas of new peripheral development determined against baseline aerial photographic record.	
Diversification of farm holdings due to economic pressure	• Conversion of farm outbuildings and field barns to recreational or business uses. • Move towards arable production on small mixed farms resulting in the removal of hedgerows and/or loss of former pasture.	* Conserve character of barns/ agricultural buildings and their setting when converted to domestic or small business use.* * Promote the use of traditional materials and building styles in barn conversions.*	• Number of barn conversions. • Area of land in arable use.	
Intensification of arable and dairy farms.	• Decline in traditional farming techniques resulting in a loss of species rich meadows. • Intensification of dairying operations resulting in farm amalgamation, the construction of large industrial style dairying sheds. • Increased risk of pollution of water courses from slurry storage and run off. • Felling of shelterbelt and farm woodlands and woodlands and trees along watercourses.	• Promote hedgerow restoration giving priority to those close to settlements, roads and footpaths. • Conserve existing species rich meadows and encourage traditional farming techniques. • Enhance quality of local rivers and streams by introducing buffer strips. • Conserve, enhance and replant farm woodlands. • Conserve and enhance riparian habitats and riverside trees such as pollarded willows and coppice.	• Area of species rich grassland managed using traditional techniques. • Length of hedgerows. • Number and diversity of indicator species in the Severn, Leadon and tributary streams.	Involvement in hedge restoration projects. Establish a community wildlife record for the River Leadon.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Grubbing out and loss of orchards.	• Loss of characteristic feature of the vale landscape and associated habitats.	• Conserve and enhance existing orchards. • Create new orchards wherever viable.	• Area of orchards.	
Climate change.	• Increase in the severity and frequency of storm surges and flooding along low lying areas of the vale bordering the Severn.	• Protect unstable river banks and valley sides to avoid erosion as a result of storm surges and initiate sensitive flood defence works.	• Monitor habitats and species in the river for signs of change.	

7 DRAINED RIVERINE FARMLAND AND GRAZED SALT MARSH

Character Areas

7a Pillhouse Drained Farmland
7b Aylburton Newgrounds
7c Awre Drained Farmland
7d Westbury on Severn Drained Farmland
7e Upper and Lower Dumball

Key Environmental Features to Conserve and Enhance

- Low lying, windswept and generally treeless flat landscape of productive improved cattle pastures providing extensive uninterrupted views for great distances over the Severn to the Cotswolds Escarpment.
- Distinctive pattern of hedgerows dividing the landscape up into large geometric fields. Whilst not a prominent feature, where present, these give the landscape a distinctive 'large scale' grain.
- Inundation grasslands and drainage ditches sometimes lined with pollarded willows forming important semi natural wetland habitats valued by over-wintering birds.
- Remote and largely inaccessible landscape. There are few roads and access is often only possible along a small number of narrow lanes and footpaths.
- Generally unsettled landscape emphasising the landscapes remote character. Farms and isolated houses tend to be located at the end of dead end tracks bordering the drained farmland.
- Potentially rich archaeological resource buried beneath the reclaimed farmland may provide clues as to land use and settlement prior to drainage and improvement.
- Numerous 'Pills' and wharves at the outer edge of the drained farmland are evidence of the importance of riverine trade in the past.
- Modern encroachment by industrial development is evident close to Lydney which erodes the landscapes remote character.
- Riverside extent of the grazing land often marked by a sea wall which acts as a distinct boundary between river and land. However, grazed saltmarsh is sometimes sited on the riverside of the sea wall, blurring this distinction.

Landscape Sensitivity

With the exception of the industrial area to the south of Lydney, these flat, visually open and remote landscapes are highly sensitive, particularly in areas where there are open views across the river to the Cotswold escarpment and east Gloucestershire. The drained farmland is also typically sparsely wooded further increasing it's open character and visual sensitivity.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Intensification of dairy farms.	• Removal of hedgerows in favour of post and wire fencing. • Intensification of dairying operations on a small number of farms resulting in farm amalgamation, the construction of large industrial style dairying sheds and increased risk of pollution from slurry storage. • Large herds causing poaching and general landscape degradation. • Improvement of drainage ditches resulting in the loss of habitats and pollarded willows.	• Promote the conservation and restoration of hedgerows. Those marking ancient boundaries should be regarded as a priority. • Conserve and enhance drainage ditch habitats and encourage appropriate tree planting/ management. * Seek to conserve the sense of openness of the landscape and consider the impact of any built development on views across the landscape towards the Severn.	• Number of pollarded Willows.	Parish Map of Pollarded Willows.
Construction of wind turbines	• Introduction of visually prominent structures to rural landscapes which may interrupt long distance views across and along the Severn. • Consequential infrastructure improvements may compromise perception of remoteness.	* Conserve the open, remote character of the landscape. * Consider the impact of wind turbine development on views across and along the Severn.	• Number of wind turbines.	
Climate change.	• Increase in the severity and frequency of storm surges and flooding along low lying areas bordering the Severn. • Requirement to improve drainage ditches resulting in the loss of habitats.	• Conserve flood defences and initiate new sensitive flood defence works where necessary that avoid significant engineered structures along the river edge. • Seek to conserve and enhance habitats as part of improvements to existing drainage ditches. • Seek opportunities for wetland habitat creation.	• Monitor habitats and species in the river and along drainage ditches for signs of change.	Establish a community wildlife record for the River Leadon

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Increased river tourism.	• Increased boat trips along the river, particularly in high powered craft, may result in severe erosion of bank-side landscapes and disturbance to habitats. • Pressure for new marinas and quays may result in built development at the water's edge and the requirement for new or improved infrastructure. • Increased public access to the riverbank could be damaging to wintering and breeding birds.	* Conserve the remote and un developed character of drained farmland bordering the Severn. * Promote the restoration of derelict 'Pills' and wharves for use by modern riverine traffic. • Ensure river tourism take account of areas of wildlife interest, coastal habitats and bird populations.	• Number of marina and waterfront developments permitted. • Bird populations in key locations.	

8 LITTORAL SANDS AND ROCK OUTCROPS

Character Areas

8a The Severn Sands

Key Environmental Features to Conserve and Enhance

- **Broad landscape of open water, sandbanks, mudflats and rock outcrops** contrasting strongly to landscapes elsewhere in the district.
- **Temporal landscape** that shifts and changes throughout the day.
- **Open landscape** with uninterrupted views over great distances.
- **Industrial sites bordering the river are often prominent in views to the east.** These contrast to views from the river to the Forest of Dean which retain, on the whole, a strongly rural character.
- **Cliffs and beaches bordering the river along many stretches** are valued sites to view local geological strata and hunt for fossils.
- **Riverine and estuarine habitats are rich in wildlife** and are noted for their invertebrate, fish and bird populations.
- **The river is a potentially rich archaeological resource.** The foreshore may yield evidence of human activity in the area as far back as the Mesolithic and waterlogged sediments may have preserved organic material such as boat timbers.
- **The remains of numerous rusting river craft, wharves and quays line the banks of the river** indicating the rivers importance as a trade route throughout history. Evidence is likely to remain of riverside structures of great antiquity.
- **Severn Bore is a well known feature of the river.** It is a unique physiographic regime with the second highest tide in the world.

Landscape Sensitivity

The unique shifting and temporal open landscapes on the Severn are highly sensitive to any form of change that may compromise their character, wildlife value and archaeological potential.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Increased river tourism.	• Increased boat trips along the river, particularly in high powered craft, may result in severe erosion of bank-side landscapes and disturbance to riverine habitats. • Pressure for new marinas and quays may result in built development at the waters edge and the requirement for new or improved infrastructure. • Desire to 'tidy up' the landscape may result in the removal of rusting and derelict river craft which add considerably to the character of the river.	* Conserve the remote and un developed character of drained farmland bordering the Severn. * Restore derelict 'Pills' and wharves for use by modern riverine traffic. • Conserve derelict river craft moored at the river bank where these contribute to the character of the river.	• Number of marina and waterfront developments permitted.	
Climate change.	• Increase in the severity and frequency of storm surges may result in the disturbance of stable mud and sand banks within the river channel.	• Conserve flood defences and initiate new sensitive flood defence works where necessary that avoid significant engineered structures along the river edge.	• Monitor habitats and species in the river for signs of change.	

9 UNDULATING FARMLAND

Character Areas

9a. Bledisloe Hundred

Key Environmental Features to Conserve and Enhance

- **Convex hills with broad rounded tops and often steep sides** creating a distinctive landscape contrasting to the gentle landscapes bordering the Severn and the strong relief created by the Ridges and Valleys landscape type.
- **Hills are generally orientated south west - north east** giving the landscape a distinctive grain, further emphasised by the alignment of the neighbouring ridge and the River Severn.
- **Strong pattern created by neat, often ancient, hawthorn hedges** emphasising the undulating landform.
- **Deciduous woodlands and copses restricted to narrow, steep sided streams** are a distinctive landscape feature and offer 'green corridors' for wildlife to move through the landscape.
- **Relatively inaccessible landscape** with a network of narrow, winding, hedged lanes linking rural communities and hilltop farms.
- **Place names are strongly related to landform** indicating a long history of farming and settlement.
- **Mixed arable and pasture farming are the prominent land uses** and impart a strong agricultural character to the landscape.
- **Sorbus hybrids on river cliffs at Gatcombe** noted as rare specimens.

Landscape Sensitivity

Prominent hill tops within this undulating rural landscape are visually sensitive due to their high visual prominence from neighbouring landscapes to the north and the A48(T). By contrast, the lower slopes are less sensitive due to the screening effects of landform and vegetation.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Housing and employment development on the eastern fringe of Lydney	• Expansion of urban area into the rural landscape and loss of characteristic features (pasture, hedges etc).	* Conserve existing landscape features such as streams and hedgerows as an integral part of new development. * Use new development as an opportunity to improve the eastern fringe of Lydney and its relationship to the wider landscape. * Seek to minimise the visual impact of large scale buildings by careful siting, use of materials and suitable mitigating planting.	• Areas of new peripheral development determined against baseline aerial photographic record	
Introduction of telecommunications masts on high hills bordering the A48 (T)	• Introduction of visually intrusive 'urban' features to rural landscapes.	* Conserve rural character of the undulating farmland and local villages by siting new masts away from visually prominent locations. * Seek opportunities to minimise impact by locating new masts on existing structures.	• Number of telecommunication masts.	
Intensification of dairy farms.	• Farm amalgamation, the construction of large industrial style dairying sheds and increased risk of pollution from slurry storage. • Felling of shelterbelt and farm woodlands and riverside woodlands and trees.	* Seek to conserve and restore existing hedgerows. Those close to settlements, roads and footpaths should be regarded as a priority. • Enhance quality of local rivers and streams by introducing buffer strips. • Conserve and enhance woodlands bordering streams. • Encourage the creation of new farm woodlands.	• Length of hedgerows. • Number of new large scale dairy sheds.	
Piecemeal residential development along the A 48(T).	• Introduction of built elements adjacent to road resulting in the screening of views to the Severn.	• Consider the impact of new buildings on views to the Severn from the A48(T).	• Number of new buildings along the road edge.	

10 RIDGES AND VALLEYS

Character Areas

10a. Allaston Ridge
10b. Littledean Ridge
10c. Edge Hill
10d. Breakheart Hill

Key Environmental Features to Conserve and Enhance

- Distinctive rounded ridge profiles rising above the neighbouring vale landscapes and bordering the wooded syncline form a prominent landscape feature visible from the Cotswold escarpment and low lying landscapes bordering the Severn.
- The ridges are orientated north south which is emphasised by the orientation of hedgerow patterns and small woodland copses clinging to steeper slopes. The orientation of the hills and features gives the landscape a strong grain.
- Mosaic of mixed farmland and woodland cloaks the ridges forming a textural backdrop to the surrounding lowlands. Extensive coniferous plantations are evident on the ridges echoing the landscapes of the Wooded Syncline landscape type.
- Distinctive 'squatter' settlements on the upper ridge slopes close to existing woodland and the line of the Crease Limestone indicating sporadic settlement of the landscape during the district's industrial age.
- Extensive views over the surrounding lowlands are possible from exposed ridge top locations and act as reminders of the ridges strategic importance throughout history.
- A number of redundant quarries are located throughout the landscape. Many of those in which regeneration has occurred are recognised for their nature conservation value and designated as SSSI.
- Numerous transportation routes follow valleys created by streams and brooks as they weave through the ridges. These valleys are often the site of linear settlements which lie alongside roads.
- Range of species rich grassland habitats, heath and bog, old orchards and ancient semi natural woodlands are noted for their nature conservation value.

Landscape Sensitivity

The distinctive, often remote, wooded ridgelines are highly visible from many areas and as such, are sensitive particularly where change would introduce built elements to otherwise agricultural or forested landscapes. Existing ridgeline squatter settlements such as Viney Hill and Old Croft are sensitive to large scale and incremental development which would compromise the character and dispersed form of these settlements. By contrast, the valleys and lower ridge slopes are visually contained and more heavily settled and are therefore less visually sensitive.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Introduction of telecommunications masts on high hills particularly those bordering the A4138 and A4151	• Introduction of visually intrusive 'urban' features to rural landscapes.	* Conserve rural character of the ridges by siting new masts away from visually prominent locations. • Seek opportunities to minimise impact by locating new masts on existing structures.	• Number of masts.	
Expansion of existing valley floor settlements.	• Intrusion of new built development into rural landscapes. • Expansion of built up areas beyond the lower ridge sides and valley floor onto visually prominent upper ridge slopes. • Infill development eroding dispersed character of some settlements along main roads.	* Conserve the distinctive linear character of the valley floor settlements and avoid siting new built development on visually prominent ridge sides. * Conserve the landscape setting of Mitcheldean and Drybrook. • Seek to enhance the setting of valley settlements through woodland planting that links to existing ridge-side woodlands. • Conserve stretches of presently undeveloped valley to prevent amalgamation of valley floor settlements.	• Location and extent of new development permitted. • Distance between built edges of settlements.	Preparation of Village Design Statements.
Piecemeal development within and surrounding existing dispersed settlements on ridge sides.	• Erosion of distinctive dispersed settlement character.	* Conserve the distinctive dispersed character of the ridge side settlements. • Seek to conserve the strong pattern created by hedges and woodlands surrounding smallholdings. • Seek to maintain the sense of openness on the ridges and consider the impact of development on long distance views.	• Changes to urban form of settlements determined from aerial photographs.	Local mapping of settlement patterns.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Changes to woodland structure.	• Alteration to existing balance of open landscapes to areas of broadleaved woodland and coniferous plantation. • Degradation and loss of woodland habitats and wildlife corridors.	• Conserve enhance and restore woodlands along ridge tops. • Seek to increase proportion of native broadleaf woodland. • Conserve small woodland copses on steeper slopes • Consider the impact of new woodland planting on long distance views from viewpoints. • Seek to conserve the pattern of small copses along narrow streams and valleys. • Seek to create new wet woodlands along narrow streams and valleys.	• Number of small copses on steeper slopes. • Overall percentage of broadleaved woodland.	Seek opportunities for funding to deliver woodland planting along streams.
Agricultural Intensification	• Loss of hedgerows resulting in a decline in characteristic medium scale field pattern.	• Seek to conserve existing hedgerows and hedgerow trees. • Promote new hedgerow planting along degraded field boundaries to reinstate medium scale field patterns where applicable.	• Length of hedgerows.	

11 WOODED HILLS

Character Areas

11a. May Hill and Outliers
11b. The South Malvern Foothills

Key Environmental Features to Conserve and Enhance

- **Varied, often steeply sloping, hilly landform rising above the neighbouring vale landscapes** forming prominent landscape features visible from great distances.
- **Individual hills form distinctive and recognisable silhouettes when viewed from the neighbouring lowlands** providing local landmarks and convenient orientation points.
- **Wide views over surrounding farmland** indicating the relatively high elevation and prominence of some hills.
- **Wooded valleys contain quick flowing streams** offering contrasting landscapes to exposed hill tops and dynamic features of otherwise static landscapes.
- **Large, often interconnecting, areas of deciduous woodland and coniferous plantations** providing green corridors through which wildlife can move freely.
- **Assarted hedged fields form interlocking pattern with broadleaf woodlands**, are an important reminder of medieval settlement patterns on the wooded hills and create intimate, small scale landscapes.
- **Areas of rough unimproved and semi improved grassland and scrub evident, particularly on steeper slopes** indicating the marginal nature of some areas of the landscape to farming.
- **Dispersed pattern of buildings with occasional clusters associated with assarting or squatter settlements** are distinctive features on some hillsides.

Landscape Sensitivity

The Wooded Hills are generally remote in character but highly visible from the surrounding landscape and are therefore particularly visually sensitive.

The valleys and existing settlements are perhaps of reduced sensitivity due to their visual seclusion, developed character and the influence of existing infrastructure. However, many settlements retain a distinctive dispersed character which should be conserved.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Expansion and infilling of existing scattered settlements on hillsides.	• Erosion of distinctive dispersed settlement character. • Upgrading of minor roads and lanes in areas of new development and introduction of suburbanising features such as mini roundabouts, street lighting and kerbs.	* Conserve the distinctive dispersed character of the hillside settlements and rural road network, particularly the strong pattern created by narrow, winding hedged lanes between and linking smallholdings. • Seek to retain distinctive field patterns that reflect assarting and squatter settlement. * Promote the use of local stone in the construction of new buildings and extensions to existing farmsteads and cottages.	• Number of new residential developments using locally dominant materials.	
A decline in woodland cover due to a combination of neglect, grazing and occasional felling.	• Degradation and loss of woodland habitats and wildlife corridors.	• Seek to conserve and enhance areas of existing woodland. Consideration should be given to preserving their irregular forms and relationship to landform. • Conserve existing woodlands along narrow streams. • Seek to create wet woodlands and associated riverine habitats along the course of the river and tributary streams. • Seek to reconfigure existing coniferous plantations through management and planting to enhance their relationship to landform (i.e. avoid rectangular woodland blocks).	• Area of woodland cover.	Parish Map of broadleaved woodland cover and coniferous plantation.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Grubbing out and loss of orchards.	• Loss of characteristic feature of the vale landscape and associated habitats.	• Conserve orchards and orchard trees. Seek opportunities for the creation of new orchards, where viable on lower hillsides. Priority should be given to sites of former orchard.	• Number of production orchards.	
Diversification from dairy and or arable farming and the establishment of large pig farms.	• Degradation of large tracts of landscape and the removal of hedgerows in favour of post and wire fences.	* Seek to conserve hedgerows and hedgerow tress and promote new hedgerow planting to replace fences. • Limit scale of pig farms and site away from visually prominent locations. • Seek to retain distinctive field patterns that reflect assarting and squatter settlement.	• Length of hedgerows/ Post and wire fences in sample area.	
Introduction of telecommunications masts on high hills particularly those bordering the A4136 and A40 (T)	• Introduction of visually intrusive 'urban' features to rural landscapes.	* Conserve rural character of the hills by siting new masts away from visually prominent locations. Seek opportunities to minimise impact by locating new masts on existing structures. • Conserve views over surrounding farmland.	• Number of new masts.	

12 FLOODPLAIN FARMLAND

Character Areas

12a. Walmore Common

Key Environmental Features

- **Flat floodplains subject to annual winter flooding** providing fertile farmland and productive pastures.
- **Steep landform defines the outer edge of the floodplain** creating a natural 'amphitheatre' which limits long distance views.
- **Range of habitats including unimproved grassland, improved neutral grassland and inundation grassland** representing the most important wetland meadow and bird site in the district.
- **Floodplain features such as drainage ditches and areas of standing water** providing visual interest and valuable habitats.
- **Mature spreading trees are a distinctive element of the floodplain** providing shelter for grazing cattle. Dead wood provides important habitats for a range of invertebrates.
- **Pastures overlie the most significant area of peat in the County** which is likely to yield organic material and archaeological finds that may provide clues as to past land use in the vicinity of the area.
- **Roads and settlement occupy higher ground surrounding the floodplain** preserving it as a remote 'island' of within the wider vale landscape.

Landscape Sensitivity

The nature conservation value and archaeological potential of the landscape contribute to the floodplain's high sensitivity to change.

The landscape is also devoid of built development and infrastructure and as such the introduction of these features should be avoided.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Intensification of dairy farming.	• Removal of hedgerows and hedgerow trees in favour of post and wire fencing. • Large herds causing poaching and general landscape degradation. • Improvement of drainage ditches resulting in the loss of habitats and desiccation of archaeological remains.	• Conserve pattern of well-maintained hedgerows and hedgerow trees, particularly Oaks, and seek opportunities for new tree planting. • Conserve existing species rich meadows and encourage traditional farming techniques. • Conserve and enhance drainage ditch habitats. Ensure improvements to drainage ditches conserve or enhance habitats or incorporate restoration of habitats lost as a result of improvement.	• Number of Oak trees. • Area of species rich meadow.	Mapping hedgerow pattern in sample area.
Climate change.	• Increase in the severity and frequency of storm surges and flooding along low lying areas bordering the Severn.	• Ensure management regimes allows for annual winter flooding to maintain wildlife value and water levels to avoid peat desiccation. • Seek to maintain Walmore Common as an important refuge for over wintering birds.	• Monitor habitats and species in the river for signs of change.	

13 VALE HILLOCKS

Character Areas

13a. Corse Wood Hill
13b. Woolridge

Key Environmental Features to Conserve and Enhance

- **Distinct limestone hills and ridges rising above the surrounding landscape** forming discreet areas of raised topography amidst the extensive rolling vale.
- **Mosaic of pasture, scrub and covers the hillocks** forming a textural backdrop to the surrounding lowlands. Scrub encroachment and narrow bands of broadleaved woodland are a significant feature on steeper hillsides that cattle cannot graze.
- **Extensive area of former common or waste land enclosed to form patchwork of regular** geometric fields indicating that the hillocks were once peripheral to intensive agriculture.
- **Historic associations with sheep farming, cider production and pear orchards** indicated by local place name evidence.
- **Main roads border the lower slopes of the hills** demarcating the boundary of the undulating vale landscapes beyond.
- **Long distance views over the surrounding lowlands are possible from footpaths and roads crossing the hills** indicating the exposed, elevated nature of the landscape.

Landscape Sensitivity

These prominent and distinctive hill tops landscapes are visually sensitive due to their high visibility and generally remote character. A general lack of extensive woodland cover further increases their visual sensitivity.

The lower slopes of the hillocks are of reduced sensitivity, being visually less prominent and more strongly influenced by built development and infrastructure.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Increasing reliance on dairy herds over sheep	• Scrub encroachment on steep hill sides unable to be grazed by cattle.	• Conserve open areas of pasture and limit scrub encroachment by increased sheep grazing or management.	• Area of scrub on hillsides.	
Agricultural diversification	• Establishment of visually obtrusive recreation initiatives such as motocross/ scrambling leading to degradation and erosion of highly visible hill slopes.	• Conserve open areas of pasture on highly visible hill slopes. • Seek to control the further proliferation or intensification of recreational uses where these would led to further landscape degradation.	• Number of new recreational sites.	
A decline in woodland cover due to a combination of neglect and occasional felling.	• Degradation and loss of woodland habitats and wildlife corridors.	• Promote the conservation and restoration of private woodlands. • Maintain areas of broadleaf woodland, particularly the distinctive narrow woodland bands on steeper slopes.	• Area of broadleaf woodland.	Active involvement in woodland management.
Introduction of telecommunications masts on hills, particularly those bordering the A417.	• Introduction of visually intrusive 'urban' features to rural landscapes.	* Conserve rural character of the hills by siting new masts away from visually prominent locations. Seek opportunities to minimise impact by locating new masts on existing structures. • Conserve extensive views over the neighbouring vale landscapes.	• Number and location of new masts permitted.	

14 LOW HILLS AND ORCHARDS

Character Areas

14a. Bromsberrow Heath
14b. Botloe's Green

Key Environmental Features to Conserve and Enhance

- Underlying soft sandstone geology has been eroded to form a discreet domed unit of low, convex, interlocking hills rising above the undulating vale.
- Wide views over farmland possible from the hills on the periphery of the landscape contrasting to sense of enclosure between hills and along river valleys in the heart if the Low Hills and Orchards landscape type.
- Fertile sandy soils are prevalent and used primarily for market gardening and orchards although mixed pasture and arable farming is also evident.
- Unimproved and semi improved neutral grasslands generally associated with hedgerows and old orchards. Regular pattern of large hedged fields imparting a strong pattern across the hills and emphasise landform.
- Extensive areas covered in glass houses, vineyards and poly tunnels indicating the specialist nature of the local agricultural economy.
- Distinctive architectural features (Dutch Style houses) surviving as evidence of the post war Land Settlement Scheme.
- Commercial coniferous plantations and large woodlands are evident. Elsewhere woodlands tend to be small coverts and shelter belts around farms. Together these combine with hedgerow trees and orchards to give the impression of a well wooded landscape.
- Dispersed pattern of isolated farmsteads and scattered wayside dwellings imparting a deeply rural character to the landscape.
- The winding and deeply incised course of the River Leadon is a distinctive landscape feature offering a, secretive, secluded heavily wooded landscape between more agricultural landscapes on the neighbouring hills.

Landscape Sensitivity

The prominent and distinctive hill top landscapes of the Low Hills and Orchards are visually sensitive due to their high visibility and generally remote rural character. However, where present, woodland cover can offer screening and so reduce visual sensitivity. The valleys and existing dispersed settlements are less visually sensitive due to their seclusion, developed character and the presence of existing infrastructure. However, significant change should be avoided in rural valleys and landscapes between settlements along the valley floor.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Expansion and infilling of existing scattered settlements.	• Erosion of distinctive dispersed settlement character. • Upgrading of minor roads and lanes in areas of new development and introduction of suburbanising features such as mini roundabouts, street lighting and kerbs.	* Conserve the distinctive dispersed character of the settlements throughout the landscape. • Conserve the character of the existing narrow winding lanes occupying deep cuttings, which are particularly sensitive to the urbanising influences of road improvements.		
Grubbing out and loss of orchards in favour of arable farming.	• Loss of characteristic feature of the landscape and associated habitats. • Removal of shelterbelts.	• Conserve existing orchards. • Create new orchards wherever viable. • Conserve and replant Lombardi shelterbelts.	• Number of productive orchards.	
Intensification of horticultural operations	• Amalgamation of numerous smallholdings and creation of industrial scale operations. • Sale of small holdings resulting in the conversion of farm houses and buildings to private residences and subsequent extension, improvement and addition of suburban features.	• Conserve pattern of small horticultural holdings and glasshouses. • Conserve distinctive buildings such as the Dutch style farm houses dating to the Land Settlement Scheme.	• Number of glasshouses. • Number of remaining Dutch style houses.	
Introduction of telecommunications masts on high hills, particularly those bordering the M50	• Introduction of visually intrusive 'urban' features to rural landscapes.	* Conserve rural character of the hills by siting new masts away from visually prominent locations. Seek opportunities to minimise impact by locating new masts on existing structures. * Conserve wide views over open farmland and surrounding lowlands.	• Number of new masts.	

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
New recreational uses associated with the restoration of the Hereford and Gloucester Canal.	• Restoration of historical features and habitats along the river. • Potential visual impact of new tourist facilities including footpaths, car parks, lighting, signage etc.	* Conserve the canal and corridor for recreational use and seek opportunities for the restoration of historic features and habitats along the route. • Conserve the intimate qualities of the landscape and consider the visual impact of any new features or facilities.	• Length of restored canal and number of new visitor facilities.	Community input into canal restoration plans.
Agricultural intensification, particularly of arable farms.	• Piecemeal loss of small areas of woodland and plantation. • Removal of hedgerows to create large fields capable of being worked by large scale machinery. • Increased run off of pesticides/ fertilisers leading to a decline in the biodiversity of the River and tributaries.	• Maintain pattern of discreet small coniferous plantations, deciduous shelterbelts and orchards. • Conserve pattern of well maintained hedgerows, particularly clipped hedgerows emphasising landform. • Conserve the wooded nature of valley sides and the fertile grazing pastures bordering the river. • Protect water courses from the impacts of eutrophication by encouraging farmers to adopt best practice for the application of fertilisers and pesticides including the creation of buffer zones and encouraging programmes of nutrient removal. • Encourage initiatives that seek to restore or enhance river and stream networks and their habitats.	• Area of healthy riverine habitats. • Number of specific indicator species.	

15 UNDULATING HILL FARMLAND

Character Areas

15a. Kilcot and Gorsley Farmland

Key Environmental Features to Conserve and Enhance

- **Transitional landscape between the Wooded Hills and Unwooded Vale landscape types** displaying many characteristics typical of them both.
- **Varied landform, extensive views and sense of exposure on some hillsides** contrasting to more intimate character in valleys.
- **Landform and landscape features have a consistent south west – north east orientation** giving the area a uniform grain.
- **Small semi natural woodlands along valley sides and larger deciduous woodlands integrated by a strong hedgerow network** combine to give the landscape a well wooded character, colour and texture.
- **Large areas of deciduous woodland** recognised and protected for their nature conservation interest, particularly woodland butterflies and moths.
- **Productive arable and pasture farmland** has replaced vast orchards that once cloaked the landscape. Only small remnants of old orchards survive.
- **Wild daffodils in Dymock Wood** representing a well known feature of the landscape and holding close associations with the Dymock Poets.
- **Isolated brick farmhouses, cottages and short lines of buildings are on hilltop locations** representing the prevalent settlement pattern.

Landscape Sensitivity

The Undulating Hill Farmland landscapes are visually sensitive due to their elevation and quiet rural character. The character and dispersed form of existing settlements such as Gorsley, should be conserved. Woodlands where present may offer screening and as such, reduce the visual sensitivity of some lower lying areas.

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Expansion and infilling of existing scattered settlements.	• Erosion of distinctive dispersed settlement character. • Upgrading of minor roads and lanes in areas of new development and introduction of suburbanising features such as mini roundabouts, street lighting and kerbs..	* Conserve the distinctive dispersed character of the settlements throughout the landscape and rural road network, particularly the strong pattern created by narrow, winding hedged lanes.* * Conserve the pattern of farmsteads and small hamlets on prominent hills.	• Changes to settlement pattern determined from aerial photographs.	
Grubbing out and loss of orchards in favour of arable farming.	• Loss of characteristic feature of the landscape and associated habitats. • Removal of shelterbelts.	• Conserve and enhance existing orchards. • Create orchards on former orchards sites where viable.	• Number of productive orchards.	
A decline in woodland cover due to a combination of neglect, grazing and occasional felling.	• Degradation and loss of woodland habitats and wildlife corridors. • Impact on the wooded character of the valley and the setting of valley settlements.	• Conserve woodlands in valley sides. • Conserve small broadleaved woodland adjacent to streams and promote the creation of new wet woodlands and associated riverine habitats along the course of the river and tributary streams. • Conserve wild daffodils in Dymock Wood.	• Area of deciduous semi ancient natural woodland. • Area of new woodlands created that form part of green networks or contribute to landscape character.	
Introduction of telecommunications masts on high hills, particularly those bordering the M50	• Introduction of visually intrusive 'urban' features to rural landscapes.	* Conserve rural character of the hills by siting new masts away from visually prominent locations. Seek opportunities to minimise impact by locating new masts on existing structures. • Conserve views north from Chibers Hill to the Malverns.	• Number of masts.	

Local Forces For Change	Potential Landscape Implications	Outline Landscape Strategies	Potential Indicators for Monitoring Landscape Change	Opportunities for Community Involvement
Intensification of dairy farms.	• Intensification of dairying operations on a small number of farms resulting in farm amalgamation, the construction of large industrial style dairying sheds and increased risk of pollution from slurry storage. • Felling of shelterbelt and farm woodlands and riverside woodlands and trees.	* Conserve pattern of hedgerows on hillsides and neatly clipped hedges on lower slopes. • Enhance quality of local rivers and streams by introducing buffer strips. • Conserve and enhance woodlands bordering streams.	• Length of hedgerows.	

4.0 POTENTIAL LANDSCAPE STRATEGIES – NEXT STEPS

4.1 How to Use the Landscape Character Assessment and Potential Landscape Strategies

4.1.1 Introduction

The *Forest of Dean District Landscape Character Assessment* offers a detailed characterisation of the district's landscape which can assist in understanding and promoting the concept of local distinctiveness. The study also recognises the fundamental role farming, forestry and other forms of development have played in fashioning the landscape and acknowledges that the landscape of the district owes its character as much to these influences as to those of geology, climate flora and fauna.

By building on the findings of the character assessment, the *Forest of Dean District Landscape Strategy* provides an overview of the forces for change that are influencing the landscape, and outlines a series of possible landscape and land management strategies to help guide change in a positive and sustainable way. In very general terms, this document should be seen as an illustration of some of the ways in which the planning, design and management of the district's diverse landscape could be handled.

The landscape character assessment and landscape strategy reports are designed to act as a catalyst for positive landscape change by achieving the following objectives.

1. To provide a clear and full description of the baseline landscape and to identify key environmental features that contribute to local distinctiveness;

2. To highlight the principal forces for change and the potential implications of change on landscape character;

3. To provide guidance to those responsible for landscape, design and management, suggesting how landscape change can be handled in a positive way, and;

4. To identify landscape indicators that may be used to monitor landscape change in the future.

The Landscape Strategy, places an emphasis on the potential for landscape enhancement and on finding opportunities to strengthen distinctive character through the design and management of new and existing landscapes.

4.1.2 Uses of the Landscape Character Assessment and Landscape Strategy Ideas

The review of existing strategy and planning documents completed as part of this study, has considered the extent to which these existing documents make reference to, and use landscape character assessments as part of the decision making process. This review has concluded that whilst a number of core documents, notably the Gloucestershire County Structure Plan and the Forest of Dean Local Plan, contain clear guidance and specific policies related to landscape character, there is often a lack of supporting guidance or advice on the practicalities of using information on landscape character as part of the planning and development control process.

This is supported by experience elsewhere which has suggested that there are often widely differing views and opinions amongst all sections of the community, on the uses, benefits, and potential applications of landscape character assessment. In addition, landscape character assessment is seen by many, solely as a development control tool, the purpose of which is to resist all forms of development.

There is therefore, a need for clear guidance on the range of potential uses and applications of the Forest of Dean District *Landscape Character Assessment* and *Landscape Strategy* and these are considered below.

Potential Applications in Planning

- Informing development plan policies at local plan level and perhaps guiding policy at regional and (for the time being) structure plan level.
- Assisting studies of development potential, for example to help identify sites for new development.
- Informing the siting, spacing, scale and design conditions for particular forms of development such as minerals and housing.
- Contributing to landscape capacity studies relating to the supply of land for housing, minerals or other land uses.
- Providing an input to Environmental Assessment at the level of plans and policies and in association with individual development proposals.
- Providing a framework and context for the production of more local landscape character assessments and Village Design Statements.

Potential Applications in Landscape Conservation, Management and Enhancement

- Providing a basis for the preparation of landscape management strategies.
- Informing work on special areas including the identification of areas for special purpose designation.
- Helping guide landscape change in positive and sustainable ways, for example programmes of woodland expansion and identifying new uses for disturbed and degraded land.
- Informing the targeting of resources for land management and agri-environment schemes and evaluating the effectiveness of funding.
- Monitoring landscape change by developing indicators in order to monitor rates and patterns of change. This information can be used to target areas for conservation and enhancement.

When used in conjunction with the ongoing biodiversity and archaeology projects currently being undertaken for the district, the landscape assessment can also be of great value in analysing the key relationships between the landscape and cultural heritage and nature conservation features.

4.2 Using the Landscape Character Assessment

The landscape character study should be accessible to every organisation involved in the planning, design and management of the district's landscapes as it provides a common source of baseline information. Indeed by offering a common framework, the study will make it easier for numerous organisations to adopt an integrated approach to managing and monitoring landscape change in the district. The following section suggests the role and responsibilities of agencies likely to be involved in implementing the strategy and identifies how the study might be used:

Government Agencies

- Organisations such as the South West Development Agency (SWERDA), the Countryside Agency, The Environment Agency, DEFRA, the Forestry Commission, English Nature and English Heritage could use landscape character assessment to help prioritise and target action through grants and funding initiatives.

- Information from landscape character assessment would support the Quality of Life Capital process by providing baseline landscape assessment data and identifying indicators for monitoring landscape change.

Forest of Dean District Council could use landscape character assessment in:

- Guiding and influencing the development control process including the preparation of development briefs and contributions to evidence at public inquiry.

- Consideration of landscape issues in planning policy development.

- Defining frameworks for development capacity studies and for the analysis of the landscape setting of towns and villages.

- The preparation of Countryside Design Summaries.

- Developing more detailed local landscape character assessments and townscape assessments.

- Helping to improve awareness of landscape issues through promotion and interpretation.

Land Owners and Land Managers could use landscape character assessment in:

- Helping guide land owners and managers such as Forest Enterprise to inform decisions on land management issues and long term planning.

- Targeting funds to achieve optimal landscape benefits and to provide a benchmark for monitoring future landscape change.

Developers could use landscape character assessment in:

- Helping to promote the benefits of (i) high quality distinctive environments as a setting for new developments and (ii) the value of reflecting local identity; using distinctive elements and features of landscape character as a model for the layout and design of new developments.

Community Groups, Parish Councils and Voluntary Organisations

- Contributing to local projects and initiatives such as Village Design Statements, Parish Plans, Community Action Plans and Local Heritage Initiatives.

- Helping to improve pride in local distinctiveness and awareness in landscape issues generally.

- Helping to identify opportunities for community action

- Assisting local communities in securing funding for environmental restoration or enhancement projects.

Educational Establishments and Research Organisations could use landscape character assessment in:

- Promoting an understanding of landscape character and the influence of landscape change.

- Establishing a baseline for long term research projects such as monitoring landscape change.

4.3 Taking a Positive Approach to Change: Guiding Principals

The following section draws together the main strategy ideas identified for each of the fifteen landscape character types as described in section three of the landscape strategy, and summarises the thoughts and aspirations arising from Stakeholder Workshops held during the course of the study. For ease of reference, these have been divided amongst four main sub headings. These are suggested as the 'guiding principles' for managing and monitoring change in the district.

4.3.1 Recognise and Enhance Local Distinctiveness

The landscape assessment identifies and records the patterns, features and elements of the various landscape character types and areas that contribute to making one landscape different from another. It is these factors that contribute to defining local distinctiveness.

The Landscape Strategy ideas presented in this document identify the forces for change that threaten to erode local distinctiveness and reduce the inherent variety expressed by the district's landscapes. The study aims to counteract this by suggesting the means by which landscape change might be managed to reinforce the inherent contrasts in landscape character identified in the landscape character assessment. This obviously has significant implications for landscape design and management and the following underlying principles are recommended to anyone seeking to take this work further:

- A standardised approach to design could be avoided by using the strategy and assessment to inform the process of negotiation between planning officers and developers. For example, officers might identify specific criteria and landscape considerations a specific development should take account of prior to approval. The success of a proposal could then be assessed on the basis of these criteria and considerations.

- Planning authorities could specify to developers how their proposals can be designed to reflect and enhance local landscape character. Officers might outline elements and characteristic features that should be considered for enhancement, restoration or conservation etc.

- Planning authorities where appropriate, could encourage developers to use local building materials, building styles, native species and other characteristic features and elements of a particular landscape to strengthen local distinctiveness.

- Developers and others involved with change could be encouraged to adopt creative solutions and identify the means by which development might be successfully integrated into the existing landscape character. Consideration could be given to the scale of development, layout and relationship to existing development and field patterns. This might apply to built development as well as new woodland planting for example.

- Planning authorities could consider the cumulative impact of small-scale changes and incremental changes as a result of one-off developments.

4.3.2 Adopt a Positive Approach to Landscape Change

The landscape strategy document, in addition to recording what is in the landscape, also explains why the key environmental features identified are important. It may be that features are valued for their habitats or distinctive field patterns, or for buildings that reflect the evolution of the local landscape or particular forms of local construction.

The landscape character assessment could be a key tool as part of Quality of Life Capital Assessments. The Quality of Life Capital approach undertakes a similar approach to this document by determining 'what matters and why'[38] as part of providing a consistent and integrated way of managing for quality of life. This approach, developed jointly by the Countryside Agency, English Nature, English Heritage and the Environment Agency, assists politicians, policy makers, planners and developers make informed decisions that consider different social, economic and environmental aspects.

[38] Countryside Agency, English Heritage, English Nature, Environment Agency (2001) Overview Report: Quality of Life Capital

In very broad terms priorities might be summarised as:

- Protecting or conserving key environmental features which are important to local landscape character and that are rare and or not substitutable and;

- Monitoring the loss of substitutable yet important features and ensuring that wherever possible there is no net loss. This might mean accepting the loss of the original feature on the provision that a compensatory increase in the valued attribute can be agreed in an appropriate location.

In taking a positive approach to landscape change, developers and planning authorities could consider the following:

- Using key environmental features to assist the development control process. Development which is assessed as possibly having a significant effect on key environmental features may be a candidate for refusal or require stringent planning conditions which ensure that important features are not lost.

- Using the landscape strategy ideas as a baseline for Environmental Impact Assessments of developments. The impact of development on key environmental features and landscape character could be assessed and where impacts are found to occur, scheme modification or mitigation measures could be required to remove or reduce the impact of development.

- Giving priority to protecting key environmental features. Wherever possible, opportunities to introduce new features could be identified to compensate for loss or degradation elsewhere. This might include ensuring that where a particular habitat or area of planting is lost as a result of development, habitat creation or planting is undertaken at a suitable location close by.

- Ensuring that change is appropriate to landscape character. Proposals would only be pursued that are appropriate for each landscape type and the features and characteristics that define local distinctiveness. Perceptual aspects such as tranquillity, remoteness and wilderness could also be considered.

- Encouraging developers to consider adopting creative design solutions to conserve or enhance local landscape character. The character assessment and landscape strategy ideas could provide guidance for new development and a model for creating landscape and restoring habitats. This could be an invaluable tool for development on brownfield sites that offer no features which new development can refer to.

- Considering the effects of small scale development on landscape character. Incremental changes can gradually erode landscape character and local distinctiveness if the wider context of a development or land management initiative is not considered. The landscape character assessment and landscape strategy ideas both highlight key characteristics such as distinctive field patterns, features and settlement patterns that are particularly susceptible to incremental change. However, the findings of the character assessment study may also identify the means by which such developments may be successfully incorporated into the landscape and indeed enhance particular characteristics.

4.4 Building Bridges: A Coordinated Approach to Landscape Resources

The character, condition and sensitivity of the district's landscape character is influenced by a wide range of factors and forces for change. To counter, control and guide these forces for change, numerous strategy ideas have been identified, many of which have implications for a diverse range of disciplines, organisations and communities. The whole community could benefit if landscape issues were tackled in an integrated way and interested parties and community groups were engaged in order that their thoughts and aspirations are assessed, consensus is reached and particular roles and responsibilities are identified and agreed. There would also be a huge benefit in sharing and coordinating information, in order to minimise costs and reduce the risk of duplication of work.

The Forest of Dean District Council and its partner organisations have been working for many years towards the effective regeneration of the district. The findings of this study could be combined with those of other studies and initiatives, to further the effectiveness of the existing integrated approach. In the long term, there is an exciting opportunity for the council to oversee and lead the promotion of the landscape strategy.

There are already a number of important projects that have cross cutting themes which have potential to impact on landscape character. It is anticipated that the landscape assessment and landscape strategy ideas will be of great benefit to these projects and offer a framework within which integrated and sustainable solutions may be identified.

Key projects include:

4.4.1 *The Forest of Dean Integrated Rural Development (IRD) Project*

This is a national pilot scheme supported by the Countryside Agency which seeks to secure sustainable development in the District by adopting an integrated, holistic approach that respects local conditions and communities. A programme of activities (14 in total) has been agreed and an initial £1m has been allocated for the first three years of the project ending in 2003. The programme has been granted a further 18 months and will be known as BOWS - Building on What's Special. This involves three areas of work:

1. Looking after what's special – showing how statutory planning processes, partnership working, community plans and voluntary agreements can effectively protect, enhance and manage the FOD's distinctive landscape, cultural heritage and biodiversity;
2. Using what's special – showing how local distinctiveness can be an important force behind social and economic regeneration;
3. Learning lessons from the program for possible application elsewhere.

The programme is managed by a multi-agency partnership made up of Forest of Dean District Council, Gloucestershire County Council, Gloucestershire Rural Community Council, Forest Enterprise, Glos. Assoc of Town & Parish Councils, Forest Voluntary Action Forum, Government Office for the South West (GOSW), SWERDA and DEFRA. This group is one of 10 theme groups responsible to the Forest of Dean Partnership board.

4.4.2 *Forest of Dean Partnership*

The Forest of Dean Partnership (FDP), brings together all sectors of the Forest of Dean including the local community, public, private and voluntary sectors to work in partnership and to promote the economic, social and environmental 'well-being' of the District and the preparation of the Community Plan. The FDP also embraces the work of three previous separate partnerships: the Forest Regeneration Partnership, the Community Safety Partnership and the Health and Social Care Partnership.

4.4.3 *The Coalfields Regeneration Programme*

The scheme is managed by the English Partnership/ South West Regional Development Agency and is based on the Strategic review 2001 – 2004. The strategy for delivering regeneration of the coalfield sites in the district is through South West Regional Development Agency (SWERDA) 'Regional Framework for Action' and the priority is to promote and integrate a range of new sustainable developments within the Forest. It is the aim of the Programme to adopt an integrated approach to site development and contribute significantly to enhancing the economy and environment of the Forest.

The current programme identifies six sites, all of which are within the Wooded Syncline and Settled Forest Margin (landscape type 5):

- Princess Royal;
- Parkend Sidings;
- Cannop Depot;
- Lightmoor Colliery;
- Northern United; and
- Steam Mills

Steam Mills, Cinderford is the most recent site to join the scheme. The 40 ha site is about a mile from the town centre, to the north of the existing Cinderford industrial area and adjacent to the former Northern United Colliery, which is an existing National Coalfields Programme site. An outline masterplan has been prepared for the site, under the banner of the Cinderford Arc Regeneration Area. This identifies six separate development areas for industrial, business and housing use with high environmental standards appropriate to the forest setting. Regeneration works would comprise new access, site servicing, landscaping and public open space.

4.4.4 *Town Partnerships*

Each of the four main towns in the district (Newent, Lydney, Cinderford and Coleford) has formed a partnership comprising representatives from public, private and voluntary sector organisations. These have been successful in securing support for physical and social projects.

4.4.5 *Market and Coastal Towns Initiative*

This initiative, launched in April 2001, is being undertaken by a regional partnership led by SW RDA, supported by the countryside agency. The aim of the program is to direct public funds to projects and initiatives identified by local communities. The fund will support, amongst other things, the preparation of community strategic plans and feasibility studies. Lydney, Cinderford, Coleford and Newent have joined the scheme.

The East Dean Initiative is one of the projects emerging from the Market and Coastal Towns Initiative. The project aims to improve the town of Cinderford and the surrounding parishes of Ruspidge, Soudley, Drybrook and Ruardean. The project will deliver a Community Action Plan which will describe what the area should look like in the future[39].

The Lydney Area Partnership recently published their plan which identifies a number of strategic 'regeneration solutions such as town centre revitalisation scheme, Lydney Greenway and Lydney Links[40].

4.5 Monitoring Landscape Change in the Future

Monitoring the rate of landscape and environmental change enables planning officers and those responsible for implementing the strategy to assess the practical effectiveness of existing policy, initiatives and management, help modify policy and management regimes in the light of actual trends.

The information arising from a programme of monitoring rates and patterns of landscape change could be used for a variety of purposes including decision making in the development control process, and the identification of priorities and targets for funding and enhancement initiatives. For each landscape type, a number of indicators have been suggested which will assist in the monitoring of change whether this is deemed to be positive or negative.

It is important that the responsibilities for recording and monitoring change are established at an early stage. It is likely that a range of agencies and organisations will be involved in monitoring change as indicators vary from elements of the built environment, the extent of particular habitats, and the survival rate of particular heritage features. Wherever possible, communities should be engaged in the monitoring process.

4.6 Wider Benefits – Countryside Quality Counts

The Forest of Dean Landscape Character Assessment (and therefore the findings of the potential strategies document) will contribute to the new Landscape Typology for England.

The second phase of the National Typology Project is entitled 'Countryside Quality Counts'[41]. This is an ongoing initiative led by the Countryside Agency on behalf of a range of partners comprising DEFRA, Office of the Deputy Prime Minister, English Heritage and English Nature which seeks to develop countryside reporting indicators. These indicators of change in countryside character will comprise part of the Quality of Life Counts (QOLC) series of national indicators for sustainable development and will help evaluate targets set in the Rural White Paper (2000).

By using the new national typology as a framework the findings of the Forest of Dean landscape assessment will be of potential benefit to this national project for monitoring landscape change.

[39] Leaflet Describing the East Dean Initiative
[40] Lydney Area Partnership (2002) Turning The Tide at Lydney: A Community Strategic Plan
[41] Internet Site: Countryside Quality Counts – Tracking Change in the Countryside, www.counryside –quality-counts.org.uk

4.6.1 Local Agenda 21

The potential landscape strategies document could help meet the aims of Local Agenda 21[42]. The Local Agenda 21 Plan contains a vision for a more sustainable future for the district and identifies a series of actions to improve the quality of life for local people and a set of indicators to measure progress. The plan contains ideas covering a wide range of topics such as creating a sustainable local economy and transport system. This document could be a valuable tool in guiding decision making and help ensure new development considers local distinctiveness and landscape character.

4.7 The Next Stage

4.7.1 A clear sense of ownership

The landscape strategy document presents a range of ideas, which are intended to promote further debate and help others manage and monitor landscape change across the district. These ideas have derived from a study of the character and diversity of the Forest of Dean landscape and an understanding of the driving forces for change through a process of consultation and discussion.

However, there is clearly a need for further development of the strategy ideas presented within this report, and for continued collaboration with the District Council, other key agencies, and stakeholder groups over the coming months. Ownership of the project by the County and District Councils is considered fundamental to this process and in the absence of a clear commitment, in terms of both resources and funding, the ideas outlined in this document will not develop further.

Establishing an effective and agreed operational framework to take these ideas forward is also fundamental to its success. Clearly the details of this framework will need to emerge through a process of discussion and debate between the key players and a number of options remain possible. In addition, these discussions may need to consider the proposed changes to the current planning system as set out within the Planning and Compulsory Purchase Bill.

4.7.2 Recommendations for Future Work

It is not possible to be definitive about the scope and timing of future works at this stage and clearly much will depend upon the availability of resources and the commitment of all parties to completion of the project. However, in order to develop and ultimately implement the ideas in this document a number of key stages will need to be completed. These are outlined below.

Stage 1 - Local Authority Review

An initial period of review by the County Council and District Council is needed in order to assess the contents of this document and determine the range of ideas that could potentially be taken forward. Ultimately, it is hoped that the landscape assessment study will be used as a planning tool by both authorities and it is essential therefore, that there is agreement over the range of ideas presented.

[42] Local Agenda 21 UK (2000) Towards a More Sustainable Future for the Forest of Dean

It is recommended that this process be completed in advance of dissemination of the potential landscape strategies document to outside agencies and other third parties.

This stage should also consider the potential integration of the ideas in this document with other parallel projects, which will in themselves, propose ideas and priorities for action in due course. An over-arching question is that of exploring the need and practicality for such an integrated strategy.

Stage 2 - Consultation

A period of consultation and review with selected stakeholder groups, outside agencies and parallel projects would widen the debate on the strategy ideas and would enhance the potential for greater links with other environmental initiatives. This process should also seek to engender a broad level of support for the project. It is recommended that this work be carried out as a series of round table discussions or workshops.

Stage 3 - Strategy Development

A period of strategy development would follow, the objective of which would be to translate the ideas into firm strategies that can be supported by the County and District Councils, and as far as possible, by other agencies and stakeholder groups.

This stage could also identify any additional strategies that may be required in order to respond to commonly encountered planning or development control issues and include a review of potential landscape indicators in order to agree key indicators and targets for each landscape type. The outcome could be a revised and updated Landscape Strategy document.

Stage 4 - Formal Adoption and Publication

It is hoped that the Landscape Strategy will ultimately be adopted by Forest of Dean District Council either as

(i) Supplementary Planning Guidance or;
(ii) Whatever measure are appropriate once the 2002 Planning and Compulsory Purchase Bill is enacted.

The timing of any formal process of consultation and adoption will of course need to be determined by Forest of Dean District Council.

4.8 Conclusion

The *Forest of Dean District Landscape Strategy* out a series of broad ideas and initiatives which, if developed further and adopted widely, would help to ensure that change and development respects landscape character, and that key environmental features are conserved and enhanced.

This document also provides the framework for further action and it is hoped that through a process of continued collaboration, and the input of parallel projects, the strategy ideas presented here, can be translated into firm commitments which can be supported and delivered through the planning and other relevant processes.

Ultimately, a Landscape Strategy for the Forest of Dean would provide a valuable tool in the decision making process and assist the County and District Councils, other agencies, developers and local communities in finding new ways of delivering change and regeneration, whilst protecting landscape character and promoting local distinctiveness.

5.0 GLOSSARY

5.1 Key Landscape Character Assessment Terms

Analysis – the process of dividing up the landscape into its component parts to gain a better understanding of it.

Approach – the step-wise process by which landscape assessment is undertaken.

Assessment – term to describe all the various ways of looking at, analysing, evaluating and describing the landscape.

Character – a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.

Characteristics – elements or combinations of elements, which make a particular contribution to distinctive character.

Characterisation – the process of identifying areas of similar character, classifying and mapping them and describing their character.

Elements – individual components which make up the landscape, such as trees and hedges.

Features – particularly prominent or eye catching elements, such as tree clumps, church towers, or wooded skylines.

Land cover – combination of land use and vegetation that cover the land surface.

Landform – combinations of slope and elevation that produce the shape and form of the land surface.

Landscape – primarily the visual appearance of the land including its shape, form and colours. However, landscape is note purely a visual phenomenon. The landscape relies on a range of other dimensions including geology, landform, soils, ecology, archaeology, landscape history, land use, architecture and cultural associations.

Objective – method of assessment in which personal feelings and opinions do not influence characterisation.

Subjective – method of assessment in which personal views and reactions are used in the characterisation process.

5.2 Other Technical Terms

Adit Mining – method of mining used by many Freeminers where the Coal Measures dip gently enough to be entered through mines driven into the hillside.

Alluvium – sedimentary deposits resulting from the action of rivers, including those laid down in river channels, floodplains, estuaries and lakes.

Alluvial Fan – a fan or cone shaped mass of material deposited by a stream where it emerges from the constriction of a narrow valley at the foot of hills and debouches on to a plain.

Ancient woodland – land continuously wooded since AD 1600. It is an extremely valuable ecological resource, usually with a high diversity of flora and fauna.

Anticline – an arched fold or up fold in the strata of the earths crust. Because denudation generally attacks the arches of folded structures faster than it does the down folds it is common for these to become the location of valleys which in time expose the core of the anticline.

Assarting – the process of clearing woodland or waste land for cultivation, associated particularly with the 12th and 13th centuries.

Biogeography – the study of areas with a distinctive flora and fauna.

Breccia – an Italian term used to describe rock composed of cemented angular clastic fragments possibly derived from material deposited during a volcanic eruption.

Bronze Age – a cultural phase in humankind's evolution when alloying of copper and tin was perfected. Metalworking technology and new types of flint tool and pottery design were introduced at the start of this period. Changes in society were reflected in the emergence of new burial techniques, particularly round barrows. In the Middle Bronze Age cremation replaced inhumations and in the late Bronze Age social and economic changes led to the abandonment of old funerary rights in favour of less traceable rites.

Calcifuge – refers to plants which prefer acidic soils and cannot exist on chalky or alkali soils.

Carboniferous – period of the Palaeozoic era following that of the Devonian and preceding that of the Permian. It ranged from about 345 million years to about 280 million years BP. Economically the Carboniferous is the most important of the systems as it contains most of the world's coal reserves and other deposits such as oil and iron ore.

Carr – woodland in waterlogged terrain. Characteristic species include alder, willow and sallow.

Chartism - a movement established and controlled by working men in 1836 to achieve parliamentary democracy as a step towards social and economic reform.
The 'Charter' made six political demands but the organisation was Utopian and naive in the belief that constitutional reform would automatically provide socio-economic betterment.

Chert – a hard siliceous rock that occurs as bands or layers in sedimentary rocks. Flint is a variety of chert.

Clastic – detrital materials consisting of fragments of broken rocks that have been eroded, transported and re-deposited at a different site.

Coppicing – the traditional method of woodland management in which trees are cut down near to the ground to encourage the production of long, straight shoots that can be harvested.

Denudation – general term to denote the action of laying bare by the washing away of surface materials. In geomorphology the term is used to include all processes which cause degradation of the earth's surface.

Devonian – the fourth geological period of the Palaeozoic era, extending from 395 to 345 million years. It comprises both marine and continental deposits, the latter being referred to as the Old Red Sandstone.

Diamicton - the unlithified equivalent of a diamictite, itself a lithified, conglomeratic, siliciclastic rock which is unsorted, with sand and/or coarser particles dispersed through a mud matrix.

Domesday Book – conceived by William the Conqueror at Christmas 1085 in Gloucester, the survey was the most comprehensive and detailed record compiled anywhere in Europe in the Middle Ages. The survey's primary purpose was to provide maximum yield from land tax. The name arose in the 12th century to signify, like the day of judgement, there could be no appeal from its verdict.

Drift Deposits - geologically recent material overlying solid geology and including glacial and fluvo–glacial deposits remaining after the retreat of ice sheets and glaciers, material deposited by rivers, including river terrace deposits and peat.

Estover – ancient right to collect brushwood in the forest.

Fluvo-glacial - processes and landforms related to the action of glacial meltwater.

Forester - this term applies to people born within the Hundred of St. Briavels (effectively anywhere in the forest). Foresters are granted certain rights which date to Norman times including the right to turn their sheep out to graze freely in the woodlands. Rights also allow Foresters to turn their pigs out into the forest in the autumn months to feed on the acorns. Sheep keepers are known locally as Sheep Badgers.

Fossiliferous – term used to describe rocks rich in fossils, the remains of living organisms preserved by natural causes in crustal rocks.

Freeminer - anyone born in the Forest of Dean within the Hundred of St. Briavels, and who has worked in a mine for a year and a day, may open up his own coal mine. Freeminers rights date back several hundred years and were enshrined in Law by various Acts of Parliament between 1819 and 1906. It is thought that Freeminers were granted their rights as a reward for services during Medieval wars when they acted as Sappers, soldiers who tunnelled beneath enemy positions.

Fulling – mechanical means of processing wool cloth. After woollen cloth has been woven, its fibres are loose, airy and unmeshed.
The cloth also contains a significant amount of oil and grease which inhibit the binding action of dyes. Fulling involves pounding the cloth to mat the fibres together and cleansing to remove natural oils and greases. Originally cloth was beaten manually. However in the 12th century fulling mills, consisting of huge water powered hammers, were introduced to Britain.

Geomorphology – the scientific study of the origin of landforms.

Geology – the study of the origin, structure, composition and history of the Earth together with the processes that have led to its present state.

Gale – term used to describe the right to mine an area. The principal officer of the Forest, whose duty it is to grant the Gales is the Gaveller. The tract of land granted is said to be galed and the grantee is called the Galee.

Glacial – term used to describe a cold phase during an ice age.

Hercynian – mountain building episode of Carboniferous/ Permian times.

Hillfort – any hilltop fortress although term usually applied to defensive sites of the Late Bronze Age or Iron Age. Some hillforts may have been permanent settlements, but many were temporary refuges.

Iron Age – a cultural phase of humankind's evolution when technical improvements in iron-working enabled iron tools and weapons to replace those of the preceding Bronze Age. Population growth led to competition for land and the development of a more territorial society. Improved farming technology and scarcity of land brought about the cultivation of heavier and poorer soils.

Karst – a term used to describe terrain created by limestone solution and characterised by a virtual absence of surface drainage. Clints and grikes together make up a limestone pavement, a feature of karst scenery.

Mesolithic – an archaeological term meaning 'middle stone' age and used to describe the culture achieved during the early Post Glacial when mankind had moved from herd- hunting practices of the upper Palaeolithic, but had not yet discovered or adopted the use of agriculture.

Metallurgy – science of extracting and working metals.

Moot Hill – Anglo Saxon term to describe a public assembly to decide legal and administrative issues. Inhabitants of an area had a duty to attend their local Moot. Prominent hills were often the sites of such meetings.

Motte-and-Bailey Castle – the earliest form of Norman castle. These were established along key communication routes after the conquest. An inner courtyard was protected by simple earth and wooden defences.

Neolithic – an archaeological term used to describe the 'new stone' age. This applies to the culture achieved during the middle Post Glacial when mankind had begun to polish and grind stone artefacts (a technological advance from the bashing and flaking of the Palaeolithic and Mesolithic). The Neolithic also saw the introduction of agriculture.

Open Field System - well established means of land management during the medieval period and was widespread across much of lowland England. The unit of cultivation was the strip which varied in length and width depending on local conditions. The strips were grouped together into furlongs and a number of furlongs formed the field. The up and down ploughing of the strips threw soil into the centre of the strip and over time created the distinctive ridge and furrow landform which may be used to identify remnants of open fields in the landscape today.

Ordovician – the second geological period of the Palaeozoic that includes rocks that were formed between about 525 million and 440 million years ago.

Orogeny – a major period of fold-mountain formation, during which the process of orogenesis occurs. Such a process includes folding, faulting and thrusting, often as a result of plate tectonics.

Outcrop – the area where a particular rock appears at the surface.

Palaeolithic – an archaeological term used to describe the earliest form of human culture. The earliest toolmakers lived during the Pleistocene in Britain after the main glacial periods had passed.

Pannage – ancient right to graze pigs in the forest.

Peat – unconsolidated black or dark-brown soil material consisting largely of slightly decomposed or un decomposed fibrous vegetable matter that has accumulated in a waterlogged environment.

Pedology – the scientific study of soils.

Permian – the final geological period of the Palaeozoic era extending from about 280 million years ago to 240 million years ago. It succeeded the Carboniferous and preceded the Triassic.

Perry – fermented drink made from pears. The name derives from '*prige*', the Saxon for pear although the first reference to making a fermented drink from pears was by Pliny.

Pleistocene – the first epoch of the Quaternary which loosely corresponds to the Ice Age.

Pericline – a crustal fold structure in the form of a dome or basin in which beds dip inwards around a central point or outwards in the case of a dome.

Quaternary - the younger of the two geological periods of the Cainzoic. This was the era which saw the appearance of mankind.

Ramsar - Ramsar sites are areas of land listed as Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention 1973).

Riparian – riverbank habitats.

Scowles – term used to describe the site of surface iron ore extraction dating from the Iron Age to the early post-medieval period. These features range from shallow, often interconnected pits to deeper, irregular trenches with exposed rock faces. Over the years these have been colonised by scrub and woodland and are often hard to discern in the landscape.

Scree – an accumulation of fragmented rock waste below a cliff or rock face formed as a result of weathering of a rock exposure.

Semi-natural vegetation – any type of vegetation that has been influenced by human activities, either directly or indirectly.

Siliceous – rocks that contain an abundance of silica.

Silurian – the third of the periods of the Palaeozoic succeeding the Ordovician and preceding the Devonian and lasting from 440 million years ago to about 395 million years ago.

Slade – local term used to describe a deeply incised valley.

Squatter Settlement – a concentration of makeshift dwellings on public or private land which is neither owned nor rented by the builders/ occupants. It is a feature of the period of population pressure in England in the 16th and 17th centuries when extensive encroachment on manorial wastes occurred. It was a commonly held belief that a cottage erected on wastes overnight entitled its builder to undisputed possession and rights to land as far as an axe could be thrown.

Stratigraphy – the structure produced when sediments are laid down in horizontal layers (stratum). The term may be used to describe the stratification of solid geology, drift and soils.

Strike valley – a valley which has been eroded along structural lines that lie parallel with the regional strike of an area.

Syncline – a downfold or basin-shaped fold of crustal rocks in which the strata dip inwards towards a central axis.

Topography – term used to describe the surface features of the earth's surface.

Tufa – sedimentary deposit formed around a spring of calcareous groundwater. It is generally found in limestone regions where it infill cavities.

Turnpike– a gate across a highway preventing passage until a toll has been paid. Turnpike roads were administered by turnpike trusts which were authorized by a private act of parliament in 1663 to levy tolls for maintenance of the highway. This replaced the parochial maintenance system and substantially improved communications in England.

Triassic – the first geological period of the Mesozoic era, extending from about 240 million years ago to about 195 million years ago.
It succeeded the Permian and preceded the Jurassic. In Britain it consists mainly of shales, red dessert sandstones, marls and pebble beds. This period witnessed the evolution of the reptiles and the earliest known dinosaurs.

Vernacular – built in the local style, from local materials.

Veteran Tree – a tree which is of interest biologically, culturally or aesthetically because of its age, size or condition.

Water Meadow - water meadows are provided with channels to carry water on to the pasture and then to drain it off again with the intention of keeping a trickle of water flowing through the roots of the spring growth to warm them and protect from frosts. The result is faster grass growth and an earlier first bite - several weeks earlier if the spring is cold. For over 300 years water meadows supplied early grazing and the first, most valuable hay crop. They have almost all ceased operation due to the cost of the labour required to maintain them and the difficulty of working them with machinery. In many instances all that remains of water meadows is the banks and ditches that controlled the water. These often only survive where pasture has endured and protected the earthworks from ploughing or development.

5.3 Abbreviations

AOD – Above Ordnance Datum

ASNW – Ancient Semi Natural Woodland

AW – Ancient Woodland

AONB – Area of Outstanding Natural Beauty

BP – Before Present

BAP – Biodiversity Action Plan

cSAC – Candidate Special Area of Conservation

GIS – Geographical Information System.

KWS – Key Wildlife Site

pSAC – Provisional Special Area of Conservation

SAC – Special Area of Conservation

SPA – Special Protection Area

SSSI – Site of Special Scientific Interest

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7.1 The Steering Group

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Alastair Chapman	Forest of Dean District Council
Rob Guest	Forest Enterprise

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Landscape Character Assessment Workshop 25 July 2002

Jasper Blake	Dean Archaeological Group
Kate Biggs	Dean Heritage Centre
Peter Chard	Action Against Quarrying
Fred Gray	Forest of Dean Ramblers
Brian Griffin	Rural Planning Consultant
Kaley Hart	Countryside Agency
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Landscape Strategy Workshop 23 November 2002

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Ben Lennon	Forest Enterprise
Charlotte Pagendam	English Nature
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Tony Pike	Countryside Agency
Ian Pope	Forest of Dean Local History Society
Andrew Sweetman	Gloucestershire County Council
Sue Wallis	Centre for Ecology and Hydrology

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Forest of Dean Biodiversity Project

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Barry Embling	Forest Enterprise
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