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LANDSCAPE ARCHITECTS

BRACKLEY LANDSCAPE SENSITIVITY AND GREEN INFRASTRUCTURE STUDY

Prepared by Quartet Design

On behalf of the
West Northamptonshire Joint Planning Unit

June 2009

Disclaimer

It should be noted that, unless otherwise stated, the assessments made assume that sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from third parties has not been independently verified by West Northamptonshire Joint Planning Unit (WNJPU) or Quartet Design, unless otherwise stated in the report.

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EXECUTIVE SUMMARY

The Brackley Landscape Sensitivity and Green Infrastructure Study has been prepared by Quartet Design on behalf of the West Northamptonshire Joint Planning Unit, who commissioned the study.

The Core Study Area incorporates all land within the area outlined in MAP 1 (QD42_200_01Rev B).

The study has been undertaken in three stages, and is set out accordingly.

Part A is a review of the baseline data, to gain an in-depth understanding of the natural and cultural resources of the area and how they contribute to the setting and character of Brackley. The results are presented as a series of drawings and also through text. This part is divided into four topics: Natural Systems; Land Use and Human Influences; Environmental and Visual Character, Northamptonshire & Buckinghamshire Environmental Character Assessments and Green Infrastructure.

Part B is a sensitivity review. Landscapes and designated sites within the Study Area identified in Part A are given a level of sensitivity (high, high-medium, medium or low) in the context of potential large scale residential/mixed use development. The results are illustrated graphically and described through text. The sensitivity review includes three topics: landscape sensitivity, biodiversity sensitivity and cultural heritage sensitivity. In conclusion there is a combined sensitivity map, which brings all the results together showing areas of high, high-medium, medium and low combined sensitivity.

The aim of this part is to guide the relevant local planning authorities and developers to decisions that reduce any adverse impact on baseline resources and to provide some indication on the location, scale and type of development that may be appropriate in a particular area. It also indicates how development should respond positively to both the opportunities and constraints identified. Plans showing sensitivity and Green Infrastructure (GI) Networks help to identify areas where Green Infrastructure provision would be most beneficial and would enable positive responses and enhancement of the resource.

Part C is a Green Infrastructure strategy for Brackley. This part considers the opportunities for Green Infrastructure enhancement and consequential recommendations for an improved Green Infrastructure Network around the town.

Key "Green Infrastructure Routes" are identified which contain Primary Movement Networks, habitat corridors and Open Space sites. A series of Green Infrastructure projects are proposed which aim to address accessibility issues and also enhance Brackley's Movement Network, Open Space sites and Biodiversity Network.

1.0 INTRODUCTION

1.1 Background

- 1.1.1 Quartet Design has been appointed by the West Northamptonshire Joint Planning Unit (WNJPU) to prepare this Landscape Sensitivity and Green Infrastructure (LSGI) Study for Brackley. Officers from the West Northamptonshire Joint Planning Unit and South Northants Council have also had input during the production of the Study.
- 1.1.2 Quartet Design are located in north Buckinghamshire, adjacent to the area covered by South Northamptonshire Council (SNC) and have provided SNC with landscape services over a long period. Quartet Design are therefore very familiar with the study areas and the wider context and character of South Northamptonshire.
- 1.1.3 The sustainable Communities Plan identifies the Milton Keynes South Midlands (MKSM) Sub Region as one of four major areas of growth within the wider South East. Elements of the development planned for that growth area will take place within Northamptonshire, focused on the existing larger towns within the County, with an anticipated 62,125 new homes by 2026 within West Northamptonshire - East Midlands Regional Plan (March 2009). It is intended that this Study will help to inform decisions about the future expansion of the town and the infrastructure required to support that growth.
- 1.1.4 In the context of this study, the Green Infrastructure and landscape encompasses all of the environmental resource at the strategic scale, comprising landscape character and visual amenity, biodiversity and cultural heritage and the wider networks and inter-relationships of strategic green space, biodiversity and sustainable movement.

1.2 Methodology and Scope of the Report

The report has been based on similar reports produced for landscape sensitivity and green infrastructure studies in Daventry and Northampton. The report has been prepared as a technical study based on a desktop review of various levels of information obtained from other organisations that focus on the environment and related issues within Northamptonshire and associated areas.

- 1.2.1 Baseline information has been obtained from the River Nene Regional Park Community Interest Company.
- 1.2.2 In addition to the desktop review, a number of site visits have been undertaken to the study areas between September 2008 and February 2009. These surveys were undertaken to gather site information and carry out a visual assessment of the landscape components, to assist in assessing the landscape quality and sensitivity.
- 1.2.3 The site visits were limited to consideration of strategic aspects, rather than detailed issues associated with individual sites. As the study areas related to this report are smaller than those previously undertaken in Northamptonshire, the scope and process of assessment has incorporated appropriate local criteria and responses.
- 1.2.4 Further detailed work would be required to assess the environmental issues at a more site specific level.

The function of the report is to:

- provide a broad overview of baseline environmental resources.

- Identify and assess key landscape elements, biodiversity, watercourses, flood plains, cultural heritage and landscape character.
- Identify opportunities for the development of a green infrastructure system that provides recreational and wildlife elements to serve the local community and allow inter-connectivity with adjacent areas.

1.2.5 The overall scope of this report is:

- To provide a broad overview of the baseline environmental resources.
- To assist the public sector agencies involved in growth decisions in their understanding of the relative sensitivity of the areas surrounding the town to proposals for growth.
- To progress the understanding of sensitivity in relation to green infrastructure and to use this to guide an optimal green infrastructure network linked to Brackley's growth.
- To contribute to the identification of an optimal Green Infrastructure Strategy for Brackley as it grows.

1.2.6 It was not considered appropriate to establish optimal development scenarios through analysis and interpretation of baseline landscape, visual, heritage and biodiversity assets and the sensitivity assessment. The rationale for this was based on the premise that any optimal scenarios for Green Infrastructure and landscape would be highly dependent upon more detailed site specific surveys and required complex balancing and weighting of the respective Green Infrastructure interests. This is largely a matter for the development plan process. The strategic level conclusions expressed from this study still risk being interpreted as determining preferred potential sites or areas for development. Notwithstanding this risk, the conclusions from the exercise have identified areas that would be more, or less, challenging for new development at a strategic scale and for which further study would be required before any definitive judgment should be made.

1.2.7 A series of plans have been prepared that illustrate where the sensitivity analysis has identified areas where there are significant constraints due to existing resources and also where Green Infrastructure provision would be most beneficial and provides opportunities for positive responses and enhancement of the resource. These plans will assist the Local Planning Authorities and developers in guiding decisions that reduce adverse impact on baseline resources and sensitivity to change as well as the location, scale and type of development that is appropriate.

Additional Considerations in respect of Green Infrastructure (GI)

1.2.8 There is a broad objective to promote and deliver an integrated system of Green Infrastructure, encompassing biodiversity and sustainable movement networks and the incorporation of strategic landscape and open spaces to increase the limited existing open space provision for Brackley.

1.3 Report Framework

This report is presented in the following format:

- 1.3.1 PART A: Baseline Review (Local Context and Resource Review), discusses the green infrastructure and landscape, visual, biodiversity and cultural heritage baseline assets that are important when considering new mixed use development within the landscape around Brackley.
- 1.3.2 PART B: Sensitivity Review provides detail of the sensitivity analysis that has been undertaken within the core selected themes of cultural heritage, biodiversity, landscape and visual and flood-risk. This analysis seeks to identify and highlight particularly sensitive assets to enable decision makers to consider the appropriateness of new development in and around the town.
- 1.3.3 PART C: Green Infrastructure Strategy examines the infrastructure requirements for Brackley and sets out a Green Infrastructure Strategy, providing opportunities to enhance the Sustainable Movement Network, Open Spaces and biodiversity of the area.
- 1.3.4 Appendix 1 contains a list of datasets used in the Study
- 1.3.5 Appendix 2 contains a glossary of technical terms and acronyms
- 1.3.6 Appendix 3 contains a reference list.

PART A: BASELINE REVIEW (LOCAL CONTEXT AND RESOURCE REVIEW)

2.0 APPROACH TO THE BASELINE REVIEW

2.1 Introduction - Environmental Assets

2.1.1 The strategic nature of this assessment and the necessity to identify a core study area through which an assessment of Brackley could be undertaken should not limit the geographical scope of future, more detailed landscape and visual assessments, perhaps undertaken as part of Landscape and Visual Impact Assessments for new developments in and around the town. For example, where new development is assessed as having a visual impact beyond the Core Study Area boundary, it may be necessary or appropriate to develop landscape interventions in the wider landscape to mitigate their adverse impact. As a consequence of the nature and scale of this strategic assessment it has not been possible to identify all the detailed issues that may arise as a result of different types of development in and around the town.

2.1.2 To aid the presentation of data, the Core Study Area has been divided into eight Study Areas. Each Study Area encompasses an area of land, which is broadly consistent in terms of landscape character and the designations within it. Therefore there is minimal repetition of information and the key issues relating to each of the Study Areas can be easily seen and addressed.

The study area boundaries identified are based on physical elements to define the extent of the study. These elements include roads, watercourses, topographical features and visual horizons. Each study area defines an area of land which is broadly consistent in terms of landscape character and qualities.

The study areas identified are as follows:

1. Brackley Fields
2. Old Glebe
3. Great Ouse
4. Evenley
5. Hinton in the Hedges
6. Steane Park
7. Brackley Grange
8. Turweston

2.2 Methodology

2.2.1 The section begins with an overview of assets (the Baseline Review) and draws upon a number of sources of information, including baseline datasets supplied by the River Nene Regional Park Community Interest Company (RNRP CIC) and the findings of primary research and field assessment. A consultation with the project Steering Group has also contributed to the summary of key landscape and environmental assets that exist within the Core Area and in the wider landscape where relevant. Illustrations of the baseline data are provided in **MAPS 1 TO 11** (QD42_200_01 to 11 Rev B).

2.2.2 A full list of the datasets used during this assessment is presented in **Appendix 1**.

2.2.3 The Baseline Review describes assets under a series of “subjects”. These subjects have then been grouped into themes to facilitate their interpretation. A summary list follows:

NATURAL SYSTEMS

- Landform
- Watercourses and flood zones
- Nature Conservation and Biodiversity
- Woodlands and Forests

LAND USE AND HUMAN INFLUENCES

- Cultural Heritage
- Strategic and Local Green Space
- Access and Movement
- Transport Infrastructure
- Strategic Agricultural Land Classification
- Countryside and Environmental Stewardship Agreements

ENVIRONMENTAL AND VISUAL CHARACTER

- Visual Baseline Analysis

NORTHAMPTONSHIRE & BUCKINGHAMSHIRE ENVIRONMENTAL CHARACTER ASSESSMENT

- RNRP Environmental Character Assessment (ECA)
- RNRP Current Landscape Character Assessment (CLCA)
- RNRP/BUCKINGHAMSHIRE CC Historic Landscape Character Assessment (HLCA)
- RNRP Biodiversity Character Assessment (BCA)

STRATEGIC GREEN INFRASTRUCTURE

- Strategic Green Infrastructure (proposed)

2.2.4 Following on from the Baseline Review is the Sensitivity Review (refer to Part B). This takes the information gathered during the Baseline Review and assesses the sensitivity of key features at the strategic scale of assessment.

3.0 NATURAL SYSTEMS

3.1 Landform

3.1.1 Refer to MAP 3 & 3.1 (QD42_200_03 + 3-1_ Rev B)

3.1.2 Brackley and the surrounding area display the key characteristics of the Northamptonshire uplands with rounded undulating hills, low ridgelines with mixed farming, enclosed by hedges, hedgerow trees and limited woodland.

3.1.3 The central core of Brackley is located on high ground, the south western edge of the town slopes towards the river valley. The eastern edge of the settlement is defined by the A43 corridor and the south eastern boundary by the A422 to Banbury. The eastern edge is also adjacent to the administrative boundaries of Aylesbury Vale District Council and Buckinghamshire County Council. The north western and western boundaries are adjacent to open countryside and are situated on rising contours. The town expansion in recent years has been concentrated in areas to the northwest of the historic town core.

3.1.4 Area 1 is located on higher contours to the north of the existing town. The landform is fairly flat and bland.

3.1.5 Area 2 contains higher contours, combined with steeper contours sloping towards the existing town. Local level variations are associated with the disused railway corridor and provide local interest.

- 3.1.6 The landform of Area 3 is an even, south-east facing slope, forming a river valley character.
- 3.1.7 Area 4 has a varied landform, composed of lower contours associated with the river valley, rising to the higher contours surrounding Evenley Hall. There are areas of local variation and interest.
- 3.1.8 The landform of Area 5 is formed by a very simple and gentle slope, with little variation and interest.
- 3.1.9 Area 6 contains varied and interesting contours created by the small and local contour variations.
- 3.1.10 Area 7 contains some variation in landform, created by the movement of contours from the valley to the higher contours associated with Hall Farm. These variations create some topographical interest and are south facing.
- 3.1.11 The landform of Area 8 slopes westerly towards the Great Ouse and creates a valley character when combined with Area 3.

3.2 Watercourses and flood zones

- 3.2.1 Refer to MAP 4 (QD42_200_04 Rev B)

Flood Plain information is sourced from the Environment Agency's interactive mapping system which can be found at www.environment-agency.gov.uk

The principal areas affected by flooding and flood plain are associated with the Great Ouse corridor and land associated with other minor watercourses and streams to the west, south and east of the existing town.

3.3 Nature Conservation and Biodiversity

- 3.3.1 Refer to MAP 9 (QD42_200_09 Rev B)

3.3.2 The current and potential wildlife sites are based on up to date information received from Heather Ball, Conservation Officer (Northamptonshire) for The Wildlife Trust for Bedfordshire, Cambridgeshire, Northamptonshire and Peterborough: www.wildlifebcnp.org

3.3.3 The study areas contain one SSSI, seven local wildlife sites and eleven potential wildlife sites, these sites include neutral grassland, calcareous grassland, woodlands, ancient woodlands and lowland meadows/ wetlands.

3.3.4 There are disused railway lines running through Areas 2, 3, 6 & 8, these are significant features in the area and have significant biodiversity value and provide potentially good habitat corridors.

3.4 Woodlands and Forests

3.4.1 The core area contains a modest range of small woodlands, including some ancient woodland, natural and semi-natural native broadleaf trees together with some groups of non-native conifers. There are areas of more significant elements of woodland associated with Area 4: Evenley and Area 6: Steane Park. There are individual trees associated with hedgerows and field patterns. There are elements of smaller woodland in Area 7: Brackley Grange.

3.4.2 There are no areas of forest within the core area.

3.5 Grasslands

- 3.5.1 The disused railways in and around Brackley are important biodiversity features and provide habitat corridors through the area. In most cases the railway lines consist of a mosaic of neutral grassland and limestone grassland, with colonising scrub and trees. The Helmdon Disused Railway SSSI is nationally important for limestone grassland, and in particular the rich butterfly fauna, including the only known location of the small blue butterfly in Northamptonshire.

3.6 Wetlands

- 3.6.1 Along the River Great Ouse and its tributaries pockets of wet grassland and marsh can be found. These are important elements of the floodplain, and are often lost to changes in hydrology, agricultural intensification and development. Watercourses and ditches in the area have been home to water voles and white-clawed crayfish in the past, both of which are of conservation concern.

3.7 Natural System Assets

Designations and notable habitats within the study areas are listed below:

3.7.1 Study Area 1: Brackley Fields

River Channel or Major Watercourse

3.7.2 Study Area 2: Old Glebe

SSSI – Helmdon disused railway
Woodlands
River Channel or Major Watercourse
1 LWS Fox Covert (Whitfield)

3.7.3 Study Area 3: Great Ouse

2 LWS (Whitfield Border Spinney, Brackley Railway Embankment)
2 PWS (Burwell Hill Farm, Versions Farm)
Woodlands
River Channel or Major Watercourse

3.7.4 Study Area 4: Evenley

4 PWS (Hopcrafts Farm, Kendal's Spinney, Dismantled railway, Evenley new ponds)
1 LWS South Ground Covert
Woodlands
River Channel or Major Watercourse
Water body
Flood Plain

3.7.5 Study Area 5: Hinton in the Hedges

2 PWS (Black Jack Spinney, St. James Lake)
4 LWS (Brackley Marsh, St James' Lake, ,Brackley Pocket Park, Gooseholm Copse)
Woodlands
River Channel or Major Watercourse
Flood Plain

3.7.6 Study Area 6: Steane Park

4LWS (Brackley Disused Railway (West), Brackley Gorse, Gooseholm Copse, Steane Park)
Woodlands
River Channel or Major Watercourse
Flood Plain

3.7.7 Study Area 7: Brackley Grange

1 PWS (Brackley Grange)
Woodlands
River Channel or Major Watercourse

3.7.8 Study Area 8 : Turweston

3 PWS (River Ouse valley, Dismantled Railway, Hopcrafts Farm)
County Wildlife Site (BUCKINGHAMSHIRE CC)
Woodlands
Flood Plain

4.0 LAND USE AND HUMAN INFLUENCES

4.1 Cultural Heritage

4.1.1 Refer to MAP 10 (QD_42_200_10_Rev B). This shows designated heritage sites within the Brackley area. For example; historic parks and gardens, conservation areas, listed buildings and their settings. Other historic elements such as ridge and furrow and dismantled railways have also been highlighted.

4.1.2 As the study Area has a direct relationship between Northamptonshire and Buckinghamshire the following groups have been consulted; Northamptonshire County Council, South Northants Council, Aylesbury Vale District Council and Buckinghamshire County Council.

4.1.3 There are many other Known Archaeological Assets within the core study area; these represent a wide variety of archaeological sites and periods. The information shown on MAP 14 (QD_42_200_14) illustrates historic and environmental information in the area, ranging from historic monuments, sites or even objects found in these locations, to events such as earthwork surveys or archaeological walks. These assets are not all registered, but are a material planning consideration. Therefore any impact upon these sites would have to be fully assessed at the planning application stage and adequate consultation with the relevant stakeholders will be required. The information is collected from Northamptonshire County Council Historic Environment Offices' database, County Hall, George Row, Northampton. Contact Katherine on 01604 237246 for further information.

4.1.4 Buckinghamshire County Councils Historic Environment Record office have been consulted to identify any historic assets and Historic Landscape Character within Area 8. The majority of these are contained within the Turweston conservation area. Refer to MAP 15 &16 (QD42_200_15-16) and paragraph 6.0 for further information.

4.1.5 It is important that the setting of historic assets is considered, as well as the site itself. For example, historic parks and gardens frequently "borrow views" from outside the designated area, such as when an avenue is aligned on a view of a folly or piece of architecture. Similarly, a Scheduled Monument designation for a deserted medieval village may not include the field systems, which surrounded it. Defining the setting for each historic asset is

beyond the remit of this study. However, it will need to be considered as part of more detailed future assessments on a case-by-case basis.

4.1.6 There are two locations of registered ridge and furrow land found in Area 2: Old Glebe and Area 7: Brackley Grange. 'Ridge and furrow earthworks, produced by medieval cultivation that were once a familiar sight across many parts of England, are now a rare archaeological resource. Major rural changes, spurred on by wartime pressures and economic incentives and the impact of modern agriculture on the last of the medieval cultivation patterns has had a severe impact. Between 1995 and 1999 Northamptonshire County Council and English Heritage Plough quantified the survival of medieval open fields in the east Midlands.

4.1.7 The results of this research have now been published in Turning the Plough and confirm that the loss of these ridge and furrow landscapes is extreme. English Heritage, DEFRA and other agencies are now faced with an urgent task – to combine their efforts in order to create a sustainable future for what little remains.'

4.2 Strategic and Local Green space

4.2.1 Refer to MAP 9 (QD_42_200_09 Rev B) which locates the principle areas of open space.

4.2.2 South Northants Council have recently produced/are currently producing Open Space, Sport and Recreation audits/ PPG17 Assessments (see Appendix 3 for full references). The results of these assessments have informed MAP 9.

4.2.3 Local Accessible Green spaces include small woodlands with public access and other accessible Green spaces such as common land, village greens, pocket parks and millennium greens. Pocket Parks are open areas of land, which are owned and managed by local people, providing free, open access for all at all times. They help to protect and conserve local wildlife, heritage and landscape.

4.2.4 There are two Pocket Parks within the core study area; Brackley and Evenley, both are managed by volunteers from the local community.

4.2.5 Brackley town has a significant number of green spaces within the existing town. A large percentage of this open space is related to educational function, with limited availability for public use. The larger elements of existing public open space are associated with the following:

- the linear corridor associated with Humphries Drive, which provides a north-south corridor through the most recent housing development in Brackley and provides footpath and cycle links to the Brackley Leisure Centre.
- Brackley Leisure Centre provides a large open space element with sporting and active recreational facilities.
- The public open space off Church Lane, providing a local open space facility.
- Local space accessed off Martial Daire Drive and Tudor Way.

4.2.6 The study has identified existing potential open space elements, such as woodland, wildlife sites, flood plain and existing footpaths and bridleways. These elements will be assessed in developing an open space strategy to offset the existing shortfall in open space, helping to protect and conserve local wildlife, heritage and landscape.

4.2.7 There are two Pocket Parks within the core study area; Brackley Pocket Park, managed by Brackley Pocket Park Management Committee, and Evenley, managed by Evenley Pocket Park Group, both groups are made up from volunteers from the local community.

4.3 Access and Movement

4.3.1 Refer to MAP 5 (QD_42_200_05 Rev B)

4.3.2 Brackley and its surrounding area are well served by public rights of way. There is a high concentration of byways, bridleways and footpaths throughout the study area. Some follow the routes of dismantled railways, others follow lanes and paths, many of which are very long-established, following parish boundaries and other ancient features in the landscape.

4.3.3 Local Assets - Local Level Sustainable Route-ways include byways, bridleways, footpaths and other cycle routes (e.g. cycle/bus lanes, cycleways on roads, shared use paths). There is a high concentration of byways, bridleways and footpaths throughout the study area. Some follow the routes of dismantled railways others follow lanes and paths, many of which are very long-established, following parish boundaries and other ancient features in the landscape.

4.4 Transport Infrastructure

4.4.1 Refer to MAP 6 (QD_42_200_06 Rev B)

4.4.2 The principal 'A' road system associated with Brackley is the A43, which provides an east-west route connecting the M1 and M40. This is an important route and carries a significant volume of long distance traffic. The alignment of the A43 creates a very strong development edge to the eastern/south eastern edge of Brackley. The other principal road is the A422 connecting Brackley with Banbury and the M40 north. The secondary 'A' road is the A422 connection to Buckingham. All access to Brackley is road-based with no local railway provision. The nearest rail facilities are located at Northampton, Banbury and Milton Keynes. Bus services are limited to local services, which provide connections with Northampton, Bicester and Oxford.

4.4.3 Smaller villages are connected with each other and with Brackley by a dense network of 'B' roads and minor roads. They include at least one Roman road and many of the lanes are historic features of the landscape.

4.5 Strategic Agricultural Land Classification

4.5.1 Refer to MAP 7 (QD_42_200_07)

4.5.2 MAP 7 is only to be used as general guidance.
The information for this map is sourced from www.magic.gov.uk and is the most up to date reference available for the Brackley area. The Agricultural Land Classification for these areas falls predominantly into Class 3 with small pockets falling into Class 4 category, excluding urban areas such as Brackley town centre. For more up to date survey information for specific areas of land a private survey will have to be carried out. For more information please visit www.naturalengland.org.uk and search for Agricultural Land Classification.

4.6 Countryside and Environmental Stewardship Agreements

4.6.1 Refer to MAP 8 (QD_42_300_08 Rev B)

4.6.2 Countryside Stewardship Agreements (CSA) closed to new applications in 2005 and this was replaced by the current Environmental Stewardship Agreement system. However existing CSAs should complete their terms and these areas are illustrated in the referenced map above. The agreement is a scheme for farmers who operate outside environmentally sensitive areas, which allows them to receive grants to manage the countryside, for example, maintaining hedgerows, conserving historic farm buildings and medieval settlements. By doing this they help to conserve the landscape and its wildlife, whilst improving public access to the countryside.

4.6.3 Large areas of the quadrants within the core area are covered by Environmental Stewardship Agreements whilst a number of Countryside Stewardship Agreements still remain in the countryside around Brackley town centre.

4.7 Land Use and Human Influence Assets

Notable assets within the Study Areas are listed below:

4.7.1 Study Area 1: Brackley Fields

Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure
Electricity lines

4.7.2 Study Area 2: Old Glebe

Ridge and Furrow
Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure
Electricity lines

4.7.3 Study Area 3: Great Ouse

Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure
Electricity lines

4.7.4 Study Area 4: Evenley

Conservation Area at Evenley
Non-Registered Parks & Gardens
Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure

4.7.5 Study Area 5: Hinton in the Hedges

Site of Archaeological Interest
Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure

4.7.6 Study Area 6: Steane Park

Non-Registered Parks & Gardens
Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure

4.7.7 Study Area 7: Brackley Grange

Ridge and Furrow
Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure

4.7.8 Study Area 8 : Turweston

Conservation Area at Turweston
Environmental Stewardship Agreements
Public Rights of Way
Road Infrastructure
Ridge and furrow

5.0 ENVIRONMENTAL AND VISUAL CHARACTER

5.1 Landform

5.1.1 Refer to MAP 3.1 (QD_42_200_03-1 Rev B)

5.1.2 Brackley is located on high contours and has a prominence to the local area and can be seen from the surrounding area. The Great Ouse and watercourse corridors provide a 'valley' context to the west, east and south of the town. There are areas of local topographical interest particularly in the west of the area. The man made contours created by the former Grand Central Railway are apparent in the south eastern area.

5.2 Notable environmental and visual character assets within the Study Areas are listed below:

5.2.1 Study Area 1: Brackley Fields

- The land is located on higher contours and is composed of an open field pattern with flatter contours. The area offers limited visual character and quality.
- The limited change of movement in the topography creates a bland landscape character with limited articulation from other landscape features.

5.2.2 Study Area 2: Old Glebe

- This area is located on higher contours with a smaller field pattern and elements of woodland.
- The steeper contours located towards the existing town create local visual interest and quality, whilst forming a natural edge to existing development.

5.2.3 Study Area 3: Great Ouse

- The landform slopes easterly towards the river and is orientated towards the other side of the valley.

- There are elements of woodland and tree groups which provide focal points and features within the area.

5.2.4 Study Area 4: Evenley

- There is a very high content of woodland, parkland trees and distinctive hedgerows.
- The parkland character offers a very individual character and quality to the area which should be preserved.

5.2.5 Study Area 5: Hinton in the Hedges

- The field pattern is open and bland with limited landscape features and character, particularly the areas directly associated with the A422 corridor.
- The land occupies higher contours to the southern edge, which provides open views back into Brackley.

5.2.6 Study Area 6: Steane Park

- The character of this area is dictated by the historic parkland landscape which, together with the topography and varying landform, combine to create a distinctive landscape character.

5.2.7 Study Area 7: Brackley Grange

- The field pattern is varied, being open and medium to large in size with limited hedgerows and trees.
- There is some topographical interest, created by the south facing slopes towards Steane Park and the disused railway.

5.2.8 Study Area 8 : Turweston

- This area contains large open fields on contours which slope down towards the Great Ouse. The eastern horizon is defined by trees which also form the boundary to Turweston Airfield. Much of the south of this area is located within the Great Ouse Valley (west) Local Landscape Area.

6.0 NORTHAMPTONSHIRE & BUCKINGHAMSHIRE ENVIRONMENTAL CHARACTER ASSESSMENT

6.1 Introduction

6.1.1 Numerous planning authorities have carried out Landscape Character Assessments for their administrative areas. In 2006 the RNRP CIC along with NCC produced a series of character assessments for Northamptonshire in order to provide a detailed characterisation of the county. Due to Brackley's close proximity to Buckinghamshire, Aylesbury Vale Landscape Character Assessment, produced for Aylesbury Vale District Council and Buckinghamshire County Council in May 2008, has also been consulted.

6.1.2 Refer to MAPS 17, 18, 19, 20, 21 (QD42_200_17, 18, 19, 20, 21) These maps show the Environmental Character Assessment (ECA), Current Landscape Character Assessment (CLCA), Historic Landscape Character Assessment (HLCA) and Biodiversity Character Assessment (BCA). The drawings are based on data supplied and licensed by RNRP CIC.

6.1.3 Buckinghamshire County Councils Historic Environment Record office have been consulted to identify the Historic Landscape Character (HLCA) within Area 8.

6.1.4 Due to the strategic scale of this study in many cases the character for each assessment type cover large parts of the study areas.

6.1.5 Details of each character type within each study area are listed below:

6.2 Environmental Character Assessment (ECA)

6.2.1 Study Areas 1, 2, 3, 6 & 7
Tove and Ouse Catchments

6.2.2 Study Areas 4 & 5
Part Tove and Ouse Catchments
Part Croughton Plateau

6.3 Current Landscape Character Assessment (CLCA)

6.3.1 Study Areas 1, 2, 3 & 7
Undulating Claylands

6.3.2 Study Area 6
Undulating Hills and Valleys

6.3.3 Study Areas 4 & 5
Part Undulating Hills and Valleys
Part Limestone Plateau

6.4 Historic Landscape Character Assessment (HLCA)

6.4.1 Study Areas 2, 3, & 4
19th Century Parliamentary Enclosure

6.4.2 Study Area 1, 5, 6 & 7
Part 19th Century Parliamentary Enclosure
Part 19th Century Non-Parliamentary Enclosure

- 6.4.3 Study Areas 8 (BUCKINGHAMSHIRE CC HLCA)
Part Enclosure (Pre 18th -18th Century 'Irregular')
Part Parliamentary Enclosure (subsequent divisions)
Part Enclosure (20th 21st Century)
Part Industrial (Post 1885)
Part Settlement
Part Meadow
Westbury and Biddlesden Great Ouse Valley

6.5 Biodiversity Character Assessment (BCA)

- 6.5.1 Study Areas 1 & 2
Part Cropped Claylands
Part Limestone Slopes
- 6.5.2 Study Area 3
Part Limestone Slopes
Part Minor Flood Plain
- 6.5.3 Study Areas 4
Part Limestone Slopes
Part Minor Flood Plain
Part Cropped Limestone Plateau
- 6.5.4 Study Areas 5 & 6
Part Cropped Limestone Plateau
Part Minor Flood Plain
Part Liassic Slopes
- 6.5.5 Study Areas 7
Part Cropped Claylands
Part Limestone Slopes
Part Liassic Slopes

7.0 STRATEGIC GREEN INFRASTRUCTURE

7.1 Introduction and Background

- 7.1.1 The following section provides a baseline review of the Green Infrastructure resource for Brackley and draws from the findings of the Northamptonshire Strategic Green Infrastructure Assessment: "Green Infrastructure - Making the Connection".
- 7.1.2 The Northamptonshire Strategic Green Infrastructure (GI) Assessment identifies a series of strategic and local Green Infrastructure corridors, as well as two connective networks: the Biodiversity Network and the Sustainable Movement Network. These are described below.

7.2 The West Northamptonshire Biodiversity Network

- 7.2.1 Refer to MAP 13 (QD42_200_13 Rev B)
- 7.2.2 The Strategic Biodiversity Network seeks to connect fragmented habitats displayed across much of the county in order to assist species' persistence and habitat function. The network presented in the Northamptonshire Green Infrastructure Strategy identifies a range of habitat locations and potential habitat links.

7.3 The Sustainable Movement Network for West Northamptonshire

7.3.1 Refer to MAP 13 (QD42_200_13 Rev B)

7.3.2 The Sustainable Movement Network identifies the principal networks and opportunities for sustainable people movement from centres of settlement to the countryside. By building upon the network of existing rights of way, it seeks to link assets and destinations to villages and towns with a hierarchy of routes that, where possible, take advantage of areas of green space.

7.3.3 The network is described as operating from doorstep to countryside, within a structured hierarchy, with each level performing a separate function.

7.3.4 A network of Primary and Secondary routes is identified for the entire county. A network of Local Connectors has also been proposed for Brackley.

7.3.5 The tiers in the movement hierarchy are described below:

Primary Green Way

- Strategic links between major settlements through open countryside, composed of the Public Rights of Way (PROW) network and cycle routes.

Secondary Greenway - Countryside Connectors

- Link towns, villages and hamlets, as well as assets in the wider countryside, composed of the PROW network and cycle routes.

7.4 Strategic Green Infrastructure Corridors

7.4.1 Refer to MAP 13 (QD42_200_13 Rev B)

7.4.2 The Green Infrastructure Strategy (MAP 13) is a local network composed of identified movement corridors combined with the biodiversity network. The principal of the strategy is to maximise the benefit of recreational use with linked biodiversity corridors. Refer to paragraphs 9.2.3 and 9.2.4 for further information.

7.4.3 The Green Infrastructure Strategy should be regarded as a conceptual framework to aid the decision-making process with regards to Green Infrastructure delivery on the ground. It is not intended to be prescriptive or inflexible and as a consequence, the network delivered in the longer term may vary depending on a multitude of strategic and local issues, not least those relating to the aspirations of local communities, land ownership and a changing development context.

7.4.4 MAP 13 shows an order of priority for green route development and is further explained in Part C.

PART B: SENSITIVITY REVIEW

8.0 SENSITIVITY REVIEW

8.1 Introduction and Methodology

- 8.1.1 The following section assesses the sensitivity of landscapes together with landscape, biodiversity and cultural heritage features under a series of key themes derived from the baseline information. However, consideration is given to other baseline datasets and information sources to provide a comprehensive overview and context.
- 8.1.2 It is essential that a clear definition of the term '**the particular type of change or development**' is established, as this provides the reference for the consideration of the sensitivity of landscapes and environmental features to the specific change and its type and scale. In the context of this study, 'change or development' is defined as major mixed-use urban extension development in excess of 5ha¹.
- 8.1.3 It is important to note that the findings of this Sensitivity Assessment are not applicable to the assessment of the sensitivity of the landscape or environmental features to other types of development, for example major infrastructure such as road or rail schemes, or renewable energy initiatives such as wind farms. As such, the following section presents an examination of the environmental resource within and around Brackley under a series of Strategic Themes. Reference to supporting plans is made where relevant.
- 8.1.4 At the national level, the area around Brackley can be identified as being of moderate to low landscape sensitivity, because of the absence of any national landscape designations (Area of Outstanding Natural Beauty, National Park). However, for the purposes of this assessment a more localised review of sensitivity has been undertaken, observing local assets and their sensitivity.
- 8.1.5 The assessment of landscape sensitivity has therefore been undertaken at the strategic scale using information and data that have been available at the scale of the study. As such, judgements on the inherent sensitivity of landscapes, views and features are considered at this broad scale. More detailed research and further site-specific assessment would be necessary to confirm the levels of sensitivity attributed to individual features.

8.2 Sensitivity Categories and Definitions

The sensitivity analysis has been assessed under the following three main themes:

- **Landscape**
- **Biodiversity**
- **Cultural Heritage**

- 8.2.1 Sensitivity is assessed under four categories: High, High / Medium (biodiversity and landscape / visual only), Medium, and Low. A summary of the definition of each sensitivity category is provided.
- 8.2.2 Whilst sensitivity analysis across the three main themes identifies areas that may be regarded as being of High, High Medium, Medium and Low sensitivity to new development, it does not necessarily preclude development, which may, through appropriate design and planning, be able to offer greater certainty in the long term protection and potential

¹ This 5ha threshold is derived from an interpretation of EIA Regulations Indicative Thresholds and Criteria

enhancement of features, or indeed make a positive contribution to the town and its visual setting.

- 8.2.3 The presence of significant overhead electricity cables and pylons has been considered in the assessment of landscape character and quality. These are considered to be a negative quality and a significant distracter within the landscape.

8.3 Landscape Sensitivity Assessment Criteria

- 8.3.1 Refer to MAP 12 (QD42_200_12_Rev B)

8.3.2 Sensitivity Assessment

The baseline landscape character and quality was evaluated using the Landscape Institute/IEMA guidelines² and its classification follows a five point scale interpreted as follows:

8.3.3 Highest Quality Landscape:

Includes the most aesthetically attractive landscape.

Areas of particular Natural Beauty perceived as special in a regional or national context. Nationally designated land such as National Parks, AONBs etc.

8.3.4 Very Attractive Landscape:

Areas include historic and designated landscape.

Diverse, semi-natural or farmed landscape with natural features. Normally abundant woodland cover together with a high distribution of trees, hedgerows and shrubs, streams, brooks and other naturalised un-polluted water corridors may be present. Several local landscape designations may apply, including Conservation Areas and some historical or cultural sites may be present.

8.3.5 Good Quality Landscape:

Countryside with some variety in farmland cover.

Settlements and villages with pockets of open space and public recreation areas. There is a reasonable distribution of semi-natural vegetation, trees and shrub cover and the overall view of the area is pleasant. Local landscape designations of cultural and historic value may be present.

8.3.6 Ordinary Quality Landscape:

Typical open agricultural land where attractive features are offset by detractors.

Some strategic planning is evident but development is primarily functional including housing estates, business parks or urban fringe land uses. Not particularly aesthetically attractive, but with more value than a poor quality landscape. Land may be within a Greenbelt or have a local landscape designation.

8.3.7 Poor Quality Landscape:

Includes detractors such as power lines, industrial, derelict or inappropriate built forms with no aesthetic value or evidence of strategic planning. There is lack of mature vegetation cover and no landscape designations apply. Intensively farmed landscape which has lost most of its features.

² Landscape Institute and IEMA (2002) *Guidelines for Landscape and Visual Impact Assessment, 2nd Edition*.

Sensitive Landscape Receptors and Magnitude of Impact

| Sensitivity (vulnerability of receptor to change) | | Magnitude (size, extent and duration of impact) |
|---|---------------|---|
| Landscape of particularly distinctive character, susceptible to relatively small changes | High | Noticeable change in landscape characteristics over an extensive area ranging to very intensive change over a more limited area |
| Landscape of good character and quality, susceptible to change | High/Medium | Noticeable change in landscape over a distinct area and location |
| Landscape of moderately valued characteristics, reasonably tolerant of changes | Medium | Moderate changes in localised area |
| A relatively unimportant landscape, the nature of which is potentially tolerant of substantial change | Low | Slight change in any components |
| An unimportant landscape capable of substantial change | Not sensitive | Virtually imperceptible change in any components |

The sensitivity of a landscape receptor is therefore based on the character and quality of the landscape and its ability to accommodate change.

8.3.8 This assessment considers and assesses heritage and biodiversity features as a component of the landscape resource. Sensitivity scores have been attributed to features identified in the baseline data. The aim of this exercise has been to produce a sensitivity analysis of heritage and biodiversity features which uses the designation level of a site as a starting point of determining sensitivity, but which then applies professional knowledge and judgement to upgrade the sensitivity levels of lower-designation and non-designated sites where appropriate. This results in a far more accurate sensitivity assessment of heritage and biodiversity features and is therefore a much more valuable tool than a mechanistic assumption of sensitivity based purely on a site's level of designation.

8.3.9 It should be noted that the process was a combination of a desk-based review and site visits, which were undertaken for further investigation / verification of the features identified within this study. Confirmation of the survival of features assessed under these themes and their inherent sensitivity would be required at the more refined level of analysis and investigation, such as that conducted as part of an Environmental Statement.

8.4 Landscape Sensitivity Assessment

8.4.1 The assessment of landscape and visual sensitivity has been undertaken at a strategic level. The following sections identify the overall sensitivity of the landscape within each Study Area based upon the primary landscape characteristics identified. Given the impact of local landform and vegetation on landscape impact at the local (scheme) level, more detailed site-specific appraisals would be required to reach a definitive position on actual sensitivity to change. These would need to be undertaken for a specific development proposal.

8.4.2 Landscape and visual sensitivity takes account of topography (which affects visibility), and also the function of the landscape. For example, does an area function as a strategic gap,

or make a distinctive contribution to the setting of Brackley or one of the surrounding villages?

8.4.3 Study Area 1: Brackley Fields

- This is considered an area of low to medium sensitivity. The land is located on higher contours and is composed of an open field pattern with flatter contours. The area offers limited visual character and quality.
- There are limited areas of hedgerow and woodland.
- The absence of movement in the topography creates a bland landscape character with limited articulation from other landscape features.
- This area is adjacent to the most recent housing development within Brackley.
- There are existing rights of way within the northern sector of the site.
- The area is dissected by a major overhead electricity cable.



8.4.4 Study Area 2: Old Glebe

- This area is considered high sensitivity and is located on higher contours with a smaller field pattern, elements of woodland and the SSSI corridor associated with the disused railway line.
- The steeper contours located towards the existing town create local visual interest and quality, whilst forming a natural edge to existing development.
- There are existing rights of way within the northern sector of the site.
- The area has distinct views to the east and south east.



8.4.5 Study Area 3: Great Ouse

- This area forms the interface boundary with Buckinghamshire and the district of Aylesbury Vale and is considered to be of medium to high landscape sensitivity character.
- The land form slopes easterly towards the river and is orientated towards the other side of the valley.
- There are elements of woodland and tree groups which provide focal points and features within the area.



8.4.6 Study Area 4: Evenley

- This area is of high landscape sensitivity as the area is predominantly a historic landscape and parkland associated with Evenley Hall.
- There is a very high content of woodland, parkland trees and distinctive hedgerows.
- The parkland character offers a very individual character and quality to the area, which should be preserved.



8.4.7 Study Area 5: Hinton in the Hedges

- The landscape sensitivity of this area is considered medium to low. The field pattern is open and bland with limited landscape features and character, particularly the areas directly associated with the A422 corridor.
- The topography lacks variety and interest, creating a bland visual character.
- The land occupies higher contours to the southern edge, which provides views back into Brackley. The slopes are predominantly north facing.



8.4.8 Study Area 6: Steane Park

- This area is of high landscape sensitivity because of the historic parkland landscape, together with the variation in topography and land form interest, which combine to create a distinctive parkland character.
- There are groups of mature parkland trees and woodland, which provide interest and an individual character to this location.
- The area is designated as a non-registered park and garden.



8.4.9 Study Area 7: Brackley Grange

- This area is graded as medium high landscape sensitivity. The field pattern is varied, being open and medium to large in size with limited hedgerows and trees. There are two small areas of woodland.
- There is some topographical interest, created by the south facing slopes towards Steane Park and the disused railway.



8.4.10 Study Area 8: Turweston

- This area is considered to be of medium landscape sensitivity. The landform slopes westerly towards the Great Ouse and creates a valley character when combined with Area 3.
- The visual horizon to the east is defined in part by tree canopy.
- The overhead power cables dissect the site.
- There are significant views at the southern end to the existing town of Brackley.



8.5 Biodiversity Sensitivity Assessment Criteria

8.5.1 The area of statutory sites important for biodiversity in the region is well below the national level. Overall there has been significant decline in biodiversity and to compensate for past losses, regional habitat restoration and creation targets need to be proportionally greater than in other regions. The significantly low regional proportion of woodland cover offers a specific opportunity for habitat creation.

8.5.2 PPS 9 recognises that Local Wildlife Sites have a fundamental role to play in helping to meet overall national biodiversity targets, contributing to the quality of life and the well-being of the community, and in supporting research and education.

8.5.3 All designated biodiversity and nature conservation sites were graded according to their designation. PWS are sites where the correct conditions may still exist to form the starting point for creation of habitats and green corridors, and without thorough surveys we cannot rule out the possibility that a site contains a high level of biodiversity.

8.5.4 High Sensitivity

In accordance with PPS9, Internationally and nationally-designated sites (i.e. Sites of Special Scientific Interest (SSSIs) have been graded as high sensitivity in order to ensure a maximum level of protection. However there are no internationally and nationally-designated sites this study area.

8.5.5 High-Medium Sensitivity

PPS 9 recognises that Local Wildlife Sites have a fundamental role to play in: *helping to meet overall national biodiversity targets; contributing to the quality of life and the well-being of the community, and in supporting research and education.* This is particularly the case in Northamptonshire, which has a much lower proportion of its area designated SSSI (2% instead of the national average of 7.5%). SSSI designations in Northamptonshire do not currently take into consideration the key principles of habitat connectivity or adaptation to climate change. Local Wildlife Sites are therefore the best examples of particular habitats or species assemblages in Northamptonshire, and play a major role in connecting areas of land with important biodiversity.

Wildlife sites with public access, which perform biodiversity, recreational and educational functions are also considered to be of high-medium sensitivity.

8.5.6 Medium Sensitivity

Non-designated sites within habitat networks, which are of national importance, as described in PPS9, are considered to be of medium sensitivity. Consequently, such sites have been included in the medium sensitivity category. Also included in the medium sensitivity category are Potential Wildlife Sites which have been surveyed and are connected to other biodiversity sites.

In some instances the exact nature of the resource may not be fully understood or documented. Some development within areas identified as medium sensitivity may be possible, although further investigation will be required to fully evaluate the significance of the features and areas of landscape.

8.5.7 Low Sensitivity

This category includes Potential Wildlife Sites which have not been surveyed and are isolated from other similar sites, or which have been surveyed but were shown to be of fairly low diversity (although higher than most surrounding land) and isolated from other similar sites. The value of these sites is unknown in many cases, and their sensitivity may be changed after comprehensive survey.

Development within areas identified as low sensitivity may be possible although further investigation will be required to fully appreciate the significance of features and areas of landscape. Where features are not then identified as being of moderate or high sensitivity appropriate mitigation will be required to limit adverse impact.

8.5.8 Lowest Sensitivity

The remainder of the Core Study Area (subject to survey)

8.5.9 Please note that all decisions on site sensitivity have been made using the information currently available for each site. In some cases there is limited information available for PWS and therefore further investigations of these sites should be made prior to any development occurring in their vicinity.

8.5.10 **Biodiversity Sensitivity Assessment**

8.5.11 Study Area 1: Brackley Fields

No area identified

8.5.12 Study Area 2: Old Glebe

SSSI, Helmdon disused railway, running through the area provides habitat reservoirs
1LWS Fox Covert (Whitfield)

8.5.13 Study Area 3: Great Ouse

2 LWS (Whitfield Border Spinney, Brackley Railway Embankment)
2 PWS (Burwell Hill Farm, Versions Farm)

8.5.14 Study Area 4: Evenley

1 LWS South Ground Covert
4 PWS (Hopcrafts Farm, Kendal's Spinney, Dismantled railway, Evenley new ponds)

8.5.15 Study Area 5: Hinton in the Hedges

4 LWS (Brackley Marsh, St James' Lake, Brackley Pocket Park, Gooseholm Copse)
2 PWS (Black Jack Spinney, St. James Lake)

8.5.16 Study Area 6: Steane Park

4 LWS (Brackley Disused Railway (West), Brackley Gorse Gooseholm Copse Steane Park)

8.5.17 Study Area 7: Brackley Grange

1 PWS (Brackley Grange)

8.5.18 Study Area 8 : Turweston

3 PWS (River Ouse Valley, Dismantled railway, Hopcrafts Farm)
County Wildlife Site (BUCKINGHAMSHIRE CC)
Biological notification site (BUCKINGHAMSHIRE CC)

8.6 **Cultural Heritage Sensitivity Assessment Criteria**

8.6.1 The East Midlands Regional Plan emphasises the importance of ensuring change does not destroy the regions irreplaceable historic assets and distinctive character and that the need for change is informed by understanding, careful management and the involvement of local communities.

8.6.2 The sensitivity assessment of the cultural heritage elements recognises that historic assets and/or their settings are usually irreplaceable and have been assessed accordingly.

8.6.3 High Sensitivity

Internationally and nationally designated sites with statutory protection (i.e. Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields, Listed Buildings, and Conservation Areas) have been graded as high sensitivity.

8.6.4 Medium Sensitivity

This category includes locally significant non-statutorily designated archaeological sites such as Non-registered Parks and Gardens and Known Archaeological Assets, which have been identified as presenting significant constraints to development due to their extent, nature or state of preservation (refer to MAPS 14, 15 + 16). These sites include rare monument types of national or regional importance identified on the Northamptonshire and Buckinghamshire Historic Environment Records.

'The majority of ridge and furrow areas (a regionally-distinctive landscape type which is being diminished as a result of development and ploughing, but provides a visual and tangible link with the past) are initially considered to be of medium sensitivity. Further investigation would be required on a site-by-site basis'.

In some instances the exact nature of the resource may not be fully understood or documented, but is nevertheless identified as a significant constraint to development. Some development within areas identified as medium sensitivity may be possible although further investigation will be required to fully evaluate the significance of the features and areas of cultural heritage remains. Where features are not identified as being of high sensitivity, appropriate mitigation will be required to limit adverse impact.

8.6.5 Low Sensitivity

This category includes cultural heritage sites which have been identified but which are (for example) in continuing use, such as historic road routes or railways, or where industrial remains are thought to be deeply buried. The value, extent and state of preservation of these sites is unknown in many cases and their sensitivity may be changed after comprehensive survey.

Development within areas identified as low sensitivity may be possible although further investigation will be required to fully appreciate the significance of features and areas of cultural heritage remains. Where features are not then identified as being of moderate or high sensitivity appropriate mitigation will be required to limit adverse impact.

8.6.6 Lowest Sensitivity

The remainder of the Core Study Area. Additional currently unknown archaeological remains may be present in these areas (for example masked by surviving medieval ridge and furrow remains, which may preserve relict landscapes) and proposed development will need to be informed by schemes for appropriate archaeological assessments, redesign and mitigation where new cultural heritage assets are identified.

8.6.7 Please note that all decisions on site sensitivity have been made using the information currently available for each site. Some assets that are based upon records held on the Northamptonshire and Buckinghamshire Historic Environment Records have very little supporting information and therefore further investigations of these sites should be made prior to any development occurring in their vicinity.

This report does not form an official statement of sensitivity by Northamptonshire County Council's Historic Environment Record.

8.6.8 **Cultural Heritage Sensitivity Assessment**

8.6.9 Study Area 1: Brackley Fields

No area identified

8.6.10 Study Area 2: Old Glebe

Ridge and Furrow

8.6.11 Study Area 3: Great Ouse

No area identified

8.6.12 Study Area 4: Evenley

Conservation Area at Evenley
Non-Registered Park & Garden

8.6.13 Study Area 5: Hinton in the Hedges

Scheduled Monument

8.6.14 Study Area 6: Steane Park

Non Registered Park & Garden

8.6.15 Study Area 7: Brackley Grange

Ridge and Furrow

8.6.16 Study Area 8 : Turweston

Conservation Area at Turweston

8.7 Conclusion: Combined Sensitivity

- 8.7.1 The following section assesses the sensitivity of the landscape within the study areas. In assessing the overall sensitivity levels of the landscape, judgements have been made based on the factual assets and elements of biodiversity and cultural heritage, combined with the assessment of the local landscape. This process identifies the hierarchy of elements in a landscape that give a locality its own unique sense of place.
- 8.7.2 An important aspect of the landscape character assessment process is that it is objective and importance has been given to identifying visual characteristics that are distinctive, rare or special. It takes individual judgement to reach conclusions regarding landscape quality, but in the case of this study it is of importance when put in the context of a large scale urban development and the impact that this will have on the existing landscape.
- 8.7.3 MAP 12 (QD42_200_12_Rev B) illustrates the combined sensitivity of the core study area, it is a graphic illustration of combined sensitivity using all the elements and assets shown on MAP 11. MAP 12 should be used as a strategic visual interpretation only and the following text should be the main focus of the combined sensitivity analysis. For example, in some study areas there will be localised elements of lower quality within the landscape, such as poor buildings or negative artefacts, these are identified by yellow tones. The information on MAP 11 has been used to inform the sensitivity conclusions in this section. It should be emphasised that whilst a designation of high sensitivity does not preclude development, any development in these areas would require full justification, strong mitigation and site-specific schemes to achieve the appropriate design and type of development in such locations.
- 8.7.4 The overall sensitivity value of an area is also influenced by the inter-relationship between the landscape, cultural and biodiversity elements and the mutual benefit the combined elements achieve.
- 8.7.5 The majority of the Core Study Area is considered to be of high/ medium-high sensitivity. However, there are some areas outside of Brackley, which are of medium and low sensitivity. Some low sensitivity sites are bisected by areas of medium sensitivity (such as river corridors) and these issues would need to be resolved through scheme designs and addressed fully through Environmental Statements.

8.7.6 Area 1: Brackley Fields

The area is composed of an open field pattern with flatter contours, limited areas of hedgerow and small woodlands, with a bland landscape character due to the absence of movement in the topography and articulation by other landscape features. The area is dissected by a major overhead electricity cable, which is considered a significant detractor. This area is therefore considered an area of **low-medium** visual landscape sensitivity

The area is considered to be of **low** cultural heritage sensitivity due to the absence of any cultural heritage assets within this area.

The area has limited elements of wildlife habitat and therefore is considered of **low** sensitivity.

8.7.7 Area 2: Old Glebe

Visual landscape sensitivity is classified as **medium-high** as the landscape character is created by smaller field patterns, elements of woodland and viewpoints to the east and south east. There are elements of visual distracter in the form of overhead electricity lines which create a variation in the sensitivity classification.

There is one identified site of Ridge and Furrow within this area and therefore is considered of **Medium** cultural heritage sensitivity.

This area contains a SSSI corridor associated with the disused railway line and is therefore considered of **high** biodiversity sensitivity.

8.7.8 Area 3: Great Ouse

This area is considered to be of **medium-high** visual landscape sensitivity. The area has open slopes creating the river valley character, the slope to the east is visual linked with Area 8: Turweston. There are elements of woodland and tree groups which provide points and features.

The area has limited cultural elements and therefore is considered of **low** cultural heritage sensitivity.

The river corridor and southern end of the site contain a range of Potential Wildlife Sites and habitat conditions which achieve a **medium-high** biodiversity sensitivity.

8.7.9 Area 4: Evenley

This area is considered of **high** visual landscape sensitivity as the area is predominantly comprised of the historic landscape and associated parkland of Evenley Hall. The area contains a high content of woodland, parkland trees and distinctive mature hedgerows.

The parkland character of Evenley Hall offers a very individual character and specific quality to this area. These historic qualities offer **Medium** cultural heritage sensitivity.

The combination of mature parkland trees, mature hedgerows and meadow parkland provide a **high-medium** biodiversity sensitivity.

8.7.10 Area 5: Hinton in the Hedges

The visual landscape sensitivity of this area is considered **medium-low**. The field pattern is open and bland with limited landscape features and character, particularly the zone directly associated with the A422 corridor.

This corridor also contains a scheduled monument and is of **high** cultural heritage sensitivity.

The river corridor adjacent to the A422 contains a pocket park and potential wildlife site and is of **medium** biodiversity sensitivity.

8.7.11 Area 6: Steane Park

This area is considered of **high** visual landscape sensitivity because of the variation in topography and landform interest which combine to create a distinctive parkland character. There are groups of mature parkland trees and woodland, which provide interest and amplify the individual character of this area.

The area contains a non-registered park and garden which gives the site a **medium** cultural heritage sensitivity.

The local wildlife site associated with the disused railway line between Brackley and Banbury is identified as medium high biodiversity sensitivity because of the variation in habitat and conditions associated with the disused railway line. The biodiversity of this area

also benefits from the parkland character, the mature trees and existing woodland, all of which provide a wide range of habitat opportunities. This area is of **high-medium** sensitivity.

8.7.12 Area 7: Brackley Grange

The area is considered to be **medium-high** visual landscape sensitivity. The field pattern is varied, being open and medium to large in size. There is a topographical interest achieved by the south facing slopes towards Steane Park and the disused railway.

This area contains sites of ridge and furrow and the dismantled railway and is considered to be of **medium** cultural heritage sensitivity.

This area contains a Potential Wildlife Site together with a brook dissecting the site, it is considered to be of **medium** biodiversity sensitivity.

8.7.13 Area 8: Turweston

This area is considered to be of **medium** visual landscape sensitivity. The landform slopes westerly towards the Great Ouse and creates the river valley character. When this area is combined with Area 3 the area has significant views of Brackley and the southern end.

Turweston is designated as a conservation area and combined with other cultural heritage elements such as four areas of ridge and furrow, the area is considered to be of **high** cultural heritage sensitivity.

This area contains a County Wildlife Site and significant areas of Potential Wildlife Sites combined with a Biological Notification Site, the area is therefore considered to be of **medium** biodiversity sensitivity.

PART C: GREEN INFRASTRUCTURE STRATEGY

9.0 GREEN INFRASTRUCTURE

9.1 Introduction

9.1.1 This section of the study considers the criteria for the development of a Green Infrastructure Strategy appropriate for Brackley. This is achieved by the combination of the baseline and sensitivity analysis presented in parts A & B with the local scale characteristics and functionality. This will allow a more refined assessment and response to Green Infrastructure requirements and opportunities than is possible at a sub regional scale.

9.1.2 This section begins with an introduction to Green Infrastructure, and then examines the Green Infrastructure requirements for Brackley. The findings are then brought together in a series of recommendations for the delivery of a Green Infrastructure strategy.

9.1.3 This strategy will inform the Joint Core Strategy.

9.2 What is Green Infrastructure?

9.2.1 'Green infrastructure is a network of multi-functional green space, both new and existing, both rural and urban, which supports the natural, historical and ecological processes and is integral to the health and quality of life of sustainable communities'.

9.2.2 The Northamptonshire Strategic Green Infrastructure Assessment has adopted a strategic and collaborative approach that, through regeneration, conservation and land management, addresses the environmental, social and economic aspects of growth and development, changes within both urban and rural landscapes and the fragmentation of habitats.

9.2.3 The key principles of Green Infrastructure (as set out in the Green Infrastructure Guide for the East Midlands (EMGIN, 2008) are as follows:

- Contribute to the management, conservation and enhancement of the local landscape.
- Contribute to the protection, conservation and management of historic landscape, archaeological and built heritage assets.
- Maintain and enhance biodiversity to ensure that development and implementation results in a net gain of Biodiversity Action Plan habitats.
- Provide connectivity and avoid the fragmentation of habitats, sites and natural features, to increase the potential for natural regeneration and the migration of species of flora and fauna, which may be affected by changing climatic or other conditions.
- Be designed to facilitate sustainable longer-term management.
- Be delivered through enhancement of existing woodlands and also by the creation of new woodlands and forest areas.
- Create new recreational facilities particularly those that present opportunities to link urban and countryside areas.
- Take account of and integrate with natural processes and systems.
- Be managed and funded in urban areas to accommodate nature, wildlife and historic and cultural assets, and provide for sport and recreation.
- Be designed to high standards of quality and sustainability to deliver social and economic, as well as environmental benefits.
- Provide a focus for social inclusion, community development and lifelong learning.

9.2.4 At the strategic level, Green Infrastructure is an environmental system that supports the health, wellbeing and aesthetic values of communities and the maintenance of functional ecosystems. It provides an asset that enables the environment to support and maintain natural and ecological processes, and sustains land, air and water resources. It also:

- contributes to high quality and accessible landscapes benefiting people and wildlife;
- plays an essential role in maintaining and enhancing the health of the natural environment and its ability to provide a wealth of 'ecosystem services';
- increases ecological connectivity to overcome habitat fragmentation and increase the ability of the natural environment to adapt to climate change;
- creates attractive and accessible places for people to enjoy direct and regular contact with the natural environment;
- strengthens links between urban areas and their surrounding countryside
- combines with promotional campaigns, green infrastructure can support healthier lifestyles by providing green routes for walking and cycling, and green spaces for exercise and play
- green infrastructure supports the efficient management of water resources. A network of green spaces reduces the likelihood of flooding by allowing water to permeate through the ground;
- green infrastructure can also be designed to act as flood storage areas, holding large volumes of water in temporary ponds to protect built up areas from flooding;
- green infrastructure can also contribute to delivery of sustainable land management e.g. through Higher Level Stewardship (HLS) schemes;
- green infrastructure can also create a range of social and economic benefits, both directly (through employment in capital projects and future management) and indirectly (increased visitors and visitor spend).
- ensures the efficient use of land through a multifunctional approach to land use planning;
- supports functioning ecosystems and robust natural systems for the management of basic resources such as water, clean air, soil, and the maintenance of biodiversity;
- delivers a broad range of ecosystem services and linked social and economic benefits that clearly demonstrate the relevance of the natural environment to the lives and livelihoods of individuals and communities;
- makes a direct contribution to the climate changing 'proofing' of peoples' homes and communities;
- enhances the self sufficiency of communities though providing local food production and recreational areas.

9.3 Sustainable Biodiversity Network

9.3.1 Green Infrastructure Provision

9.3.2 The proposed Green Infrastructure Network for Brackley is shown on MAP 13 (QD42_200_13 Rev B).

9.3.3 This plan illustrates habitat opportunities and wildlife corridors, together with sustainable movement networks. It also shows an order of priority for green route development.

9.3.4 Proposed developments should incorporate opportunities for the delivery of biodiversity habitat links and enhancement and the expansion of Current and Potential Wildlife Sites.

9.3.5 These opportunities could include the establishment of habitats appropriate to the area. By combining the specific aims of habitat enhancement and connectivity, with other goals such as providing accessible natural green space, pedestrian links and landscape mitigation, it

will provide multi-functional landscapes and, as such, deliver the broader principles that are inherent in the Green Infrastructure concept.

- 9.3.6 This will provide a net gain in biodiversity and recreational opportunity whilst contributing to Northamptonshire's BAP targets.

9.4 Green Infrastructure Provision: Movement Network

- 9.4.1 Refer to MAP 13 (QD42_200_13 Rev B)

9.4.2 The provision of a sustainable movement network is an important aspect of Green Infrastructure. It will include provision for sustainable patterns for walking, cycling and horse riding, where appropriate. Brackley's Green Infrastructure network will focus on the need to establish a structure of safe green routes. These will aim to link the environmental and, wherever possible, cultural and leisure assets.

9.4.3 The sustainable movement network contains three different elements. Strategic Infrastructure Corridors are an interconnected network of Sub Regional and Local Green Infrastructure corridors. They are not intended to indicate rigid corridors for Green Infrastructure provision, but instead identify broad landscape zones within which Green Infrastructure-related proposals should be focussed.

9.4.4 The **Primary Network** is made up of strategic links between major settlements, key wildlife sites and recreational opportunities. The routes are composed of the Public Rights Of Way network and cycle routes, they also run through open countryside, disused railways and other environmental assets such as watercourses.

9.4.5 The **Secondary Network** links villages and hamlets together and to assets in the wider countryside. It is composed of the Public Rights Of Way network and cycle routes. A network of local connectors has also been proposed for Brackley, which would link different parts of the town, and other parts of the sustainable movement network.

10.0 POLICY FRAMEWORK

10.1 Introduction

10.1.1 The provision of a comprehensive network of green infrastructure with multi-functional benefits is recognised at National, Regional and Local Levels. At a National level, (PPS1) – Delivering sustainable development (2005); supplement to PPS1 (2007) Planning and Climate Change; PPS12 – Local Spatial Planning; PPS7 – Sustainable Development in Rural Areas; PPS9 – Biodiversity and Geological Conservation; PPS25 – Planning and Flood Risk; PPS22 – Renewable Energy; PPG15: Planning and the historic environment; and PPG16: Archaeology and Planning. All these policies reflect and encourage the need to identify and incorporate Green Infrastructure.

10.1.2 The Supplement to PPS1: Planning and Climate Change (2007) recognises the contribution to be made from existing and new opportunities for Open Space and Green Infrastructure to urban cooling, sustainable drainage systems and conserving and enhancing biodiversity. Policy requirements within the Regional Spatial Strategy (RSS) are outlined below. The MKSM Sub-Regional Strategy sits within the RSS.

10.1.3 At a local level, while the West Northamptonshire Joint Planning Unit has yet to finalise the Joint Core Spatial Strategy and policy framework, the provision of Green Infrastructure is

supported by CLG and policy in the RSS. On this basis the inclusion of Green Infrastructure networks should form an integral part of Brackley's infrastructure requirements for growth.

10.2 Regional Spatial Strategy for the East Midlands (RSS8)

10.2.1 The principle of delivering Green Infrastructure is now embedded within the East Midlands Regional Plan (March 2009). The vehicle for this growth will be the MKSM Sub-Regional Strategy.

10.2.2 The policies in the East Midlands Regional Plan set the context for the preparation of the West Northamptonshire Local Development Framework and help in the development of related policy. Of direct relevance are the following policies:

10.2.3 Policy 1 Regional Core Objectives

To secure delivery of sustainable development within the East Midlands, all strategies, plans and programmes should meet the following core objectives:

- c) *To protect and enhance the environmental quality of urban and rural settlements to make them safe, attractive, clean and crime free places to live, work and invest in, through promoting:*
 - *“Green Infrastructure”*
 - *enhancement of the “urban fringe”.....*

- g) *To protect and enhance the environment through the:*
 - *protection, enhancement, sensitive use and management of the Region's natural resources...*

- h) *To achieve a “step change” increase in the level of the Region's biodiversity through:*
 - *The management and extension of habitats, both to secure net gains in biodiversity and to facilitate species migration to allow the biosphere to adapt to climate change, and*
 - *Ensuring that no net loss of priority habitats or species is allowed to occur.*

10.2.4 Policy 26: Protecting and enhancing the Region's Natural and Cultural Heritage

10.2.5 Policy 27: Regional Policies for the Historic Environment .

10.2.6 Policy 28: Regional Priorities for Environmental and Green Infrastructure

10.2.7 Policy 29 Priorities for enhancing the Region's Biodiversity

10.2.8 Policy 30: Regional Priorities for Managing and Increasing Woodland Cover

10.2.9 Policy 40 Regional Priorities for Culture, Sport and Recreation

11.0 DELIVERY OF GREEN INFRASTRUCTURE

11.1 Introduction

11.1.1 So far this study has undertaken an analysis of data, which has resulted in a series of illustrations that identify valuable and quality assets. The baseline information for this section can be found on MAPS 9, 10, 11 & 12 (QD42_200_9-10-11-12_RevB):

Designated Nature Conservation, Biodiversity
Cultural Heritage
Strategic and Local Green Space
Access and Movement

Green Infrastructure networks are illustrated on MAP 13 (QD42_200_13 Rev B)

11.1.2 Existing open space resources.

The existing town of Brackley has a significant number of green spaces within the existing town. A large percentage of this open space is related to educational function, with limited availability for public use. The larger elements of existing public open space are associated with the following:

- the linear corridor associated with Humphries Drive, which provides a north-south corridor through the most recent housing development in Brackley and provides footpath and cycle links to the Brackley Leisure Centre.
- Brackley Leisure Centre provides a large open space element with sporting and active recreational facilities.
- The public open space off Church Lane, providing a local open space facility.
- Local space accessed off Martial Daire Drive and Tudor Way.

11.2 Establishment of key “Green Infrastructure Routes”

11.2.1 The baseline information has been analysed and used to formulate the principles to develop a Green Infrastructure Strategy. These “Green Corridors” also contain the opportunity for Local Open Space sites and have a combined biodiversity and recreational function. The structure is illustrated on MAP 13 (QD42_200_13 Rev B).

11.2.1.1 The Green Infrastructure corridors are based on the environmental assets identified through the analysis of biodiversity, cultural heritage and landscape elements identified by the study.

11.2.1.2 Green Infrastructure benefits the community by providing a linked network of open space which will provide walking and cycling routes together with promoting healthy living and contributing to the climate change agenda.

11.2.1.3 The Green Infrastructure will provide a strong network of green corridors which will provide opportunities for wildlife habitat extension and connectivity.

11.2.1.4 The priorities for the implementation of the Green Infrastructure have been identified on MAP 13. The highest priorities are based on providing open space in areas of shortfall and population need, together with creating links between existing elements of open space.

11.2.2 The following Green Infrastructure routes and corridors have been identified using the analysis of assets and data previously described:

1. Great Ouse - Primary Greenway

This corridor would provide access along the river by a combination of existing Public Rights of Way, together with the disused track bed of the Buckingham-Brackley railway. The long term objective should be to create a continuous route to Buckingham. The varied environmental character and habitat opportunities make this a very high quality environmental and biodiversity route. This route also provides links from Turweston to Brackley with connections into the 'local' footpath network. The management, restoration and creation of lowland meadows, wet grassland, and marsh should be prioritised along this corridor along with sensitive management of the river banks.

2. Whitfield – Radstone – Halse – Farthinghoe ~ Secondary Greenway

This would provide a local route connecting the villages of Whitfield, Radstone, Halse and Farthinghoe. It also provides a green link between the Great Ouse and the Helmdon railway, and the long distance path to Banbury.

3. Helmdon Railway - Primary Greenway

This open space route follows the disused railway line from Brackley to Helmdon. This corridor has already been designated as a SSSI because of the rich biodiversity and habitat provided. The opportunity should be sought to establish a continuous route around the southern boundary of Brackley, providing a continuous open space link to other green infrastructure corridors. This will maximise the continuity of routes and wildlife corridors. This area may however be sensitive to external pressures, such as public access and therefore any proposals for this corridor should be produced in consultation with Natural England. The sustainable management and extension of the limestone grassland in the SSSI and the Brackley Railway Embankment LWS should be included in proposals for this corridor.

4. Radstone – West Brackley - Secondary Greenway

This local greenway would provide linkage between the Helmdon railway corridor and the Banbury-Buckingham primary greenway. This route would be achieved by a combination of existing Public Rights of Way and significant hedgerow corridors. This corridor could also provide the opportunity to invest in mitigation planting, to minimise visual impact of the existing development of Brackley and any other potential development that may be considered to the north west of the town.

5. Halse - Hinton - Secondary Greenway

This route would provide linkage between Halse and Hinton in the Hedges via Steane Park. The greenway would be based on existing Public Rights of Way and tracks. This route would offer varying landscape character and wildlife habitat. This corridor could be connected to corridor 9 along the Farthinghoe to Brackley road, which is adjacent to two Local Wildlife Site woodlands, one of which is Ancient Woodland. The priority for this linking corridor would be woodland expansion and linkage to connect Steane Park in the west with the disused railway to the east.

6. Brackley - Hinton - Secondary Greenway

This local greenway would provide a link with Brackley and the Banbury-Buckingham primary greenway and would connect with the identified local and potential wildlife sites associated with the valley.

7. Brackley – Croughton Secondary Greenway

This route will link Brackley with Croughton and follows existing Public Rights of Way. The northern section is combined with corridor 6. This route would provide the opportunity to be developed as a cycleway in conjunction with the open space elements.

8. Brackley - Evenley - Secondary Greenway

This corridor is based on existing Public Rights of Way and will provide a route through the Evenley parkland and will connect Evenley with the wider green infrastructure network proposed. This corridor could be connected to corridor 9 through extensions to the South Ground Covert Local Wildlife Site and management of habitat around the drains and ditches north and south of this site.

9. Banbury - Buckingham - Primary Greenway

This corridor will provide the opportunity to achieve a long distance route between Buckingham and Banbury. It will be based on a combination of the disused railway and the river valley to the south of Brackley. It will provide the opportunity to connect a number of local wildlife sites, potential wildlife sites and non-registered parks and gardens, together with connections to other sections of the proposed green infrastructure. This route broadly follows the local greenway infrastructure corridor, Middleton Cheney, Brackley & Buckingham extension, identified by the RNRP. This corridor contains a variety of habitats and is already a fairly continuous semi-natural habitat. Opportunities for improved conservation management of existing habitat and connectivity should be identified.

11.3 Potential Improvements to Open Space Provision

11.3.1 It is inherent that many routes are both habitat links and access routes. The green infrastructure corridors identified make use of existing landscape assets such as the river valley (Great Ouse), disused railway lines and existing Public Rights of Way. There will be a need to establish linkage into appropriate elements of the existing open space, to maximise connectivity and continuity. Sensitive design and minor modifications of routes (e.g. widening of the route corridor and new habitat creation and restoration schemes) can enable improvements in terms of both access and biodiversity. There is also the potential to increase the educational value of these areas and also areas of archaeological and/ or cultural interest through interpretation, guided walks etc.

11.3.2 Many of the opportunities to deliver improved or extended green infrastructure will lie not with the local planning authority but with other partners. For example, providing cycle routes within green links could help to meet objectives within a Local Transport Strategy for more sustainable travel and objectives within a local health strategy to increase the amount of exercise taken by local people. This further highlights the importance of ensuring that green infrastructure objectives are embedded in the Sustainable Community Strategies as well as in the Local Development Framework. Other funding stream is as described in 11:6:1 and can be promoted to provide money for improvements.

11.3.3 Improved signage and way-marking

In order to raise public awareness of the Green Infrastructure Network, it's marketing and branding needs to be positively improved. This can be achieved through consistent and themed signage and interpretation. If the network is not clearly communicated then it will not be used to its full potential. Other sources (e.g. EA, SNC & NCC) would consider the branding and marketing of the Green Infrastructure network within their own watercourse signage.

11.3.4 Maintaining the Quality and Accessibility of existing Green Space

It is important that the quality and accessibility of existing Green Space remains high, to ensure continuing levels of usage, and to avoid people being deterred from using the sites. Where there are accessibility issues the Green Infrastructure network should be examined to see if it could increase the level of accessibility.

11.3.5 Maximising the Biodiversity of Existing Open Spaces

The types of corridors shown on MAP 13 (QD42_200_13_Rev B) include grassland, woodland and water/lowland meadow. These sites should be managed to maximise the biodiversity value of each site, and of the network of sites as a whole. This linkage can be increased through the provision of additional green corridors between open space sites, which would provide both access and habitat connections.

11.4 Additional Enhancement of Biodiversity

11.4.1 Identifying Sites for Future Conservation Programmes

Several of the "gaps" or breaks in the green infrastructure routes illustrated could be addressed through future conservation and habitat creation programmes, which also provide public access. For example, woodland/copse planting, riverbank clean-up, grassland restoration etc.

11.4.2 Management of Existing Biodiversity Resources

Existing sites that have been recognised for their biodiversity value (Local Wildlife Sites, SSSIs etc) are not necessarily under positive conservation management or in good condition. Lack of appropriate management on these sites may lead to a decline in biodiversity. Positive conservation management should be implemented in order to retain the features of biodiversity value. Once the long term future of these sites is secured, action should be taken to extend them and link them together with areas of suitable habitat.

11.4.3 Mitigation Planting

Carefully-sited Community Woodland schemes which are in keeping with the landscape and biodiversity characteristics of the area could improve woodland habitat corridors while at the same time softening the skyline. However, it should be noted that tree planting is not necessarily the appropriate form of mitigation for all types of development.

11.5 The Role of Structural Landscape Areas

11.5.1 Green Infrastructure enhancement can also be achieved through the careful design of development sites. The provision of structural landscape areas (usually achieved through the planting of trees/woodland and shrubs) which enhance the landscape infrastructure will be required as part of all major new developments. These structural landscape areas will

help to mitigate adverse visual impact, strengthen local character and identity and integrate new development into its wider landscape setting.

11.5.2 The detailed assessment of development proposals may also necessitate off-site planting or habitat creation within the wider landscape. Site specific assessment of landscape, habitat types and visual issues would be required to ascertain the nature of off-site mitigation proposals, paying particular regard to appropriateness to local character and other visual considerations.

11.5.3 A co-ordinated approach to the planning and design of structural landscape areas will contribute to local delivery of Green Infrastructure. Consistent with the principle of multi-functionality of green infrastructure provision, structural landscape areas have the potential to accommodate a wide range of functions and compatible uses. These potentially rich and diverse areas with a high level of accessibility to local people would contribute to the wider network of Green Infrastructure across and beyond the town. Examples of Green Infrastructure provision achieved through structural landscape include:

- Incorporation of a range of open space uses, including informal play areas and playing fields, and allotment areas
- Biodiversity enhancement including strengthening and creation of new woodland, wetland and grassland and habitat links, or accommodation of more specific features such as a nature reserve;
- Sustainable water management;
- Sustainable movement network incorporating footpath, cycle ways and bridleways.

11.6 Principles for Delivery

11.6.1 The delivery of Green Infrastructure is an overarching process which requires the understanding and input of all the stakeholders. The lead local authority officer should actively engage with the local strategic partnership to ensure the significance of Green Infrastructure is understood and inclusive in the spatial planning process.

11.6.2 The delivery of Green Infrastructure can be progressed through the following process:

- Local area agreements to develop Green Infrastructure targets.
- Local transport strategy for sustainable travel and health and wellbeing.
- Planning conditions requiring the creation of open space and wildlife habitats as part of development mitigation.
- Planning obligations (section 106 agreements) for funding of open space and habitat provision and management of both new and existing.
- Planning conditions and obligations requiring the protection and enhancement of existing cultural assets.
- Working with the Northamptonshire Biodiversity Partnership to provide management advice and assistance to landowners.
- Promotion of conservation land management schemes such as Higher Level Stewardship and Woodland Grant Schemes to deliver habitat management and enhancements in GI corridors and surrounding land.
- Tariff; a roof tax to support Green Infrastructure.
- Community Infrastructure levy; charges levied by local authorities using a formulae on the size of development.
- Regional Infrastructure fund to support key infrastructure for developments within a growth point.
- Growth point funding; funding support in named growth point areas through the housing growth fund.

- Private management charges; private funding for on going maintenance of public accessed open space which remains in private ownership.
- Voluntary sector; labour and expertise from 'not for profit' organisations. Partnerships can be formed between Green Infrastructure stakeholders to access funding and promotional activities.

11.6.3 A number of principles for the delivery of Brackley specific Green Infrastructure projects have been identified through this study. These are set out below, and are compatible with the more general principles of Green Infrastructure set out in section 9.

- 1) Projects which contribute to key Green Infrastructure routes and complete/improve/enhance the Primary Movement Network and their associated Biodiversity Networks along river valleys and woodlands should be supported.
- 2) Projects which increase the safety of users of the Movement Network when walking on roads (and at the same time potentially improve the grassland corridors along verges) should be supported.

11.6.4 It should be noted that Green Infrastructure objectives can be achieved through a number of means. For example, the management of Open Space sites within Habitat Reserves/Habitat Corridors to improve their biodiversity could in some cases be addressed through changes in Council or landowner's management/maintenance regime. Such changes (e.g. in mowing regimes) would not necessarily have a financial implication.

11.6.5 New development also has the opportunity to make a major contribution to Green Infrastructure through its design and structure planting on site, and/or through compensatory measures off site.

12.0 CONCLUSIONS

- 12.1.1 Green Infrastructure is enshrined in National, Regional and Local Planning Policies. These include PPS 1 Climate Change Supplement; RSS8 (the Regional Spatial Strategy for the East Midlands).
- 12.1.2 The requirements outlined in this study can be integrated with the baseline analysis and landscape sensitivity research to inform a Green Infrastructure Strategy for Brackley. The recommendations of the Green Infrastructure Strategy include initiatives to improve the Sustainable Movement Network and the Open Space Network, and also to enhance biodiversity. These initiatives include creating a Sustainable Movement Network, filling missing sections and providing additional links, improving the accessibility of open spaces and maximising their biodiversity.
- 12.1.3 By undertaking the Green Infrastructure Strategy in conjunction with a landscape sensitivity study, it is possible to make a practical and positive contribution to the delivery of sustainable development in and around Brackley.
- 12.1.4 Green Infrastructure makes an extremely valuable contribution to meeting Brackley's infrastructure requirements in terms of open space, sport and recreation, and also contributes more broadly to its environment, biodiversity and accessibility. Brackley has great potential to further improve and enhance its existing limited Green Infrastructure provision in terms of Movement Networks, Open Space and Biodiversity Networks, and this Strategy should enable this potential to be achieved.

APPENDIX 1: LIST OF DATASETS

The schedule below presents a summary of data presented on the Baseline Review Drawings.

- 1:50,000 Ordnance Survey map
- Aerial Photograph
- Ordnance Survey Landform Profile
- Ordnance Survey Master map
- River Channel/ Major Watercourses
- Flood Zones
- Sites of Special Scientific Interest (SSSI)
- Local Wildlife Sites (LWS)
- Potential Wildlife Sites (PWS)
- Pocket Park
- Ancient Woodland
- Registered Parks and Gardens
- Scheduled Monuments
- Conservation Areas
- Ridge and Furrow
- Roman Road
- Non Registered Parks and Gardens
- Known Archaeological Assets (derived from Historic Environment Record)
- Woodland with Public Access/ Recreation Role
- Parks or Green spaces
- Byways
- Bridleways
- Footpaths
- Transport Infrastructure (Motorways, A Roads, B Roads, Minor Roads), Strategic Agricultural Land Classification
- Local Agricultural Land Classification

APPENDIX 2: GLOSSARY OF TECHNICAL TERMS AND ACRONYMS

AONB Area of Outstanding Natural Beauty
ASL above sea level
BAP Biodiversity Action Plan
BCA Biodiversity Character Assessment
CIC Community Interest Company
CLCA Current Landscape Character Assessment
CLG (Department of) Communities and Local Government
CS Countryside Stewardship
EA Environment Agency
ECA Environmental Character Area
GI Green Infrastructure
HLCA Historic Landscape Character Assessment
LSGI Landscape Sensitivity and Green Infrastructure
LWS Local Wildlife Site (formerly known as County Wildlife Site)
MKSM Milton Keynes South Midlands (Regional Growth Area)
NCC Northamptonshire County Council
PWS Potential Wildlife Site
RNRP River Nene Regional Park
RSS Regional Spatial Strategy
SM Scheduled Monument
SNC South Northants Council
SRS Sub Regional Strategy
SSSI Site of Special Scientific Interest
WNJPU West Northamptonshire Joint Planning Unit

Biodiversity Character Type/ Area Defined by a suite of common characteristics, such as the range of habitat types, geology, soils, topography and watercourses and flood zones, which together typify a particular ecological landscape in Northamptonshire. Each Biodiversity Character Type is subdivided into Biodiversity Character Areas. These are geographically discrete areas that contain the suite of common characteristic ecological features that characterise a particular Biodiversity character type. Biodiversity Character Area boundaries are defined by changes in underlying geology, the extent of particular soil types, particular contours or landscape features such as rivers or the edges of plateau landscapes.

Biodiversity Network A means of connecting fragmented habitats in order to assist species persistence and habitat function.

Countryside Connectors Part of the Sustainable Movement Network, they link towns, villages and hamlets and to assets in the wider countryside. They are composed of the Public Rights of Way network and cycle routes.

Green Infrastructure A planned network of multifunctional Green Spaces and interconnecting links.

Habitat corridor Where existing **habitat reservoirs** of the same or similar Biodiversity Action Plan habitats form a distinct network through the landscape.

Habitat network Linked habitat sites, including **habitat corridors** and **habitat reservoirs**.

Habitat reservoir An existing site, which provides a habitat for species to live, e.g. a woodland; an area of grassland.

Hinterland The land surrounding a settlement, which is connected to it visually or in terms of its function.

Historic Landscape Character Types/ Areas Distinct types of landscapes that are relatively homogenous in historic character. They are generic in nature in that they may occur in different parts of the county...but wherever they occur they share broadly similar combinations of historical land use and settlement pattern. Historic Landscape Character Areas are unique in that they are geographically discrete, sharing characteristics of the broader Historic Landscape Types to which they belong.

Inter-Urban Neighbourhood Connectors This local level of the **Sustainable Movement Network** link different areas of Brackley.

Ironstone A type of limestone with a golden-brown colour, which is distinctive to Northamptonshire.

Landscape character area The unique individual geographical areas in which **landscape character types** occur. They share generic characteristics with other areas of the same type but also have their own particular identity.

Landscape character type Generic types of landscape, which possess broadly similar patterns of geology, landform, soils, vegetation, land use, settlement and field pattern in every area where they occur.

Landscape Sensitivity (to a specific type of change). The extent to which a landscape can accept change of a particular type and scale without unacceptable adverse effects on its character.

Outcrop An area of rock on the surface of the Earth. An outcrop is usually material that can be seen, but the name may also be used where the rock is covered.

Primary Network Strategic routes within the **Sustainable Movement Network**. They are composed of strategic links between major settlements, using the Public Rights of Way network and cycle routes. Green Ways are through open countryside while Blue Ways follow water courses including rivers, navigations and canals.

Setting The area of landscape around a settlement, which forms the approach to the settlement, and/or the backdrop to views from within it.

Strategic Gap The gap between two settlements, which enables them to remain discrete from each other.

Strategic Infrastructure Framework An interconnected network of Sub Regional and local Green Infrastructure corridors.

Sustainable Movement Network Principal networks and opportunities for sustainable people movement from centres of settlement to the countryside.

Sustrans UK-based charity dedicated to sustainable transport. Co-ordinates the National Cycle Network.

Townscape character type Generic types of townscape, which contain similar street patterns and age/ style of buildings in each area where they occur.

Visual influence Extent of potential visibility to or from a specific area or feature.

West Northamptonshire Development Corporation Established by the Government in 2004, the WNDC mission is to promote and deliver sustainable housing growth and regeneration in Brackley, Daventry and Brackley.

West Northamptonshire Joint Planning Unit Daventry District, Brackley Borough, South Northamptonshire Council and Northamptonshire County Councils have established the West Northamptonshire Joint Planning Unit (JPU) to prepare the Joint Development Plan Documents, including the Joint Core Strategy and the Joint Supplementary Planning Documents. Each Borough and District Council continues to be responsible for preparing its own Local Development Documents addressing local matters although co-ordination of the overall programme by the JPU will be necessary.

APPENDIX 3: REFERENCES

- Aylesbury Vale Landscape Character Assessment May 2008 by Jacobs for Aylesbury Vale District Council & Buckinghamshire County Council
- Buckinghamshire Green Infrastructure Strategy (Draft 2008)
- Buckinghamshire Historic Environment Records Office
- Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment Guidance for England and Scotland*.
- Countryside Agency and Scottish Natural Heritage (2005) *Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity*
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