



GLOUCESTERSHIRE LANDSCAPE CHARACTER ASSESSMENT

Landscape Character Assessments for the following Study Areas:

The Severn Vale

Upper Thames Valley

Vale of Moreton

Vale of Evesham Fringe

January 2006

Contents

Preface

- 1.0 Introduction
- 2.0 Review of Existing Landscape Character Assessments
- 3.0 Evolution of the Landscape
- 4.0 The Landscapes of the Study Areas
- 5.0 The Severn Vale Landscape Character Types and Character Areas
- 6.0 The Upper Thames Valley Landscape Character Types and Areas
- 7.0 The Vale of Moreton Landscape Types and Character Areas
- 8.0 The Vale of Evesham Landscape Character Types and Areas
- 9.0 Glossary
- 10.0 Core References
- 11.0 Acknowledgements

Figures

- Figure 1 The Study Areas
- Figure 2 Character of England and National Landscape Typology
- Figure 3 Geology: Drift
- Figure 4 Geology: Drift and Solid
- Figure 5 Landform
- Figure 6 Land Cover
- Figure 7 Heritage Designations
- Figure 8 Nature Conservation Designations and Local Assets
- Figure 9 Landscape Character Types: The Severn Vale, Upper Thames Valley, Vale of Moreton, and Vale of Evesham Fringe, 1:250,000
- Figure 10 Landscape Character Types and Character Areas of the Study Areas: 1:80,000 at AO

Appendices

Appendix 1	Core Data Sets
Appendix 2	Example of Field Survey Form and Field Survey Prompts Sheet
Appendix 3	Flow Diagram of Landscape Character Assessment Process

Tables

Table 1	Review of Current and Emerging Landscape Character Assessments within and contiguous with Gloucestershire
Table 1A	County Council and Cotswolds AONB Assessments
Table 1B	Borough and District Councils and Unitary Authority Assessments
Table 2	Final LCTs for the Study Areas and Cross Reference of terminology used for contiguous LCTs within local authorities adjoining Gloucestershire
Table 2A	County Council and Cotswolds AONB Assessments
Table 2B	Borough and District Councils and Unitary Authority Assessments
Table 3	Landscape Character Types and Areas for The Severn Vale; The Upper Thames Valley; The Vale of Moreton; and The Vale of Evesham Fringe

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with BS EN ISO 9001: 2000

The Gloucestershire Landscape

Gloucestershire is a much cherished English county, renowned for the diversity and scenic beauty of its landscape and wildlife, and the legacy of man's occupation of the land over many millennia. The remarkable variety of its landscapes is principally due to the underlying geology. The range of rock types found in Gloucestershire makes it unique within the country, containing rocks from nearly all of the major divisions of the geological timescale from Pre Cambrian through to the Quaternary. Only the Cretaceous period is missing, and this outcrops not far from Gloucestershire to the south of Swindon. In response to this wide range and varying characteristics of the underlying rock types, the county displays very different and diverse landscapes and landforms. In the west of the county, the imposing wooded hills of the Forest of Dean, the deep gorge of the Wye Valley and the distinctive form of May Hill are underlain by older Palaeozoic rocks. The impressive steep slopes of the Cotswolds escarpment extends across the central part of the county, with almost a complete sequence of Lower, Middle and Upper Jurassic limestones represented. East of the escarpment, the Cotswolds high wold and broad, gently sloping dip slope extends down to the Thames floodplain. Between the Cotswolds and the Forest of Dean is the expansive, low lying Severn Vale mainly underlain by Permo-Triassic sandstones and Lower Jurassic Lias Group clays, but also by much older rocks in the south of the county. The series of outliers that extend beyond the Cotswold escarpment such as Robins Wood Hill, and Peaked and Cam Long Downs to the west of Dursley, are also distinctive features.

The Influence of Geology

Geology has had a strong influence on landscape character. The topography, soils, vegetation cover and wildlife change in response to the underlying rock types. At a broader scale, the pattern of human occupation and resulting heritage features and historic landscape has also been influenced by these natural features. The masking of the solid geology with more recent superficial deposits, together with the effects of geomorphological processes, have resulted in further local features such as the river terraces that rise above the Severn Vale defined by a series of distinctive low hills which have provided favoured locations for settlement within the Vale. Superimposed on this geologically led structure, socio economic factors have also influenced the character of the landscape, in particular the changing agricultural landscape and the pattern of tenure and management within this predominantly rural county.

River Systems of National Significance

Gloucestershire is drained by two of England's major rivers. The Severn, Britain's longest river, is the principal river system, with much of the west of the county lying within its catchment area. It flows southwards into the broad sweep of the Seven Estuary, which

progressively widens to form a major natural feature of considerable biodiversity as well as economic and cultural importance. In the east of the county, the headwaters and tributaries of the River Thames flow across the Cotswolds dip slope and drain into the River Thames. This other great river rises at Thameshead north of Kemble and flows across the low lying Thames basin. In the north east of the county further streams rise in the Vale of Moreton and flow southwards to drain into the River Evenlode, a tributary of the Thames. The major watershed between the Severn and Thames catchment areas, and between the western and eastern sides of England, crosses Gloucestershire along the high wold of the Cotswolds.

Cultural Associations

Gloucestershire has strong cultural associations which are also of national significance. Over the years, the diversity, beauty and rural tranquillity of its landscape has influenced many writers, poets, and artists. Musicians have also found a special link with the county, where the qualities of the landscape inspired the emergence in the early 20th century of the quintessentially English pastoral music, attributable to a coterie of English composers who lived in, or had strong associations with Gloucestershire and adjacent Worcestershire. It was also in the late 19th and early 20th centuries that the Arts and Crafts Movement blossomed, and became intrinsically linked to the county. William Morris, who moved to Kelmscott in the south of Gloucestershire within the Thames valley, motivated many followers of the movement to also settle in the county, particularly in the Chipping Campden area, where the beauty of the landscape, and its villages and vernacular architecture provided a continuing inspiration for their ideals.

Landscape Character Assessment

This report comprises a landscape character assessment of the Severn Vale, the Upper Thames Valley area and the land on the northern fringe of the Cotswolds AONB within the Vale of Moreton and Vale of Evesham and completes a detailed review of Gloucestershire's landscape character. Earlier studies for the county commenced with a desk study review of the county's landscape typology, and went on to undertake detailed assessments of the Forest of Dean and the Cotswolds AONB. The findings of this report combines with these earlier studies to provide a new landscape character map of the county at 2005 that defines the pattern and contrasts in landscape character across the county. The purpose of the Gloucestershire Landscape Character Assessment is to observe, analyse, describe and classify these variations and distinctive patterns.

In common with the previous assessments, this study has been undertaken in accordance with the most recent guidance and methodology set out by the Countryside Agency. The guidance acknowledges that all landscapes matter, not just those that are particularly well known or evoke strong images, and that each

PREFACE

landscape character type and landscape character area has a recognisable and consistent pattern of elements that makes it different from another. Character makes each part of the landscape distinct, with a particular sense of place, regardless of perceptions of quality or value.

The combined landscape character assessment for the whole of Gloucestershire has identified a total of 38 landscape character types. This unusually large number of types for a county wide assessment is a reflection of the great diversity of the Gloucestershire's landscape as a consequence of the remarkable range of the underlying geology and the pattern of social, economic and cultural responses to this diversity.

Purpose and Application of the Landscape Character Assessment

It is intended that the findings of this report, together with the earlier parallel reports prepared for the Forest of Dean and the Cotswolds AONB Landscape Character Assessments, will provide a valuable tool in the spatial planning and decision making processes. It will provide a comprehensive baseline for Gloucestershire County Council and its partners to direct the management of landscape change and ensure that the pattern of landscape character and local distinctiveness is celebrated, protected and enriched.

1.1 Appointment and Brief

In October 2004 Gloucestershire County Council, in association with the partnership District and Borough authorities¹, appointed LDA Design to undertake a Landscape Character Assessment (LCA) of those sections of Gloucestershire County for which a detailed LCA has not been carried out. Assessments have been completed for the Forest of Dean District and the Cotswolds Area of Outstanding Natural Beauty (AONB). The remaining areas within the county which require a detailed LCA comprise:

- **The Severn Vale**, encompassing the vale landscape between the Forest of Dean and the Cotswolds AONB. This includes land within Stroud District, Gloucester City, Cheltenham Borough, and Tewkesbury Borough.
- **Upper Thames Valley**, comprising the area of land on the southern perimeter of Cotswold District that lies outside of the Cotswolds AONB, and extending into the upper section of the River Thames Basin and the Cotswold Water Park. In addition to this land to the south and east of Cirencester, further small detached areas are located to the south west of Kemble, and to the south of Little Barrington.
- **The Vale of Moreton**, comprising the area of land on the north-eastern side of Cotswold District that lies outside of the Cotswolds AONB, and which extends to the north and south of Moreton-in-Marsh.
- **The Vale of Evesham Fringe** on the northern perimeter of the Cotswolds comprising land extending from Teddington to the west of Broadway within Tewkesbury Borough, and land to the north west of Chipping Camden within Cotswold District.

1.2 The Scope and Context of the Study

Figure 1 shows the entire county together with the four separate areas that are the subject of this study. For context, the extent of the Forest of Dean LCA and Gloucestershire section of the Cotswolds LCA is also indicated.

The assessment includes a description of the physical (geology and soils, landform, hydrology, land cover, woodland and trees), and human (archaeology, history, land use, enclosure patterns, settlement patterns and buildings styles) attributes of the landscape. An appraisal of past and present perceptions of the area, including those of national and local artists, musicians and writers did not form part of the brief.

1.2.1 Urban Area Assessments and Boundaries

This study is an assessment of the rural landscape. The principal urban areas of Cheltenham and Gloucester, and the major towns of Cirencester, Stroud / Stonehouse, and Tewkesbury / Ashchurch are excluded from the study area, as agreed with Gloucestershire County Council and the partnership local authorities. As a consequence, separate urban character or townscape assessments have not been undertaken for these settlements as part of this study.

The boundaries of these urban areas have been defined through consultation with the relevant local authorities within which the urban areas are located. They have been confirmed by the partnership authorities and represent the current limit of the built areas at the time of the assessment, and a working boundary for the purpose of undertaking the LCA. The boundaries do not imply, however, any formal status or delineation in respect of an adopted or emerging development plan designation and should not be used to in the context of planning considerations and decisions.

Other built areas, comprising villages and other settlements, are regarded as an integral part of the wider rural landscape they occupy. The land within the development limits of these settlements was not studied in detail as part of the LCA, and descriptions therefore apply to the undeveloped area surrounding these settlements. Nevertheless, the pattern and form of these settlements within the rural landscape make an important contribution to landscape character, and where relevant, this is referred to in the descriptive text. Furthermore, where there are notable landmarks or built form within villages and hamlets, such as distinctive church spires these are also described since they influence the wider landscape and form important reference points.

The findings of the LCA provide the context and framework for a future programme of more detailed townscape assessments for the urban areas, should these be required. Such studies would allow for further analysis of the distinctive character, composition, form and setting of the county's principal urban areas and major towns, and their capacity to accommodate change. The LCA also provides the context for more local studies of smaller settlements, such as Village Design Statements and Parish Plans.

1.2.2 Related Studies

This completion of the Gloucestershire County LCA uses as a framework the County Scoping Study², commissioned in February 2002 which itself used, as a starting point, the Countryside

1 Cotswold District Council, Cheltenham Borough Council, Gloucester City Council, Stroud District Council, Tewkesbury Borough Council.

2 Landscape Character Assessment: Gloucestershire and Forest of Dean: County Scoping Study and County Typology, November 2002, Landscape Design Associates.

1.0 INTRODUCTION

Agency's Character Map of England and the National Landscape Typology. In addition, the assessment has been informed by a range of existing LCA studies within the county, notably the Forest of Dean³ and Cotswolds AONB⁴ LCAs, and an earlier assessment for Stroud District, together with existing and emerging LCAs for neighbouring county and district authorities.

1.3 Purpose of the Study

The overall purpose of the assessment is to complete the detailed landscape assessment of Gloucestershire and provide the County Council and others with a comprehensive understanding of the Gloucestershire landscape and the forces for change that have shaped them in the past, and those that continue to shape them. Consistent with the previous detailed landscape assessments for the county, an holistic approach has been adopted that considers these remaining parts of Gloucestershire as a mosaic of different landscape types and character areas, each with particular characteristics.

The landscape character assessment has the following main objectives:

- to provide an assessment of the character, distinctiveness and qualities of each of the separate study areas, including the cultural and natural heritage resources, and to identify and describe the component landscape character types and landscape character areas;
- to summarise the key characteristics associated with each landscape type to inform the principles in respect of landscape change; and
- to promote awareness of landscape character and the importance of landscape conservation, enhancement and restoration.

1.4 Approach and Methodology

Landscape characterisation is the practical process by which areas of distinctive character are classified, mapped and described. In this assessment landscape character types and landscape character areas have been identified.

- **Landscape Character Types** are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different parts of the country, but wherever they occur they

share broadly similar combinations of geology, landform, drainage patterns, vegetation, and historical land use and settlement pattern.

- **Landscape Character Areas** are single, unique areas and form discrete geographical areas of a specific landscape type.

An important feature of the approach adopted in this assessment is that it is objective. The underlying principle is that all landscapes matter and not just those which are designated or are regarded as being of higher quality than others, so no judgement is made of a particular landscape's value, or whether it is of higher quality than others. Written descriptions avoid value-laden terminology such as beautiful, bland, attractive and degraded, although particular attention is given to identifying characteristics that are distinctive, rare or special. In this way, the descriptions help raise awareness of an area's local distinctiveness and encourage appreciation of variations in character across the county.

The assessment has been completed in accordance with the most up-to-date Countryside Agency methodology⁵ in respect of landscape character assessment. The main tasks were:

- a detailed review of the various LCAs within and immediately surrounding the county where these adjoin or are in close proximity to the separate assessment areas;
- familiarisation with the study areas through reconnaissance, information gathering, GIS interrogation, overlay mapping at 1:50,000 scale and compilation of field survey forms. A list of core data sets is attached at Appendix 1;
- background research into the physical and cultural attributes of the landscape;
- site survey including completion of field survey forms for landscape character types and landscape character areas; detailed mapping of landscape character types and landscape character areas to 1:25,000 scale, with final mapping in GIS at 1:10,000 scale; preparation of a digital photographic record; integration of completed field survey forms into a geo-referenced Access Database. Example field survey forms and prompts sheets are attached as Appendix 2.
- consultation with local authorities and statutory agencies; and
- report and digital map preparation.

3 Forest of Dean Landscape Character Assessment, Landscape Design Associates for Gloucestershire County Council, Forest of Dean District Council and the Countryside Agency, 2002

4 Cotswolds AONB Landscape Character Assessment, and Landscape Strategy and Guidelines, Landscape Design Associates for Cotswolds AONB Partnership and the Countryside Agency, 2003

5 Landscape Character Assessment Guidance for England and Scotland, Countryside Agency and Scottish Natural Heritage, 2002

A flow diagram of the landscape character assessment process is presented in Appendix 3.

1.5 Structure of the Report

This report presents up to date findings on landscape character and key characteristics for the study areas. It will provide a valuable source of information for those with an interest in the Gloucestershire landscape, and responsible for land management and planning in the county.

Section 2, Review of Existing Landscape Character

Assessments describes the national level of assessment to provide a context to the subsequent review of assessments that have been undertaken within the county, and in the district and county authorities that are contiguous with the study areas. A comparison of the range of landscape character types and areas that have been identified within these various assessments are summarised in Tables 1A and 1B.

The landscape patterns evident today have evolved gradually through the interaction of natural and human forces. **Section 3** describes the **Evolution of the Landscape of the Study Areas**. The principal influences that have shaped these landscapes are considered, and important geological, topographical, cultural and historic, and natural features are recorded, and their distribution described.

Section 4, The Landscapes of the Study Areas introduces the subsequent review of the Landscape Character Types and Areas for each of the study areas, and summarises the range of types and areas in table form. The landscape character types and character areas that occur within each study area are described in Sections 5-8. A description of the key characteristics and physical and human influences for each landscape type are followed by more detailed descriptions for each character area. An understanding of landscape character and scale, and the interplay of characteristics derived from geology and landform, habitats, field and settlement patterns, historic land use patterns and vernacular building styles, provides the basis for subsequent development of a landscape strategy and guidance on how the landscape may be able to accommodate future change.

Section 9 of the report provides a **Glossary** of key terms, followed by **Section 10**, which lists the **Core References**. Finally, **Section 11, Acknowledgements**, identifies the stakeholders and consultees who made valuable contributions to the character assessment.

2.1 Introduction

This section commences with a review of the national level of landscape character assessment, and summarises the Character of England and National Landscape Typology which underpins all landscape character assessments across the country. It then summarises the most recent assessments that have been undertaken within Gloucestershire, together with current and emerging assessments for the authorities that extend up to or are located in close proximity to the study areas.

The review has provided a basis for comparison and cross reference of the range of existing landscape character type and area classifications, their boundaries and names, and the scale of the assessments. These are summarised in Table 1A, covering the County Council and Cotswolds AONB Assessments, and Table 1B for the Borough and District Councils and Unitary Authority Assessments. For further clarification, Tables 2A and 2B set out a more detailed cross reference of the terminology used for the final Landscape Character Types (LCTs) identified in this assessment of the study areas with those used for contiguous LCTs by the local authorities adjoining Gloucestershire.

The intention has been to integrate with these adjacent assessments, and share contiguous boundaries and names where these are appropriate to the Gloucestershire findings. As the foregoing review reveals, a wide range of terminology and boundary delineation has been adopted by the various adjacent authorities. It has not been possible, therefore, to achieve correlation between all of the assessment findings.

2.2 National Level Assessment and Context

2.2.1 The Character of England

The former Countryside Commission, in conjunction with English Nature and English Heritage, produced a map of England entitled 'The Character of England: landscape, wildlife and natural features'. The character of the landscape is depicted at a national scale. Computer based statistical analysis was combined with landscape character assessment to identify 159 character areas based on physical and human influences. In addition to this, a series of countryside character descriptions were developed for each of the character areas.

The following Countryside Character Areas (CCAs) extend across the four study areas:

- 106, The Severn and Avon Vales;
- 107, The Cotswolds;
- 108, Upper Thames Clay Vales; and
- 96, Dunsmore and Feldon (limited section only on west of CCA)

These Character Areas, are described in Countryside Character Volumes 4 and 5⁶, For context, the distribution of CCAs across Gloucestershire is illustrated on Figure 2.

2.2.2 National Landscape Typology for England⁷

The Countryside Agency has prepared a national landscape typology for England. This was undertaken to divide the 159 CCAs into distinct and relatively homogenous tracts of land. The National Landscape Typology for England analysed the three strongest determinants of landscape character (physiography, land cover and cultural pattern) through national GIS data sets in a series of complex overlays. The resultant output is a map of 120 generic landscape character types (LCTs) which exist within the framework of the CCAs. Each LCT is allocated a three-letter code, which are representative of descriptions of physiography, land use and cultural pattern. A review of the National Landscape Typology identified 18 LCTs within Gloucestershire. Their extent and distribution, together with the CCAs, is illustrated on Figure 2.

Based on this initial classification of landscape types, the LCT and CCA maps were combined as part of the national study, to identify geographically distinct Landscape Character Type Areas (LCT Areas). Through this process 587 LCT Areas were identified across the country. Full details of the national typology project, and the methods of assessment used, are contained within two reports⁸ prepared by consultants on behalf of the Countryside Agency. These describe and map the LCT Areas in detail and should be referred to as part of any future studies.

2.3 Gloucestershire Assessments

The most recent LCAs that have been undertaken for the county, including District and Borough level assessments, are listed below in chronological order. The Cotswolds AONB LCA is also included as this covers a substantial part of the county. The earlier assessments for Stroud District, and the 'Landscapes within Cotswold District that lie outside of the Cotswolds AONB' were undertaken prior to the publication of the Countryside Agency and Scottish Natural Heritage 'Landscape Character Assessment Guidance for England and Wales', 2002. They therefore made no reference to the emerging National Typology or had the opportunity to utilise GIS datasets.

6 Countryside Character: Volume 4: East Midlands and Volume 5: West Midlands; Countryside Agency, 1999

7 National Countryside Character Decision Support Database, Technical Report, Countryside Agency, 2002

8 National Countryside Character Decision Support Data Base, Data Report, and Map Report - South West Volume, Countryside Agency, 2001

- Assessment of Landscapes within Cotswold District that lie outside of the Cotswolds AONB, 2000
- Stroud LCA, 2000
- Draft Gloucestershire LCA, 2002
- Forest of Dean, 2002
- Cotswolds AONB LCA, 2003

2.3.1 Draft Gloucestershire Landscape Character Assessment

In February 2002 the Countryside Agency, in partnership with Gloucestershire County Council and the Forest of Dean District Council, commissioned Landscape Design Associates (now LDA Design) to undertake a desk based LCA for Gloucestershire.

A principal requirement of the assessment was to use GIS to develop a digital landscape typology for the county, with reference to the Countryside Agency's Character Map of England, the emerging National Landscape Typology for England, and the '*Landscape Character Assessment Guidance for England and Scotland*'. The national typology was used as a starting point and basis for testing and refining the typology for Gloucestershire. The assessment was also guided by the findings of previous landscape character assessments and related studies, and by drawing together essential county-wide datasets wherever possible. Subsequent to the completion of the draft county typology, the findings of the desk study were then used to inform and undertake a full LCA of the Forest of Dean District (see 2.5.2).

The findings of the Draft Gloucestershire LCA provided an initial description and classification of the Gloucestershire landscape into county landscape types, which linked directly into the national typology framework. It also enabled subsequent district, borough and other assessments to fit within this nested hierarchy of landscape types and areas, with each level of assessment adding more detail to the one above. This 'nesting' process has now been undertaken in respect of the Forest of Dean District and the Cotswolds AONB assessment (see sections 2.3.2 below) whereby further refinement of the draft desk based county typology has been confirmed.

The overall purpose of the assessment was to provide Gloucestershire County Council, and others, with a more detailed understanding of the Gloucestershire landscape. It also provided advice on 'rolling out' the landscape character assessment across the remaining district and borough councils. This current project therefore takes the process forward by completing the coverage of landscape character assessment for the remainder of Gloucestershire.

2.3.2 Cotswolds AONB Landscape Character Assessment and Landscape Strategy⁹

In October 2002 the Cotswolds AONB Partnership appointed Landscape Design Associates (now LDA Design) to undertake a Landscape Character Assessment and Landscape Strategy and Guidelines for the designated area. This now replaces the earlier ADAS study undertaken for the AONB in 1994. As a substantial part of the AONB is located within Gloucestershire the study enabled the draft Gloucestershire LCA to be tested and refined. Through further desk studies and detailed field assessment, more accurate mapping of the landscape types was undertaken. Additional Landscape Types were also identified and some of the Landscape Types were renamed. Within the Gloucestershire section of the AONB 15 Landscape Types were classified, a number of which form part of, or adjoin the study areas. These are confirmed in Table 1A.

2.4 County Assessments on the Perimeter of the Study Areas

The counties that extend up to the boundaries of the four study areas either have completed LCAs, or assessments that are in an advanced stage of completion. These are briefly described below, together with their completion date or current status, and hierarchy of typology. Table 1A provides a comparative review of the types and areas that have been identified; those that are contiguous with the study areas are highlighted in bold on the table.

2.4.1 Worcestershire¹⁰

The Worcestershire LCA was completed in 1999 and has been adopted as SPG. The assessment identified twelve broad Regional Character Areas across the county and classified eighteen Landscape Types, three of which were further divided into sub sets. Each landscape type was also divided into Land Description Units (LDUs) with geographically distinct names.

9 Cotswolds AONB Landscape Character Assessment, and Landscape Strategy and Guidelines, Landscape Design Associates for Cotswolds AONB Partnership and Countryside Agency, 2003

10 Shaping the New Worcestershire SPG Draft Landscape Character Assessment, Worcestershire County Council, 1999

2.4.2 Warwickshire¹¹

The Warwickshire Landscape Project was established in 1987 to consider the unique and distinctive landscapes of Warwickshire and to develop a new methodology tailored to the needs of lowland England¹². The study was concerned with the assessment of both local and regional landscape character and the report identified Regional Character Areas and Local Landscape Types.

In 2002, the County Council commissioned more detailed studies across the county and further refinement of the character assessment, working in conjunction with the 'Living Landscapes Project'. Working within an integrated GIS based spatial framework, this more detailed study identified Landscape Description Units (LDUs) that nest within larger scale landscape types.

2.4.3 Oxfordshire¹³

The Oxfordshire Wildlife and Landscape Study (OWLS) three year demonstration project was completed in 2004. Its principal aim has been to explore the relationship between landscape character and biodiversity and to produce a strategic framework for decision making. The landscape assessment was based on the National Typology of Landscape Description Units derived from the national datasets. The Regional Character Areas defined within Oxfordshire were subdivided into LDUs derived from GIS mapping. The field survey and characterisation process then identified Landscape Types and Local Landscape Character Areas. Eight Landscape Types extend up to the eastern boundary of Oxfordshire in the vicinity of the Upper Thames Valley, the most extensive of which are Estate Lowlands and Lowland Village Farmland. The Thames valley bottom is defined as River Meadowlands.

2.4.4 Wiltshire¹⁴

The Wiltshire LCA commenced in 2004 and is now published as a consultation draft. The study was undertaken by Land Use Consultants for Wiltshire County Council and identified 16 Landscape Types, two of which extend up to the southern perimeter of Gloucestershire adjacent to the Thames Valley study area. These comprise the Open Clay Vales and Limestone Lowlands Landscape Types. Landscape Character Areas have also been identified within each of the types.

11 Warwickshire Landscapes Guidelines, Warwickshire County Council, 1993

12 Assessment and Conservation of Landscape Character - The Warwickshire Landscape Project Approach (CCP 332) Countryside Commission, 1991

13 Oxfordshire Wildlife and Landscape Study, Oxfordshire County Council, 2004

14 Wiltshire Landscape Character Assessment, Land Use Consultants for Wiltshire County Council, 2005

2.5 Borough, District and Unitary Authority Assessments within and bordering the county

The LCAs that have been undertaken at borough, district and unitary authority level are reviewed below, and include studies completed either within the county or for authorities that extend up to the boundary of the study areas. The typology and range of landscape character types and areas in the vicinity of the study areas are summarised on Table 1B. As with the review of the county studies, the types and areas that are within, or contiguous with the study areas, are highlighted in bold.

2.5.1 Cotswold District Council¹⁵

In 2000 Cotswold District Council commissioned WHITE Consultants to undertake an assessment of the landscape character of those parts of the District that lie outside of the Cotswolds AONB. The study informed the review of the District-wide Local Plan, and adopted the guidance in the Countryside Agency's Interim Landscape Assessment Guidance, 1999. The geographic areas covered by the assessment coincide with the current study areas and were named Cirencester/ Upper Thames Valley; Moreton-in-Marsh Surrounds; and The Vale of Evesham. A total of six landscape types were identified within the study areas, comprising Cotswold Lower Dipslope; Lower Dipslope Valleys; Dipslope/Thames Valley Transition; Thames Valley; Cotswold Fringe Clay Vales; and Clay Vale of Evesham. Geographically specific landscape character areas were classified within these landscape types.

2.5.2 Forest of Dean Landscape Character Assessment¹⁶

The Forest of Dean LCA undertaken in 2002 verified and further refined the desk based draft Gloucestershire LCA. It signified the first stage in the process of establishing a full LCA for the county and has set the framework and benchmark for subsequent studies. The Severn Vale Study Area extends up to the eastern perimeter of the Forest of Dean and therefore shares a number of the landscape types and character areas. These are highlighted in Table 1B.

15 Assessment of Landscapes outside of the Cotswolds AONB, WHITE consultants for Cotswold District Council, June 2000

16 Forest of Dean Landscape Character Assessment and Landscape Strategy, Landscape Design Associates for Gloucestershire County Council, Forest of Dean District Council and Countryside Agency, 2002

2.5.3 North Wiltshire District¹⁷

A landscape character assessment was undertaken in 2004 by WHITE Consultants for North Wiltshire District. The study identifies a range of Landscape Types; those extending up to the Upper Thames Valley study area comprise Alluvium River Terrace Farmland; Lowland Clay Farmland; and Lowland Limestone Farmland. These, together with the Landscape Character Areas, are indicated on Table 1B.

2.5.4 South Gloucestershire¹⁸

South Gloucestershire Council commissioned Chris Blandford Associates in 2001 to undertake a landscape assessment for the Unitary Authority, to support Local Plan Policies, promote good quality design and help raise local awareness of the landscape. Following wide community and stakeholder involvement co-ordinated by South Gloucestershire Council, the findings were amalgamated to formulate the South Gloucestershire LCA, and issued as draft Supplementary Planning Guidance. Adoption was deferred in anticipation of further revisions arising from the Local Plan Inquiry.

The draft landscape character assessment identified eight landscape character types, four of which border the Severn Vale study area within Gloucestershire. These comprise the Shallow Ridge landscape character type (comprising Wickwar Ridge and Vale landscape character areas); Parkland Vale landscape character type (comprising Falfield Vale landscape character areas); Undulating Ridge landscape character type (comprising Severn Ridges landscape character area); and Estuary Shoreline and Levels landscape character type (comprising Oldbury Levels and Severn Shoreline and Estuary landscape character areas).

2.5.5 Stratford-on-Avon District

Although no detailed landscape character assessment has been undertaken for Stratford-on-Avon District, the Council uses the findings of the Warwickshire Landscapes Guidelines which define both Regional Character Areas and Local Landscape Types.

2.5.6 Stroud District¹⁹

The Stroud Landscape Assessment (2000) was undertaken by Landscape Design Associates (now LDA Design) for Stroud District Council to provide an overview of the visual character of the landscape, and its variety and distinctiveness. It is used as Supplementary Planning Guidance to the Stroud District Local Plan. The assessment identified twelve landscape character types, eight of which comprise the Severn Vale Lowland Landscapes, and fall within the Severn Vale study area. The findings of the assessment also informed the draft Gloucestershire LCA, and subsequent Cotswolds AONB assessment. There is a strong correlation between these studies, although the two later studies benefited from the availability of more comprehensive GIS data. Consequently further refinements to the landscape type boundaries and nomenclature were undertaken.

2.5.7 Swindon Borough²⁰

The draft Swindon Borough Assessment identified eight Landscape Types. One of these types, the Clay Vales, borders the south-eastern boundary of Gloucestershire, and hence the Upper Thames Valley study area.

2.5.8 Vale of White Horse District²¹

The Vale of White Horse District Landscape Strategy identified four distinct Landscape Zones in the district. Two of these zones have been further sub divided into component landscape types. One Landscape Zone and one of its component sub types were identified as bordering the south eastern extremity of Gloucestershire: Zone 1 Thames Valley and Corallian Ridge (comprising the Golden Ridge and Oxford Heights sub type).

¹⁷ North Wiltshire Landscape Character Assessment WHITE consultants for Cotswold District Council, June 2004

¹⁸ South Gloucestershire Draft Landscape Character Assessment, Chris Blandford Associates for South Gloucestershire Council, 2002

¹⁹ Stroud District Landscape Assessment, Landscape Design Associates for Stroud District Council, 2000

²⁰ Draft Landscape Assessment of the Borough of Swindon, Swindon Borough Council, 2001

²¹ Vale of White Horse Adopted Local Plan November 1999 - Supplementary Planning Guidance, Landscape Strategy, Vale of White Horse District Council, 2000

2.5.9 West Oxfordshire District²²

West Oxfordshire District Council commissioned Atlantic Consultants in 1997 to undertake a district-wide landscape assessment. The main aims of the assessment were to increase understanding of the landscape resources of the district, assist with policy formulation and development control, and target resources for enhancement and management. The study drew from the Countryside Commission guidance document CCP423, and was completed in 1998.

Within the Regional Character Areas of the Cotswolds, and the Upper Thames Clay Vales, the study identified thirteen Landscape Character Areas, three of which adjoin the Upper Thames Valley study area. These comprise Shilton Downs, Bampton Vale, and Western Thames Fringes Character Areas. The assessment also identified Landscape Types within these Character Areas. Those that border the small areas of land that lie outside of the AONB in this study area comprise semi-enclosed limestone wolds in the Shilton Downs; open flat vale farmland in the Bampton Vale; and semi-enclosed flat vale farmland in the Western Thames fringes.

2.5.10 Wychavon District

No detailed landscape character assessment has been undertaken for Wychavon District. The Council uses the findings of the Worcestershire LCA which defines Regional Character Areas and county-wide Landscape Types, and local level Landscape Description Units.

2.6 Summary and Conclusion

Within Gloucestershire, both the Forest of Dean and Cotswolds AONB LCAs stem from the draft desk based LCA and correlate closely with the county character types that were identified. Through the more detailed level of assessment, however, verified by field evaluation, a number of the character types and boundaries were refined, and some new character types were also identified or type names revised to reflect observed characteristics. However, the strong correlation with the draft county study still remains. Similarly, the Stroud assessment closely concurs with the draft county landscape types since the findings of this earlier study were taken into account. As a continuation of this process, it is intended that the detailed studies for the Severn Vale, Upper Thames Valley and Vales of Moreton and Evesham Fringe will nest within and display a strong match to the desk based county assessment, thus achieving a strong correlation of types and boundaries across the county, cascading from county down to district / borough level.

The preceding review of current and emerging landscape character assessments on the perimeter of Gloucestershire demonstrates that there is a wide spectrum of classifications, terminology and scales of assessment beyond the county. Tables 1A and 1B bring these findings together and further demonstrate the numerous character type and area terms that have been defined either adjacent to each other, or overlaying at different scales from county down to district / borough studies. Thus, the principle of 'nesting' of assessments, with common boundaries retained at each scale of assessment but further sub-divided at the more detailed level, has not always been achieved. Furthermore, there is limited correlation of boundaries and typology names either between adjacent assessments on the perimeter of Gloucestershire, or with the draft County Types and subsequent verified boundaries for the Forest of Dean and Cotswolds AONB.

It is concluded that in view of the range of LCA findings along the Gloucestershire boundary, it will not be possible for the Gloucestershire assessment generally, and the four study areas in particular, to marry into these adjacent assessments in respect of the naming of types and areas and determination of boundaries. Nevertheless, through cross reference with these adjoining studies, there has been an endeavour to integrate with the findings and make connections where appropriate, and this has been achievable in a number of locations.

22 West Oxfordshire Landscape Assessment, Atlantic Consultants for West Oxfordshire District Council, 1998

Table 1: Review of Current and Emerging Landscape Character Assessment within and contiguous with Gloucestershire

1A: County Council and Cotswolds AONB Assessments

County / Cotswolds Conservation Board	Gloucestershire County Council Draft County LCTs 2002	Cotswolds AONB Assessment 2003	Oxfordshire County Council 2001-2004	Warwickshire County Council Warwickshire Landscapes Guidelines, 1993	Wiltshire County Council LCA, Consultation Draft. 2005	Worcestershire County Council Draft LCA /SPG 1999
Summary of Assessment Hierarchy	Draft County Landscape Character Types	Landscape Character Types and Areas	Regional Character Areas (RCAs) Landscape Description Units Landscape Types and Local Landscaper Character areas	Regional Character Areas (RCAs) Landscape Types Landscape Description Units	Landscape Character Types and Areas	Regional Character Areas (RCA) Landscape Types / Sub-Types Landscape Description Units
Landscape Character Types and comparison of LCA terminology	<ol style="list-style-type: none"> 1 Wooded Valleys 2 Limestone Hills 3 Limestone Plateau 4 Wooded Scarp and Lower Scarp Slopes 5 Wooded Syncline and Settled Forest Margin 6 Unwooded Vale 7 Drained Riverine Farmland & Grazed Saltmarsh 8 Littoral Sands and Rock Outcrops 9 Undulating Farmland 10 Ridges and Valleys 11 Wooded Hills 12 Floodplain Farmland 13 Vale Hillocks 14 Low Hills and Orchards 15 Undulating Hill Farmland 16 River Meadows 17 Wooded Outlier 18 Settled Unwooded Vale 19 Farmed Slopes 20 Clay Vale 21 Broad Valley Floor Farmland 22 High Wold 23 High Wold Dipslope 24 Dip Slope Lowland 25 River Basin Lowland 26 Escarpment 27 Secluded Valleys 28 Escarpment Valleys 29 Low Sandstone Hills 30 Low Limestone Ridge 31 Gently Undulating Lowland Farmland 32 Low Wooded Hills 33 Urban 	<ol style="list-style-type: none"> 1 Escarpment Outliers (Wooded Outliers) 2 Escarpment 3 Rolling Hills and Valleys (Escarpment Valleys) 4 <i>Broad Limestone Valley</i> 5 Settled Valley 6 <i>Ironstone Hills and Valleys</i> 7 High Wold 8 <u>High Wold Valley</u> 9 High Wold Dip Slope 10 <u>High Wold Dip Slope Valley</u> 11 Dip Slope Lowland 12 Dip Slope Lowland Valley 13 <i>Low Limestone Plateau</i> 14 Cornbrash Lowland 15 Farmed Slopes 16 Broad Floodplain Valley 17 Pastoral Lowland Vale (Clay Vale) 18 Settled Unwooded Vale 19 Unwooded Vale <p>Notes</p> <ol style="list-style-type: none"> 1: <i>Text in italics</i> signifies Landscape Character Types that do not occur in Gloucestershire; 2: <u>Underlined text</u> signifies new Landscape Character Types that were introduced following the more detailed desk based and field assessment; 3: (Text in brackets) signifies the revised name of the Landscape Character Type following the more detailed desk based and field assessment; 	<p>RCAs on the eastern perimeter of Gloucestershire: Cotswolds Upper Thames Vale</p> <p>Landscape Types on the eastern perimeter of Gloucestershire: Farmland Slopes and Valley Sides Estate Farmlands Lowland Village Farmland Terrace Farmland River Meadowland</p>	<p>Cotswolds RCA Landscape Types: The High Wold The Wold Plateau Redlands and Edge Hill Settled Fringe</p> <p>Feldon RCA: Landscape Types: Vale Farmlands Feldon Parklands</p> <p>Avon Valley RCA: Landscape Type: Vale Farmlands The Wold</p> <p>Landscape Types subdivided further into Landscape Description Units</p>	<p>Landscape Character Types and Areas on the southern perimeter of Gloucestershire</p> <p>Landscape Types: Open Clay Vale Limestone Lowland</p> <p>Landscape Character Areas:</p>	<p>Vale of Gloucester Landscape Types: Principal Village Farmlands Village Claylands</p> <p>Cotswolds and Bredon Hill RCA Landscape Types: Principal Wooded Hills Wooded Hills and Farmlands Limestone Wolds</p> <p>Vale of Evesham RCA Landscape Types: Principal Village Farmlands Village Claylands</p> <p>Landscape Types subdivided further into Landscape Description Units</p>

Note: Landscape Character Types and Landscape Character Areas located within or contiguous with the Study Areas are shown in bold

2.0

REVIEW OF EXISTING LANDSCAPE CHARACTER ASSESSMENTS

1B: Borough Council, District Council, and Unitary Authority Assessments

Authority	Forest of Dean District Council	Cotswold District Council	North Wiltshire District Council	South Gloucestershire Council	Stratford-on-Avon District Council	Stroud District Council	West Oxfordshire District Council	Wychavon District Council
Name, Status and Date of Landscape Character Assessment	Forest of Dean LCA, 2002	Assessment of Landscapes outside of the Cotswold AONB, 2000; WHITE consultants for CDC Approved as SPG	North Wiltshire LCA, 2005 WHITE consultants for NWDC	Draft Landscape Character Assessment, 2002; Chris Blandford Associates for SGC; Emerging as SPD	Use of 1993 Warwickshire Landscapes Guidelines, plus update	Stroud District Landscape Assessment and SPG, 2000; Landscape Design Associates for SDC	West Oxfordshire Landscape Assessment, 1998; Atlantic Consultants for WODC	Use of Worcestershire Draft LCA / SPG, May 1999
Principal Names and Typology Note: Landscape Character Types and Landscape Character Areas in bold are located within or contiguous with the Study Areas	Landscape Character Types & Areas (suffixed by a, b, etc) 1 Wooded Valleys 2 Limestone Hills 3 Limestone Plateau 4 Wooded Scarp & Lower Scarp Slopes 5 Wooded Syncline & Settled Forest Margin 6 Unwooded Vale LCAs: 6a Severn Vale - Stroat / Sedbury 6b Severn Vale 6c The Leaddon Vale 7 Drained Riverine Farmland & Grazed Salt Marsh 8 Littoral Sands & Rock Outcrops LCAs: 8a The Severn Sands 9 Undulating Farmland 10 Ridges and Valleys 11 Wooded Hills 12 Floodplain Farmland LCAs: 12a Walmore Common 13 Vale Hillocks LCAs: 13a Corse Wood Hill 13b Woolridge 14 Low Hills & Orchards 15 Undulating Hill Farmland	LCT: Cotswold Lower Dipslope LCAs: Kemble Dipslope; Cirencester North Fringe Dipslope; Ampney to Southrop Dipslope LCT: Lower Dipslope Valleys LCAs: Churn Valley Coln Valley LCT: Dipslope / Thames Valley Transition LCAs: Ewen Cirencester Southern Fringe Lower Churn Valley Driffield & Meyse Hampton LCT: Thames Valley LCA: Cotswold Water Park – Western Section; Down Ampney; Fairford Airfield and Cotswold Water Park East; Kempsford and Lechlade; Lechlade Water Park; LCT: Cotswold Fringe Clay Vales LCAs: Upper Stour Valley and Hills; Vale of Moreton; Upper Evenlode Valley; LCT: Clay Vale of Evesham LCAs: Saintbury Grounds; Norton Hall Ridge; Mickleton; Scarp Fringes;	Landscape Character Types: Lowland Limestone (Forest Marble) Farmland Alluvium River Terrace Farmland;	Landscape Character Types (LCTs) and Landscape Character Areas (LCAs) adjacent Gloucestershire: LCT: Shallow Ridge LCAs: Wickwar Ridge and Vale LCT: Parkland Vale LCAs: Falfield Vale LCT: Undulating Ridge LCAs: Severn Ridges LCT: Estuary Shoreline and Levels LCAs: Oldbury Levels Severn Shoreline and Estuary	See Table 1A Warwickshire LCTs and LCAs	Landscape Character Types: Rolling Agricultural Plain; Undulating Lowlands; Lowland Ridges; Severn Vale Hillocks; Severn Vale Grazing Marshes; Sandstone Ridge; Triassic Ridge; Wooded Cambrian Ridge; Kingswood Vale;	Landscape Character Areas adjacent to the Upper Thames Valley and Vale of Moreton: Each LCA is further subdivided into a series of local landscape types eg semi-enclosed limestone wolds; valley floor farmland; and parkland. Shilton Downs Landscape Type: Semi-enclosed limestone wolds Bampton Vale Landscape Types: Semi-enclosed rolling vale farmland Western Thames Fringes Landscape Type: Floodplain pasture; Floodplain wetlands; Semi-enclosed flat vale farmland; Open falt vale farmland Northern Valleys & Ridges Semi-enclosed clay wolds Valley floor farmland	See Table 1A for Worcestershire LCTs and LCAs

2.0

REVIEW OF EXISTING LANDSCAPE CHARACTER ASSESSMENTS

Table 2: Final Landscape Character Types (LCTs) for the Study Areas

Cross reference of terminology used for contiguous LCTs within local authorities adjoining the Gloucestershire

2A: County Council and Cotswolds AONB Assessments

Gloucestershire: Final LCTs for the Study Areas	Cotswolds AONB Landscape Character Assessment, 2003	Oxfordshire Wildlife and Landscape Study, 2001-2004	Warwickshire: Warwickshire Landscapes Guidelines, 1993	Wiltshire: Wiltshire Landscape Character Assessment, Consultation Draft, 2005	Worcestershire Draft Landscape Character Assessment & SPG, 1999
Littoral Sands and Rock Outcrops					
Drained Riverine Farmland and Grazed Salt Marsh					
Floodplain Farmland					
Riverside Meadows					Riverside Meadows
Unwooded Vale	Unwooded Vale		The Wold; Vale Farmlands (Avon Valley);		Estate Farmlands; Settled Farmlands; Village Claylands; Principal Village Farmlands;
Settled Unwooded Vale	Settled Unwooded Vale				Settled Farmlands; Principal Village Farmlands;
Low Triassic Ridge					
Low Sandstone Hills					
Gently Undulating Farmed Lowland					
Low Wooded Cambrian Hills					
Vale Hillocks					
Low Hills and Commons					Unenclosed Commons; Principal Settled Farmlands; Principal Settled Farmlands associated with sandy soils; Estate Farmlands;
Rolling Hills and Valleys	Rolling Hills and Valleys				
Settled Valley	Settled Valley				
Escarpment Outlier	Escarpment Outlier				
Pastoral Lowland Vale	Pastoral Lowland Vale; Farmed Slopes				
Undulating Lowland Vale	Pastoral Lowland Vale; Farmed Slopes		Cotswold Fringe		
River Basin Lowland		Terrace Farmland; River Meadowland; Vale Farmland;		Open Clay Vale	
Cornbrash Lowlands	Cornbrash Lowlands; Dip Slope Lowland	Lowland Village Farmland;		Open Clay Vale	
Dip Slope Lowland	Dip Slope Lowland	Estate Farmlands; Farmland Slopes and Valley Side		Limestone Lowland	
Dip Slope Lowland Valley	Dip Slope Lowland Valley			Limestone Lowland	

Note: Shaded box denotes that there are no areas within the assessment that share a boundary with the Gloucestershire Landscape Character Type (LCT).

2.0

REVIEW OF EXISTING LANDSCAPE CHARACTER ASSESSMENTS

2B: Borough and District Councils, and Unitary Authorities

Gloucestershire: Final LCTs for the Study Areas	Forest of Dean LCA, 2002	Cotswold District Council Assessment of Landscapes outside of Cotswolds AONB, 2000	North Wiltshire District Council North Wiltshire LCA, 2005	South Gloucestershire Council Draft LCA and SPG, 2002;	Stroud District Council Landscape Assessment and SPG, 2000;	West Oxfordshire District Council Landscape Assessment, 1998;
Littoral Sands and Rock Outcrops	Littoral Sands and Rock Outcrops			Estuary Shoreline and Levels	Severn Vale Grazing Marshes	
Drained Riverine Farmland and Grazed Salt Marsh	Drained Riverine Farmland and Grazed Salt Marsh			Estuary Shoreline and Levels	Severn Vale Grazing Marshes	
Floodplain Farmland	Floodplain Farmland				Severn Vale Grazing Marshes	
Riverside Meadows						
Unwooded Vale	Unwooded Vale	Clay Vale of Evesham		Parkland Vale; Shallow Ridge;	Kingswood Vale;	
Settled Unwooded Vale					Rolling Agricultural Plain	
Low Triassic Ridge				Undulating Ridge;	Triassic Ridge	
Low Sandstone Hills					Sandstone Ridge	
Gently Undulating Farmed Lowland				Undulating Ridge; Parkland Vale;	Undulating Lowlands; Lowland Ridges	
Low Wooded Cambrian Hills				Parkland Vale	Wooded Cambrian Ridge	
Vale Hillocks	Vale Hillocks				Severn Vale Hillocks	
Low Hills and Commons						
Rolling Hills and Valleys					Rolling Valleys	
Settled Valley					Secluded Valleys	
Escarpment Outlier					Escarpment	
Pastoral Lowland Vale		Cotswold Fringe Clay Vales				Northern Valleys and Ridges; Semi-enclosed clay wolds; Valley floor wetland
Undulating Lowland Vale		Cotswold Fringe Clay Vales				
River Basin Lowland		Thames Valley	Alluvium River Terrace Farmland			Western Thames Fringes: Floodplain wetlands; Floodplain pasture; Semi-enclosed flat vale farmland; Open flat vale farmland
Cornbrash Lowlands		Dipslope/Thames Valley Transition	Alluvium River Terrace Farmland			Western Thames Fringes: Semi-enclosed flat vale farmland
Dip Slope Lowland		Cotswold Lower Dipslope	Lowland Limestone (Forest Marble) Farmland			Shilton Downs: Semi-enclosed limestone wolds; Bampton Vale: Semi-enclosed rolling vale farmland
Dip Slope Lowland Valley		Lower Dipslope Valleys	Lowland Limestone (Forest Marble) Farmland			

Note: For LCT terminology used by Stratford-on-Avon District Council, refer to Warwickshire Landscape Guidelines; and for LCT terminology used by Wychavon District Council, refer to Worcestershire LCA.

3.1 Introduction

The landscape has been shaped by the complex interplay of physical and human influences. An understanding of these influences is central to the assessment process and provides the basis on which to define and describe landscape character.

3.2 Gloucestershire and the Study Area Landscapes

The Forest of Dean District and Cotswolds AONB Landscape Character Assessments (LCAs) provide a comprehensive description of the evolution of their respective landscapes, and together cover a substantial part of Gloucestershire. Many of the physical and human influences and processes that are described in these two assessments are relevant to the whole of the Gloucestershire landscape, including the study areas, and reference should therefore be made to these two documents for a more comprehensive understanding of the evolution of the landscape.

In order to complete the review of the evolution of the Gloucestershire landscape, this section principally focuses on the Severn Vale and the Upper Thames Valley. These are the largest of the study areas. At a national level the Severn Vale is identified as part of the Severn and Avon Vales Countryside Character Area, and is separate and physically distinct from the Forest of Dean and the Cotswolds. The Upper Thames Valley, although not as extensive as the Severn Vale, nevertheless comprises a broad and discrete tract of land, forming part of the Upper Thames Clay Vales Countryside Character Area. In contrast, the remaining study areas are much smaller and fragmented in extent and form northern and eastern extensions of the Cotswolds AONB. Consequently the descriptions given in the Cotswolds AONB LCA largely covers the physical and human evolution of these latter areas. The review below is therefore principally confined to the Severn Vale, and Upper Thames Valley but where relevant, further detail is given in respect of the remaining study areas where these are not adequately covered in the existing Cotswolds AONB LCA.

Physical Influences

The underlying geological structure, and the juxtaposition and character of the succession of rocks, is fundamental to the form and structure of the landscape. While the underlying solid geology is responsible for the principal pattern and elevation of the landform, the differential responses of the various rock strata to the effects of erosion and weathering processes have altered the detailed form of the landscape, influenced drainage and soils, and in turn the subsequent patterns of vegetation, land cover and land use. The deposition of material during the most recent Quaternary era has also been important in moulding and modifying landform patterns.

3.3 Geology and Soils

The diversity of rock types found in Gloucestershire makes it unique within the country, with nearly all of the major divisions of the geological timescale represented. The solid and drift geology across the county is illustrated Figures 3 ((Drift) and Figure 4 (Solid and Drift). Rocks dating from the Cambrian through to the Quaternary Systems are represented, with only the Cretaceous and Tertiary periods excluded. The surface expression of the sequence and range of rock units display a range of landforms. This varied geology has given rise to the distinctive features and landscape character for which the county is renowned, including the Oolitic limestone escarpment and wolds of the Cotswolds, the wooded ridges of the Forest of Dean, the deep gorge of the Wye Valley, the low-lying area of the Severn Vale and the series of outliers within the Vale such as Robins Wood Hill.

3.3.1 The Severn Vale

Rock formations from the Cambrian / Ordovician period through to the Middle Jurassic period are represented within the Severn Vale. The majority of the rocks are from the Mesozoic Era, however, with older Triassic rocks to the west, and younger Lower Jurassic Lias Group rocks to the east. These extend up to the Middle Jurassic Inferior and Great Oolitic limestone escarpment that define the edge of the Cotswolds.

The north and west of the Severn Vale is underlain by Triassic Mercia Mudstones, formerly the Keuper Marl, over which are more limited outcrops of the younger and harder Penarth Group, formerly the Rhaetic Beds, and comprising a mix of shales and limestone. The rest of the vale to the east is underlain by the Lower Jurassic Lias Group formations comprising warm sea deposits of shales and mudstones interbedded with clayey limestone characterised by ammonites, and belemnites, as well as distinctive ferruginous bands.

As a result of earlier periods of major earth movements, the underlying solid geology is more complex in the southern part of the Gloucestershire section of the Severn Vale, with the alignments and sequences of rocks bearing evidence of this activity. Major structural lines intersect in the vicinity of Sharpness where the south west/north east aligned Severn Axis crosses the north/south Bath Malvernian Axis. Here, Old Red Sandstone rocks of the Devonian period have been brought to the surface and are evident at Berkeley, and Tortworth Green, immediately to the south of the county, and form anticlinal folds forming hills. To the east there are outcrops of Silurian rocks, notably exposed on the banks of the Severn at Tites Point to the east of Sharpness.

The oldest rocks in the Severn Vale are Cambrian in age. In the vicinity of Damory in the extreme south of the county, the Upper Llandovery beds are exposed near Damory Mill. The Lower Ludlow shales or mudstones are also seen at Berkeley and Purton where the upper part is Aymestry Limestone.

The Quaternary history of the Severn Vale area is one in which erosion has dominated over deposition. Nevertheless, there are significant remnants of drift deposits associated with events that occurred during the Pleistocene period. At the height of the Anglian glaciation, the Severn Valley was blocked as far south as Gloucester by a glacier deriving from Wales. This glacier, together with the further effect of glaciers moving eastwards across the Bristol Channel, and also from the north and north east, and the Jurassic escarpment and land mass, confined the drainage into a vast glacial lake named Lake Harrison. Drainage from this lake occurred through overflow gaps in the escarpment at about 125m AOD, and through the Moreton Gap to the north east.

The series of terraces of the River Severn are represented by notable landforms within the Severn Vale. Only the Woolridge Terrace is regarded as fluvio-glacial, however, and hence directly related to an ice front. It is considered to be the outwash of the Severn Valley glacier that was partly responsible for ponding up Lake Harrison. The remaining terraces within the Severn are attributable to sequential erosional phases of the river, and are evident as a series of distinctive hillocks at accordant heights that link each terrace. Superficial deposits of river sands and gravels across these terraces are further evidence of their formation.

There are also notable deposits of Quaternary sands within the Severn Vale which have given rise to the presence of the 'Cheltenham Sands', renowned both for the free draining qualities and high quartz content. It is considered that the Sands were formed from wind blown deposits.

3.3.2 The Upper Thames Valley

The northern part of the area is underlain by a sequence of White Limestone and Forest Marble of the Middle Jurassic Great Oolite Group. The Cornbrash, a coarse crumbly limestone, outcrops to the south of these strata extending across the central part of the study area in a distinct east-west line. South of the Cornbrash, the Upper Jurassic Kellaways Clays and Kellaways Sand, comprising a combination of mudstones, calcareous sandstones, is followed by the Oxford Clay Formation. These latter Upper Jurassic rock formations have been extensively masked by superficial deposits of river terrace sand and gravels and alluvium along the valley floors of the River Thames, and the lower reaches of the Churn, Ampney Brook, Coln and Leach. In some areas these recent deposits are extensive and of sufficient depth to eradicate all visual evidence of the nature of the underlying solid geology. Where Oxford Clay is evident above the sand and gravels, some areas form small but locally prominent hillocks in the flat or gently undulating landscape. Exposures of the more limited areas of White Limestone, located on the northern edge of the study area, are principally confined to the valley sides of watercourses. Overlying the geological formations are soils that are mainly alkaline in nature and fairly well drained due to the underlying limestones. In contrast, heavier clay soils have developed over the Oxford Clay.

3.3.3 The Vale of Moreton

The Lower Jurassic Lias Group clays form the bedrock of the area. They are softer than the limestone, and have eroded more easily. As a result there is a distinct rim to the west and the north west where land rises from the lower clay vale towards the higher Oolitic Limestone wolds. Although the wolds of Warwickshire and Oxfordshire to the east are less pronounced, they nevertheless continue the sense of enclosure of the Vale of Moreton. Extensive deposits of boulder clay overlay the Lias Group clays, with pockets of glacial sand and gravel. To the south of and surrounding Moreton-in-Marsh, much of the boulder clay remains on the broad floor of the vale creating an expanse of relatively flat land. To the north, the boulder clay deposits have been dissected to form rounded hills and ridges between the valleys.

3.4 Landform (refer to Figure 5)

3.4.1 The Severn Vale

At a regional level the Severn Vale forms a gently undulating and low lying landform unit contained between, and contrasting with the elevated landforms of the Cotswolds escarpment and wolds to the east, and the Forest of Dean to the west. North of the Vale the distinctive line of The Malvern Hills is also visible as a significant feature. Despite the relatively subdued relief of the Vale, it nevertheless displays a wide variety of landforms in response to the underlying complexity and differential weathering responses of the sequence of solid and superficial geology as well as terrace deposits of the Proto Severn. As a consequence there are notable elevated areas across the Vale including the sequence of 'Vale Hillocks' that correlate with the sequence of Severn River Terraces, the most notable being Woolridge Hill which defines the Woolridge Terrace, and the highest and oldest terrace. The variation of landform at this more detailed and local level contributes to the patterns of local distinctiveness that contribute to the character of the vale.

On the eastern side of the Severn Vale there are further elevated areas and isolated hills which form remnants and outliers of the retreating Cotswold escarpment. The most notable within the study area are Robins Wood Hill and Chosen Hill to the south and north of Gloucester respectively. These are significant landform features and warrant classification as a distinctive and separate landscape type. Others are less significant, where outliers have been substantially eroded, but are nevertheless of local importance. These local hillocks and former outliers are characteristic of the wider Vale in the vicinity of the escarpment. Further landform variations occur where differential erosion of the Lias Group rocks have occurred and where harder Triassic rocks outcrop.

The essence of the Severn Vale is therefore that of a broad plain at a regional scale, but at a local scale displaying immense variety and local diversity, which in turn is reflected in the local landscape character and land cover and management of the land.

3.4.2 The Upper Thames Valley

The River Thames flows through an extensive floodplain. This low lying area is characterised by very shallow slopes, and in many areas is perceived as flat particularly where the extensive floodplain borders the river channel. There are notable variations to this pattern, however, with intermittent areas of Oxford Clay rising above the general levels of the low lying floodplain to form locally distinctive hillocks. Their relative prominence is further defined by a number of small settlements which occupy the summit areas and upper slopes of these hillocks, benefiting from the slightly higher land above the general level of the floodplain.

Rising above the Thames floodplain the progressive exposures of the Cornbrash Formation and Great Oolite Limestones form the broad Dip Slope Lowland area that defines the south easterly termination of the Cotswolds. This undulating landscape on the northern margin of the Upper Thames Valley generally slopes south eastwards towards the Thames, following the general geological grain and dip of the strata. Where the sequence of tributaries of the Thames have cut into the landscape, distinctive valleys have formed, which in their lower reaches are often shallow sided.

3.5 Hydrology and Drainage

3.5.1 The Severn Vale

The River Severn is one of England's principal rivers. At 338 km in length, it rises in the Cambrian Mountains in Wales flowing southwards to its mouth in the Bristol Channel. It is also renowned as Britain's longest navigable waterway. Within Gloucestershire, the Severn has a profound influence on the county influencing the character of the Severn Vale and its landform, land use and communication patterns.

Numerous tributary rivers drain into the Severn. On the east bank of the river within the Gloucestershire section of the Severn Vale, these include the Little Avon River / Berkeley Pill in the south of the county, the River Frome, whose source is deep in the Cotswolds, and the River Avon which joins the Severn at Tewkesbury. On the west bank within Gloucestershire, the Wye, Lyd and Leadon Rivers flow into the Severn, and form the principal catchment area for the Forest of Dean. There are also numerous secondary tributaries that flow into this network of rivers.

A large part of Gloucestershire, including the Forest of Dean and all of the Severn Vale area, falls within the extensive Severn Catchment. To the east of the Cotswolds escarpment, however, the headwaters of a series of rivers rise and flow eastwards across the dip slope towards the upper reaches of the River Thames. This separation between the Severn and Thames catchments defines a major watershed across the county

3.5.2 The Strategy for the Severn Estuary

In view of the regional importance of the Severn Estuary a Partnership of local authorities, government agencies and other key organisations has developed a comprehensive Strategy for the Severn Estuary. This seeks to bring an holistic approach to the management of this important resource and examines the effect and interrelationships between a wide range of topic areas. The Association of Severn Estuary Relevant Authorities (ASERA) has been set up to develop a scheme of management for the European marine site.

3.5.3 The Upper Thames Valley

A number of shallow valleys flow through the study area, carrying both permanent and winterbourne streams. Most notable is the Ampney Brook and those forming the upper reaches of the River Thames, including the River Churn, Coln and Leach. The Thames and its tributaries are small, and it is only between the confluence of the Coln and Thames that a sizeable river becomes evident. Together, these multitude of small streams and brooks drain the area. A number of streams also feed large man made lakes, established on the site of restored gravel workings.

3.5.4 The Vale of Moreton

The Vale of Moreton is of regional significance since the watershed between the River Thames and Severn is located on an east west line through the centre of this area. To the south, the headwaters of the River Evenlode, a tributary of the Thames, gather from the springs around the edge of the broad Vale of Moreton and flow southwards to the upper reaches of the Evenlode Valley. To the north, Knee Brook and Paddle Brook flow in generally eastward courses to join and form the River Stour. This river flows northwards into the Avon and eventually to the Severn. Compared to the upper reaches of the Evenlode catchment, the north flowing tributaries of the Knee Brook within the upper Stour catchment are at a lower level. These tributary streams occupy more pronounced valley forms, and the transition into the Severn catchment is identified by a locally distinctive slope.

3.6 Biodiversity

The distribution of wildlife habitats and natural features throughout Gloucestershire is determined by the nature of the underlying geology, landform, past land use patterns and the cultural history of individual areas. At a very broad scale these wildlife habitats and natural features have been identified by English Nature, which has divided England into a number of Natural Areas, each with a characteristic association of wildlife and natural features. These areas provide a way of interpreting the ecological variations in terms of natural features and illustrate the distinctions between one area and another. Each Natural Area possesses a unique identity resulting from the interaction of natural and human influences.

3.6.1 Biodiversity Action Plan for Gloucestershire

Gloucestershire has a particularly diverse and rich natural environment with many habitats. The Gloucestershire Biodiversity Action Plan (BAP), which was launched in April 2000, sets out a series of objectives and targets in relation to the biodiversity resource. In particular, it contains a series of Habitat Action Plans for a range of key habitats such as Estuaries, Saltmarsh and Mudflats; Unimproved Neutral Grassland; Woodlands; Unimproved Limestone Grassland; Reedbeds; and Standing Open Water habitats. It also sets out Species Action Plans for a wide range of species, including farmland birds, water vole, otter, bats, stag beetle, arable wildflowers and stoneworts.

The county holds many habitats and species of national and international importance, so the delivery of the Gloucestershire BAP forms a vital part of the national strategy embodied in the UK BAP. Nature Conservation Designations and Local Assets within the county are shown on Figure 8. Long term partnership working is the key to delivering Gloucestershire's BAP and managing this precious resource. The Gloucestershire Biodiversity Partnership encompasses around 60 organisations that are united in their commitment to protect and enrich the county's biodiversity. These range from the Gloucestershire Wildlife Trust, English Nature, local authorities, the Environment Agency, farmers and landowners to businesses and communities.

3.6.2 The Severn Vale

The majority of land lying within the Severn Vale comprises the Severn and Avon Vales Natural Area. The Natural Areas of the Severn Estuary and the Cotswolds also extend into the margins of the Severn Vale to the west and to the east respectively.

The Severn Estuary is subject to a very large tidal range which creates a distinctive, highly dynamic environment. A range of habitats have developed in this unique estuarine environment including salt marshes, and sand banks which support a vast array of over-wintering birds. The biodiversity value of the Severn Estuary cannot be underestimated. A substantial part of the Severn Estuary, including the section extending into Gloucestershire, is designated as a Wetland of International Importance (Ramsar Site), and also designated as a SPA for birds under the EU Birds Directive. The role of ASERA (see Section 3.5.2 above) in the co-ordinated management of activities is important.

Much of the land within the Severn Vale lying adjacent to the River Severn remains subject to seasonal flooding and there are remnant wetland sites and other associated riparian features such as old pollarded willows, wet pastures as well as numerous ditches and overgrown hedges.

The key characteristics of the Natural Areas lying within the Severn Vale are listed in the table below. Although only very small margins of the Cotswolds Natural Area occur within the Severn Vale, the full schedule of the key characteristics are included as these provide a context for the association of this adjacent landscape and Natural Area which forms the setting to the Severn Vale.

Natural Area	Key Characteristics
Severn and Avon Vales	<ul style="list-style-type: none"> • Tremadoc, Llandovery and Wenlock rocks and fossils • Exposures of Quaternary sediments including river gravels and glacial deposits • Some areas of lowland oak and mixed deciduous wood. • Some wet woodland in the river valleys • Several areas of lowland wood pasture and parkland • Unimproved neutral grasslands, especially old meadows and pasture • Important areas of lowland hay meadows and dry neutral grassland • Small areas of lowland heathland
Cotswolds	<ul style="list-style-type: none"> • Cotswolds scarp and clay vales • Limestone exposures in Cotswolds scarp and crest • Cotswold stone buildings and walls • Internationally important lowland beech and yew woodland on scarp slopes and in valleys • Well distributed, significant lowland oak and mixed deciduous woodland • Characteristic lowland wood pasture and parkland • Some large blocks of conifer plantation • Nationally significant lowland calcareous grassland (on limestone) • Neutral grassland including species-rich meadows and pasture on lower slopes • Remnant wet grasslands along river valleys
Severn Estuary	<ul style="list-style-type: none"> • Substantial Areas of Saltmarsh. • Substantial areas of intertidal sandflats and mudflats. • Extensive areas of highly mobile sandbanks. • Extensive subtidal reef of <i>Sabellaria alveolata</i>

The Severn and Avon Vales Wetland Partnership

The Severn and Avon floodplain meadows are of considerable biodiversity importance. This vulnerable habitat, and its associated historic agricultural management regime, has suffered a progressive decline, with dramatic losses of floodplain habitats and key species of flora and fauna. To address these growing concerns, and in recognition of the need for a co-ordinated catchment level approach covering a wide range of interests, the Severn and Avon Vale Wetland Partnership (SAVWP) was set up in 2000. It embraces a wide range of partners including English Nature, the Environment Agency, County and District authorities, the Wildlife Trusts, Defra and FWAG. The purpose of the partnership is to encourage the recovery, creation, enhancement and appropriate management of wetland habitats linked to a sustainable rural economy.

The Stroud Valleys Project

The Stroud Valleys Project (SVP) is a community development charity that operates across Stroud District. Its principal aim is to encourage people to cherish their local environment and work towards protecting and enhancing its biodiversity. The Project also encourages the sustainable use of resources and guiding the setting up of new initiatives such as Farmers Markets. Integral to the project, the SVP has set up the People and Ecology Project (PEP) with the purpose of helping parishes to plan the integration of biodiversity enhancement with the social and economic needs of the parish. The Cam People and Ecology Project was the first PEP and has been a particularly successful demonstrator of the benefits of parish-wide biodiversity work and raising local people's awareness and enthusiasm.

The Severnside Project

The Severnside Project is managed by Gloucester City Council and promotes the environmental and leisure uses of the open land on the fringe of the city between the River Severn and the Sharpness Canal from the Gloucester Docks area to Stonebench. It is primarily funded by the Gloucestershire Environmental Trust together with landfill tax contributions donated by Cory Environmental. It has a Project Manager who is responsible for co-ordinating the many activities, ranging from restoration of arable land to wetland grassland, to a programme of local walks.

The Severn Vale Biodiversity Project

The Severn Vale Biodiversity Project, formed in 2004, is a partnership of the SVP, the Severnside Project and FWAG, and administered by English Nature. The project is promoting an holistic approach to wildlife conservation, with the principal purpose of helping 12 parishes within the Severn Vale to create a thriving natural environment that meets the needs of wildlife, communities and the local economy. Funding for this project is through Defra's Aggregates Levy Sustainability Fund.

The Gloucester Vale Conservation Volunteers

The Gloucester Vale Conservation Volunteers, which is affiliated to the BCTV, has been working in the Severn Vale for 20 years and has made an important contribution to the management and enrichment of the biodiversity value of many sites within the Vale.

The Gloucestershire Orchard Group

The Gloucestershire Orchard Group (GOG), which was founded in 2001, seeks to conserve and promote the restoration of traditional orchards within Gloucestershire, many of which are present within the Severn Vale. The biodiversity value of Old Orchards is recognised in the Gloucestershire BAP, and a Habitat Action Plan (HAP) has been prepared for the county's orchards, setting out their landscape, wildlife and historic importance and the requirements to safeguard and improve them. GOG has an important role in achieving the targets set out in the HAP.

Delivering the Gloucestershire BAP and Targets within the Severn Vale

Together, these many initiatives and projects within the Severn Vale are working towards delivering and fulfilling the targets of the Gloucestershire BAP. This will enrich the biodiversity and landscape character of this area.

3.6.3 The Upper Thames Valley

The northern part of the Upper Thames Valley, incorporating the Dip Slope Lowland and the Cornbrash Lowlands landscapes, consists of the Cotswolds Natural Area, whilst the southern portion extending across the Thames river basin comprises the Upper Thames Clay Vales Natural Area. The key characteristics of these two Natural Areas comprise the following:

Natural Area	Key Characteristics
Upper Thames Clay Vales	<ul style="list-style-type: none"> • Outcrops of Oxford and Kimmeridge Clays in brickpits • Mostly northerly deposits of Wealden rocks in Britain • Upper Jurassic 'Corallian' limestones and fossil remains in classic area • Most northerly exposures of Portlandian rocks • Many clay-bottomed rivers, mostly forming tributaries to the Thames • Extensive marl lake system • Extensive ditch system • Wet neutral grasslands in river valleys • Significant dry neutral grasslands including mostly small lowland hay meadows
Cotswolds	See previous table

Biodiversity within the Upper Thames Valley and the Cotswold Water Park

The Upper Thames Valley supports a wide range of habitats including the numerous lakes that have been created as a consequence of the sand and gravel extraction in the Valley, and which now form a unique wetland complex called the Cotswold Water Park. The biodiversity resource within the Cotswold Water Park is of considerable importance supporting internationally important wintering waterfowl, and nationally important winter and breeding populations of birds. There are also important assemblages of aquatic plants and wildflower meadows, while the limestone streams and rivers that flow through the Water Park to the Thames support fish, otter, water vole and native crayfish. Some of the sites are designated as SSSIs. With some further extension of the gravel extraction areas proposed, as set out in the adopted Gloucestershire Minerals Plan, the Park has the potential to become the largest freshwater wetland complex in Europe.

The Cotswold Water Park Biodiversity Action Plan

In recognition of the need to protect and manage this unique and precious wildlife resource, a Cotswold Water Park Biodiversity Action Plan (CWP BAP) was prepared and launched in 1997 to cover the period 1997-2007. In common with the Gloucestershire BAP, the CWP BAP is implemented through partnership working, including the local authorities, nature conservation bodies, landowners and the gravel companies, and co-ordinated by the Cotswold Water Park Society. The CWP BAP is currently under review.

The Cotswold Water Park and Strategy

Following the designation of the Cotswold Water Park in 1967, the Cotswold Water Park Joint Committee (CWP JC) was formed. The principal purpose of the CWP JC, which is represented by all the county and district authorities that extend across the Park, is to provide a co-ordinated approach to the management and forward visioning of the area. The CWP Strategy covers the period 2000-2006, and provides a framework for addressing and balancing the complex range of issues that affect the area, including existing and future gravel extraction, hydrology, nature conservation and biodiversity, residential and leisure development, sport and recreation, and traffic and access.

3.6.4 The Vale of Moreton and Vale of Evesham Fringe

The Vale of Moreton and the Vale of Evesham Fringe lie within the Cotswolds and Severn and Avon Vales Natural Areas respectively. Reference should therefore be made to the key characteristics of these Natural Areas, as detailed above.

Human Influences

3.7 Introduction

The diversity of the landscape character across Gloucestershire is in part due to the interaction between humans and their environment. The concept of 'time depth' indicates the successive periods of landscape change, with the modern landscape forming a palimpsest of the earlier periods of occupation, and historic events and processes. These interactions have had a profound effect on the evolution of the Gloucestershire landscape. The principal events are described in more detail in the Cotswolds AONB LCA, as at a broader scale these are common to man's activities within the Severn Vale and the other study areas. The distribution of Land Cover across the county is illustrated on Figure 6 and the Heritage Designations on Figure 7.

3.7.1 Severn Vale

There is only scattered evidence suggesting that the Severn Vale landscape was heavily utilised and inhabited in the prehistoric period. However, following the Roman invasion the vale landscape came to prominence, with the Twentieth Legion establishing itself at Gloucester in AD 49. Roman roads were quickly constructed to link the fort, and later the city of GLEVVM and designated as a 'Colonia' AD97, to the wider Roman world. The principal route shared the course of the modern A38 through the vale that linked Gloucester to AQUA SVLIS (Bath) in the south, and SALINAE (Droitwich) in the north. The colonia developed suburbs and a thriving port on the river.

Many of the villages within the wider Severn Vale originate from the Saxon period, and grew throughout the medieval period taking increasing areas of land into their open fields, remnants of which can occasionally be found as surviving tracts of ridge and furrow. The historic cores of many of these vale settlements contain medieval buildings that are largely half-timbered although many have now been infilled with brick, or have a brick facade. A number of older buildings are also constructed of Cotswold stone. These are often clustered around medieval churches that are also built of stone, the materials of which were obtained from Cotswolds quarries and brought to the vale by packhorse. The spires and towers of these churches gain visual prominence in the lowland landscape and are important landscape features and landmarks. The most prominent is the 15th century tower of Gloucester Cathedral, which acts as an orientation point in the lowland vale.

Larger vale settlements such as Gloucester continued to grow throughout the industrial period, displaying evidence of this in the rows of 19th century terraced houses, and occasionally mills, that have survived demolition. The vale settlements took advantage of

good transport links provided by the Severn, and the numerous roads, canals and railways, for the importation of building materials such as bricks and slate for roofing. Cheltenham and Gloucester also contain fine examples of Regency architecture, the distinctiveness of the buildings much enhanced by the locally available fine Cotswolds limestone used in their construction.

Post industrial and modern urban and suburban sprawl has had a major impact on the landscape, in terms of physical change to land use and landscape patterns, the built environment, transport and infrastructure. The main north-south route through the Severn Vale established by the Romans still persists, its course closely followed by the M5 motorway, the mainline railway between Bristol and Birmingham, and to the west, the Gloucester and Sharpness Canal.

3.7.2 Upper Thames Valley

Prehistoric settlement of the gravel terraces is likely to have been widespread although extraction has removed much of the archaeological record in this area. A number of prehistoric long barrows & burial mounds present within areas of the Dip Slope Lowland & Dip Slope Lowland Valleys suggest occupation of the land since the Neolithic. It also suggests that this lower part of the Cotswolds would also have been extensively cleared of trees from this period to ensure visibility of these symbolic features and territory markers, as well as to enable cultivation of the land to support these early sedentary farming communities. The valleys within the area were also likely to form important trade and communication routes.

The Roman roads of Akeman Street, Ermin Street and Fosse Way radiate out from the Roman town of Cirencester (Corinium) signifying the importance of the Roman occupation of this area.

Airfields are also conspicuous 20th century historic features of the landscape, some of which were established in preparation for the D-Day landings. Fairford Airfield is still functioning as a major military airfield with USAF interests; others at Kemble, Down Ampney and South Cerney are no longer active airfields although Kemble is used for recreational use including microlites.

3.7.3 Vale of Moreton

It is likely that early prehistoric communities, possibly resident in the valleys on the neighbouring uplands, would have exploited wetland and marginal habitats in the vale for game and fish. From the advent of farming, however, it is likely that the gravel terraces bordering rivers may have been the focus of some settlement. The low, poorly drained landscape may have remained marginal up until improved plough technology in the Romano-British and Saxon periods allowed the more heavily water-logged soils to become workable.

The Romans constructed the Fosse Way (A429), and in addition to this major routeway, their presence is signified by the site of a Roman settlement located at Dorn, to the north of Moreton-in-Marsh and adjacent to the Fosse Way.

Throughout the medieval period, pressure on land elsewhere and improved drainage techniques allowed increasing areas of the landscape to enter production. Villages expanded and new settlements were established, including the market town of Moreton-in-Marsh, which was established by charter in 1226. This medieval town was laid out with burgage plots on either side of the Fosse Way. The remaining settlements within the area were also developed during the medieval period. Indeed, place name evidence indicates that the majority of modern towns and villages of the vale have Saxon origins. Alongside Knee Brook, three deserted medieval village sites can be found, complete with ridge and furrow earthworks of their open fields. Another deserted village overlooks this valley at Lemington. Only small hamlets remain at these sites.

The Severn Vale, Upper Thames Valley, Vale of Moreton and the Vale of Evesham Fringe

4.1 Introduction

This assessment completes the detailed review of the Gloucestershire landscape and recognises that all landscapes matter, not just those that are particularly well known, or evoke strong images. Landscape character assessment acknowledges that each landscape character type and landscape character area has a distinct, recognisable and consistent pattern of elements that makes it different from another. Character gives each part of the landscape a particular sense of place, regardless of perceptions of quality or value. In conjunction with the linked studies of the Forest of Dean and the Cotswolds AONB this assessment provides a descriptive map of the county, and draws attention to the contrasts in landscape character that is so often taken for granted.

4.2 Landscape Character Types and Landscape Character Areas

The assessment has used the Draft Gloucestershire Landscape Typology, 2002 as a framework for the study, together with the findings of the more detailed LCAs for the Forest of Dean, and the Gloucestershire section of the Cotswolds AONB. Reference has also been made to earlier landscape character assessments undertaken within the county and in neighbouring county and district / borough / unitary authorities and study areas. These are summarised in Section 2 and Tables 1 and 2. The 'Landscape Character Assessment Guidance', 2002 published by the Countryside Agency and Scottish Natural Heritage sets out the methodology and spatial hierarchy for the assessment process with a top down cascade from the National Typology down to local level. As a further clarification of the assessment methodology employed, a flow diagram is presented in Appendix 3.

Building upon this framework and methodology, the Landscape Character Assessment has identified a total of 20 landscape character types and 44 landscape character areas across the four study areas. These are listed in Table 3 at the end of this section and their distribution shown on Figure 9, confined to character types only. Figure 10, comprising a more detailed map at 1:80,000 scale at AO, indicates both landscape character types and character areas, and their nomenclature.

Following this introduction, each of the generic landscape types is described. The key characteristics are summarised followed by a review of landscape character, and the physical and human influences that have shaped the landscape and contributed to its character. This is followed by a description of the unique landscape character areas that occur within each landscape character type, and a summary of the principal features that are particular to each.

4.3 Stroud Valleys Landscape Character Types

In addition to the 20 landscape character types identified in this study, two further types occur within the Stroud Valleys section of the Severn Vale study area, both of which are identified and described in the Cotswolds AONB LCA. These comprise Settled Valleys and High Wold Valley (Types 5 and 8 respectively in the Cotswolds assessment). The areas comprise fragmented and generally small areas of land that lie outside of the built area as defined in this LCA, and also outside of the Cotswolds AONB. They occur within the valley area occupied by the Stroud / Stonehouse built up area and also extending south to the Nailsworth Valley. In view of their classification as an integral part of the landscape types and character areas described in the Cotswolds AONB, reference should be made to that document for their full description. Cotswolds LCA Type 5 is represented by the landscape character areas of 5A: Nailsworth, and 5B: Frome Golden Valley and Stroud. In respect of Cotswolds LCA Type 8, this is represented in the study area by the landscape character area 8B: Painswick and Slad Valleys. For cross reference, the representation and colour coding of these areas of Settled Valleys and High Wold Valley on Figures 8 and 9 are correlated with their representation on the Cotswolds AONB LCA and mapping.

4.4 Boundary Determination of Landscape Character Type and Areas

The boundaries of the landscape character types and areas were initially mapped to 1:50,000 scale, using the range of data sets that were made available at this scale, and subsequently verified and refined in the field. Reference to 1:25,000 scale maps was also made as an integral part of the desk study and throughout the field studies, to provide a more informed and detailed analysis of mapped features, including the pattern of field sizes and types. The final mapping of the boundary lines was taken down to 1:10,000 scale and mapped on GIS.

Landscape character rarely changes abruptly or follows clearly defined lines on the ground, and as a consequence the boundaries that have been defined for the landscape character types and areas should be considered as transitional. This is evident, for example, in the subtle transition from the Dip-Slope Lowland to the Cornbrash Lowlands, and the River Basin Floodplain Lowland in the Upper Thames Valley area. Other types are more clearly defined, however, such as the Vale Hillocks and Escarpment Outliers within the Severn Vale. Here, the transition between the adjacent types is more abrupt. Nevertheless, even these distinctive morphological units demonstrate transitional characteristics where the base of the hillocks merges with the surrounding lower lying vale lowland areas.

4.0

THE LANDSCAPES OF THE STUDY AREAS

Despite the transitional nature of landscape character, the provision of a definitive line provides an essential reference point from which to commence the determination of specific outputs from the LCA, including interrogation in GIS. Throughout this study, therefore, the boundaries to landscape character types and areas are all shown as definitive lines, mapped to 1:10,000 on GIS. In recognition of the transitional nature of landscape character, however, these boundary lines represent the centre line of the transition based on the determining features associated with geology, topography, soils, cultural patterns and land use. These are then refined to follow field boundaries or the perimeter of well-defined features such as woodlands, roads, tracks and occasionally footpaths.

In many instances, the boundary lines were initially defined by contours where these correlated with a well-defined landform, a change in slope profile or a general height above Ordnance Datum, or a change in the underlying geology that resulted in a significant surface expression. Here the boundary lines were then drawn to

the field boundaries that followed the closest correlation with the landform and mapped contours, or other identifiable features.

Where the assessment of a particular site or area is undertaken that falls close to, or within 0.5km of a boundary line, the characteristics, descriptions and any future management strategies for each of these adjacent landscape types and areas should be taken into consideration. This is particularly important in the evaluation of and guiding management requirements, as well as in the consideration of the development of landscape and environmental projects. Such an approach is particularly important where there is a high degree of intervisibility between neighbouring landscapes. 'Borrowed' characteristics are important not just to the landscape they are in, but also to the landscape they are visible from.

Table 3: Landscape Character Types and Areas for the Severn Vale; Upper Thames Valley; Vale of Moreton; and Vale of Evesham Fringe.

Landscape Character Type	Severn Vale LCAs	Upper Thames Valley LCAs	Vale of Moreton LCAs	Vale of Evesham Fringe LCAs
Littoral Sands and Rock Outcrops	SV 1A Hill Flats / Hock Cliff / Longney			
Drained Riverine Farmland and Grazed Salt Marsh	SV 2A Berkeley Pill Riverine Farmland SV 2B Slimbridge and New Grounds Marshes SV 2C Arlingham Warth and Longney Riverine Farmland			
Floodplain Farmland	SV 3A Elmore Back and Minsterworth Ham SV 3B The Rea Maisemore Ham and Longford SV 3C The Severn Hams (Gloucester to Tewkesbury South)			
Riverside Meadows	SV 4A Severn Ham, Tewkesbury SV 4B Mythe Meadows SV 4C Twyning and Upham Meadows			

Landscape Character Type	Severn Vale LCAs	Upper Thames Valley LCAs	Vale of Moreton LCAs	Vale of Evesham Fringe LCAs
Unwooded Vale	SV 5A Kingswood and Wick Vale SV 5B Ashleworth, Tirley and Forthampton Vale			VE 1A Teddington and Greet Vale VE 1B Wormington Vale Fringe VE 1C Mickleton Vale Fringe
Settled Unwooded Vale	SV6A Vale of Berkeley SV6B Vale of Gloucester			
Low Triassic Ridge	SV 7A Bevington and Whitcliff Ridge			
Low Sandstone Hills	SV 8A Berkeley and Newtown Hills			
Gently Undulating Farmed Lowland	SV 9A Stone and Berkeley Heath Undulating Lowland			
Low Wooded Cambrian Hills	SV 10A Michael Wood Hill			
Vale Hillocks	SV 11A Overton and Barrow Hill SV 11B Monks' and Hockley Hills SV11C Lassington and Rodway Hills SV 11D Woolridge Hill SV 11E Sandhurst and Norton Hills SV 11F Corse Wood & Barrow Hills SV 11G Apperley Hill			
Low Hills and Commons	SV 12A Twyning Hills			
Rolling Hills and Valleys	SV 13A Dursley, Cam and Uley Valley			
Escarpment Outlier	SV 14A Robins Wood Hill SV 14B Chosen Hill			
Pastoral Lowland Vale			VM 1A Upper Evenlode Vale	
Undulating Lowland Vale			VM 2A Upper Stour Hills and Valleys	

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THE LANDSCAPES OF THE STUDY AREAS

Landscape Character Type	Severn Vale LCAs	Upper Thames Valley LCAs	Vale of Moreton LCAs	Vale of Evesham Fringe LCAs
River Basin Lowland		TV 1A Somerford TV 1B Keynes TV1C Down Fairford and Lechlade		
Cornbrash Lowlands		TV 2A Poole Keynes and Ewen Lowlands TV2B Driffield Lowlands TV2C Southrop Lowlands		
Dip Slope Lowland		TV 3A Kemble Dip Slope TV 3B The Ampneys		
Dip Slope Lowland Valley		TV 4A Lower Churn Valley TV 4B Lower Coln Valley		
Urban				