

**GREEN
INFRASTRUCTURE
MAKING THE CONNECTION**

STUDY A



STUDY A A STRATEGIC GREEN INFRASTRUCTURE FRAMEWORK FOR WEST NORTHAMPTONSHIRE

12.0 WEST NORTHAMPTONSHIRE: THE RESOURCE

12.1 INTRODUCTION

In common with North Northamptonshire (presented in Study B), a comprehensive examination of the environmental resource within West Northamptonshire has been undertaken in order to implement the approach discussed earlier and identify a GI Strategy. This section commences with an overview of the study area, (Figure 7) followed by an examination of the resource, structured within the framework of a series of Strategic Themes, together with an analysis of issues that are likely to influence the development of GI.

12.2 AN OVERVIEW OF WEST NORTHAMPTONSHIRE

West Northamptonshire is a predominantly rural area containing a diverse mix of farmland, woodland, villages, and riparian landscapes together with a number of urban areas. The countryside is highly valued, both as a food producing area, and as a recreational and visual resource. The area is particularly noted for its quiet rural character, attractive stone villages and extensive country estates. The main settlement is Northampton, a large town situated on the River Nene. Its historic core, and numerous districts that mark post medieval expansion and the industrial age, are architecturally and culturally rich. Elsewhere, post war development offers less to the town's character and identity. Other major settlements comprise Daventry, Towcester and Brackley. These display similar characteristics to Northampton, but on a smaller scale, with each retaining its own distinctive identity.

The landscape character of West Northamptonshire is varied, reflecting the pattern of the underlying geology and effects of geomorphological processes. The highest parts of the county are located within the western perimeter of West Northamptonshire. The ridgeline following the crest of these hills defines the watershed separating the catchments of tributaries of the Severn and Thames rivers to the west, and the Nene and Welland rivers to the east, which drain into The Wash. This distinctive tract of elevated and rolling rural landscape forms the West Northamptonshire Uplands. Further east is the Central Northampton Plateau, which extends north of Northampton and comprises more gently undulating farmland. The broad upper valleys of the River Tove and Ouse occupy the southern side of West Northamptonshire, together with smaller but distinctive tracts of land, notably the more open Croughton limestone plateau in the south, and the dense outline of the wooded landscapes associated with Whittlewood, and Yardley Chase and Salcey Forests. The river valley landscape of the Middle and Upper Nene extend into the heart of West Northamptonshire, while on the western and northern perimeter of the study area are the lower lying vale landscapes of the Cherwell, Vale of Rugby and Welland.

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12.3 A REVIEW OF THE RESOURCES WITHIN THE STRATEGIC THEMES

In order to develop GI proposals that enhance landscape, historic and biodiversity character, and respond to urban character and conditions, a sound understanding of the baseline resource is required. This section of the report describes the resource, and analyses its significance and the opportunities it presents, in the context of green infrastructure provision. The review and analysis of the baseline resource, and identification of opportunities and constraints, has been structured within the rationale of Strategic Themes. These Themes, which are listed below, have the potential to contribute to a multi-functional green infrastructure network within West Northamptonshire.

Strategic Themes:

Natural Systems	
Figure 8	Geology
Figure 9	Landform
Figure 10	Hydrology and Flood Information
Figures 11-17	Designated Nature Conservation and Landscape Biodiversity
Land Use and Human Systems	
Figure 18	Heritage and Culture
Figure 19	Strategic and Local Green Space
Figure 20	Leisure, Recreation and Tourism Destinations
Figure 21	Access and Movement
Figure 22	Transport / Service Infrastructure and Connections
Integration of Natural and Human Systems	
Figure 23	Environmental Character
Land Use and Landscape Change	

In addition to the principal Strategic Themes, Environmental Character is examined as a synthesis of the interaction of the natural and human resources and processes. Environmental Stewardship Agreements are also considered as an indicator of land management change through initiatives undertaken by farmers and landowners.

An integral part of the desktop research included the interrogation of the full suite of baseline maps within the Strategic Themes in order to identify all assets and destinations that were deemed to be of strategic and countywide significance. These included all statutory designated sites and features, together with non-statutory or semi-statutory designations, such as County Wildlife Sites for the Biodiversity Mapping, or as a consequence of county level policy and guidance. The assets of county importance, and destinations where relevant, are included on the themed mapping presented in Figures 8 - 23 inclusive and provide a comprehensive record of the resource base that has contributed to the development of the Strategic Green Infrastructure Framework for West Northamptonshire.

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Biodiversity: Analysis and Opportunities

- Protection of key wildlife sites must be a priority. These encompass all statutory and non-statutory designated sites including all existing and Potential County Wildlife Sites
- Reduction of fragmentation through habitat restoration and creation, with priority given to areas that will provide the most benefit in terms of habitat fragmentation combined with the highest chance of achieving a high standard of restoration as determined by technical issues, such as past and current land-use, land ownership, soils and planned development.
- Priority for restoration of ancient woodland sites planted with coniferous woodland;
- Opportunities arising from changing forestry practice and objectives;
- Implementation of legislation and planning policy: There are two strands to this mechanism, one is the protection of key assets and the second is using the planning system to deliver creation and restoration targets. Planning should ensure the protection of key designated sites, protected species and species of importance for conservation as described by the CRoW Act 2000.
- Opportunities associated with new development and planning gain to help deliver nature conservation enhancement including the setting up of financial endowments for management. The opportunities for such gains have been increased by the publication of PPS9 which guides local authorities that they should be seeking biodiversity gain wherever possible from new development;
- In addition to the effects of mineral extraction on the biodiversity resource, there are important opportunities for biodiversity creation and enhancement associated with site restoration;
- Development of Defra's High and Entry Level Environmental Stewardship Scheme and integrated funding co-ordinating both agri-environment and forestry grants may bring new opportunities and priorities. In addition to woodland management, restoration and creation, Stewardship grants should be particularly targeted at calcareous grassland, veteran trees, lowland hay meadows, heathland and acid grassland, reedbeds and hedgerows.
- There is a need for training and information provision for farmers and landowners, including promotion of strategic objectives. While this conservation and advisory service is being delivered through the RNRP Land Advisor there is potential for extending this important role of connecting with the landowner and farming community and promoting sustainable land management.
- Tapping into a further range of funding opportunities covering local authority and central government grant schemes, grants from statutory agencies and EU funding. Business Sponsorship should also be considered;
- Biodiversity influences local and regional distinctiveness in respect of landscape, townscape and riverine character; so areas proposed for creation must be sensitive to this.
- Assemblages of similar habitat type within close proximity to each other have been identified. These comprise reservoirs, and links of core areas or key groupings of target habitats. In addition reservoirs of high biodiversity represented by assemblages of key habitats have also been identified. These areas support the highest levels of biodiversity and should be protected and enhanced in their own right and through the different key habitat strategies.
- Where core areas of habitat are located close to each other or linked, priority links for habitat restoration and creation have been identified to enhance the habitat network and reduce the effects of habitat fragmentation. The technical constraints on habitat creation links or corridors will influence the prioritisation of action.
- Habitat reservoirs and links have been identified and form an integral part of the emerging biodiversity 'Natural Network'.
- The health, well being and education benefits from 'natural' and urban habitats is an important potential dual functionality particularly within urban areas and at the urban/rural interface (hence the value of the ANGST Standard).

Potential Constraints:

- There is potential conflict arising from the over use of a biodiversity resource
- Extraction industries may threaten habitats;
- Access can also threaten the biodiversity resource;
- There are technical limitations to the feasibility of habitat creation;
- Land ownership constraints are a significant limiting factor to the enhancement or creation of habitats;

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NATURAL SYSTEMS

12.3.1 GEOLOGY

The geological structure of West Northamptonshire is fundamental to the form and structure of the landscape, influencing both physical and human processes such as the distribution of habitats, land uses, settlement and movement.

Figure 8: Geology

- The solid geology comprises entirely of sedimentary strata of the Jurassic period, overlain by superficial deposits of Quaternary glacial sands, gravels and till, and alluvial deposits.
- The Jurassic geology of the area is dominated by limestone, ironstone, ferruginous sandstone and clays of the Lower Jurassic Lias Group and the Middle Jurassic.
- The geological structure of Northamptonshire reveals itself in a pattern similar to a contoured map of the landscape (*Northampton Stone, D. Sutherland, 2003*): rivers and streams are picked out by river deposits, higher ground is occupied by the remains of glacial till cover, and exposed, and successively older layers of Jurassic rocks appear as contours.
- Older Jurassic rocks are exposed in the west of the county and younger rocks towards the east.
- Alluvial deposits, including clay, sand, silt, and river gravels are concentrated at the base of the river valleys, principally the River Nene and the River Tove and their tributaries. Gravel extraction in the area has been prolific, particularly along the River Nene.
- Jurassic limestones and ironstones have been extensively quarried, particularly in areas to the north of Northampton. They provided a rich source of building material, and patterns in the underlying geology are unequivocally linked to local vernacular buildings and urban character. They include fossil-rich limestones, sandstone, rust-coloured ironstone, Collyweston stone-slate, pale Weldon freestone, and brown Harlestone and Duston Stone (*ibid*).
- The Northamptonshire Ironstone Belt is a notable feature within West Northamptonshire, and indeed into North Northamptonshire. It includes the Lias Group Marlestone Rock Formation, which is confined to the western side of the county, and the younger and more widely represented Northampton Sand Formation of the Inferior Oolite Group. These two rock formations include horizons of workable ironstone and iron ore deposits that have been excavated in the past. The contribution of these rock formations to local vernacular is particularly significant, as they are both important source of building stone and their rich brown hues are evident in many older domestic buildings within the numerous 'Ironstone Villages', as well as in churches, historic country houses and town buildings.
- Former stone pits were located at Cold Higham, Newbottle, Spratton, Boughton, Kingsthorpe and Brixworth. Former quarries were located at Eydon, Church Stowe, Duston, Harlestone, Northampton, Kingsthorpe and Mears Ashby, with working quarries still present at Harlestone and Pitsford.
- Regionally Important Geological/Geomorphologic Sites (RIGGS) are identified in the study area and include those areas that are valued for educational, historic, research and aesthetic needs. For example, the former building stone quarry at New Duston, where sections of the Northampton Sand Formation are exposed.

Geology: Analysis and Opportunities

- The underlying geology is fundamental to local and regional distinctiveness, as a result of its influence on topography, soils, land use, biodiversity, local vernacular architecture and landscape character.
- There is the opportunity to celebrate the distinctive network of Ironstone Villages and create local networks that focus on these settlements, for example Mears Ashby, Brixworth, and Harlestone.
- Educational, cultural and recreational benefits arise from the potential for interpretation of geological features and links to the historic and cultural environment.
- The extraction industry provides continuing economic and social benefits and post-extraction restoration provides opportunities for environmental enhancement.

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12.3.2 LANDFORM AND HYDROLOGY

Landform and hydrology are inextricably linked within West Northamptonshire, closely reflecting the underlying geological structure and physical character of the landscape. They are dominated by the valleys of the River Nene and its tributaries, although the Tove and the Ouse, in the south of the study area and the upper reaches of the Welland in the north are also significant valley areas. To the west of the county lies the valley of the River Cherwell, the eastern part of which lies within the county. Although the landform across the area is generally subdued and gently undulating in nature, a broad band of high ground in the west, with a more pronounced undulating form and sequence of hills, adds variety and distinction to the landscape, in addition to a number of hydrological features.

Figure 9: Landform

Figure 10: Hydrology and Flood Information

The Resource

- A broad band of undulating high ground extends along the western boundary of the study area, with the highest point at Arbury Hill near Badby, narrowing near Daventry where it is bisected to form the Watford Gap, a strategically important point in the regional infrastructure network.
- An elevated very gently undulating plateau to the south of the study area provides wide panoramic views across the landscape.
- The broad band of high ground forms the principal watershed in Central England, between those rivers that flow to the east coast and The Wash, and those that flow west and south towards the Severn Estuary and the Thames respectively.
- The valleys of the River Nene and the River Tove form well defined and distinctive topographic features, in addition to their numerous tributary valleys, notably the Brampton Valley. The source of Nene is located near Badby. Within this juvenile section of the river course, the valley floodplain is very limited, and surrounded by more elevated land.
- An extensive canal network forms an important component of the inland waterways, notably the Grand Union Canal from Cosgrove, in the southeastern part of the study area, to Crick in the northwestern part, and beyond into neighbouring counties linking London to Birmingham. Flights of locks, tunnels, mooring sites and marinas are located along its length, for example the Whilton and Long Buckby Locks.
- A number of reservoirs are located in the north and east of the study area, providing important water, recreational and habitat resources. The largest is Pitsford Reservoir, located between the villages of Pitsford and Brixworth, but other notable reservoirs are located at Ravensthorpe, Hollowell, Drayton and Daventry.
- The numerous water filled gravel pits along the Nene Valley are notable hydrological features, and valued for their amenity and nature conservation interests. These man made lakes are a dominant feature and influence the valley's character. Although pedestrian access is possible to a number of these lakes, some are inaccessible and retain a more remote character as a result of the absence of people, and distance and detachment from settlements.
- In combination with the roads and rail lines that are aligned along the valleys, the River Nene and its tributaries, together with the Nene Navigation and the Canal network have been the focus for movement through the county for many hundreds of years.

Landform and Hydrology: Analysis and Opportunities

- The network of rivers and their tributaries contribute to the landscape character of the area and landscape features are reflected in topographical form and the pattern of land use and settlement.
- Highpoints create opportunities for the location of landmarks and the celebration of views;
- Lower lying areas provide opportunities for local landmarking and way-finding.
- Access to rivers for recreation and movement, and to lakes and reservoirs, provide the potential for closer association with 'natural systems', building on their educational potential and engendering a greater sense of wellbeing.
- Flood risk management is an important consideration, particularly at the urban/riverside interface, and the requirement to implement sustainable approaches to future environmental management and development. The Sustainable Urban Drainage System (SUDS) at Upton, Northampton is an example of the successful consideration and implementation of these issues.

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12.3.3 BIODIVERSITY

Figure 11 – Designated Nature Conservation Sites and Landscape Biodiversity

Figure 12 – Habitat Networks - Woodland

Figure 13 – Habitat Networks - Calcareous Grassland

Figure 14 – Habitat Networks - Neutral Grassland, and Acid Grassland and Heathland

Figure 15 – Habitat Network - Wetland / Open Water

Figure 16 – Habitat Networks - Composite Strategic Habitat Network

Figure 17 – Habitat Networks - Species Distribution

The Resource

West Northamptonshire supports a range of habitats. With the exception of woodland along the Whittlewood Ridge between Northampton and Milton Keynes, and wetlands along the River Nene, these are generally highly fragmented as a result of settlement expansion, infrastructure developments and agriculture.

Woodland

- The majority of woodland in West Northamptonshire, with the exception of the Yardley and Whittlewood Ridge, comprises small woodlands within a highly fragmented agricultural landscape.
- Large blocks of woodland, including much of the ancient woodland sites and SSSI woodlands, occur along the Yardley and Whittlewood Ridge. Together these form an almost continuous belt of woodland along the southern boundary of the county stretching from Syresham to Bozeat, breached at Cosgrove by the River Tove. The woodlands in the Whittlewood Forest comprise a mixture of semi-natural woodland, broadleaved and coniferous plantation. The woodlands within the Yardley Chase and Salcey Forest have been largely replanted with broadleaved, coniferous plantation and mixtures of the two. These woodlands are also associated with parkland and wood pasture.
- Other areas of woodland occur on the northwestern edge of Northampton and between Daventry and Towcester. The block on the northwestern edge of Northampton contains some ancient woodland and parkland and also includes Harlestone Firs, comprising a coniferous plantation over heathland. Although this coniferous woodland has been included within the wider woodland habitat reservoir, the area is recognised as being of great importance for heathland and acid grassland, rather than woodland. Longer-term management of the Harlestone Firs area should therefore encourage the establishment open heathland and acid grassland although some areas of native woodland should be created to create a mosaic of habitats.
- The large block of woodland between Daventry and Towcester includes a number of ancient woodland sites and SSSI woodlands ranging from acid oak birch woodland of the Northampton Sands Formation to mixed woodlands on the richer soils of the Liassic Slopes and Cropped Claylands Biodiversity Character Types. As such, remnants of acid grassland can be found associated with some of these woodland areas.
- There are no other significant blocks of woodland infrastructure in the rest of West Northamptonshire although smaller groupings have been identified in the northern part of West Northamptonshire based around small blocks of ancient woodland.

Calcareous Grassland

- Calcareous grassland is a highly fragmented habitat in West Northamptonshire being restricted to narrow strips of grassland in roadsides and in railway cuttings or on embankments where limestone soils and strata have been exposed. Recorded sites of calcareous grassland occur in the southern part of West Northamptonshire on the fringes of the Croughton Biodiversity Character Area on the Cropped Limestone Plateau Biodiversity Character Type to the southeast of Brackley.

The most notable calcareous grassland sites include:

- The railway line running north from Brackley, which is partly designated as a SSSI (Helmdon Disused Railway) for its calcareous grassland vegetation on Jurassic limestone exposures.
- RAF Croughton is thought to support an important area of calcareous grassland, although access to the site has been restricted
- Charlton Old Workings, which is an area of long abandoned limestone quarrying, supports grassland and scrub

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Neutral Grassland

- Neutral grassland (hay meadows) are highly fragmented and occur as a scattering of small grassland sites in fields, along roadside verges, along woodland rides and verges and in woodland glades and along disused and existing railway lines. They primarily occur on the edges of a number of Biodiversity Character Types. North and west of Northampton grassland blocks occur in the Liassic Slopes and Cropped Clayland Biodiversity Character Types especially around Pitsford Reservoir and on the fringes of the urban areas of Northampton. Northwest of Northampton is a block of grassland associated with the upper tributaries of the Brampton Arm of the River Nene and its tributaries. These grasslands are largely found with the Liassic Slopes and Cropped Claylands Biodiversity Character Types. To the south and southwest of Northampton blocks of grassland occur on the Liassic Slopes, Cropped Clayland and Limestone Slopes Biodiversity Character Types.
- High quality neutral grassland is rare within West Northamptonshire and many of the grassland sites are recorded from the grassland inventory and have been subjected to varying degrees of agricultural improvement. The designated SSSI or Wildlife Site neutral grasslands are highly fragmented. There are a number of isolated high quality neutral grassland sites, most notably on the Yardley and Whittlewood Ridge and often occurring on Upper Lias clay within the Limestone Slopes Biodiversity Character Types.
- Neutral, species-rich marshy grasslands also occur within West Northamptonshire within a number of character areas within the Minor Floodplain Biodiversity Character Type.

Heathland and Acid Grassland

- Heathland and acid grassland is a rare habitat in West Northamptonshire. It occurs in small patches on outcrops of the Northampton Sand Formation in the Acid Sands Biodiversity Character Type within the Midland Clay Pastures Natural Area. The principal area occurs on land to the northwest of Northampton at Harlestone Firs where an area of remaining heathland has been planted with coniferous trees. A study for English Nature (now Natural England) and The Wildlife Trust has also identified areas to the east of Daventry, at Borough Hill, and also in the vicinity of Preston Capes. These occur on outcrops on the Northampton Sand Formation. There is also a linear area of acid grassland associated with the Northampton and Lamport disused railway line, and although not located on the Northampton Sand Formation, may have an association through the material used in the construction of the embankments.
- Although the extent of heathland and acid grassland within West Northamptonshire is small, this habitat type is an important one and it is therefore shown as a separate habitat type on Figure 14, in combination with the areas of Neutral Grassland. Along with other habitats that are highly fragmented and covering small areas such as springs and flushes, heathland and acid grassland remains a priority biodiversity habitat, and as such, warrants conservation action.

Wetlands

- Primary areas of wetland are associated with the Middle Nene Major Floodplain Biodiversity Character Area through Northampton. Other wetland blocks, including Pitsford Reservoir SSSI and other reservoirs are associated with the Minor Floodplains of the Brampton Nene, Upper Nene, River Tove, River Cherwell and River Great Ouse.
- Within the Middle Nene, east of the M1 motorway, through and to the west of Northampton wetlands, including the River Nene itself, a series of former sand and gravel workings have been restored as large areas of open water.
- Within the Brampton Valley Biodiversity Character Area there is a series of reservoirs associated with the tributaries of the River Nene. These include Pitsford, Hollowell and Ravensthorpe Reservoirs. Smaller areas of open standing water occur in Cottesbrooke Park and elsewhere are other small fragmented stands of marsh and wet grassland and ditches and drains.
- Within the Upper Nene floodplain, wetlands include areas of unimproved wet grassland and marsh, the best example being Bugbrooke Meadows SSSI. Other wetland habitats include springs and flushes, ditches and open water habitats in the form of the Grand Union Canal and ponds. Daventry Reservoir is one of the large areas of standing water. Wet woodland is rare with one of the last remaining stands occurring at Whilton Marsh.
- The River Tove Floodplain supports a range of wetland habitats including seasonally flooded grassland, drains, ponds and a small area of flooded gravel pit.
- Within the Cherwell Floodplain there are low-lying fields that flood in the winter providing seasonal wetlands for wildfowl and waders. There are also areas of open water in the form of ponds and small lakes. Boddington Reservoir, the largest standing water, is associated with the operation of the Oxford Canal. Small stands of wet woodland are also present, with the largest occurring at Aynho Viaduct Carr.
- Within the River Great Ouse Floodplain there is a range of wetland habitats including wet grassland of varying quality, open water and relict valley mire on shallow peat. The most valuable site is Syresham Marsh SSSI, which supports species-rich marsh and wet grassland, calcareous springs and a small area of relict valley mire. The only large open water is located at St James' Lake close to Brackley.

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Biodiversity Targets

The following tables illustrate habitat creation and habitat restoration and management targets.

Table 1: Habitat Creation Targets – Northamptonshire

National BAP Habitat	Equivalent and additional Local BAP Habitat/s	Assigned Northants Creation Target to 2021
Veteran Trees	Included in Lowland Wood Pasture and Parkland	N/A
Lowland Wood Pasture and Parkland	Lowland Wood Pasture and Parkland	18 Ha
Wet Woodland	Wet Woodland	243 Ha
Lowland Heath	Acid Grassland and Heathland	22 Ha
Lowland Dry Acid Grassland	Acid Grassland and Heathland	18 Ha
Lowland Calcareous Grassland	Lowland Calcareous Grassland and Quarries and Gulleys	36 Ha
Lowland Hay Meadows	Lowland Neutral Grassland and Road Verges	156 Ha
Ancient and/or Species Rich Hedgerows	Hedgerows	N/A
Coastal and Floodplain Grazing Marsh	Wet and Marshy Grassland	90 Ha
Reedbeds	Reedbeds and Swamps	44 Ha
Eutrophic Standing Waters	Open Standing Water	500 ponds
Large Rivers	Rivers and Streams	N/A
No National Plan	Lowland Mixed Woodland	1000Ha

Table 2: Habitat Restoration and Management Targets – Northamptonshire

National BAP Habitat Type	Equivalent and additional Local BAP Habitat Type	Habitat Management/ Restoration Target to 2021
Veteran Trees	Included in Lowland Wood Pasture and Parkland	N/A
Lowland Wood Pasture and Parkland	Lowland Wood Pasture and Parkland	165 Ha
Wet Woodland	Wet Woodland	69 Ha
Lowland Heath	Acid Grassland and Heathland	c.60 Ha
Lowland Dry Acid Grassland	Acid Grassland and Heathland	c.113 Ha

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Table 2: Habitat Restoration and Management Targets – Northamptonshire

National BAP Habitat Type	Equivalent and additional Local BAP Habitat Type	Habitat Management/ Restoration Target to 2021
Lowland Calcareous Grassland	Lowland Calcareous Grassland and Quarries and Gulleys	465 Ha
Lowland Hay Meadows	Lowland Neutral Grassland	1,151Ha
Ancient and/or Species Rich Hedgerows	Hedgerows	N/A
Coastal and Floodplain Grazing Marsh	Wet and Marshy Grassland	N/A
Reedbeds	Reedbeds and Swamps	N/A
Eutrophic Standing Waters	Open Standing Water	c. 1,500 Ha
Large Rivers	Rivers and Streams	N/A
No National Plan	Lowland Mixed Woodland	c. 8,750 Ha

12.0 WEST NORTHAMPTONSHIRE: THE RESOURCE

Biodiversity: Analysis and Opportunities

- Protection of key wildlife sites must be a priority. These encompass all statutory and non-statutory designated sites including all existing and Potential County Wildlife Sites
- Reduction of fragmentation through habitat restoration and creation, with priority given to areas that will provide the most benefit in terms of habitat fragmentation combined with the highest chance of achieving a high standard of restoration as determined by technical issues, such as past and current land-use, land ownership, soils and planned development.
- Priority for restoration of ancient woodland sites planted with coniferous woodland;
- Opportunities arising from changing forestry practice and objectives;
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- In addition to the effects of mineral extraction on the biodiversity resource, there are important opportunities for biodiversity creation and enhancement associated with site restoration;
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Potential Constraints:

- There is potential conflict arising from the over use of a biodiversity resource
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- Access can also threaten the biodiversity resource;
- There are technical limitations to the feasibility of habitat creation;
- Land ownership constraints are a significant limiting factor to the enhancement or creation of habitats;

LAND USE AND HUMAN SYSTEMS

12.3.4 HERITAGE AND CULTURE

Cultural and historic associations and features contribute to local identity and inspire an understanding and awareness of cultural landscapes and the time layers of previous occupation periods. There is a wealth of sites of historic or archaeological interest throughout West Northamptonshire, and the landscape itself is a record of social, political and technological progress stretching back thousands of years.

Figure 18 – Heritage and Culture

The Resource

- A wide variety of strategic urban and rural, archaeological, historic, environmental and cultural destinations are present within the study area. These are set within extensive tracts of deeply rural countryside, villages and towns, which in themselves are often an important record of past activity.
- The Northamptonshire Historic Landscape Character Assessment identifies 12 principal Historic Landscape Character Types. Historically Northamptonshire is an 'enclosed landscape', and within the west of the county, areas of non-parliamentary and parliamentary enclosure have been identified, in addition to modern fields and ancient woodlands.
- Important historic destinations in the rural landscape include Althorp Park, Cottesbrooke Hall, Castle Ashby and Yardley Chase, Canons Ashby and Sulgrave Manor. Within the towns, individual buildings such as 78 Derngate, Northampton are notable for their architecture or historical associations. Many important buildings are concentrated within conservation areas where street patterns, structures and other features combine to create a rich and characterful urban fabric.
- Registered Parks and Gardens of strategic significance include Castle Ashby and Yardley Chase, and Holdenby House and Gardens, one of the largest private residences during the Elizabethan period, but now much reduced in size. It was built by Sir Christopher Hatton to entertain Elizabeth 1st. It later became the Palace of James 1st and the prison of his son, Charles 1st. A number of the larger gardens formed part of estates, with the influence of the house extending for great distances beyond the parkland wall, influencing, for example, the layout and architecture of estate villages.
- There are notable Parks within urban areas, and Northampton in particular, which has parks of historic significance with potential for wider interpretation. Abington Park is a notable example with elements of a surviving historic landscape and Hall. The historic context of Delapre Park has been affected by the Golf Course but it includes Delapre Abbey, one of the three remaining Queen Eleanor's Crosses, and the site of the Registered Battlefield of 1460 Battle of Northampton.
- Surviving Ridge and Furrow is potent evidence of medieval farming and social organisation. It is an important and irreplaceable heritage asset that is declining and becoming increasingly rare. It is particularly significant in the Midlands, however, and as such can be regarded as potentially of national significance. It occurs frequently across West Northamptonshire, but principally concentrated in the northwest of the area.
- There are a number of Scheduled Monuments within the study area including the separate sites of Borough Hill and Burnt Walls, on the eastern side of Daventry. Borough Hill has remains from different periods including prehistoric burial mounds, an Iron Age Fort and a Roman settlement. Burnt Walls is an Iron Age or Roman settlement site – probably the former.
- Registered Battlefields are an important link to some of the major battles that shaped England. Whilst in most cases the landscape has seen significant change since the time of the battle as a result of the enclosures of the 18th and 19th

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centuries, they represent an important link to historical events and characters. The most notable is Naseby Field in the north of the study area – the site of the 1645 Battle of Naseby, and a symbol of an important turning point in the English Civil War and the defeat of the Royalists. The Registered Battlefield site of the Battle of Northampton in 1460 is located within and extending beyond the boundary of Delapre Park, Northampton.

- Industrial heritage is important to the character of the landscape. This is particularly the case in towns and built up areas where many industrial structures survive. However, the rural landscape is also rich in the evidence of past industries, albeit softened in many cases by time and nature. For example the impact and legacy of the once widespread ironstone industry is notable in the landscape, particularly to the north and east of Northampton. The history of the use of stone is evident through local vernacular buildings, and present and historic quarry sites. Duston Quarry was the site of the thickest workable ironstone in the county, and was worked between 1859 and 1909. Harlestone Quarry, on the Althorp estate, was opened in 1892 to provide Northampton Sand sandstones (Sutherland, 2003) principally for local building material. It is still operating and provides a variety of material including stone for local restoration projects. The 8th century Saxon Church of All Saints in Brixworth was built of such an assortment of stone (including some from the Jewry Wall at Leicester) that it was once described as ‘a museum of rock types’ (Northampton Stone, Sutherland, 2003).
- The boot and shoe industry has had a notable influence on the character of settlements within West Northamptonshire, particularly Northampton. It has had an impact on the fortunes of the town and there has been a recent cultural revival in the industry through the production of contemporary fashion footwear replacing the more traditional boot and shoe factories in the town.
- Historic railways are important features in the West Northamptonshire landscape. The routes of these lines that criss-cross the study area are evident in the countryside as raised embankments, often lined with trees and regenerating scrub, and as bridges, either complete or partially demolished. The disused Northampton to Lamport Railway running along the Brampton Valley is a popular route for walking, cycling and horse riding, and a section has been restored as a steam and heritage diesel operated tourist railway.
- Canals provide an additional historic and cultural legacy for West Northamptonshire. The ‘Canal Age’, in the latter half of the 18th century, was responsible for opening up the county to the Industrial Revolution, providing a more cost effective mode of transport for goods than that previously used. Now canals are valued for their leisure and recreation potential. The Grand Union Canal is the primary route through West Northamptonshire, passing through the historic canal towns of Braunston and Stoke Bruerne, the home of the Canal Museum and Boat Inn. The Northampton Arm provides a link with the River Nene and the East of England beyond the county boundary. The Canal Museum portrays the heritage of 200 years of inland waterways.
- The military barracks at Weedon contribute to the military heritage of the area. They were built two hundred years ago because it was thought to be the place in England farthest from any possible coastal invasion. It consists of spacious storehouses for artillery, small arms and ammunition; stables; and a hospital and workshops for artisans.
- There are a number of sites or links associated with the WWII and Cold War military heritage within the county, notably associated with former or current airfields and United States Air Force (USAF) bases. These are of local and perhaps national significance. They have strong associations with particular squadrons or nationalities serving in Britain and in many cases are significant for the relationships that grew up between military sites and local communities. In addition many of the airfields that are no longer in military use are of value to local communities for leisure activities such as flying.
- There are approximately 4000 Listed Buildings within West Northamptonshire. A significant number of these, such as Lamport Hall, Canons Ashby and The Sessions House in Northampton are of the highest listing grade. The location of these historically or architecturally important structures varies, with some, such as country houses, occupying remote rural locations. Others are located in villages and towns, where they add significantly to urban character. Where concentrations exist, and where the fabric of streets, trees and open spaces is noteworthy and other criteria met, Conservation Area designations have been designated.
- The numerous farmsteads scattered across the agricultural landscape, including many barns, provide a wealth of historic and architectural interest.
- The patterns inherent within the landscape provide a constantly evolving record of the influence of man on his surroundings. The landscape is an historic record in itself and has been the subject of an in-depth, countywide Historic Landscape Character Assessment (HLC).

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Archaeology, Heritage and Culture: Analysis and Opportunities

- The contribution the historic and cultural resource makes to the celebration of sense of place, sense of time, and sense of community should be fully recognised and exploited.
- The broadening of the knowledge and perceptions of the resource will improve the identity and image of the area, attracting visitors and business. Increased and improved interpretation and opportunities for education should be exploited.
- Opportunities to improve access to heritage assets should be explored where this is appropriate to the resource and its setting and will not adversely affect a finite resource.
- Aspects of more recent heritage are often overlooked, particularly in the urban environment. The Cultural Mile, an important arts and cultural regeneration initiative is designed to link key cultural sites within Northampton's town centre, and also celebrate important local industries notably the Boot and Shoe Industry for which Northampton is renowned.
- There are opportunities to widen the understanding and interpretation of historic Parks located within the urban area of Northampton. The historic context of both Abington Park and Delapre Park are notable examples where wider interpretation would be of benefit. Delapre Park, the site of the Battle of Northampton in 1460, is particularly rich in historic associations. Despite the loss of features, including ridge and furrow, as a result of the construction of Delapre Golf Course, the historic context of Delapre Park is still evident and includes Delapre Abbey, one of the three remaining Queen Eleanor's Crosses, as well as part of the battlefield site.
- There are linked opportunities to improve interpretation, recreation and heritage tourism focused on the military heritage of the county, in particular at the Weedon Barracks, at the Battle of Naseby Field site, and also at The Battle of Northampton site at Delapre Park in Northampton.
- There is considerable potential for the restoration and re-use of historic farm buildings, for example as camping barns on long distance footpaths such as the Jurassic and Nene Ways, together with a wider understanding of the historic significance of these buildings. English Heritage, in conjunction with the Countryside Agency (now Natural England) and the University of Gloucestershire, has commissioned a study to examine historic farm buildings and is considering the findings of this important historic resource, and the further assessment and examination of potential uses.
- Airfields, and other sites associated with the WWII and Cold War military heritage, are an important asset that is under pressure from development elsewhere in the country. To celebrate this relatively recent phase of military history, there is the potential to develop a Secret Wars Signature Project. This initiative also has regional links beyond the county to USAF bases and cemeteries, the threatened Cold War control bunker in Cambridgeshire, the development of a possible Cold War museum or Interpretation Centre incorporating the Hardened Aircraft Shelters and associated infrastructure at the former USAF base at Upper Heyford in Oxfordshire, and the National Space Centre in Leicestershire.
- Defra's Environmental Stewardship agri-environment incentive scheme operates at two levels through the more widely available Entry Level Scheme, or the Higher Level Scheme, with the potential for more enhanced improvements, subject to a comprehensive farm audit and justification of benefit. The overall objective of both schemes is to encourage environmentally friendly farming. However, at a more detailed level a number of objectives are set out which include the protection of the historic environment. There will be many opportunities to address this objective, for example, the restoration of redundant rural buildings, as discussed above, and the cessation of inappropriate farming methods to protect archaeological and historic structures.

12.3.5 STRATEGIC GREEN SPACE

There is a network of strategic green space throughout West Northamptonshire, both in rural and urban areas. These include Country Parks, Woodlands with public access, Registered Parks and Gardens, strategic parks or green space and local parks or green space.

Figure 19 – Strategic and Local Green Space

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The Resource:

- A number of Country Parks are located within West Northamptonshire; these include Daventry and Brixworth Country Parks.
- Key woodlands, with public access and recreation roles, are located at Salcey Forest and Hazelborough Wood; both are located close to the southeastern boundary of the study area.
- Strategically important green space is primarily concentrated within or near areas of major settlement, and often coincides with a Registered Park or Garden or urban park or green space.

Strategic Green Space: Analysis and Opportunities:

- There is a moderate distribution of public open space within West Northamptonshire, although an assessment of the quality of the resource is not an objective of this study.
- The value of a park or open space increases exponentially when easily accessible and connected to a larger strategic green space network.
- Improvement in environmental quality, planning and design of open spaces should be encouraged to ensure they meet their full potential.
- The value of the resource for improving biodiversity in urban, urban fringe and rural areas should be exploited.
- The historic and cultural value of the resource should be exploited.
- The educational benefits of the parks and open spaces should be recognised.
- A comprehensive assessment is required of the quality and connectivity of a range of Northamptonshire's green spaces, as set out in the Growth Areas Funding (GAF) Bid 2 by the RNRP, in order to evaluate the resource and its value to both urban and rural communities.
- Northampton Waterfront Project is an initiative designed to enhance the town's waterfront landscapes, creating a notable river frontage and associated features that link a number of brownfield developments, as well as acting as a connecting corridor between open spaces and recreation sites, and existing green spaces, for example Becketts Park.
- There are exciting opportunities for strategic green space to contribute to the creation of sustainable communities, which should be developed, now and in the future.

12.3.6 LEISURE, RECREATION AND TOURISM

Tourism makes a vital contribution to the Northamptonshire economy, generating income and employment, and an awareness of the facilities the county has to offer.

There is a wealth of recreation and leisure opportunities and facilities within the study area, including nationally and regionally significant heritage and nature conservation sites, formal and informal active and passive recreation sites, and locally important sites.

Figure 20 – Leisure Recreation and Tourism Destinations

The Resource:

- Strategic Destinations have been identified in the Northamptonshire Tourism Strategy (2001-2006), many of which are associated with areas of major settlement. Other notable examples include the Silverstone Motor Racing Circuit (the home of the British Grand Prix), Stoke Bruerne Waterway Museum, Althorp House, Brixworth Country Park, Northampton Museum, the National Trust managed Canons Ashby, and Sulgrave Manor.
- Within rural areas Country Houses and parkland are extremely popular visitor attractions, contributing to the rise in 'intellectual' tourism.
- Country Parks, outdoor activity centres, for example the Nene Whitewater Centre, and camping sites are a valued recreational resource within the area, providing opportunities for the interaction between people and their landscape. Country Parks are used for walking, dog walking, children's play and the opportunities they provide for access for 'fresh air and countryside'.

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- A number of mooring sites are well distributed along the Grand Union Canal and the navigable stretches of the River Nene. Clusters of locks act as focal points for visitors and are usually accompanied by cafes, public houses, boutique shops and other rural visitor attractions.
- The major settlements are the principal sites for the location of museums, tourist information centres, and cultural and sports venues. Within Northampton, Franklins Gardens and Sixfields are home to Northampton Saints Rugby Club and Northampton Town Football Club, respectively.

Leisure, Recreation and Tourism: Analysis and Opportunities:

- Inland waterways provide numerous opportunities for recreation at the local, regional and national scales. The Environment Agency highlights the use of rivers for enjoyment, communities and business, as a part of their 'Your Rivers for Life' campaign, a strategy for the restoration, conservation and development of navigable rivers.
- Opportunities for improving participation in recreational physical activity, and both informal and formal sports.
- The Northamptonshire Tourism Strategy (2001) identifies opportunities for development of tourism within the area including a need to develop sustainable tourism, establishing a Northamptonshire brand and improving perception and identity of the area, and a variety of specific activity based promotions.
- Within the rural landscapes there is the potential for farm diversification to contribute more widely to leisure and tourism opportunities.

12.3.7 ACCESS AND MOVEMENT

The access and movement network incorporates major roads, railways, bridleways, byways, footpaths, cycleways, and green ways within the study area.

Figure 21 – Access and Movement

Figure 22 – Transport / Services Infrastructure and Connections

The Resource:

- A strong underlying pattern of strategic movement exists within West Northamptonshire with principal corridors running northwest to southeast, and west to east along the Nene Valley, within and to the east of Northampton. The northwest to southeast alignment of transport and service infrastructure creates a distinct boundary between a denser network to the northeast and a less dense network to the southwest.
- Watford Gap is a strategic infrastructure point through which the M1, A5, Birmingham to London railway and Grand Union Canal all pass.
- The strategic road network, incorporating the M1, M6, A14, A43 and A45, provides nationwide links into the area.
- At a sub-regional level, roads radiate from Northampton and Daventry linking other settlement within the study area.
- Principal recreational routes include the Midshires Way, Nene Way, Jurassic Way, Macmillan Way, Knightley Way, and Grafton Way. These long distance routes are concentrated in the north and east of the study area, forming a generally dense sustainable movement network. Local level footpaths and bridleways are more prevalent in the southwest of the study area.
- The Nene Way is a central feature and link within the core of the River Nene Regional Park.
- The Northamptonshire Round Walk is promoted to fully utilise the movement network and encourage visitors to explore villages and sites around Northamptonshire.
- The Sustrans National Cycle Route 6, which links London with the Lake District, runs north - south through the east of the study area along the disused Northampton to Lampport railway, along the Brampton Valley.
- A number of navigable waterways run through the study area. Primarily movement by water involves the use of the Canal network but also some limited navigable stretches of the River Nene.
- A number of extant stretches of canal and disused railway lines add variety to the network.

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- The Public Rights of Way network has been assessed in the Northamptonshire Draft Rights of Way Improvement Plan (ROWIP), July 2005. It states that within Northamptonshire, the network comprises 61% as footpaths, 17% as bridleways and 22% as byways. Currently the network has a large number of instances of 'cul-de-sac' paths that do not link, thereby affecting the confidence of users in the network. Throughout Northamptonshire, developments have impacted on public rights of way, causing obstructions across paths.
- The Northamptonshire Accessibility Strategy (NAS), which forms part of the Local Transport Plan (LTP), provides an important framework for improving accessibility within West Northamptonshire. The NAS includes reference to the need to enhance the role of walking and cycling, with improved accessibility to destinations, and to work in tandem with the Draft ROWIP in respect of implementation of improvements and opportunities identified in the Plan. South Northamptonshire, East Northamptonshire and the Welford, Clipston and Welland areas are all classified as suffering rural isolation, and have been identified as Rural Priority Areas for further examination and action.

Access and Movement: Analysis and Opportunities:

- Opportunities for the delivery of environmentally sustainable transport solutions, improving access to workplaces, education, health, shopping and other facilities for all the population, encouraging healthier travel choices and minimising the effect of traffic and transport on the built and natural environment (Northamptonshire Local Transport Plan 2006/7-2010/11, 2005).
- Opportunities for improving, enhancing and plugging gaps within the network, to fulfil sustainable movement and access objectives, through new projects and initiatives. A good example of this is the proposed development of a new Daventry Canal Arm. This exciting project has the potential to stimulate high quality development, provide an ecological corridor, provide sustainable transport links and act as a significant tourist attraction for the area.
- Opportunities for improvements to the ROW network, principally through the reconnection of obstructed and disjointed paths, restoring the public's confidence in the network. In addition, improved access for the disabled, improved site interpretation and opportunities for education, and an increase in travel choices are all highlighted in the Northamptonshire Draft ROW Improvements Plan, 2005, and provide a strong framework for positive and functional change that can integrate with Green Infrastructure aspirations. A commitment to enhance the ROW network is demonstrated in the approved Growth Areas Funding (GAF) that has included improvements to ROWs that exceed statutory requirements.
- Opportunities exist for the enhanced connectivity for isolated rural areas, improved infrastructure and educational possibilities for the promotion of sustainable transport and accessibility to fulfil the key aim of the Accessibility Strategy; *"to improve access to workplaces, education, health, shopping and other facilities for all the population"* (Northamptonshire County Council Full Accessibility Strategy Final Report, 2006).
- There are opportunities in particular to focus on the Rural Priority Areas identified in the Accessibility Strategy, and identify opportunities for enhanced connectivity and access for people living in rural and isolated settlement.

12.3.8 ENVIRONMENTAL CHARACTER

Northamptonshire is a predominantly rural county with a rich and varied landscape heritage. Whilst not widely regarded for its scenic beauty, the county contains a wealth of attractive rural landscapes punctuated by many sites of cultural heritage and biodiversity interest.

The Northamptonshire Environmental Character Assessment (ECA) describes the changing pattern of environmental character within the study area. The county scale character areas were identified through the synthesis of the Current Landscape, Historic Landscape and Biodiversity Character Assessments, which in turn were informed by a comprehensive range of baseline data. Together these provide a wider understanding of the key elements and components that contribute to environmental character.

Figure 23 – Environmental Character

The Resource:

11 Environmental Character Areas have been identified in West Northamptonshire, in addition to the four urban areas of Northampton, Daventry, Towcester and Brackley. Excluding the principal urban areas, these comprise:

- Cherwell Valley;
- West Northamptonshire Uplands;
- Croughton Plateau;
- Tove and Ouse Catchment;

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- Whittlewood;
 - Yardley Chase and Salcey Forest;
 - Vale of Rugby;
 - Welland Valley;
 - Central Northamptonshire Plateaux and Valleys;
 - Middle Nene – Northampton to Aldwinckle; and
 - The Upper Nene Catchment and Watford Gap.
- The elevated hills and valleys of the West Northamptonshire Uplands and the deep wooded areas of Whittlewood, and Yardley Chase and Salcey Forest are particularly important because they are physically distinctive landscapes, and figure in the 'collective consciousness' of Northamptonshire's communities; as such they should be celebrated and used to promote the county. The Nene Valley is also an important feature and its source near Badby is a notable, marking the modest beginning of a major river and navigation channel within the county.
- Urban, industrial and commercial development, including mineral extraction, has altered the character of some parts of the rural landscapes within West Northamptonshire, particularly during the 20th century. The effects of mineral extraction and road building, or the visual juxtaposition of industry / urban development in close association to rural landscapes, particularly on the fringe of the urban areas of Northampton, Daventry and Towcester, with the impact emphasised by the relatively low lying nature of the topography.

Environmental Character: Analysis and Opportunities

- There is a great diversity of environmental character across West Northamptonshire. Green Infrastructure initiatives and developments will provide the opportunity to strengthen and enhance this diversity of character.
- Proposals should consider local character and context at all times, including the historic landscape context, in order to contribute to positive landscape change, and to enable opportunities for landscape enhancement and creation to be considered as an integral part of scheme development.
- Defra's Environmental Stewardship scheme encourages a response to landscape and biodiversity character and has released broad guidance to farmers and landowners on the management options and potential enhancement works. The guidance relates to the Joint Character Area within which farmholdings are located. There are positive opportunities for farmers to enter into ES schemes that contribute to the wider network of Green Infrastructure and also respond to the principles of working in accordance with and enhancing the inherent landscape character.
- Changing land uses in urban and rural contexts can threaten this resource at both the micro and macro scale. The planned growth of Northampton, and also Daventry and Towcester, together with associated infrastructure will be a key consideration at the macro scale. The introduction of major Green Infrastructure proposals, such as new woodlands and recreation facilities, will also influence environmental character.
- At the micro scale, the local effects of land management change and detailing of features such as access route improvements and footpaths would need to be sensitively handled (see also Access and Movement Guidance).

12.3.9 LAND USE AND LANDSCAPE CHANGE

West Northamptonshire is principally a rural area, with major development contained within the settlements of Northampton, Daventry, Towcester and Brackley. The variations in land use and development have a strong influence on landscape character.

The Resource:

- Northampton is the principal settlement within West Northamptonshire. Smaller towns include Daventry, Brackley and Towcester located to the west and southwest of Northampton respectively. Other settlement is principally confined to a number of medium and large villages, for example Long Buckby and Brixworth. Many small villages and isolated settlements are scattered across the rural landscape, creating a dispersed settlement pattern.
- Land use within the rural areas principally comprises agricultural land, with both modern and traditional farming practices evident. Variations in land use and agricultural practices have a strong influence on landscape character. Intensive agriculture is prominent in the north with medium to large-scale fields, and few dividing hedges. By contrast in the west of the county wide variations in underlying physical characteristics has led to a mixed farming regime with small hedged arable fields and improved pastures, creating a more intimate, traditional, rural landscape. Pasture is dominant west of Northampton towards the western boundary of the study area and along the Nene Valley.

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- Many of the farms across West Northamptonshire have entered into Environmental Stewardship Agreements and records provided by Defra have identified their location. Defra's Environmental Stewardship Scheme will enable the principles that underlie the Countryside Stewardship process to continue, either through the more widely available Entry Level Scheme, or with potential for more enhanced improvements through the Higher Level Scheme, subject to a comprehensive farm audit and justification of benefit. In parallel with but separate from this, the introduction of the Single Farm Payment breaks the link between subsidy and production, but through cross compliance requires farmers to manage their land in accordance with 'good agricultural and environmental conditions'.
- Parkland landscapes associated with country estates, for example Althorp and Holdenby, are a notable feature in the study area and there is sufficient variety between them to create a diversity of designed landscapes.
- The principal areas of woodland comprise the ancient woodland sites and SSSI woodlands associated with Yardley Chase, Salcey Forest and Whittlewood Forest landscapes. Elsewhere across West Northamptonshire, the majority of woodland comprises small woods and copses of a highly fragmented nature.
- Land use within urban areas encompasses a mix of residential, commercial, industrial, transport, leisure and retail. Northampton is located at a strategic point within the national transport and distribution network, and is a focus for a range of distribution, financial and service industries.
- Influential built features and structures include Rugby Radio Station and the Silverstone Motor Racing Circuit. Both are located at the boundary of the study area but have a strong influence on views and landscape character.
- Future development is defined by the Milton Keynes South Midlands Sub-Regional Strategy. Within West Northamptonshire, the Strategy highlights Northampton as a Major Area for Growth, and Daventry and Towcester as other areas for growth. The strategy indicates expected growth to accommodate 47,400 new homes and 37,200 jobs by 2021. Milton Keynes, located immediately to the southeast of the study area boundary is also identified as a Major Growth Area.
- Gravel Extraction has historically been an important industry in the area. The Northampton Minerals Local Plan suggests that it will become more difficult to balance the need to provide aggregates through extraction and the need to safeguard the environment. Potential future extraction sites have been identified and include those at Dodford, Heyford, Bugbrooke, Rothersthorpe, Milton Malsor, Collingtree, Wootton, Overstone, Grendon, Bozeat, and Passenham.

Land Use and Landscape Change: Analysis and Opportunities:

- Increased sustainable connections and accessibility between the urban and rural landscapes and existing and future populations.
- Increased recognition of the contribution to biodiversity of land uses within urban areas including, for example, gardens, derelict land, allotments, roadside verges and parks.
- Potential to exploit un-developed areas for leisure, recreation, tourism and nature conservation.
- Opportunity to consider all rural landscapes and their GI potential.
- Significant changes are emerging within the farm economy with introduction of the Single Farm Payment and shift from a subsidy led production to the economics of land management. Cross compliance now requires farmers to manage their land in accordance with 'Good Agricultural and Environmental Conditions'. This may herald a change in focus towards creative environmental enhancements, where economically viable, together with further agri-environment support through the new Environmental Stewardship system.
- The agenda for growth and creating sustainable communities seeks to accommodate increased rates of population growth, economic growth and development of new areas of housing, and deliver successful, thriving and inclusive communities within West Northamptonshire. This growth agenda brings opportunities to create an enhanced urban environment through successful regeneration.
- Opportunities for implementation of sustainable waste management to minimise the risks of immediate and future environmental pollution and harm to human health, for example the recently implemented SUDS scheme at Upton, Northampton.

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FIGURE 24 – WEST NORTHAMPTONSHIRE: THE STRATEGIC BIODIVERSITY NETWORK

13.1 WOODLAND HABITAT RESERVOIRS AND LINKS

A number of woodland reservoirs have been identified through the mapping process. These comprise:

- King's Sutton – Newbottle Spinney;
- Whittlewood, Hazelborough, Bucknall Woods;
- Whittlewood Forest;
- Towcester east and Roade Woodland Complex;
- Badby and Farthingstone Woodland Complex;
- Yardley Chase;
- Althorp and Harlestone Heath; (see note below)
- Holthorpe Hills;
- Kelmarsh and Scotland Woods; and
- Shortwood Complex.

Note: The Harlestone Heath section of the woodland reservoir includes the coniferous plantation of Harlestone Firs, which has been established over heathland. Although this coniferous woodland has been included within the wider woodland habitat reservoir, it represents the biggest opportunity in the county for the creation of acid grassland and heathland rather than woodland. Longer-term forestry operations and management of the Harlestone Firs area should therefore seek to create large areas of open acid grassland and heathland, together with more limited areas of native woodland.

Three principal strategic level habitat links between these reservoirs have also been identified as follows:

- A network in the southwestern sector of West Northamptonshire connecting the series of woodlands from King's Sutton, to Whittlewood, Hazelborough, and east of Towcester, and also northeast to the Badby and Farthinghoe Woodland Complex;
- A network that extends southeast to northwest across West Northamptonshire from Yardley Chase to Flore – Weedon and the Watford Gap area and also with links to the Althorp and Harlestone Heath;
- A network in the northeastern sector of West Northamptonshire connecting the Holthorpe Hills, Kelmarsh and Scotland Woods, and the Shortwood Complex. This also links eastwards into North Northamptonshire to Rothwell and Desborough and to the north of Kettering to link into the Rockingham Forest.

Within woodland habitat reservoirs, opportunities for woodland and hedgerow creation would be sought in order to increase the area of woodland and the overall extent of woodland habitat, buffer existing woodlands, particularly those which exist within sites designated for their habitat value, and to create habitat connections between woodland blocks. This could be achieved through natural regeneration and/or planting of new woodlands adjacent to or close to existing woodland stands. Where this is not possible, the natural regeneration and/or planting of linear woodlands and new hedgerows would be encouraged to improve connectivity between existing isolated woodland patches. New woodland should comprise native broadleaf woodland.

In addition to enhancing the network of woodland and improving connectivity, the quality of existing woodlands should be maintained through appropriate management. Priority should be given to enhancing ancient woodland sites, particularly those that have been planted with non-native coniferous species. Ancient woodlands are a finite and irreplaceable resource and valued for their historic associations as well as the rich biodiversity they support. The restoration of these woodlands will produce immediate benefits to plants and animals such as wood anemone closely associated with old woodland sites.

It will be necessary to address all habitat expansion and enhancement proposals on a case by case basis since land ownership, historic land use, underlying soil conditions, site conditions, species distributions and habitat requirements may be important factors in determining the most appropriate approach to habitat creation, restoration or enhancement. For example,

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woodlands that have been established on previously valuable habitats such as heathland (for example at Harlestone Heath) or acid grassland should be considered for restoration of these priority habitats rather than broadleaf woodland.

It should also be noted that the concept of woodland reservoirs should not necessarily be that of a dense stand of planted native trees. When creating new woodland, or buffering or expanding existing woodland areas, the new woodland habitat should encompass a mosaic of habitat types in addition to areas of planted trees. Woodland edge habitats, glades and rides provide additional habitat diversity and habitat linkages between sites of grassland, scrub and wetland. The existing biodiversity value of the surrounding area will need to be carefully considered when planning woodland expansion. In particular, new woodland should not be planted or allowed to regenerate naturally at the expense of important habitats such as unimproved calcareous, neutral and acid grassland or wetland.

13.2 WETLAND/ OPEN WATER HABITAT RESERVOIRS AND LINKS

The following wetland reservoirs have been identified through the mapping process. These comprise:

- Cherwell River Valley;
- Tove – Ouse River Valley;
- Flore – Weedon Floodplain Pastures;
- Upper Nene River and Floodplain Pastures;
- Brampton Arm;
- Nene (Billing to Brackmills);
- Nene at Cogenhoe;
- Pitsford.

The following strategic level habitat links between these wetland / open water habitat reservoirs have also been identified. These principally follow the main river valleys and interconnecting tributary valleys as well as canal networks.

- Cherwell River Valley;
- Tove – Ouse River Valley;
- Nene Valley through Northampton and linking northwestwards to the Upper Nene tributary including a link to Daventry;
- Brampton Arm with links to Pitsford Reservoir.

Wetland creation should focus on those wetland habitats that are rare within the county, such as marshy grassland, wet woodland and reedbed and other fen and swamp habitats. The expansion of these habitats within the reservoirs should be given priority over open water since there is already an abundance of this habitat type within the county.

Small wetlands in the upper reaches of catchments, such as springs and flushes and associated marsh and fen habitats, should not be overlooked. Whilst often small in extent, these wetlands support a rich diversity of wetland plants and animals.

13.3 CALCAREOUS AND NEUTRAL GRASSLAND HABITAT RESERVOIRS AND LINKS

The occurrence of calcareous grassland is very fragmented. The following calcareous grassland reservoirs have been identified through the mapping process. These comprise:

- Helmdon Disused Railway line and Evenley Road Verge;
- Woodford Halse Disused Railway Line;
- Tiffield Road Verge and Disused Railway;
- Horton Disused Railway Line.

Neutral grasslands are also fragmented and generally occur as a scattered resource confined to small sites within road verges, woodland glades and rides, in former quarries and adjacent to disused railway lines. The following neutral grassland reservoirs have been identified through the mapping process. These comprise:

- Chipping Warden – Eydon – Woodford Halse – Byfield Complex;
- Weedon Lois to Litchborough Complex;
- Tiffield (southwest Northampton);
- Hardingstone and Cotton (south Northampton);
- Northampton Parks;
- Pitsford – Walgrave (north Northampton);
- Moulton – Ecton
- West Haddon Hills;
- Guilsborough and Spratton.

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Habitat Links

The extent and continuity of habitat is less strongly developed in respect of calcareous and neutral grasslands. These areas of calcareous and neutral grasslands form 'islands' of like habitat rather than existing or potential areas of continuous habitat. Although areas of connectivity have been identified, these are indicative only, and are identified as dashed lines on Figures 13 and 14.

Reducing the effect of habitat fragmentation can be achieved through increasing the size of individual areas of grassland, where possible, and connecting grassland patches through the creation of new patches of grassland or through grassland enhancement along linear features such as roads and railway lines. Priority should be given to the protection and enhancement of existing high quality grasslands, especially where they occur within reservoirs or indicative links. The expansion of grasslands adjacent to existing sites will enable important sites to be buffered from adjacent land use, provide new opportunities for colonisation and larger land units that may provide benefits in terms of species population viability and economy of scale for site management.

For calcareous grasslands, priority should be given to habitat expansion within the reservoir. Opportunities should also be taken to create new habitat outside the reservoir, especially adjacent to the existing links along the disused railway line north of Brackley.

The neutral grassland resource generally comprises poor quality grassland that has been subject to agricultural improvement. Whilst the reservoirs show where there are groupings of grassland, this does not necessarily reflect the distribution of high quality species-rich unimproved neutral grasslands.

Priority should be given to expanding the extent of high quality grassland habitat adjacent to existing sites within grassland and other habitat reservoirs. Priority should also be given to expansion of high quality grassland adjacent to existing sites outside reservoirs.

It is considered that there is less urgency for habitat creation to be focused on improving links between grassland blocks unless there is a need to maintain particular species populations.

13.4 ACID GRASSLAND AND HEATHLAND HABITAT RESERVOIRS AND LINKS

The following acid grassland and heathland reservoirs have been identified through the mapping process.

- Harlestone Firs;
- Borough Hill, east of Daventry;
- Preston Capes;
- Northampton and Lamport Disused Railway Line.

Strategic Level Habitat Links

Because of the very dispersed nature and small scale of the areas of acid grassland and heathland, there are no clear habitat links at a strategic level. However, a tentative and indicative habitat link has been identified between the Northampton and Lamport Railway and the Harlestone Firs area. The link is located on the Northampton Sand Formation, and also crosses the Brampton Heath Golf Centre at Sandy Lane, the local names of which suggest a heathland / sand association.

As discussed in Section 13.1 in the context of Woodland habitats and reservoirs, there is an important opportunity to recreate acid grassland and heathland at Harlestone Firs which is currently planted with coniferous trees established over heathland. The re-creation of acid grassland and heathland should be the priority here and take precedent over the further retention of woodland cover. Longer-term management of the Harlestone Firs area should therefore seek to create large areas of acid grassland and heathland together with more limited areas of native woodland to create a mosaic of habitats.

In addition the Harlestone Firs site, priority should also be given to conserving, and where possible extending the other dispersed area of acid grassland to the east of Daventry and at Preston Capes.

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FIGURE 25 – WEST NORTHAMPTONSHIRE: THE STRATEGIC SUSTAINABLE MOVEMENT NETWORK

FIGURE 26 – PRIMARY AND SECONDARY MOVEMENT NETWORK FOR NORTHAMPTON

FIGURE 27 – PRIMARY AND SECONDARY MOVEMENT NETWORK FOR DAVENTRY

14.1 THE PRIMARY NETWORK OF GREEN WAYS AND BLUE WAYS

Green Ways and Blue Ways in West Northamptonshire are described below to convey a better understanding of their character and function. This top tier of the Sustainable Movement network has been separated into a number of sections, and the character, key features and assets, and principal destinations described. Furthermore, at a county scale a number of sections of the Primary Network provide strategic links between the main settlements, including towns outside of the county.

It is important to note that these sections do not define specific routes or journeys, as the network as a whole provides freedom for the user. However, each of these sections has a geographical identity that is further informed by the changing pattern of the environmental character of the county through which they pass. For ease of reference they have therefore been given a geographical reference that is indicative of key locations within the route. Although forming a strategic network these identified routes will also form part of a local level system, with local use of the important assets and connections that lie along them.

14.2 THE GREEN WAY NETWORK:

14.2.1 BRAMPTON VALLEY WAY

The Brampton Valley Way follows a tributary of the River Nene, and connects Northampton with Market Harborough immediately to the north of the county. In places it follows the Midshires Way national trail, the Brampton Valley Way and the disused Northampton to Market Harborough Railway. Three Green Way branches extend eastwards from this Green Way to connect with major settlements in North Northamptonshire and include links between Great Oxendon to Corby, Arthingworth to Desborough and Rothwell, and Brixworth to Kettering and Wellingborough.

Between Brixworth and Northampton the landscape is influenced by urban development and infrastructure with tree cover confined to linear copses along the course of streams. Extending north from the centre of Northampton, the traveller experiences a distinctive sequence from urban to urban fringe, and then into rural landscapes. Urban fringe landscapes are dominated by the presence of horsiculture and settlement and infrastructure become sparser within the rural landscape.

In 1981 the Northampton to Market Harborough Railway was closed to passengers. From 1995 onwards, six and half miles of the railway were rebuilt and the Northampton to Lamport Steam Heritage Diesel railway now operates on the line as a tourist railway, and is an important visitor attraction and recreational resource. The railway line forms the basis for the Green Way link north from Northampton, reinventing a previous strategic link between two major settlements and providing access to a variety of resources and assets along the way.

Further north the Green Way extends across the Central Northamptonshire Plateau. Here, the landscape becomes more undulating, and deciduous woodland cover is denser, particularly in association with the parkland landscapes at Cottesbrooke Hall, Kelmarsh Hall and near Haselbech and Maidwell. Kelmarsh Hall, a Palladian house built around 1728, is a Grade 1 Listed Building and surrounded by landscaped gardens, grazed parkland and a working estate of around 3,500 acres, and also a

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medieval settlement that is scheduled, Red Way Countryside Connectors provide links with Cottesbrooke Hall and Lamport Hall, both of which are Grade I listed buildings surrounded by Grade II parks and gardens. Cottesbrooke Hall and Park includes formal gardens with traces of an earlier formal layout, set within a landscaped park. The gardens were laid out in the early 18th century, although altered in the late 18th century and again in the 1930s, and are now Grade II listed. Leading to the hall from surrounding areas are tree lined roads bordered by large arable fields and a parkland landscape of mature parkland trees.

The rural landscape of the West Northamptonshire Uplands to the south of Market Harborough is more elevated, with the village of Great Oxendon located on this higher ground. The ridge and furrow that denote the medieval field systems that surround Great Oxendon are of note. These tangible traces of medieval field patterns, together with the presence of Little Oxendon Village as earthworks beneath pasture fields, provide the visitor with clues to the rich heritage of the area. Also in this area, the disused railway and adjacent landscape provides key opportunities within a linear zone for the protection, enhancement and creation of neutral grassland.

Recreational opportunities along the Brampton Valley are extensive and primarily focused around outdoor activities including walking, running, cycling and horse riding. The Kingsthorpe Local Nature Reserve located on the northern edge of Northampton includes the site of Kingsthorpe Mill, and sections of the old mill race are still evident in the area. An additional 8ha of land associated with the Henry Martin Ltd Business Site has been purchased in order to extend the nature reserve and create further habitat enhancements. The site is important for insects, wild flowers and mammals. Pitsford Reservoir (SSSI) provides not only a valuable recreational resource for fishing, boating, sailing, bird watching and picnics, but is also an important wildlife habitat, in particular for bird life and waterfowl. Located on the western edge of the reservoir, Brixworth Country Park provides cycle hire, a residential centre and visitor centre, and is one of the most recently developed country parks in Northamptonshire. The rights of way network within the area is also extensive, criss-crossing the rolling valley landscape.

14.2.2 NENE VALLEY WAY

The Nene Valley Way principally follows the course of the River Nene from central Northampton as far as the source of the river at Badby. It comprises an important east-west connection between Wellingborough, Weedon, and Badby, and beyond the county boundary to the Grand Union Canal at Napton on the Hill. It passes through a variety of distinctive landscapes ranging from the heavily settled broad valley floodplain of the Middle Nene in the east, through more undulating landscapes of the Upper Nene Catchment and then into the simple, quiet rural landscapes of the West Northamptonshire Uplands in the west.

The compact settlement of Weedon is located at a notable crossing point for the principal north-south and east-west components of the network, and major infrastructure routes including the A5, J16 of the M1 and the Grand Union Canal. Nether Heyford, to the east of Weedon, is the convergence point for the Midshires Way, Nene Way and Grand Union Canal Walk national trails.

There is the opportunity for the increase in the number of recreational and tourist sites along the Nene Valley Way. The future restoration and opening of the military barracks at Weedon as a visitor and heritage centre is a particularly notable example and opportunity. Red Way Countryside Connectors provide links with Daventry to north, including Daventry Country Park, and the separate Borough Hill and Burnt Walls Scheduled Monuments, and the proposed Northern Valley Park. Connections are also made with Fawsley Hall and Park to the south, a Grade II* Registered Park attributed to Capability Brown.

14.2.3 ALTHORP WAY

The Althorp Way branches off from the Brampton Valley on the northern edge of Northampton, northwest towards Long Buckby and its junction with the Grand Union Canal at Long Buckby Wharf. From the villages along its length, notably Harlestone, Great Brington and Long Buckby, Red Way Countryside Connectors extend to the north and northeast creating an important network across a diverse rural landscape. There are also connections with the Knightley Way and Grafton Way footpaths that cross this route.

Althorp Way passes through the undulating landscape within the West Northamptonshire Uplands, with land rising towards the west, and is characterised by a mosaic of arable farmland and improved pastures. Urban influences have an increasing presence in proximity to Northampton, including the busy A428, and the Rugby to Northampton Railway. Views of other prominent features, including high voltage pylon lines and telecommunication masts east of Long Buckby, contribute urbanising elements into the landscape.

Country houses of historic interest are characteristic of the landscape and from a distance are often viewed as well wooded areas in the landscape. The Althorp Green Way skirts the southern edge of the Althorp Estate. Althorp House is a Grade II* listed 18th century building and the gardens at Althorp contain traces of an early formal layout. The park dates from 1512, although has since been extended, with date stones recording planting between 1567 and 1901. Traces of avenues are ascribed to Le Notre. A small island, in the centre of the lake at Althorp is the resting place of Diana, the late Princess of Wales. The Hall and Stables house a small exhibition in her memory and the estate is therefore a popular tourist attraction, particularly to international visitors.

The villages of Harlestone and Great Brington have significant heritage and tourist interest. They are the principal villages

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that served the Althorp Estate and have significant architectural merit and rich heritage. The use of locally quarried Ironstone in the historic buildings has created a distinctive character and visual expression of the underlying geology. The dispersed settlement of Harlestone is located within a wooded valley below a significant area of coniferous woodland on Harlestone Heath. This area is well used by people from nearby Northampton and popular for outdoor recreational activities including horse riding, walking, cycling and dog walking. There are opportunities for the protection, enhancement and creation of woodland habitats, particularly encompassing the eastern section of the Althorp Way.

14.2.4 CANONS ASHBY AND SULGRAVE WAY

Canons Ashby and Sulgrave Way is the principal Green Way in the southeast of West Northamptonshire and connects Weedon Bec, an important junction in the network, to the settlement of Banbury. The Green Way rises from the valley of the River Nene, through an undulating and elevated landscape, to the valley of the River Cherwell, with Thenford Hill providing a notable feature and sense of elevation. The landscape has a diverse and colourful character as a result of varying land uses and streamside and valley side woodlands combine to provide texture to the otherwise smooth landscape. South of Farthingstone a number of woodlands are located in the vicinity of the Green Way. These have been identified as a potential woodland habitat reservoir in the Natural Network, and the enhancement of the reservoir would contribute to the variety of landscape experience within this section.

There is a rich heritage along the Canon's Ashby and Sulgrave Way, particularly associated with the villages. Church spires are prominent within many of the smaller villages, including those at Middleton Cheney, providing local landmarks and punctuating the horizon. Canons Ashby village located along the western boundary is home to Canons Ashby House. Owned by the National Trust, the Elizabethan manor has remained largely unaltered since around 1710 and the formal gardens created by Edward Dryden provide panoramic views of the surrounding parkland and church, which is all that remains of the Augustinian priory. Sulgrave Manor also provides an important heritage feature. It is a modest manor house from the Shakespearean period, and was home to the ancestors of George Washington.

Recreational opportunities within the area are limited. A Red Way Countryside Connector provides a link to Everdon Stubbs Woodland Nature Reserve and Forest Trail, and between Middleton Cheney and Banbury the Green Way crosses the Jurassic Way, an important national trail.

Red Way Countryside Connectors link the principal villages along this route to the surrounding settlements, notably at Sulgrave with links to Culworth and Chipping Warden to the northwest, and to Brackley to the southeast.

14.2.5 FOREST WAY

Following the southern county boundary, the Forest Way connects the River Nene to the Grand Union Canal and passes through the settlements of Towcester, Silverstone and Brackley. The Green Way extends from the Nene Valley across the Tove Valley to the Cherwell Valley and traverses a variety of landscapes, encompassing the wooded landscapes of Yardley Chase, Salcey Forest and Hazelborough Woods to the more open and expansive limestone plateau in the southwest of the county. There is a wealth of heritage, conservation and recreational opportunities in the vicinity of the Forest Way.

Principal sites include Castle Ashby, Yardley Chase, Salcey Forest, Easton Neston Park, Hazelborough Wood and Country Park, and connections to Silverstone Motor Racing Circuit and Towcester Racecourse. The Scheduled Monument of Bury Moat at Towcester is also of note.

The extensive gardens and park at Castle Ashby, designed by 'Capability' Brown, are Grade I listed. A mile long avenue of trees, dating back to 1695, connects the house with the landscape beyond and to Yardley Chase, a significant area of remnant Royal Forest. These compartments of the Royal Forest, and Hazelborough Wood form the backbone for the creation, enhancement and protection of woodland habitats extending from Castle Ashby along the length of the Forest Way to Brackley, to create a rich and varied landscape experience.

The 300 ha estate of Easton Neston House, immediately northeast of Towcester, includes a Grade II* listed building with formal gardens, pleasure grounds and landscaped park. The park is a prominent feature, with its influence extending beyond the boundary of the early 18th century park into the surrounding landscape in the form of long avenues of trees.

Towcester Racecourse and the Silverstone Motor Racing Circuit are significant recreational and tourist assets. Silverstone attracts national and international visitors to the area during events, notably for the British Grand Prix.

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14.2.6 STEANE WAY

Northwest from Brackley the Steane Way traverses the disused Brackley to Banbury Railway joining the Canons Ashby Sulgrave Green Way at Middleton Cheney. Travelling through a flat plateau farmland landscape, the Steane Way connects the villages of Farthinghoe and Thenford. The landscape provides extensive panoramic views to the user, and is sparsely settle with limited vegetation cover. Thenford Hill provides elevation within the landscape.

There are few recreational opportunities within this area, and footpaths are not common, contributing to a more remote and quiet rural experience.

South of Thenford is Farthinghoe Nature Reserve. The site is on a disused railway line and also includes a former landfill site that has been capped, and is now a mosaic of woodland and open grassland with an old meadow. Steane Park is an important conservation and heritage site. It is valued as a County Wildlife Site and area of calcareous grassland. Hinton Airfield is visible in the landscape to the south of the Steane Way and is now used as a skydiving centre. Low storage units are prominent on the airfield and the numerous gliders and light aircraft that frequently occupy the airspace above the airfield create intermittent noise and activity. The telecommunications masts at Thenford Hill are also prominent landmark features.

14.2.7 WOOTTON - SALCEY WAY

A short but strategically important Green Way link between the Forest Way and the Nene Way connects the Northampton and Milton Keynes urban centres. From the centre of Northampton the Wootton Salcey Green Way passes through Delapre Golf Course, which is located on part of the Battle of Northampton battlefield site and also includes part of the historic grounds of Delapre Abbey. Beyond this, the Way passes through Wootton on the urban edge of Northampton into the rural valley landscape beyond. Elevated landform further south is emphasised by woodland on higher ground.

The landscape in this area is a remnant of a much larger area of Royal Hunting Forest, and features of the landscape are evocative of this. Historic associations with the Royal Hunting Forest are strong and add to the landscape's appeal. Surviving woodlands are an important indicator of the landscape's past and an important recreational and conservation asset. Salcey Forest, together with Yardley Chase to the northeast covered 1,200 acres, almost all of which was managed as coppice. It has the largest number of ancient (veteran) oak trees anywhere in Northamptonshire. Notable oaks include The Salcey Oak and Milking Oak, both of which are situated on the Forest Lawn, and The Piddington Oak and The Church Path Oak, which are to be seen in the Forest.

Salcey Forest is an important recreational resource and includes a Forest Trail, Visitor Centre and picnic area. The recently constructed Tree Top trail has proved a particularly popular visitor venue. Other heritage and recreational assets in the vicinity of the Green Way are limited. The village of Quinton has a rich architectural heritage and contains the remains of a manor house.

14.2.8 OXFORD - GRAND UNION CANALS LINK

This relatively short Green Way link provides an important connection in the north of the area between the Oxford Canal and the Grand Union Canal, connecting the villages of Crick and Kilsby to the network, across a largely flat and open landscape.

Recreational and conservation opportunities are limited across this short link, which is primarily dominated by the presence of communications and transport infrastructure, including the M1, A5 and Northampton to Rugby Railway and the two canals, in addition to the presence of the Daventry International Rail Freight Terminal and Rugby Radio Station in views to the north.

The Kilsby Tunnel is an important component of the transport infrastructure network. Located beneath the Ironstone Hills to the east of Kilsby it takes the mainline railway from Rugby to Northampton. The impressive castellated brick structures of the airshafts provide locally prominent landscape features. Kilsby Tunnel was built by Robert Stephenson in 1838 as part of the London to Birmingham Railway.

14.3 THE BLUE WAY NETWORK:

14.3.1 NENE VALLEY BLUE WAY

The Nene Valley Blue Way extends between the urban centres of Wellingborough and Northampton. The broad, flat and often tranquil, floodplain landscape provides a distinct setting for the network. In close proximity to these urban centres, the landscape appears busier and the network contributes to the significant use of the floodplain as a communications corridor, following in places the Nene Way, a well established national trail.

Red Way Countryside Connectors link the Nene Valley to the neighbouring villages of Earls Barton, Great Deddington and

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Cogenhoe, within which are buildings of architectural heritage and interest.

Large-scale lakes developed on the site of former sand and gravel pits dominate the area, creating a distinctive landscape pattern, a tangible link with the industrial archaeological heritage, and provide opportunities for wetland focused nature conservation and recreation. The landscape has been managed and enhanced for the benefit of wintering and breeding birds, and can be enjoyed by visitors to the Summer Leys Nature Reserve and the Nene Valley as a whole. This area of wetland is designated as an SSSI and is also potential SAC status.

Active recreational opportunities are provided at the Water Sports Centre and Nene Whitewater Centre, and Billing Aquadrome is a focus for other leisure, recreation and holidaying activities, including camping and caravanning.

At the heart of Northampton connections are made with waterfront residential and leisure development at Becketts Park and the business, heritage, recreational and tourism opportunities this urban centre has to offer, for example the 'Cultural Mile'. Connections with the wider infrastructure network linking to the county and beyond are obtainable at this point and include road, rail, bus and other routes.

14.3.2 GRAND UNION CANAL BLUE WAY

The Grand Union Canal connects Milton Keynes and Husbands Bosworth, via a variety of small settlements and villages including Cosgrove, Stoke Bruerne, Blisworth, Weedon Bec, Braunston, Long Buckby Wharf, Crick and Yelvertoft. Two arms extend from the main canal route, one from Long Buckby Wharf to Braunston, and the other from Blisworth to the River Nene in the centre of Northampton. There is also a connecting Leicester Arm. The Canal passes through a variety of landscapes ranging from the broad valley floodplain to undulating and elevated farmlands, and simple, unified and exposed landscapes.

The Grand Union Canal Blue Way encompasses the Grand Union Canal Walk and the Midshires Way, both important long distance trails. It follows an important and well established concentration of communications and infrastructure, including the Watford Gap. Together, these have an urbanising influence on an otherwise rural landscape.

The canal travels through a number of areas of potential grassland, woodland and wetland reservoirs, in addition to providing a key wetland and grassland habitat link, enhancement of which would contribute significantly to the biodiversity and landscape experienced along its length.

Canal moorings are well distributed along the whole length of the Grand Union Canal, providing the opportunity for users of the canal system to stop and enjoy the surrounding landscape, and in turn provide a means by which other visitors can admire and enjoy the cultural landscapes of the inland waterways. Locks, an important functional element of the canal network, also act as a focus for visitors. The principal lock flights are located at Braunston, Long Buckby Wharf, Watford, Stoke Bruerne and Rothersthorpe. In addition, the presence of a number of tunnels along this length of the Grand Union Canal, contributes to the variety of experiences enjoyed by the traveller. The canal passes through the Crick Tunnel. Constructed in 1815, the tunnel was built to allow two boats to pass without touching the sides. Running for a length of 1518 yards, the tunnel is visible by a series of mounds in the landscape, although a number have been planted with trees. Further south the Blisworth Tunnel that terminates at Stoke Bruerne is also a notable canal feature. Completed in 1805 after several years of construction, the tunnel is 1.75 miles long. These tunnels are testimony of the remarkable engineering feats that were undertaken at a time when construction and excavation methods relied on physical labour.

Stoke Bruerne is home to the Canal Museum, portraying the heritage of 200 years of the inland waterways, and villages and buildings along the length of the canal have a rich architectural heritage.

14.3.3 OXFORD CANAL BLUE WAY

The canal follows the county boundary on the Oxfordshire side of the border, connecting Rugby to Aynho, via Banbury, and beyond. It passes through West Northamptonshire between Rugby and Braunston and again further south near Aynho. The canal provides connections between major settlements, and has an important role as gateway to Northampton from the west. Braunston is an important junction of the Oxford Canal and Grand Union Canal. Connections with the settlements and landscapes of West Northamptonshire branch out at Kilsby, Napton on the Hill, Upper Boddington, Chipping Warden, Banbury, Kings Sutton and Aynho Wharf.

In the north, the largely flat and open landscape allows expansive views, particularly towards Warwickshire in the west. The Rugby Radio Station is highly visible and intrusive creating a distinctive local landmark. In close proximity to the canal is the site of the medieval village Onley, on the banks of the Rains Brook, fields of ridge and furrow are extensive and scattered throughout the area, and medieval field systems occur to the west of Braunston.

In the south, the canal is located within the valley floodplain adjacent to the Cherwell River, with a primarily arable and horticultural landscape with sparse vegetation and woodland cover. The line of the adjacent operational and disused railways, and the canal, are identifiable in the landscape, and defined by linear belts of young trees.

15: SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS IN WEST NORTHAMPTONSHIRE

FIGURE 28 – THE WEST NORTHAMPTONSHIRE STRATEGIC GREEN INFRASTRUCTURE FRAMEWORK

15.1 THE SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS

The Sub-Regional corridors within West Northamptonshire broadly following the strategic waterways and valleys, comprising the Nene as far west as Newnham, the Brampton Arm, and the Oxford Canal / Cherwell Valley. Other strategic corridors follow notable concentrations of biodiverse areas with a strong woodland cover, or well defined movement patterns and opportunities, including linkages between major settlements. The strategic level corridors are noteworthy for their mosaic of land uses, natural and built resources and settlement. They often function as transportation routeways, support flood storage areas, or are rich in biodiversity and heritage resources, and offer recreation and leisure opportunities. These corridors already function as Green Infrastructure resources, and provide GI related benefits. They therefore form a 'backbone' of sub-regional significance for the GI resource within West Northamptonshire.

The following Sub-Regional Green Infrastructure corridors have been identified.

- The Nene Valley (Northampton – Newnham)
- The Daventry Spur
- Yardley, Salcey and Whittlewood Wooded Ridge
- The Brampton Arm (Northampton to Market Harborough)
- Northampton to Salcey (Milton Keynes Link)
- Oxford Canal and Cherwell Valley (Oxford to Rugby)
- Silverstone to Buckingham Link

The names proposed are based on the geographic features and places within which they pass or connect to. For the purpose of this standalone report in respect of West Northamptonshire only, the numbering of the Sub-Regional GI Corridors commences at 1. Subject to wider discussions, however, and a potential amalgamation of the Green Infrastructure network for the whole county, it may be necessary to agree a revised numbering system that can operate in conjunction with the parallel numbering system for the North Northamptonshire GI corridors.

These Sub-Regional Corridors are intended to become fully multi-functional zones with the ability or potential to deliver the following 'functions':

- Access and Movement – linking settlements to their hinterland, destinations and the wider strategic Green Infrastructure Sustainable Movement Network; corridors provide sustainable links through attractive green routes with clear way marking and other relevant facilities;
- Biodiversity – providing a focus for the enhancement and linkage of the biodiversity resource;
- Enhancement of flood risk, water management and other natural process roles;
- Enhancement and promotion of environmental character to celebrate the distinctiveness of these different corridors;
- Enhancement and promotion of heritage and cultural assets; and
- Enhancement and promotion of recreation and leisure, providing the context for the county's Sub-Regional Greenspace and other destinations.

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Green Infrastructure related proposals are therefore likely to focus on the enhancement and restoration of the existing resource and assets in these corridors, as well as the creation of new resources.

15.2 LOCAL GREEN INFRASTRUCTURE CORRIDORS

These corridors 'link up' the Sub-Regional Strategic Corridors to complete the comprehensive Green Infrastructure network. They are zones within which a mosaic of land uses, natural and built resources and settlements although the extent of 'multi-functionality' is less developed.

They are essential for providing the network linkage between two Sub-Regional GI corridors, or between a Sub-Regional Corridor and settlements thus providing the doorstep to countryside 'connections'.

The proposed names are based on the geographic locations or assets they connect and have a local resonance and relevance to the communities they serve or connect to.

The following Local Green Infrastructure Corridors have been identified:

- Great Oxendon - Rugby
- Pitsford Water – North Kilworth
- Northampton - Daventry
- Newnham – Napton on the Hill
- Nether Heyford – Milton Keynes and Northampton Grand Union Canal Spur
- Farthingstone – Towcester – Milton Keynes
- Crick - Banbury
- Middleton Cheney – Brackley and Buckingham Extension
- Syresham - Buckingham
- Buckingham – Milton Keynes
- Wellingborough to Northampton

The proposed names are based on the geographic locations or assets they connect and have a local resonance and relevance to the communities they serve or connect to. These corridors will require substantially more resources to improve their functionality than the Sub-Regional corridors. Asset and resource creation will be at the centre of the GI related proposals. These local corridors have the potential to become truly multifunctional, and therefore with the existing or potential functions as detailed above, are essential to delivering Green Infrastructure related benefits at the local level

15.3 URBAN AREA CONNECTIVITY

As a development from the Phase 1 study, and in response to stakeholder feedback, the network of both Sub-Regional and Local Green Infrastructure Corridors extends not only up to but through urban areas. While these routes are indicative at the sub-regional level, they demonstrate the importance of connectivity within and into urban areas. As an example of the local resolution of the process, a potential network has been developed for Northampton and Daventry. Although this was developed as an integral part of the development of the Sustainable Movement Network, at this level of resolution it links to key assets and destinations within the urban area and also takes account of Biodiversity resource. These examples of the process are illustrated on Figures 26 and 27.

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS:

A Schedule of existing, emerging and potential Green Infrastructure projects within West Northamptonshire are set out in the following tables. The projects are classified into a range of categories, comprising Town Centre and Urban Sites; Town Edges; and Rural Sites. Each of these projects is examined in respect of the Strategic Themes which they address and hence the range of multi-functional benefits they bestow. In addition, from an analysis of the location of the project, an indication of the Sub-Regional and Local Corridors which they form part of or have a strong connectivity with, is also provided.

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Town Centre and Urban Sites				
Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Northampton Town Centre and Surrounds; The Cultural Mile Concept & Street Scene	Regeneration of the Town Centre to create and enhance the cultural, leisure and retail facilities within the centre	<ul style="list-style-type: none"> Sustainable Movement Network and Access: enhanced and safer pedestrian routes and links Leisure, Recreation and Tourism: creation of landmark site and facility drawing both local communities and wider visitors; Environmental Character, and Strategic and Local Green Space: enhancement of public realm and quality of life 	The Nene (Northampton to Newnham)	
Waterside, Northampton	Delivery of an ambitious River Corridor Vision with wide ranging enhancement proposals that support mixed use development and facilities	<ul style="list-style-type: none"> Sustainable Movement Network and Access: Safer pedestrian routes and links and landmark Gateway into the Town Leisure, Recreation and Tourism: creation of landmark site and facility and community / visitor benefits Environmental Character: enrichment of the River Valley Character and enhancement of public realm and quality of life Strategic and Local Green Space: Positive interface between river and town development and protection and enhancement of natural resources 	The Nene (Northampton to Newnham)	
Urban Parks and Green Space in Northampton – Masterplan Framework Study	Review of urban parks and open space network in Northampton including their usage, condition and distribution	<ul style="list-style-type: none"> Biodiversity Network: identification of potential for habitat enhancement; Sustainable Movement Network and Access: enhanced pedestrian routes and links within town Strategic and Local Green Space: enhancement of publicly accessible green space; Recreation and Tourism: creation and improvement of parks and green spaces for community / visitor benefits Environmental Character: masterplan for enrichment of the parks system and enhancement of public realm and quality of life 	<p>The Nene (Northampton to Newnham)</p> <p>The Brampton Arm (Northampton to Market Harborough)</p> <p>Northampton to Salcey – Milton Keynes Link</p>	<p>Wellingborough to Northampton</p> <p>Northampton to Daventry</p>

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Daventry Canal Arm and Development	Establishment of the Daventry Canal Arm, and marina and associated Town Centre Waterfront development Integral part of the Town Centre Vision	<ul style="list-style-type: none"> Biodiversity: ecological enhancement and benefits Sustainable Movement Network and Access: enhanced and safer pedestrian routes and links Leisure, Recreation and Tourism: creation of landmark site and facility drawing both local communities and wider visitors; Environmental Character and Strategic and Local Green Space: enrichment of the Town Character and enhancement of public realm and quality of life Sustainable Communities and Economy: Town economy benefits Heritage and Culture: Social and cultural activities and improvements 	The Daventry Spur	
Brackley Market Square Environmental Enhancements	Enhancement of the architectural and historic character of the town centre	<ul style="list-style-type: none"> Leisure, Recreation and Tourism: enhancement of public spaces for benefit of both local community and visitors; Heritage and Culture: enhancement of historic fabric and character; Social and cultural activities and improvements Environmental Character and Strategic and Local Green Space: enrichment of the Town Character and enhancement of public realm and quality of life Sustainable Communities and Economy: Town economy benefits 	Yardley, Salcey and Whittlewood Wooded Ridge	Middleton Cheney – Brackley and Buckingham Extension
Potential Site: Weedon Depot / Barracks	Potential restoration of former military barracks and conversion to Museum and Visitor Centre	<ul style="list-style-type: none"> Sustainable Movement Network and Access: potential for enhanced and safer pedestrian links Recreation and Tourism: creation of public facility for benefit of both local community and visitors; Heritage and Culture: enhancement of historic character and celebration and understanding of military history; potential for development of social and cultural activities Environmental Character: enrichment of the town character and local enhancement of public realm; Sustainable Communities and Economy: Local economy benefits 	The Nene (Northampton to Newnham)	Crick to Banbury

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Town Edges				
Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
<p>Daventry Green Infrastructure Network:</p> <p>Land Acquisition for Country Park Extension; Securing of long term possession of Country Park; Strategic landscape infrastructure works</p>	<p>Acquisition of land to form part of a planned expansion to the Park and linkage to the Grand Union Canal and proposed Daventry Canal Arm;</p> <p>Development and enhancement of a valuable park asset for local and wider enjoyment with enhanced landscape infrastructure and biodiversity;</p>	<ul style="list-style-type: none"> • Biodiversity: biodiversity enhancement and contributing to meeting BAP Targets including Open Standing Water – canals and reservoirs and other habitat creation; • Sustainable Movement Network and Access: footpath creation and improved access for local communities, and links from Daventry town centre to wider countryside network beyond; • Strategic and Local Green Space: Enhancement and creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: development and enhancement of leisure destination, including accessibility; • Environmental Character: Enrichment of landscape character of area; • Heritage and Culture: Extension to and association with Canal network; 	The Daventry Spur	
Land at Moat Lane, Towcester	Acquisition of land to support regeneration of area and provision of commercial space, affordable housing, riverside walk and enhancement of local environment	<ul style="list-style-type: none"> • Biodiversity: biodiversity enhancement of riverside corridor; • Sustainable Movement Network and Access: footpath creation along river and improved access for local community from town centre to wider countryside network beyond; • Strategic and Local Green Space: Creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: development and enhancement of leisure destination, including its accessibility; • Environmental Character: Enhancement of local landscape character of riverside area; 	Yardley, Salcey and Whittlewood Wooded Ridge	

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Towcester A5 Bypass	Feasibility Study to examine potential route options for bypass in association with the future expansion of the town; associated opportunities for mitigation and green space creation.	<ul style="list-style-type: none"> Biodiversity: potential for biodiversity enhancement and contributing to meeting BAP Targets Sustainable Movement Network and Access: potential for associated footpath creation and improved linkages 	Yardley, Salcey and Whittlewood Wooded Ridge	
Towcester Cycle Network	Co-ordinated cycle network through the town promoting sustainable modes of travel. Opportunities for access to key destinations including leisure, shops and medical facilities.	<ul style="list-style-type: none"> Sustainable Movement Network and Access: cycleway creation and improvement for local community use and potential linkage to wider countryside network; Strategic and Local Green Space: Creation of publicly accessible green space in association with cycle network; Leisure, Recreation and Tourism: development and enhancement of leisure destinations, including its accessibility; Environmental Character: Enhancement of local landscape character associated with cycle route improvements; 	Yardley, Salcey and Whittlewood Wooded Ridge	Farthingstone – Towcester – Milton Keynes
Kingsthorpe Local Nature Reserve and Martins Yard Business Site Extension:	Purchase of land to provide an 8ha extension to the existing LNR located 3km to the north of the centre of Northampton Creation of new areas of wetland and grassland to enrich existing diverse mosaic of habitats; Footpath creation to serve community links into site	<ul style="list-style-type: none"> Biodiversity: biodiversity enhancement and contributing to meeting BAP Targets Sustainable Movement Network and Access: footpath creation and improved access to LNR for local communities, and a wider town centre to countryside network linking from Northampton to the site and the Brampton Arm Valley beyond; Strategic and Local Green Space: Creation of additional publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure destination, including accessibility; Environmental Character: Enrichment of landscape character of Brampton Arm Valley Potential educational resource 	The Brampton Arm (Northampton to Market Harborough)	Northampton to Daventry

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Rural Sites				
Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Salcey Forest Enhancements: Extension to Canopy Walk; Restoration of pasture woodland;	<p>The Ancient Woodland and former medieval Hunting Forest of Salcey Forest, located within the Salcey Forest and Yardley Chase Low Wooded Clay Ridge Character Area.</p> <p>Project supports a Visitor Car Park, Information Centre and Forest Café; all ability Forest Trail, and recently constructed Canopy Walk;</p> <p>Development of site to extend existing benefits with enhanced visitor facilities, potential to enjoy greenspace</p>	<ul style="list-style-type: none"> • Biodiversity: biodiversity enhancement and management and contributing to meeting BAP Targets • Sustainable Movement Network and Access: footpath creation and improved access to forest for visitors; • Heritage and Culture: promotion of the understanding of the medieval Hunting Forest and development; educational resource. • Strategic and Local Green Space: Creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; • Environmental Character: celebration of landscape character of Forest • Healthy Living: activities provided encourage healthier lifestyle; • Sustainable Communities and Economy:: commercial benefits from visitor use of facilities and sustainable woodland management enterprises; 	<p>Yardley, Salcey and Whittlewood Wooded Ridge;</p> <p>Salcey to Milton Keynes Link</p>	
Nene Way Rights of Way Improvements	<p>Enhancement of the rights of way Network to consolidate the continuity of the Nene Way and wider connections</p> <p>Both rural and urban sections, including Waterfront Northampton, Cultural Mile and Upton development;</p>	<ul style="list-style-type: none"> • Sustainable Movement Network and Access: footpath creation and improved access for local communities, and a wider population and visitors to area; • Strategic and Local Green Space: Creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: enhancement of leisure destination, including wider accessibility; • Environmental Character: celebration and opportunity for enhancement of river corridor landscape • Healthy Living: encouraging exercise and healthier lifestyle 	The Nene (Northampton to Newnham)	

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Feasibility Study and Masterplan for the Brampton Valley	A RNRP Greenspace Project to review the Brampton Valley and address social, economic and environmental issues; potential development of iconic Gateways at the edge and arrival into Northampton;	<ul style="list-style-type: none"> Biodiversity: potential for biodiversity enhancement and contributing to meeting BAP Targets Sustainable Movement Network and Access: potential for footpath and cycleway creation and improved access for local communities, and a wider links from Northampton to the Brampton Valley; Heritage and Culture: Lamport Steam Heritage Railway links Strategic and Local Green Space: Creation of additional publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure destinations, including accessibility; Environmental Character: enhancement of landscape character of Valley Identification and development of a potential educational resource; 	The Brampton Arm (Northampton to Market Harborough)	
Hazleborough Woods Woodland and Visitor Use Enhancements	<p>Facilities within woodland to be enhanced to include:</p> <p>Establishment of new 'Green Buildings' to provide a new learning zone;</p> <p>Woodland café;</p> <p>Creation of two new trails including one surfaced to an all-ability standard.</p>	<ul style="list-style-type: none"> Biodiversity: biodiversity enhancement and management and contributing to meeting BAP Targets Sustainable Movement Network and Access: footpath creation and improved access to forest for visitors; Heritage and Culture: promotion of the understanding of the Woods and potential development of educational resource. Strategic and Local Green Space: Creation of additional publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Environmental Character: enhancement of landscape character of Wood; Healthy Living: activities encourage exercise and healthier lifestyle; Sustainable Communities and Economy: commercial benefits from visitor use of facilities and sustainable woodland management; 	Yardley, Salcey and Whittlewood Wooded Ridge	

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Feasibility Study and Masterplan for the Brampton Valley	A RNRP Greenspace Project to review the Brampton Valley and address social, economic and environmental issues; potential development of iconic Gateways at the edge and arrival into Northampton;	<ul style="list-style-type: none"> • Biodiversity: potential for biodiversity enhancement and contributing to meeting BAP Targets • Sustainable Movement Network and Access: potential for footpath and cycleway creation and improved access for local communities, and a wider links from Northampton to the Brampton Valley; • Heritage and Culture: Lamport Steam Heritage Railway links • Strategic and Local Green Space: Creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: enhancement of leisure destinations, including accessibility; • Environmental Character: enhancement of landscape character of Valley • Identification and development of a potential educational resource: 	The Brampton Arm (Northampton to Market Harborough)	
Hazleborough Woods Woodland and Visitor Use Enhancements	Facilities within woodland to be enhanced to include: Establishment of new 'Green Buildings' to provide a new learning zone; Woodland café; Creation of two new trails including one surfaced to an all-ability standard.	<ul style="list-style-type: none"> • Biodiversity: biodiversity enhancement and management and contributing to meeting BAP Targets • Sustainable Movement Network and Access: footpath creation and improved access to forest for visitors; • Heritage and Culture: promotion of the understanding of the Woods and potential development of educational resource. • Strategic and Local Green Space: Creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; • Environmental Character: enhancement of landscape character of Wood; • Healthy Living: activities encourage exercise and healthier lifestyle; • Sustainable Communities and Economy: commercial benefits from visitor use of facilities and sustainable woodland management; 	Yardley, Salcey and Whittlewood Wooded Ridge	

15.4 WEST NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF EXISTING, EMERGING AND POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
<p>Yardley Chase</p> <p>Woodland and Visitor enhancements</p>	<p>Facilities within woodland to be enhanced to include:</p> <p>Enhancement of major area of woodland with parkland and pasture for use as a public open space;</p>	<ul style="list-style-type: none"> • Biodiversity: biodiversity enhancement and management and contributing to meeting BAP Targets • Sustainable Movement Network and Access: improved access to woodland for visitors; • Heritage and Culture: promotion of the understanding of the woodland habitats and the historical development; application as an educational resource. • Strategic and Local Green Space: Creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; • Environmental Character: enhancement of landscape character of Woodland; • Healthy Living: encouraging healthier lifestyle; 	<p>Yardley, Salcey and Whittlewood Wooded Ridge</p>	

15.4 SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS IN WEST NORTHAMPTONSHIRE

The following additional sites with potential to include in list of projects were confirmed through stakeholder consultation:

- Potential by-pass schemes at West Haddon, and Flore-Weedon;
- Henry Martin Nature Reserve extension;
- Stoke Bruerne side ponds project and canal regeneration;
- Cosgrove Aqueduct and Lock Restoration;
- Silverstone Motor Racing Circuit improvements;
- Ongoing works at Upton Country Park and associated flood alleviation / SUDS scheme;
- Daventry Northern Valley Park and integration with Borough Hill and Burnt Walls Scheduled Ancient Monument;
- Daventry International Rail Freight Terminal (DIRFT) improvements;
- M1 - J19 improvements;
- Daventry to Long Buckby link improvements;
- Daventry to Braunston Green Route;
- Potential reinstatement to active use of Rugby to Brackley railway line;
- Potential extension to National Cycle Route No.6;
- Potential growth areas at Daventry, Towcester and Brackley; and
- Nene Valley mineral extraction sites;
- Waterside Northampton Skate Park

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THE WEST NORTHAMPTONSHIRE SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS

- The Nene (Newnham – Northampton)
- Yardley, Salcey and Whittlewood Wooded Ridge
- The Oxford Canal and Cherwell Valley (Oxford to Rugby)
- The Daventry Spur
- Northampton to Salcey (Milton Keynes Link)
- The Brampton Arm (Northampton to Market Harborough)
- Silverstone to Buckingham Link

NENE VALLEY (NEWNHAM TO NORTHAMPTON) SUB-REGIONAL CORRIDOR

The Nene Valley (Newnham to Northampton) Sub-Regional Corridor follows the course of the River Nene on a broadly east-west alignment from Northampton to the village of Newnham, close to the source of the Nene near Badby. To the east, it links into the Nene Valley Corridor that extends through North Northamptonshire to the county boundary near Wansford.

The Corridor passes through a variety of landscapes ranging in the east from the wetland and developed landscapes to the urban sections of the Middle Nene in the heart of Northampton, and the settled broad valley floodplain on the western side of the town. Beyond this the corridor extends into the more undulating low hills and valleys landscapes that contain the broad floodplain between Northampton and Weedon. Further west the Corridor extends into the simple, quiet rural landscapes of the West Northamptonshire Uplands and the distinctive Ironstone Hills.

The eastern section of the Corridor, and its continuation within North Northamptonshire, extends between the urban centres of Wellingborough and Northampton. The broad, flat floodplain landscape is in close proximity to these urban centres, with the significant use of the floodplain as a communications corridor, followed also in places by the Nene Way, a well established national trail.

Large-scale lakes developed on former sand and gravel pits dominate the area, and create a strong landscape pattern, and a tangible link with the industrial archaeological heritage, with opportunities for wetland focused nature conservation and recreation. In the eastern section, the landscape has been managed and enhanced for the benefit of wintering and breeding birds, and can be enjoyed by visitors, for example at Summer Leys Nature Reserve. Further west, active recreational opportunities are provided at the Water Sports Centre and Nene Whitewater Centre, and Billing Aquadrome is a focus for other leisure, recreation and holidaying activities, including camping and caravanning.

At the heart of Northampton the Corridor extends through waterfront residential and leisure development at Becketts Park with the business, heritage, recreational and tourism opportunities this urban centre has to offer. Opportunities include the 'Cultural Mile' and the proposed Waterside Northampton development. Here, there are important strategic connections with the Sub-Regional Corridor followed by the Brampton Arm, a tributary of the River Nene, and also the Northampton to Salcey Sub-Regional Corridor.

To the west of Northampton, a series of other river edge settlements are located close to the river, notably the village of Nether Heyford to the east of Weedon, which is the convergence point for the Midshires Way, Nene Way and Grand Union Canal Walk long distance trails. The compact settlement of Weedon is located at a notable crossing point of a series of major infrastructure routes including the A5, J16 of the M1, and again the Grand Union Canal Way, and Nene Way and also the Macmillan Way long distance trails.

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The wetland and open water habitats are the most important biodiversity resource within this section of the Nene Valley. Wetland and open water habitat reservoirs have been identified at Cogenhoe and in the Billing to Brackmills section. A further reservoir is located to the north of Flore associated with the Flore Weedon Floodplain Pastures. These are interlinked with a Priority Habitat link that extends from Northampton to the Upper Nene including a link to Daventry. Within the Upper Nene floodplain, wetlands include areas of unimproved wet grassland and marsh, the best example being Bugbrooke Meadows SSSI.

Although woodland habitats are not extensive in the Corridor, there is a notable Woodland Habitat Reservoir to the south of the Upper Nene which includes the ancient woodland of Badby Woods. There are also intermittent areas of neutral grasslands in the vicinity of the corridor, with Habitat Reservoirs identified at Northampton Parks, and Hardingstone and Cotton, to the north and south of the Nene respectively.

The Corridor supports a range of recreational activities and sites encompassing both active and more passive pursuits. There is the opportunity for further recreational and tourist sites along this section of the Nene Valley. The future restoration and opening of the military barracks at Weedon as a visitor and heritage centre is a particularly notable example and opportunity.

The Nene Valley (Newnham to Northampton) Sub-Regional Corridor: Summary

The GI resource within the Northampton to Newnham section of the Nene Valley Sub-Regional Corridor is very diverse as a consequence of the changing character of the floodplain, and the sequence of urban and rural landscapes that contain it. While the focus of nationally important areas of wetland and open water, including a Wetland Habitat Reservoir, is located on the eastern side of Northampton the entire floodplain corridor has been identified as a priority Habitat Link. The urban section of the corridor has potential for innovative projects and linkages to the wider Sub-Regional Corridor network. By contrast, the quieter rural sections can benefit from opportunities to enhance the rural economy such as sustainable tourism and recreational developments. West of the corridor, near the source of the Nene, there are notable ancient woodlands and a Woodland Habitat Reservoir.

Priorities for Action:

- Conserve and enhance the wetland and open water habitat reservoirs within the Nene Corridor located at Cogenhoe, and Billing to Brackmills, and south of Upton. Seek opportunities to introduce wet meadows habitats instead of further lake creation to enrich and strengthen the biodiversity value of the corridor.
- The urban regeneration proposals within Northampton that focus on the river Corridor should be promoted and supported in order to deliver an ambitious Vision for the river landscape. Support the Waterside, Northampton and Cultural Mile Concept projects and seek opportunities to integrate a range of leisure and recreation opportunities and enhanced sustainable movement links.
- Stronger linkage with the Sub-Regional Corridor followed by the Brampton Arm a tributary of the River Nene and also the Northampton to Salcey Sub-Regional Corridor should be considered to enable the establishment of a stronger network of Green space through the town with linear park links through Delapre and northwards along the Brampton Arm.
- Restoration of the former Military Barracks at Weedon should be promoted to provide a key heritage museum and visitor centre and a focal point and intersection of the corridor with the Grand Union Canal.
- Promote further woodland and hedgerow creation to increase the Woodland Habitat Reservoir at Badby and connecting to the Farthingstone areas of woodland in the wider area. Seek to increase the overall extent of the woodland habitat and create habitat connections between woodland blocks.
- Opportunities should be sought to celebrate and identify the source of the Nene, located to the west of the corridor including enhancement of the interconnecting footpath network.

YARDLEY, SALCEY AND WHITTLEWOOD WOODED RIDGE SUB-REGIONAL CORRIDOR

The Yardley, Salcey and Whittlewood Wooded Ridge Sub-Regional Corridor extends along a substantial part of the southern side of Northamptonshire. Although it encompasses a range of landscape character, much of the Corridor follows a low wooded ridge with a mosaic of woodlands of varying density and cover. The woodlands at Hazleborough, Whittlewood Forest, and Salcey Forest and Yardley Chase are extensive, while to the east of Towcester, a more open pattern of woodlands is found.

In contrast to the predominantly wooded and enclosed character there are also more open sections, notably in the vicinity of Croughton and Aynho in the extreme southwest of the county, where the Corridor extends across an expansive limestone plateau landscape. East of Towcester is another open section within the lower reaches of the Tove Valley, where a simple, quiet

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pastoral landscape prevails. Finally, east of Yardley Chase, and the designed parkland at Castle Ashby, the Corridor takes a north - south alignment across more open Limestone Valley slopes to link into the floodplain of the River Nene near Cogenhoe.

The Corridor supports a range of habitats that are of considerable biodiversity value. Of particular note is the large assemblage of woodlands stretching from Syresham to Bozeat, many of which are ancient and designated as SSSIs. The mosaic of woodlands, which form the remnants of a once more extensive Royal Hunting Forest, form woodland reservoirs, with potential woodland habitat links between them. These comprise Whistley, Hazleborough and Bucknall Woods; Whittlewood Forest; the Towcester East and Roade Woodland Complex; and Yardley Chase and Salcey Forest. Together they form a notable resource with considerable potential for enhancement and extension. Wetland habitats are also of note within the Corridor. Between Towcester, the River Tove floodplain supports a range of wetland habitats including seasonally flooded grassland, drains, ponds and a small area of flooded gravel pit. Within the River Great Ouse Floodplain along the county boundary there is a range of wetland habitats including wet grassland of varying quality, open water and relict valley mire on shallow peat.

This important assemblage of habitats, and particularly the rich woodland resource, has provided the basis for identifying a landscape scale biodiversity enhancement area that could stretch from Brackley and along the Corridor to the Nene near Earls Barton and then northeastwards along the Nene Valley.

There are also a wealth of heritage, conservation and recreational opportunities within and in the vicinity of this Corridor which influence its character and also its value in providing a range of interesting and popular destinations. Principal sites include the registered gardens and park at Castle Ashby; Yardley Chase; Salcey Forest with its visitor facilities and recently completed and innovative Tree Top Way; Stoke Park adjacent to the Tove; Easton Neston Park to the east of Towcester; and Hazelborough Wood and Country Park. The Silverstone Motor Racing Circuit and Towcester Racecourse are particularly notable and nationally renowned recreational and tourist venues within the corridor. Both attract visitors from a wide area, with Silverstone drawing national and international visitors to the area during key events, notably the British Grand Prix.

There are a number of links with other Sub-Regional Corridors which offers opportunities to enhance habitat reservoirs and links, and movement networks through interconnected projects and priorities. At its western and eastern extremities the Corridor links into the valleys of the Oxford Canal and Cherwell Valley, and the Nene, respectively. At Silverstone a link beyond the county extends towards Buckingham. Finally, Salcey Forest lies at the intersection with the Northampton to Salcey corridor, and beyond to Milton Keynes.

The area is well served with rights of way between settlements, and a number of the woodlands have public access, but there are opportunities to further enhance the sustainable movement network.

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Yardley, Salcey and Whittlewood Wooded Ridge Sub-Regional Corridor: Summary

The overall GI resource within the Yardley, Salcey and Whittlewood Wooded Ridge Sub-Regional Corridor is particularly valuable within the county due to the extensive woodland resource, including many areas of ancient woodland stretching from Syresham to Bozeat. A series of Woodland Habitat Reservoirs have been identified which interconnect and form part of a wider landscape scale biodiversity enhancement area. In addition to conserving and enhancing this important biodiversity resource, opportunities to develop a range of multi-functional uses and varying characters and identity of the woodlands should be sought.

Priorities for Action:

- Conserve and enhance the ancient woodlands associated within the Woodland Habitat Reservoir that extends through the Yardley, Salcey and Whittlewood Corridor. Opportunities should be sought through Environmental Stewardship and wider guidance to extend the resource and contribute to the longer term aspiration to create a landscape scale biodiversity enhancement area. Biodiversity enhancement may include the encouragement of a wider mosaic of habitats including the restoration of pasture woodland and lawns, based in historic patterns.
- Seek opportunities to provide a range of uses for the mosaic of woodlands introducing multi-functional uses and varying experiences ranging from active recreation as at Salcey, and passive uses, linked to nature conservation, and heritage interpretation focused on the Royal Hunting Forest legacy. Introduce a stronger identity and ranging uses to these woodlands promoting wider access set within a controlled management regime. Opportunities could include Sculpture Parks and Arts trails with a focus of activity at Salcey where two principal corridors intersect. (See also Northampton to Salcey Corridor)
- Conserve and enhance the wetland habitats along the Tove Valley to the east of Towcester. Seek opportunities to introduce further wet meadow habitats to enrich and strengthen the biodiversity value of this section of the corridor.
- Encourage the establishment of a stronger sustainable movement network to provide a range of options connecting settlements to the many visitor destinations within and on the perimeter of the woodlands.

THE OXFORD CANAL / CHERWELL VALLEY (OXFORD TO RUGBY) SUB-REGIONAL CORRIDOR

The Oxford Canal and Cherwell Valley Sub-Regional Corridor is located on the western perimeter of the county and follows the Oxford Canal, and a substantial section of the Cherwell Valley. It extends from Aynho in the extreme south, northwards via Banbury, and eventually links into Rugby. Although a large part of the Corridor is located outside of the county, it forms an important Sub-Regional link with the wider network of Green Infrastructure Corridors that thread through the county. These comprise the Yardley, Salcey and Whittlewood Ridge Corridor in the south, and the Daventry Spur, which is an extension of the Nene Corridor in the central western boundary of Northamptonshire.

The review below examines the principal features and resources that fall within the county.

The Oxford Canal passes through Northamptonshire between Rugby and Braunston and again further south near Aynho. The canal provides connections between major settlements, and has an important role as a gateway to Northamptonshire from the west. Braunston is located at an important junction of the Oxford Canal and Grand Union Canal and also lies at the intersection with the Daventry Spur Corridor.

In the north, the largely flat and open landscape allows expansive views, particularly towards Warwickshire in the west. The Rugby Radio Station is highly visible landmark. In the south, the canal is located within the Cherwell valley and floodplain, with a primarily arable and horticultural landscape with sparse vegetation and woodland cover. The line of the canal and adjacent operational and disused railways are identifiable in the landscape, and defined by linear belts of young trees. Between Aynho and Banbury, the M40 Motorway also follows the Cherwell Valley. The visual impact, traffic noise and movement are particularly evident where sections of the road are on embankment.

The biodiversity resource within the Northamptonshire sections of the Corridor is mainly confined to woodland and wetland habitats. A woodland habitat reservoir has been identified on the rising valley slopes to the east of the Cherwell Valley in the King's Sutton area, focused around the village and Newbottle Spinney. There is also a habitat link to a wider network further east, but this is separate from the wider valley network. The Cherwell River Valley has been identified as a wetland and open water habitat reservoir and offers strategic level wetland habitat links.

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The Oxford Canal is a principal heritage feature in view of the industrial heritage it represents. In the northern section of the Corridor, the site of the medieval village of Onley lies on the banks of the Rains Brook in close proximity to the canal. Here, fields of ridge and furrow are extensive and scattered throughout the area, and medieval field systems occur to the west of Braunston.

The Oxford Canal / Cherwell Valley (Oxford to Rugby) Sub-Regional Corridor: Summary

The overall GI resource within the Northamptonshire sections of the Oxford Canal / Cherwell Valley (Oxford to Rugby) Sub-Regional Corridor is focused on the wetland and open water resources that extend through this area. It is particularly important as a strategic valley route with links not only eastwards into Northamptonshire but also to adjacent counties and regional settlements such as Oxford, Banbury and Rugby.

Priorities for Action:

- Conserve and enhance the wetland and open water habitat reservoir focused on the Cherwell Valley. These extend between the southern limit of the county at Aynho, and the Grimsbury district of Banbury and M40 corridor, which adjoins the county boundary. Seek opportunities to introduce further wetland or wet meadows habitats to enrich and strengthen the biodiversity value of the corridor.
- Seek opportunities to enhance the interpretation of the industrial heritage associated with the Oxford Canal and strengthen associations with key features along the route of the Canal to enhance the enjoyment by users of this key recreational resource. Examples include the medieval village of Onley and associated medieval field systems, located close to the Oxford Canal in the northern section of the corridor.
- Strengthen the links into Northamptonshire from the Oxford Canal / Cherwell Valley Corridor at the intersections with other Sub-Regional and local corridors, through the creation of gateways and landmark features. Braunston in the north of the county should be highlighted as a key Gateway through its location at the intersection of the Grand Union and Oxford Canals.

THE DAVENTRY SPUR SUB-REGIONAL CORRIDOR

The Daventry Spur Sub-Regional Corridor is one of the shortest in the county but it provides an important connection between the Nene Corridor to the south and the Oxford Canal and Cherwell Valley Corridor on the western boundary of Northamptonshire. It also provides a direct link with the town of Daventry. The village of Braunston is also strategically located at the western end of the Corridor as it lies at the junction of the Oxford and Grand Union Canals. A range of resources are present, contributing to its potential for providing multi-functional benefits and opportunities, and the association with the potential growth of the town.

Although there are a number of small woodland blocks within the Corridor, including a prominent area of broadleaved woodland on Borough Hill, at a strategic level the concentration is insufficient for any woodland reservoirs or associated woodland habitat links to be identified. Wetland habitats of 'open standing water' are associated with the Drayton and Daventry reservoirs, with the latter forming part of the Daventry Country Park. Wetland or open water habitat links in the vicinity of the Corridor have been identified along the Grand Union Canal which follows the northern perimeter of the town. This is a priority habitat link which extends from the Upper Nene tributary in the vicinity of Long Buckby Wharf and westwards to Daventry. A Daventry Canal Arm is also proposed that would link from the Grand Union Canal into the heart of the town. The proposal includes a marina and associated Town Centre Waterfront development. In addition to enhancing the urban vision for the town, the new canal link would provide opportunities to strengthen the biodiversity resource.

There are intermittent areas of calcareous and neutral grasslands within and in the vicinity of the Corridor and notably a calcareous grassland habitat link along the disused railway between Dodford and Braunston and through Daventry. A number of isolated areas of neutral grassland are also evident, with sites to the southeast, east and northeast of Daventry plus mesotrophic grassland associated with Daventry Reservoir and the Country Park. These form part of a neutral grassland habitat link with potential for habitat connectivity, and broadly follows the alignment of the Daventry Spur.

The Daventry Spur includes some notable heritage resources which enhance the interest of the area. The most significant are the Scheduled Monuments of Borough Hill, an Iron Age hill fort and Burnt Walls, the site of an extensive Roman earthworks and remains. There is potential to establish a Daventry Northern Valley Park incorporating these two sites and a 'heritage trail' with interpretation. This proposal would also link with the adjacent Borough Hill Picnic site, and Daventry Country Park to the north to establish and integrated recreational and heritage facility.

Further areas of potential change within the Daventry Spur comprise a possible Daventry to Long Buckby Link improvements, and a Daventry to Braunston 'Green Route' utilising the disused railway that extends from the northwestern side of Daventry. As a consequence of the growth agenda for Northamptonshire, potential growth areas have been identified on the perimeter

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of Daventry all of which are located within the Daventry Spur. Development would provide the opportunity for creative and positive solutions that can enhance the green infrastructure network both at a local level and also forming part of the Sub-Regional corridor network.

The Daventry Spur Sub-Regional Corridor: Summary

The GI resource within the Daventry Spur Sub-Regional Corridor includes a number of biodiversity and heritage assets that can be integrated with potential opportunities linked to development associated with the future growth and regeneration of the town. The establishment of a network of green space on the eastern and northern perimeter of the town, focused on the reservoirs, Country Park and proposed Daventry Canal Arm, and also incorporating scheduled heritage features, can benefit the setting of Daventry and the integration of new growth. There is potential to strengthen and enhance the intersettlement links to improve the network of sustainable movement, notably the Green Link to Braunston. There are also opportunities to enhance the biodiversity resource including the establishment of further woodlands to enrich the ridge top and hill side woodlands.

Priorities for Action will be focused on the creation of a multi functional green infrastructure network around the eastern and northern perimeter of the town that integrates a range of opportunities and assets that enrich this area, and provide a setting and accessible green space for communities within the potential growth areas. These would incorporate:

- Enhancement of the wetland and species rich grassland habitats, with potential for the creation of further areas of biodiversity interest in association with the Grand Union Canal, and also the proposed Daventry Canal Arm. These biodiversity enhancements will complement the wide ranging benefits of this ambitious and exciting public realm project, including the establishment of valuable green space for use by the local community.
- Protection of the scheduled heritage resources of Burnt Walls and Battle Hill and incorporation within a Northern Valley Park to create a heritage rich recreational area and 'heritage trail' with enhanced interpretation and linkages to the Country Park.
- Enhancement of the network of sustainable movement around the perimeter of the town including routes through the proposed Northern Valley Park and in association with the proposed Daventry Canal Arm and associated marina development.
- Establishment of a 'Green Way' recreational route between Daventry and Braunston utilising the disused railway line, with associated indigenous planting to enhance nature conservation interests.
- Conservation of the existing woodlands sites with a priority for restoration of those planted with coniferous woodland to native broadleaved species. Encouragement, through Environmental Stewardship and the English Woodland Grant Scheme to create further iconic ridge top and hill side woodlands to enhance the setting of Daventry.

NORTHAMPTON TO SALCEY (MILTON KEYNES LINK) SUB-REGIONAL CORRIDOR

The Northampton to Salcey (Milton Keynes Link) Sub-Regional Corridor is a short but strategically important link between the Nene, and the Yardley, Salcey and Whittlewood Ridge Corridors, and also connects the urban centres of Northampton and Milton Keynes. From the centre of Northampton the Corridor extends southwards across Delapre Park and Golf Course and the busy A45 to the districts of Hardingstone and Wootton located on the urban edge of Northampton. Beyond the built edge of the town the Corridor extends across the quiet and productive agricultural landscape of the Undulating Claylands that extend across this southern side of the county. Further south, the gently undulating landform of shallow valleys and rounded interfluvies gives way to a low ridge, with the more elevated landform emphasised by the extensive areas of woodland of Salcey Forest that occupies this higher ground.

The biodiversity value of the Corridor focuses on the woodland resource and its location in the core of the area identified as a potential landscape scale biodiversity enhancement area. The woodland habitat reservoirs of Towcester East and Roade and the ancient woodlands of Salcey Forest and Yardley Chase both intersect with the corridor as well as the woodland habitat link between these two reservoirs.

Despite its short length the Corridor supports an interesting and varied heritage resource. Within the urban section of the Corridor, Delapre Abbey is notable, set within the grounds of Delapre Park, while the adjacent Delapre Golf Course is the site of the War of the Roses Battle of Northampton in 1460. Much of the historic evidence of this Registered Battlefield, including ridge and furrow and open field systems has been destroyed by the construction of the Golf Course. One of the three remaining Queen Eleanor's crosses is also located in Delapre Park. Within the rural area of the corridor the Registered Park and Garden at Courteenhall is of note, and the village of Quinton has a rich architectural heritage and the remains of a manor house.

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The pattern of woodlands evident in this rural section of the Corridor, and Salcey Forest in particular, is a remnant of a once much larger Royal Hunting Forest. Historic associations with the Royal Hunting Forest are strong and add to the landscape's appeal. As well as an important indicator of the landscape's past the surviving woodlands are an important recreational and conservation resource. Salcey Forest, together with Yardley Chase to the northeast covered 1,200 acres, almost all of which were managed as coppice. It has the largest number of ancient and veteran oak trees anywhere in Northamptonshire. Notable oaks include The Salcey Oak and Milking Oak, both of which are situated on the Forest Lawn, and The Piddington Oak and The Church Path Oak, which are located within the Forest.

The principal recreation resources within the Corridor comprise Delapre Park within the urban area and Salcey Forest. This latter resource includes a Forest Trail, Visitor Centre and picnic area. The recently constructed Tree Top Way has proved a particularly popular visitor venue. The Midshires Way long distance trail crosses the corridor and also passes through the heart of Salcey Forest.

Northampton to Salcey (Milton Keynes Link) Sub-Regional Corridor: Summary

The GI resource within the Northampton to Salcey (Milton Keynes Link) Sub-Regional Corridor encompasses a range of habitats and resources. The ancient woodland resource at Salcey Forest is a principal asset and links into the Yardley, Salcey and Whittlewood Corridor. These woodlands are of strategic importance as a county wide resource and form part of a wider area with potential for landscape scale biodiversity enhancement. In the heart of Northampton, the urban green space resource at Delapre Park and its nationally important heritage associations is a notable asset and provides opportunities for further enrichment and linkage to a wider system of green space and heritage sites to create a linked network. There are also opportunities to enhance sustainable movement links to Salcey Forest.

Priorities for Action:

- Conserve and enhance the ancient woodlands associated with Salcey Forest that form part of a wider Woodland Habitat reservoir that extends through the Yardley, Salcey and Whittlewood Corridor. Opportunities should be sought through Environmental Stewardship and wider guidance to extend the resource and contribute to the longer term aspiration to create a landscape scale biodiversity enhancement area. Biodiversity enhancement may include the encouragement of a wider mosaic of habitats including the restoration of pasture woodland.
- The existing recreational facilities within Salcey Forest, including the innovative Tree Top Way, should be supported and enhanced to widen the range of experiences for visitors and support its focus as a multi-functional woodland and green space asset providing both biodiversity and recreational benefits. Opportunities such as an iconic structure to celebrate its focus at the intersection of two Corridors could be considered. Other opportunities could comprise a woodland sculpture park or Arts trail.
- Further enhancement of the valued green space of Delapre Park should be considered, to include wider celebration through a heritage trail linking the key heritage feature of the Battle of Northampton and Queen Elaeonor's Cross. The heritage and recreation trail could extend into adjacent Northampton Parks and link with the southern section of the Brampton Arm Corridor to form a linear green park through the heart of the town following the river course.
- Opportunities should be considered to establish a sustainable movement for both walking and cycling between Northampton and Salcey Forest, building and enhancing the existing rights of way network and focusing on opportunities to link with key features. This should include Delapre Park and its key heritage assets, and the villages within the corridor. A circular route may also be appropriate.

THE BRAMPTON ARM (NORTHAMPTON TO MARKET HARBOROUGH) SUB-REGIONAL CORRIDOR

The Brampton Arm is a major tributary of the River Nene and follows a north-south course from its confluence with the Nene in the heart of Northampton. The Brampton Arm Sub-Regional Corridor follows the valley of the Brampton Arm, and also the route of the disused Northampton to Market Harborough railway line. Beyond the headwaters of the river, which rise in the vicinity of Maidwell, the Corridor continues northwards within a zone that parallels and incorporates the route of the railway that connected with Market Harborough. The association of the Sub-Regional Corridor with the former railway line re-establishes this strategic link through the county and strengthens the potential to improve access and enhance the range of resources and assets that are present.

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Between Brixworth and Northampton the landscape within the Corridor is influenced by urban development with a progressive sequence from urban to urban fringe, and then rural landscapes. Further north the Corridor extends across the Central Northamptonshire Plateau, where the landform becomes more undulating, and supports a productive agricultural landscape with a strong field pattern and intermittent small deciduous woodlands. Distinctive parkland landscapes associated with historic houses enrich the wider agricultural landscape and contribute to woodland cover. To the south of Market Harborough the Corridor is located within the more elevated rural landscape of the West Northamptonshire Uplands.

The Brampton Arm Corridor supports a range of habitats that are of biodiversity value. Although woodland cover is not extensive, there are notable concentrations to the east and west of the corridor which have been grouped into woodland habitat reservoirs, with opportunities for protection, enhancement and further creation to consolidate the resource. These comprise the Shortwood Complex to the east of Maidwell and Draughton, and the Kelmarsh and Scotland Woods in the vicinity of Kelmarsh Hall. A potential woodland habitat link crosses the Corridor and joins these two woodland reservoirs. In addition to the local riverine habitats associated with the Brampton Arm, there are notable wetland and open water habitats associated with the Pitsford Reservoir on the eastern side of the Corridor. Designated as a SSSI, it is an important wildlife habitat, in particular for bird life and waterfowl. Although there are a number of neutral grassland sites, their distribution is often fragmented. However, neutral grassland reservoirs have been defined in the area surrounding Pitsford Reservoir and Walgrave area and also within Northampton in association with the town parks, where there are more notable concentrations of this habitat. Kingsthorpe Local Nature Reserve, on the northern edge of Northampton is on a former flood meadow, includes the site of Kingsthorpe Mill and has a diversity of habitats including open water, grassland and scrub. Finally, to the west of the Corridor and close to the northern edge of Northampton, there is an area of heathland at Harlestone Firs, now planted with coniferous trees. This is a rare habitat in the county and a priority biodiversity habitat that warrants conservation action.

Notable heritage features in this area include a number of historic houses or Halls, set in parkland or formal gardens, notably at Boughton Hall, Lamport Hall, Cottesbrooke Park to the west, and Kelmarsh Hall. In the northern part of the Corridor, field systems surround the village of Great Oxendon. These tangible traces of medieval field patterns, together with the presence of Little Oxendon Village as earthworks beneath pasture fields, are evidence of the long period of settlement of the area, and its rich historic heritage.

Recreational opportunities along the Corridor are varied and primarily focused around outdoor activities. In view of their proximity to Northampton, the Kingsthorpe LNR and Harlestone Heath are popular sites. Pitsford Reservoir offers a range of water based activities, and Brixworth Country Park, located on the western edge of the reservoir, is a popular venue. At the southern end of the Corridor, a 6.5 mile section of the former railway line has been rebuilt. The Northampton to Lamport Steam Heritage Diesel railway now operates as a tourist railway, and is an important visitor attraction and recreational resource. The Midshires Way national trail and the Brampton Valley Way also follow the Brampton Arm Valley and Corridor.

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The Brampton Arm Sub-Regional Corridor: Summary

The GI resource within the Brampton Arm Corridor is derived from the changing pattern of landscape character through the valley from the urban heartland of Northampton through to the quiet rural landscape in the north. The Corridor contains some notable area of biodiversity including the Wetland and Open Water Habitat Reservoir associated with Pitsford Reservoir. Woodland resources are also evident further north. Opportunities should be focused on strengthening the character of the Valley both through gateway projects and encouraging wider use of the valley routes and experiencing the heritage resource.

Priorities for Action:

- Undertake a comprehensive review of the Brampton Arm Valley to consider its functionality as a recreation and landscape resource and the potential to introduce new facilities and structures to strengthen its identity, including the introduction of gateway features.
- Conserve and enhance the Woodland Habitat Reservoirs at Shortwood and Kelmarsh and seek to and create more broadleaved woodlands building on these habitat reservoirs and the potential links between them.
- Conserve and enhance riverine habitats along the Brampton Arm, and the wider wetland and open water Habitat Reservoir associated with Pitsford Reservoir. Seek opportunities to introduce further wetland or wet meadows habitats, as well as areas of neutral grassland associated with the reservoir area, to enrich and strengthen the biodiversity value within the corridor.
- Enhance the principal recreational movement networks through the valley, in particular the Brampton Valley Way and the potential extension of the Northampton to Lamport Heritage Railway.
- Enhance access to and management of key nature conservation resources, notably at Kingsthorpe LNR and Harlestone Heath, but ensuring through appropriate management that their biodiversity value is not adversely affected.
- Enhance the understanding of the range of heritage resource including the pattern of historic halls and medieval fields / ridge and furrow, particularly in the north of the corridor in the vicinity of Oxendon.

SILVERSTONE TO BUCKINGHAM SUB-REGIONAL CORRIDOR

Located on the southern perimeter of the county, the Silverstone to Buckingham Corridor occupies a very small part of the county but it provides important strategic connectivity from the Yardley, Salcey and Whittlewood Corridor to Buckingham, beyond the county. Because of its very short length there are limited resources and opportunities to identify. Nevertheless, there are a number of key issues that are of relevance.

The corridor's location between two major woodland habitat reservoirs is of particular importance. These comprise the Whittlewood, Hazleborough and Bucknall Woods to the west of Silverstone, and the Whittlewood Forest to the east. In addition to a habitat link between these two reservoirs, they also form part of the wider potential landscape scale biodiversity enhancement area that has been identified.

Within the Northamptonshire section of the Corridor, the Silverstone Motor Racing Circuit is the most significant destination and leisure resource. As the venue for the British Grand Prix, it is of strategic significance as a destination and attracts national and international visitors on key event days. Originally the site of a former airfield, it is undergoing significant improvements to enhance the facilities, and a new link road into the venue has recently been provided, in association with improvements and dualling of the A43. This has gone some way to ease the major traffic congestion that can occur on race days.

Beyond the county, the Corridor to Buckingham encompasses the extensive historic Registered Park and Garden of Stowe Park, with its renowned associations with 'Capability' Brown, William Kent, and Sir John Vanbrugh. This National Trust managed landscape includes the grounds, while Stowe School, now a boarding school, is managed by the Stowe House Preservation Trust. Beyond the park, extensive designed woodlands, avenues and prominent landmarks and monuments extend out into the wider landscape, notably Stowe Avenue which extends into Buckingham and the impressive Corinthian Arch at its northern end. The Park has a major influence on the landscape and key viewpoints. Although there is a network of local footpaths throughout the area from Silverstone to Buckingham, there is potential to enhance the connectivity between these two settlements and establish a dedicated route.

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Silverstone to Buckingham Sub-Regional Corridor: Summary

The overall GI resource within the Northamptonshire sector of the Silverstone to Buckingham Corridor is focused on the network of ancient woodlands that extend across the Corridor, forming part of the Yardley, Salcey and Whittlewood Corridor. These woodlands are of strategic importance as a county wide resource. They form part of a wider area with potential for landscape scale biodiversity enhancement. The Silverstone Circuit and Stowe Park are strategic destinations of national importance and a focus for visitors within an otherwise quiet rural area. Both venues attract intermittent heavy traffic movements and activity associated with key events. The distinctive designed parkland and landmarks associated with Stowe Park has an impact on the wider landscape particularly in views from local footpaths.

Priorities for Action:

- Conserve and enhance the ancient woodlands that extend up to the Corridor and seek opportunities to extend the resource and contribute to the longer term aspiration to create a landscape scale biodiversity enhancement area.
- Seek opportunities for the creative use of the woodlands to encourage their multi-functional use with wider provision for access and recreational benefits.
- Seek opportunities to establish a sustainable movement between Silverstone and Buckingham, building and enhancing the existing footpath network and focusing on opportunities to view the distinctive form and features associated with Stowe Park.

FIGURES

PLEASE REFER TO THE DOCUMENT '**GI_STUDY A - FIGURES**'.