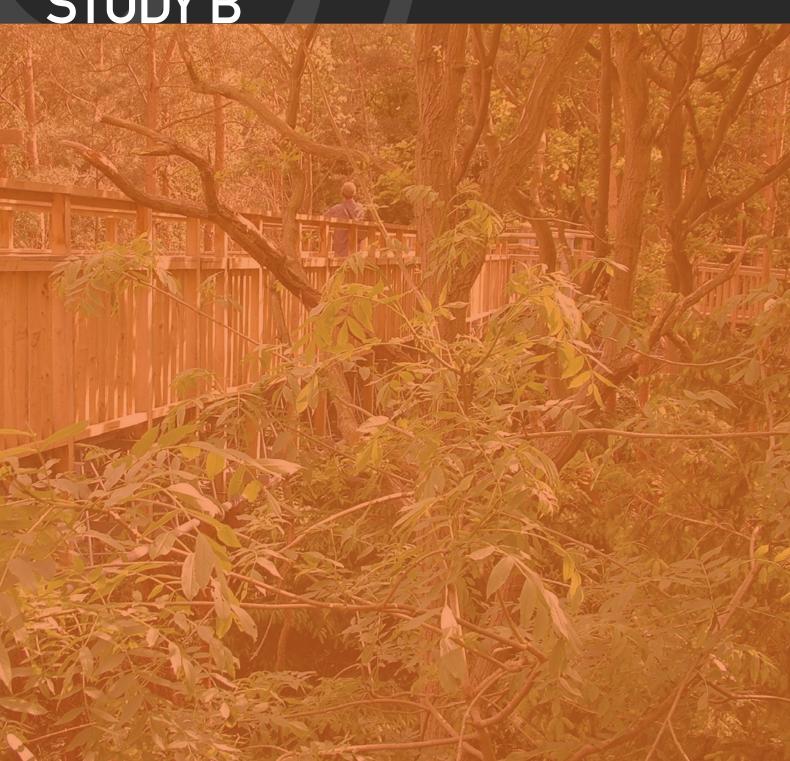


STUDY B





A STRATEGIC GREEN INFRASTRUCTURE FRAMEWORK FOR NORTH NORTHAMPTONSHIRE: THE RESOURCE

17.1 INTRODUCTION

In common with West Northamptonshire (presented in Study A), a comprehensive examination of the environmental resource within North 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, 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.

17.2 AN OVERVIEW OF NORTH NORTHAMPTONSHIRE

North Northamptonshire is a predominantly rural area although it also contains a number of large towns that have all seen significant expansion throughout the twentieth century. Wellingborough, Kettering and Corby are the largest, although other smaller towns such as Thrapston, Rushden and Oundle are notable. The larger towns had humble origins, but saw significant growth following industrialisation and in particular the expansion of iron ore mining and processing in the nineteenth century. Despite their industrial character, especially notable in Corby which saw the most significant growth resulting from extraction and processing industries, many older buildings survive, often clustered around a stone church. The smaller towns have retained much more of their historic character, particularly Oundle, which is renowned for its architectural heritage.

The countryside around these towns contains a diverse mix of farmland, woodland, villages and riverine landscapes that contribute to a rich and varied resource. The quiet rural character is a stark contrast to the bustle of the towns, although, as elsewhere in the country, the urbanising influences of large settlements and infrastructure continue to threaten the tranquillity of the wider rural landscape.

The countryside is highly valued, both as a food producing area, and as a recreational and visual resource. Of particular note is Rockingham Forest, which represents the remnants of what was once a much larger medieval hunting forest. The forest is perhaps one of the best known of Northamptonshire's landscapes and is noted for its quiet rural character, attractive stone villages and extensive country estates as well as for a wealth of nature conservation sites. More recently the Forest has been associated with the reintroduction of Red Kites during the 1990s and the successful development of breeding populations of this bird species.

The landscape character of West Northamptonshire is varied, reflecting the pattern of the underlying geology and effects of geomorphological processes. The Nene forms a broad valley running through the heart of the area paralleled further to the north by the Welland. Both are characterised by a peaceful, rural and pastoral character, although a significant stretch of the

Nene has encountered significant change in recent times resulting from the expansion of neighbouring towns and sand and gravel extraction. The watershed between the two rivers is a high clay capped plateaux that at one time was almost entirely covered by Rockingham Forest. Clearance for agriculture has changed the character across some areas, notably on the open farmed plateau areas east of Northampton. The character of these plateaux is repeated to the east of the Nene across what was once the Bromswold, again, a cleared ancient tract of forest. Here, vast horizons across large scale and productive agriculture characterise the landscapes that extend into neighbouring Cambridgeshire. Despite contraction of the overall scale of the forest area, a significant part of the county is identified as Rockingham Forest. Here, attractive limestone villages and farmland nestle within large areas of ancient woodland and coniferous plantations. The northernmost portion of the county contains a small area whose character is clearly attributable to the underlying geology. The Collyweston Plateau, famed as the source of Collyweston stone roofing slate, is located on a small elevated area of limestone plateau overlooking the Welland Valley and Stamford. Its dry stone walls, stone villages and elevated character are reminiscent of the Cotswolds, and indeed the underlying limestone is part of the belt that runs from Dorset, through the Cotswolds into Lincolnshire.

17.3 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. As in the study for West Northamptonshire 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 North Northamptonshire.

Strategic Themes:

Natural Systems	
Figure 30	Geology
Figure 31	Landform
Figure 32	Hydrology and Flood Information
Figures 33-39	Designated Nature Conservation and Landscape Biodiversity
Land Use and Human Systems	
Figure 40	Heritage and Culture
Figure 41	Strategic and Local Green Space
Figure 42	Leisure, Recreation and Tourism Destinations
Figure 43	Access and Movement
Figure 44	Transport / Service Infrastructure and Connections
Integration of Natural and Human Systems	
Figure 45	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 30 - 45 inclusive and provide a comprehensive record of the resource base that has contributed to the development of the emerging Strategic Green Infrastructure Framework for North Northamptonshire.

17.3.1 GEOLOGY

The geological structure of North 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 30: Geology

The Resource

- North Northamptonshire's solid geology comprises entirely of sedimentary strata pertaining to the Jurassic period.
 Overlying the solid geology are superficial deposits of Quaternary glacial sands, gravels and till, while alluvial deposits
 can be found in the main valleys and tributaries of the Nene and Welland. Soils are closely related to the rocks from
 which they are derived, in terms of chemical content and physical characteristics, both of which are important factors that
 influence the range of habitats and land cover elements that occur.
- The Jurassic geology outcropping in North Northamptonshire forms part of the belt that stretches almost continuously from Yorkshire to Dorset. In Northamptonshire, Jurassic limestones and ironstones are well represented and have determined the structure of the landscape and influenced the form and appearance of settlements and buildings. Within the county, the Jurassic system consists of the Lower Jurassic Lias Group, and the Middle Jurassic, which mainly comprise limestones, ironstones, ferruginous sandstone and clay.
- The Jurassic limestones and ironstones have been extensively quarried and provided a rich source of building material which is reflected in the local vernacular. The iron rich strata have been worked since Roman times through to the 20th century, particularly in the Rockingham Forest and Corby area. The legacy of quarries, mining and associated industry has had a significant influence on the landscape. Reinstated mineral workings now characterise much of the agricultural landscape from Wellingborough in an arc to Corby.
- Along the Nene Valley, post-glacial gravels form a series of river terraces. They have provided a rich resource, and gravel
 extraction has been prolific along the Nene between Northampton and Thrapston. Much of the valley floor has been
 restored to lakes and wetland. Alluvial deposits are also extensive, occupying most of the county's river valley bottoms.
 These deposits are relatively recent, continuing to be laid down well into medieval times.

Geology: Analysis and Opportunities

- The pattern of the underlying geology underpins local distinctiveness, through the influence on the topography, soils, land use, biodiversity and the overall landscape character.
- Vernacular architecture such as the use of banded ironstone and limestone and Collyweston Slate in domestic buildings is reference both to the use of available resources for construction and specific local building traditions. Such traditions are important aspects of the historic character of many settlements and inform local distinctiveness.
- There are educational, cultural and recreational benefits arising from the potential for interpretation of geological features, as well as the links to the historic and cultural legacy.
- The extraction industry provides continuing economic and social benefits and post-extraction restoration provides opportunities for environmental enhancement.

17.3.2 LANDFORM AND HYDROLOGY

Landform and hydrology are inextricably linked within North Northamptonshire, closely reflecting the underlying geological structure and physical character of the landscape. They are dominated by the valleys of the River Nene and River Welland, although the Nene's tributaries also exert a strong influence on local drainage patterns.

Although the landform across the area is generally less dramatic in the hilly landscapes in the west of the county a sense of elevation is experienced across many of the areas relatively high plateaux that often afford wide panoramic views across neighbouring river valleys.

Figure 31: Landform

Figure 32: Hydrology and Flood Information

The Resource:

- A broad and relatively high plateau extends eastwards from Northampton. Whilst the eastern portion is cloaked in the Forests of Rockingham, the western portion has seen widespread clearance and agricultural improvement. This forms the watershed between the Nene and Welland that run parallel to each other through the county.
- An elevated area of limestone plateau to in the very north of the county provides wide panoramic views across the Welland.
- The valleys of the River Nene and Welland form well defined and distinctive topographic features, in addition to their numerous tributary valleys, notably Harper's Brook and Willow Brook.
- Significant sand and gravel extraction between Northampton and Thrapston and subsequent restoration to open water has created a large area of lakes along the Nene, and a new character for this stretch of the floodplain. The numerous water filled pits are notable hydrological features, and valued for their amenity and nature conservation interests. 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.
- The Nene navigation forms an important component of the inland waterways network linking canal systems in the west of the county, that form part of the much larger network covering London, the Midlands and the north of England to the network of navigations entering the Wash.
- 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 associated valley systems, ranging from the Nene to the smaller tributaries all
 contribute to the landscape character of the study area, at a regional as well as a local level. The distinctiveness
 of these valley landscapes is reflected in the interplay of the topographical form and the pattern of land use and
 settlement.
- Elevated vantage points provide opportunities for the creation of landmarks and celebration of views across the countryside; in contrast, the lower lying areas provide opportunities for local landmarking and waymarking;
- 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.
- River valleys will have a key role in the defining and strengthening the environmental infrastructure to balance the effects of new as well as existing development.

17.3.3 BIODIVERSITY

Figure 33 – Designated Nature Conservation Sites and Landscape Biodiversity

Figure 34 - Habitat Networks - Woodland

Figure 35 - Habitat Networks - Calcareous Grassland

Figure 36 - Habitat Networks - Neutral Grassland

Figure 37 - Habitat Network - Wetland / Open Water

Figure 38 – Habitat Networks - Composite Strategic Habitat Network

Figure 39 - Habitat Networks - Species Distribution

The Resource:

North Northamptonshire supports a range of habitats. With the exception of woodland at Rockingham Forest, 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, ancient woodland and designated woodland sites are located in the Rockingham Forest Natural Area, and particularly in the Limestone Woodlands and Boulder Clay Woodlands Biodiversity Character Type (BCT). This formed the core of what was at one time the medieval hunting forest of Rockingham.
- There is also a notable satellite woodland block located on the Cropped Clay land southeast of the River Nene at Polebrook. This lies in an area of former hunting forest known as the Bromswold.
- Many of the larger woodland blocks support conifer plantation or broadleaf plantation woodland on ancient woodland sites.
- Key woodland blocks (i.e. agglomerations of woodlands that lie within 100 metres of another woodland) in the Boulder Clay Woodlands BCT include Laundimer Woods and Fermyn Woods north of Brigstock, Geddington Chase and Old Head Wood east of Geddington, Carlton Purlieus and Pipewell Wood west of Corby, and Shire Hill Woods south of Apethorpe.
- Key woodland blocks in the limestone woodlands biodiversity character type include Brookfield Plantation north of Corby, and Westhay Wood, Buxton Wood and North Spinney, north of King's Cliffe.
- Outside these key woodland reservoirs are scattered woodlands of varying size and quality, including ancient semi-natural woodland designated as SSSI and plantation woodlands of relatively recent origin. The fragmentation of woodland habitat is as a consequence of deforestation for development and agriculture.

Calcareous Grassland

• The calcareous grassland resource in North Northamptonshire is scattered and largely associated with post-industrial sites such as quarries, active and disused railway lines and cuttings and roadside verges.

The most notable calcareous grassland sites include:

- Fineshade Abbey, comprising disused railway cuttings and roadside verges.
- Old Sulehay Forest, comprising disused railway cuttings and former quarries.
- King's Cliffe, comprising disused railway cuttings and a SSSI grassland.
- Collyweston, comprising two SSSI close to the Jurassic Way footpath
- Brookfield Plantation, north of Corby.
- Corby Old Quarries, east of Corby.

Other former quarry sites support limestone grassland assemblages at Alledge Valley centred on Cranford St Andrews, Weekley Hall Wood, Finedon, associated with former quarry activity, Fermyn Woods Country Park and Irchester Country Park, including the Roman road verges south of the area.

Neutral Grassland

High quality neutral grassland (hay meadow) is rare within North Northamptonshire and many of the grassland sites are recorded from the grassland inventory and have been subjected to varying degrees of agricultural improvement.

Neutral grasslands therefore 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, in former quarries and along disused and existing railway lines.

The most notable concentrations of the resource occur in two distinct areas to the west of Kettering and south of Rothwell and Desborough and to the east of Northampton around Sywell Reservoir. Further, less extensive concentrations are located to the south and east of Wellingborough and along the A14 east of Kettering through Cranford St Andrew.

Wetlands

The primary areas of wetland habitat are associated with the Major Floodplain Biodiversity Character Areas (BCAs) of the River Nene and River Welland, and the Minor Floodplain Biodiversity Character Areas of the River Ise, Sywell Bottom, Harper's Brook, Alledge Brook, and Willow Brook north of the River Nene, and Grendon Brook south of the River Nene.

Within the Welland Floodplain there are few wetlands owing to drainage and agricultural improvements. As a consequence only one County Wildlife Site comprising unimproved neutral floodplain former hay meadow grassland remains.

Within the River Nene floodplain, the Middle Nene section is characterised by large areas of open water created by restoration of former sand and gravel workings. In addition there is a range of associated habitats including wet floodplain neutral grassland managed as hay meadows and pastures, marsh, fen, springs and flushes and wet woodland. The large extent of sand and gravel workings is reflected in the high number of County Wildlife Sites and the presence of four SSSIs supporting spring fed marshes, open water, wet woodland and agriculturally unimproved flood meadow grasslands.

The Lower Nene section of the River Nene floodplain has been worked to a lesser degree for sand and gravel and flooded workings and associated habitats of open water, wet woodland and swamp are more dispersed in this section of the Nene floodplain. As a consequence large parts of the flood plain support grasslands (wet and dry) and areas of marsh with two notable wet grassland and marsh sites designated as SSSIs. The preponderance of marsh and grassland over open water is also reflected in the series of County Wildlife Sites within this part of the Nene floodplain.

Of the major tributaries of the Nene, the River Ise and Willow Brook are the longest and most significant in terms of habitat potential. The upper section of the River Ise is designated a SSSI. In addition, the floodplain supports good areas of wet and marshy grassland and marsh.

The Willow Brook supports small areas of marsh and two ornamental lakes associated with parkland landscapes. The lakes support fringing vegetation.

The Sywell Bottom is the smallest of the minor floodplains identified in the Biodiversity Character Assessment, but despite this, supports a reservoir, a wooded watercourse and woodland plantations.

Biodiversity Targets:

The following tables illustrate habitat creation and habitat restoration am=nd 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 Gullets	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
Lowland Calcareous Grassland	Lowland Calcareous Grassland and Quarries and Gullets	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

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		
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		

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;

LAND USE AND HUMAN SYSTEMS

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 North Northamptonshire, and the landscape itself is a record of social, political and technological progress stretching back thousands of years.

Figure 40 - Heritage and Culture

The Resource

- A wide variety of 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.
- Cultural heritage and the evolution of the landscape are foremost considerations in many areas, but significantly ion the Rockingham Forest area which has retained strong connections to its medieval past.
- 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. The Northamptonshire Historic Landscape Character Assessment identifies 12 principal Historic Landscape Character (HLC) Types. Seven HLC types possess broad landscape patterns that pre-date the 20th century. Historic patterns which predate the 19th century are represented by just three HLC types (Pre 19th Century Parliamentary Enclosure, Pre 19th Century non-Parliamentary Enclosure and Woodland). These landscapes might be regarded as the most mature in the county and express the greatest time depth. The remaining six HLC Types represent landscapes that display characteristics dating primarily to the 20th century. North Northamptonshire displays significant areas of what can be regarded as mature landscape although the majority of the area is characterised by Parliamentary enclosure patterns and 20th century patterning resulting from the restoration of mineral workings and removal of hedgerows for more intensive agriculture.
- Important historic destinations include Rockingham Castle, Kirby Hall, The Castle (Castle Ashby), Chichele College (Higham Ferrers), Great Harrowden Hall (near Wellingborough), Boughton House (Weekley), Lyveden New Bield (Brigstock), Lilford Hall (nr Barnwell), St Andrew's Manor (Barnwell), Kirby Hall and Deene Park and Hall (near Corby), Southwick Hall (near Oundle), and Fotheringhay Church and Castle.
- Registered Parks and Gardens (Grade I) of strategic significance are Boughton Park and Drayton Park, and Castle Ashby, on the southern boundary of North Northamptonshire.
- Lyveden New Bield (Brigstock), Kirby Hall gardens and Deene Park (near Corby) and the castle gardens at Castle Ashby are all open to the public.
- Rockingham Forest is a major historic asset and the subject of ongoing research by the Rockingham Forest Trust. This area of former hunting forest has its origins in the Anglo Saxon period. Rockingham Castle was the administrative centre of the Forest and the site remains a potent feature of the landscape.
- The pattern of Conservation Areas reflects the origin and focus of settlement within the locality. Within North Northamptonshire most Conservation Areas are located within the perambulation of the hunting forest; only seven are sited to the east of the River Nene.

- The close relationship between the cultural and industrial heritage with the natural and semi natural landscape is a central and recurring theme.
- The industrial heritage is important to the character and perception of the locality. Iron working, with its origins in the Roman period and continuing into the 20th century, is a particularly notable feature of the area's heritage and culture. The impact and legacy of the once widespread iron industry is principally focused on Corby as well as in the surrounding rural area, with evidence of iron working signified by modified landscapes, old quarry areas and associated industrial archaeological features.
- The boot and shoe industry has also been a notable influence on the character of settlements within Northamptonshire, in particular Northampton and Kettering, and the 'A6' towns.
- Historic railways are features in the landscape. Of particular relevance is the branchline that previously followed the length of the River Nene between Northampton and Wansford. In the north of the Study Area evidence of disused railway lines can also be seen in the landscape. Two lines used to link from Peterborough: the Peterborough to Northampton line calling via Wansford, Oundle, and Thrapston, and the Peterborough to Rugby line running via King's Cliffe and Corby.
- Beyond those structures, sites and monuments that have been formally designated, the county processes a great wealth of non designated sites and areas of historic or archaeological interest. Whilst these areas have not been mapped and assessed as part of this study, they must be assessed and considered as part of all developments associated with Green Infrastructure delivery. Similarly specific cultural associations and elements and features that contribute to local identity will be considered as part of GI delivery.

17.3.5 STRATEGIC GREEN SPACE

There is a network of strategic green space throughout North 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 41 - Strategic and Local Green Space

The Resource:

- The strategic green spaces in North Northamptonshire with public access are Irchester Country Park with Visitor Centre, East Carlton Countryside Park, west of Corby, Barnwell Country Park, Oundle, and Brigstock Country Park, near Fermyn Woods on the A6116.
- Key woodlands with Access and Recreation Roles, and which contribute to the strategic accessible green space resource
 of the study area, include Laundimer Woods, Fermyn Woods, Titchmarsh Woods, Bearshanks Wood, Wakerley Woods and
 Fineshade Woods.
- Large Nature Reserves, of particular importance because of their contribution to strategic accessible green space, are Summer Leys Local Nature Reserve, Stanwick Lakes and Polebrook Airfield.
- The strategically important accessible green spaces are found primarily in the Rockingham Forest area or Nene floodplain. This results in a potential deficit in provision within the rural landscapes to the east of the Nene and west of Wellingborough; however, the agricultural areas are sparsely populated.
- Numerous smaller sites, comprising picnic sites and nature trails, are located either along the Nene Waterway or principal routeways.
- Other green spaces within the study area which are of strategic importance include registered historic parks and gardens including Boughton House Registered Park and Garden, Drayton Park, Chase Park (Castle Ashby), Rockingham Castle, Great Harrowden, Deene Park and many other smaller sites. For most sites it is paid access only, if at all. ROW access is very limited.

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. Opportunities to
 protect and improve our understanding of more recent cultural achievements and sites should be exploited.
 Examples might include military airfields and defensive structures.
- There is often poor interpretation of sites and monuments of historic or archaeological importance and the heritage environment generally. A low level of appreciation or understanding represents a missed opportunity for education and threatens both the county's and North Northamptonshire's heritage resource.
- Scheduled monuments, listed buildings and other forms of heritage designation represent only a small proportion of known heritage assets within North Northamptonshire and as such the vast majority of sites, monuments and structures are afforded little statutory protection. This is highlighted by Rockingham Forest Trust's research which has demonstrated the richness of this resource within the Forest area. Known heritage assets themselves represent a sub set of surviving assets, and recognition of the heritage resource as finite and non-replaceable is important.
- Despite a wealth of assets many of the heritage assets are in private ownership with limited public access.
 There may be improved mechanisms for opening up public access into part of the sites through Defra's Environmental Stewardship Scheme / former Countryside Stewardship.
- Many wildlife sites within North Northamptonshire exist within or adjacent to monuments and landscapes of heritage interest. Opportunities to maximise wildlife and biodiversity benefit by tailored management of heritage sites and their surroundings should be exploited but not to the detriment of the resource itself.
- Key heritage sites within the county and North Northamptonshire are located in the wider agricultural landscape and represent 'islands' of heritage in a wider 'modern' farmed landscape. Opportunities to manage the landscape surrounding these assets should be exploited to aid the interpretation of a site the wider heritage context.
- Aspects of more recent heritage are often over looked or undervalued. This is particularly true of the historic urban environment. The historic cores of many of the Northamptonshire settlements have been designated as Conservation Areas and numerous individual buildings are listed. However, historic townscapes associated with 20th century development is less considered and at greater risk.
- The rich industrial heritage of the area should be celebrated. Than emphasis on promoting industrial heritage destinations as part of the green infrastructure strategy could assist this.

Strategic Green Space: Analysis and Opportunities:

- The evaluation of strategic green space offers an opportunity to review the provision of a wider co-ordinated network of both existing and new designated parks and open spaces across the study area.
- 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.
- An absence of common land, moor, coastline and mountain means that free access to open countryside, via the CROW Act, is limited in the study area. Country Parks and areas of open accessible woodland are therefore key assets for such activity in rural areas.
- Despite a general absence of common land, significant areas within the study area are covered by strategic scale green space although public access is limited to approximately 10 large sites.
- In relation to the absence of land covered by the CROW Act in the county, there may be opportunities for relatively low cost creation of large wet grassland / meadow common land within the Nene Valley following the closure of existing and future gravel workings, rather than restoration to farmland or other more formal access and recreation sites.
- Although there is a reasonable distribution of public open space within the Strategy Area an assessment of the quality of the resource is not an objective of the Green Infrastructure study.
- Local parks are not included in the catchment analysis because, although they are crucial components of Green Infrastructure, they are more appropriately analysed at the local scale through PPG 17 strategies.
- The country park 'experience' within North Northamptonshire varies from a restored Ironstone quarry (Irchester) to former gravel extraction sites (Barnwell), and woodland sites.
- Visitor numbers to country parks peaked in the early 1990s and the desire is to work towards improving visitor numbers. As populations increase alongside new development, it is anticipated that visitor numbers could increase to levels where litter, erosion, traffic congestion and damage to wildlife and heritage assets may occur.
- Publicly accessible woodland and Nature Reserves within the Strategy Area are critical green space destinations which provide a valuable, often high quality resource as part of the 'bigger green space picture' and should therefore be promoted; and
- Incidental picnic areas and nature trails are under used and not widely promoted.

17.3.6 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 North Northamptonshire, including nationally and regionally significant heritage and nature conservation sites, formal and informal active and passive recreation sites, and locally important sites.

Figure 42 – Leisure Recreation and Tourism Destinations

The Resource:

- Mapping of the key tourist and recreation sites in the study area confirms that there is a wealth of recreation and leisure
 opportunities and facilities that cater for a range of interest groups. These include nationally and regionally significant
 accessible heritage and nature conservation sites, formal active recreation sites and sites catering for informal recreation
 activities.
- Camping and Caravanning are popular pursuits in North Northamptonshire. Sites are generally located within the River Nene Floodplain. Other popular sites are located at Fineshade Woods and Billing Aquadrome which covers 235 acres. This extensive site provides camping and touring holidays. Grendon Lakes is also a substantial site. There are numerous other smaller sites, often associated with sailing clubs or country parks.
- A number of mooring sites are well distributed along the River Nene Navigation. Mooring sites act as focal points for visitors and are sometimes accompanied by cafes, public houses and other rural visitor attractions.
- There are many water sport and sailing centres within North Northamptonshire associated with the river or the margins of
 the former gravel extraction pits, such as the Middle Nene Sailing Club (at Thrapston) and Oundle Marina. Grendon Lakes
 east of Northampton, is the largest and home to the biggest waterboarding and water-skiing club in the Midlands. This
 site covers 150 acres and comprises twelve lakes and ponds.
- Five golf courses are located within or on the periphery of North Northamptonshire, located on the valley slopes above the Nene floodplain.
- Of the museums that are located within North Northamptonshire, excluding those associated with country parks, all but three are within urban areas. These comprise Oundle Museum, Irchester Narrow Gauge Railway and Earls Barton Museum.
- There are four Tourist Information Centres within the study area; Northampton (city centre), Kettering (city centre), Corby (civic centre) and Oundle (town centre).
- Other attractions within the Study Area include The Yarrow Galley at Oundle, a Craft Centre at Castle Ashby, and Elinor Trout Fishery. Motor racing circuits can be found at Oundle and Corby (Rockingham Motor Speedway) and an orienteering centre at Wakerley Great Wood.
- The key visitor attractions in North Northamptonshire (as identified by the Tourism Strategy) are: the country parks (Irchester and Barnwell in that order); Wicksteed Amusement Park; Northampton Central Museum; Kirby Hall; Rockingham Castle and Lamport Hall.

Leisure, Recreation and Tourism: Analysis and Opportunities:

- River/ canal boating holidays and general use of these watercourses for pleasure is an important activity; there are opportunities for further promotion of this facility to meet new tourism markets focusing on activity holidays and use of inland waterways. 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.
- There is a growing tourism sector, which is of importance to the regional economy but is starting from an embryonic base so there is much potential.
- The resident market is important for day visits. Other important markets are conference and business travel, short breaks and waterways holidays;
- Strong landscape character, lived in heritage and gardens of Northamptonshire, and soft adventure (ie walking and cycling) were identified as the strengths of Northamptonshire by the Tourism Study. Weakness included lack of brown signage, poor public transport services, lack of identity, and poor perceptions of region.
- Opportunity to develop an 'International Centre of Motor Excellence', building on local expertise and industry.
- 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.

17.3.7 ACCESS AND MOVEMENT

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

Figure 43 - Access and Movement

Figure 44 – Transport / Services Infrastructure and Connections

The Resource:

- A strong underlying pattern of strategic movement exists within North Northamptonshire, with principal corridors
 running southwest northeast along the valley of the Nene, and northwest southeast. These routes, originating in
 London, link the capital to the Midlands and echo the pattern of roads established in the Roman period. Watling Street
 and the road linking Leicester and Huntingdonshire show this common orientation. The east west corridor of the Nene,
 although not occupied by a Roman Road, is thought to represent the principal movement corridor through the county
 during prehistoric times.
- In North Northamptonshire, the main road corridors are concentrated to the west, converging on Kettering, and to a lesser degree on Corby and Wellingborough. The eastern and northern portion of the study area is less well served, indicating the absence of major settlements, and the landscape history of the area as a sparsely settled Royal Forest.
- There are four strategic roadways through or near the Study Area which provide links from the national road network into the area; these are the M1 (North to South), A45 (Peterborough to Coventry) and A43 (M40 to Stamford). The A14 is one of the few roadways crossing the county in an east west direction. It is a strategic routeway because it links Cambridgeshire and the east coast at Felixstowe with the M1 and M6 (and thus the Midlands) north of Northampton at Junction 19 (A Trans European Transport Network Priority Route).
- There are no motorways in North Northamptonshire.
- Links into North Northamptonshire from the northeast (the Peterborough area, the A1 (M) and The Wash region) are limited to the relatively minor roadway of the A605 (which then links to the A45).
- The principal east-west recreational walking routes are the Nene Way, and the Jurassic Way (routed along the scarp

overlooking the Welland in north Northamptonshire). The course of the Jurassic Way is closely followed by the Hereward Way.

- North-south routes include the Midshires Way and the Macmillan Way, although these only pass through North Northamptonshire for short distances in the northwest of the study area.
- The Lyveden Way, offering a circular route in its southernmost stretch, comprises a recreational path linking the Nene Way to Brigstock Country Park, partially through significant areas of woodland with an access or recreation role. The route also links the Nene Way to Lyveden New Bield, a key heritage, architectural and recreational resource.
- The study area is well served by cycling routes. There has been no analysis of the routes identified in respect of their suitability for cycling, so the baseline mapping represents all routes where cycling is permitted. Despite widespread provision of routes, there is an absence of a coordinated cycle network in the study area, and there are no SUSTRANS routes in the North Northamptonshire LDV. However, SUSTRANS route 6, which links London and the Lake District, passes through the county to the west of the study area boundary.
- Kettering Borough Council has prepared a Cycling Strategy which has undergone public consultation.
- The River Nene is navigable from Cotton End Lock, Northampton to the boundary of the county and beyond. Moorings
 and supporting facilities can be found along the extent of the navigational sections of the River Nene with particularly
 extensive facilities/mooring at Braunston, Welton Hythe and Welton Haven marinas. There is an absence of moorings on
 the River Nene between Billing Aquadrome and Irthlingborough with the exception of Wellingborough Embankment
 Moorings located near Irchester (for access to Wellingborough);
- Beyond the project area, the Fens Waterway 'Link' intends to provide linkage from the Wash area to the Nene at Peterborough. This strategically important navigation improvement aims to increase the recreational use of this navigation significantly;
- The principal active railway lines are the Birmingham to London Euston mainline and the Nottingham/Sheffield to London St Pancras mainline. The former does not stop in Northamptonshire but does at Milton Keynes and Rugby. To access North Northamptonshire visitors must use the Northampton Loop branchline and embark at Northampton. The latter stops at Kettering and Wellingborough on its way north to Market Harborough.
- A number of extant stretches of disused railway lines add variety to the network.
- There is an extensive bus network within Northampton and between Northampton and Weedon Bec and Wellingborough. However, the level of service is considerably less in the east of the county in association with the smaller rural settlements.
- The Nene Navigation runs through North Northamptonshire and provides an important navigable link between
 navigations that enter the Wash to the east and the network of canals that link to London, the Midlands and the north of
 England.
- 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.
- 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.
- Opportunity to reinforce the Nene Way as a centre piece to the Regional Park.
- The A605/ A45 route bordering the Nene, combines with the river to form a significant physical barrier between areas to the north and to the south. Indeed, the busy road is infrequently crossed by bridges and has resulted in the severance of many cycle/pedestrian routes.
- Principal vehicular crossings over the Nene are located at Wellingborough, Irthlingborough, Thrapston and Oundle.
- Busy roads encircling the area's principal settlements create strong urban edges and have limited the occurrence
 of urban fringe landscapes. The abrupt urban-rural interface acts as a barrier to movement between the town and
 countryside, particularly around Corby, Kettering and Wellingborough
- A section of the former Northampton to Peterborough railway line has been identified as an important recreational route with the creation of a bridleway and cycle route between Irthlingborough and Stanwick / Raunds. This could link into other potential off-road sections along the Nene Valley to create a Nene Cycleway. Structural surveys of the railway bridges between Thrapston and Irthlingborough have been undertaken. East Northampton District Council, in partnership with the Rockingham Forest Trust and the County Council, has proposed a "Green Lane Strategy" for the area. Seven towns and villages along the former Thrapston Irthlingborough line are connected to it by a bridle network. The development of the route will provide an off road sustainable transport links between all the settlements and a through route avoiding the A45.

17.3.8 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 45 – Environmental Character

The Resource:

Seven Environmental Character Areas (ECAs) are located within the North Northamptonshire together with two further ECAs that only extend a short distance into the study area. The ECAs that occupy the principal extent of the NN LDV comprise:

- Rockingham Forest;
- Welland Valley;
- Collyweston Plateaux;
- The Lower Nene (Aldwincle to Wansford);
- The Middle Nene (Northampton to Aldwincle);
- Central Northamptonshire Plateaux and Valleys; and
- East Northamptonshire Claylands.

Secondary ECAs comprise:

- West Northamptonshire Uplands; and
- Yardley Chase and SalceyForest.
- The wooded hills and valleys of Rockingham Forest and the limestone plateau at Collyweston are particularly important
 because they are distinctive and well known 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 demonstrating a great diversity of character along its length.
- 20th century urban, industrial and commercial development, including mineral extraction, has altered the character of
 some parts of the rural landscapes within North Northamptonshire. The effects of mineral extraction and road building,
 or the visual juxtaposition of industry / urban development in close association to rural landscapes, are particularly
 noticeable on the fringes of Northampton and Corby. The impact of restoration of former mineral extraction sites is also
 notable. This has seen the installation of large artificial water bodies along the Nene and the creation of wholly modern
 fieldscapes on former quarry sites.

Leisure, Recreation and Tourism: Analysis and Opportunities:

- River/ canal boating holidays and general use of these watercourses for pleasure is an important activity; there are opportunities for further promotion of this facility to meet new tourism markets focusing on activity holidays and use of inland waterways. 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.
- There is a growing tourism sector, which is of importance to the regional economy but is starting from an embryonic base so there is much potential.
- The resident market is important for day visits. Other important markets are conference and business travel, short breaks and waterways holidays;
- Strong landscape character, lived in heritage and gardens of Northamptonshire, and soft adventure (ie walking and cycling) were identified as the strengths of Northamptonshire by the Tourism Study. Weakness included lack of brown signage, poor public transport services, lack of identity, and poor perceptions of region.
- Opportunity to develop an 'International Centre of Motor Excellence', building on local expertise and industry.
- 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.

17.3.9 LAND USE AND LANDSCAPE CHANGE

Although North Northamptonshire is principally a rural area, major development is contained within the settlements of Corby, Kettering, Wellingborough and neighbouring Northampton. The variations in land use and development have a strong influence on landscape character.

The Resource:

- Corby, Kettering and Wellingborough are the principal settlements within North Northamptonshire. Smaller towns
 include Rushden, Raunds, Thrapston, Desborough and Thrapston. Other settlement is principally confined to a number
 of medium and large villages, for example Oundle. Many small villages and isolated settlements are scattered across the
 rural landscape, creating a dispersed settlement pattern which is remote in character, and in some instances appears
 devoid of settlement, limited to scattered farms.
- Future development is defined by the Milton Keynes South Midlands Sub-Regional Strategy. Within North Northamptonshire, the Regional Spatial Strategy highlights Corby, Kettering and Wellingborough as major growth towns. The strategy indicates that North Northamptonshire should accommodate 52,100 new dwellings between 2001 and 2021 with 34,100 incorporated within the three towns. Beyond North Northamptonshire, Northampton and Milton Keynes, to the southeast of the study area, are also identified as a Major Growth Areas. This growth will have a significant effect on both urban and rural character.
- 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 across the East Northamptonshire Claylands to the east of the Nene. This landscape stretches
 into Cambridgeshire and is characterised by large-scale fields, and few dividing hedges. By contrast other areas display a
 mixed farming regime with small hedged arable fields and improved pastures, creating a more intimate, traditional, rural
 landscape.
- Many of the farms across North Northamptonshire have entered into Environmental Stewardship (ES) Agreements and records provided by Defra have identified their location. Defra's Environmental Stewardship Scheme will enable the principles that underlie the previous 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 comprising a Farm Environment Plan (FEP) and justification of benefit. In parallel with, but separate from the ES Scheme, 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 Apethorpe, Rockingham Castle and Deene Park, 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 Rockingham Forest. Elsewhere across North 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.
 Although located outside of North Northamptonshire, Northampton lies in close proximity to the western boundary
 of the area and exerts a strong urbanising influence. Also, the town is important in the wider sub-regional context as
 it 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 that extend along the Nene Valley within both North and neighbouring West
 Northamptonshire. Corby, Kettering and Wellingborough as well as other smaller towns also exert a strong influence on
 their hinterlands.
- Influential built features and structures include the Rockingham Speedway Motor Racing Circuit which has a strong influence on views and landscape character on the eastern side of Corby. There is also a number of the major distribution 'sheds' along the Nene Valley that have a major local impact as a result of their large scale. A wind turbine site has recently been erected in the vicinity of Burton Latimer, which presents a notable skyline feature.
- Gravel extraction has historically been an important industry in the area. The Nene Valley in particular bears witness to the widespread effect of the industry on the landscape, and a progressive change in landscape character from valley bottom pastoral farmland to wetland. There has been a preponderance of restoration to lakes for many of the extraction sites, so an extensive network of lakes and wetland has established, principally between Northampton and Aldwincle / Thrapston. Many of these lakes are of high biodiversity value and have received national and international designation as SSSIs / pSPAs. A number also have recreational uses. The Northampton Minerals Local Plan suggests that it will become more difficult to balance the need to provide aggregates through extraction against the need to safeguard the environment. There is therefore likely to be more limited gravel extraction activity in the future along the section of the Nene Valley that lies within North Northamptonshire.

Land Use and Landscape Change: Analysis and Opportunities:

- Increased sustainable connections and accessibility between the urban and rural landscapes for 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 undeveloped 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 agrienvironment support through the 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 North Northamptonshire. This growth agenda brings opportunities to create an enhanced environment through successful regeneration, for the urban areas and also their wider setting and rural hinterland.
- Opportunities for implementation of sustainable waste management to minimise the risks of immediate and future environmental pollution and harm to human health.

18 THE NORTH NORTHAMPTONSHIRE BIODIVERSITY NETWORK

FIGURE 46 - NORTH NORTHAMPTONSHIRE: THE STRATEGIC BIODIVERSITY NETWORK

18.1 WOODLAND HABITAT RESERVOIRS AND LINKS

A number of woodland reservoirs have been identified through the mapping process. The principal areas of woodland extend across the Rockingham Forest area, and comprise both Boulder Clay and Limestone Woodlands. In view of the large scale of some of the reservoirs, these include a matrix of both of these types. In addition there are further reservoirs to the east of the River Nene Valley extending up to the eastern perimeter of the county which form part of the Cropped Claylands. The reservoirs comprise:

- Collyweston Great Wood; North Spinney / Buxton Wood / Westhay Wood; Wakerley Great Wood north of King's Cliffe;
- Shire Hill Woods to Deene Park / Weldon Park Woodlands, south of Apethorpe;
- Spanhoe Wood / Ferrels Wood / Hollow Wood adjacent to Gretton Brook;
- Deene Park Woodlands / Dibbin's Wood / Weldon Park, northeast of Weldon;
- Brookfield Plantation and Rockingham Park / and northwest of Corby;
- Thoroughsale Wood, Corby;
- Stanion Plantation / Laundimer Woods / Fermyn Woods, north of Brigstock, Lady Wood / Titchmarsh Wood Complex;
- Ashton Wold;
- Armston / Polebrook Woodland Complex southeast of the River Nene;
- Lilford Park Woods / Wadenhoe Woods;
- Barnwell Wold;
- Snapes Wood / Grafton Park Wood / Old Head Wood / Boughton Park east of Geddington;
- Geddington Chase;
- Weekley Hall Wood;
- · Pipewell Wood and Carlton Purlieus, west of Corby; and
- Brampton Wood / Hermitage Wood.

A number of principal strategic level habitat links between these reservoirs have also been identified, as follows:

- Wakerley Great Wood Complex to Deene Park / Weldon Park woodlands;
- From Shire Hill Woods northeastwards to county boundary;
- Deene Park Woodlands to Brookfield Palantation;
- Shire Hill Woodlands to Laundimer / Fermyn Woods Complex, and furthere spur to Titchmarsh Wood;
- Links between Cropped Claylands Woodlands of Ashton Wold to Polebrook Complex; to Lilford Park Woodlands; to Barnwell Wold; and to Oxen Wood at southern extension of Titchmarsh Wood;
- Weekley Hall Wood to Short Wood Complex, east of Draughton, West Northamptonshire;
- Links from Pipewell / Carlton Purlieus Woods Complex and Brampton / Hermitage Woods to Short Wood Complex, east of Draughton, West Northamptonshire;

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 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.

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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 grassland or wetland.

18.2 WETLAND/OPEN WATER HABITAT RESERVOIRS AND LINKS

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

- Nene Valley (from Northampton to the county boundary at Wansford). This section incorporates a series of reservoirs
 focused on the complex of lakes at Grendon / Cogehoe / Summer Leys Nature Reserve; Stanwick Lakes; lakes to the east of
 Great Addington / west of Ringstead; Thrapston to Aldwincle, including Titchmarsh Local Nature Reserve; Oundle Marina
 and Barnwell Country Park; and Bluebell Lakes and land to the north west of Warmington;
- Welland Valley (focused on a section of the valley to the north of the village of Medbourne);
- Sywell Bottom (incorporating two separate habitat reservoirs focused on Sywell Reservoir and Sywell Wood);
- Alledge Valley centred on Crawford St Andrew; and
- Ise Valley (to the east and northeast of Wellingborough).

A number of 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. These comprise:

- Nene Valley linking the principal habitat reservoirs that occur along the valley bottom;
- Sywell Bottom from the confluence with the Nene, east of Northampton and norrthwards to Sywell Wood;
- Ise Valley extending along the course of the river from the confluence with the Nene, east of Wellingborough, northwards and then westwards to the eastern perimeter of Desborough;
- Swanspool Brook, a tributary of the Ise that flows on an east west aligned course through the heart of Wellingborough;
- Alledge / 'Tywell' Valley extending from the Nene at Thrapston, westwards along a small valley and watercourse to the north of Woodford and south of the A14(T);
- · Short section of valley extending westwards from the Nene at Oundle to Oundle Wood; and
- Willow Brook extending from the Nene to the north of Warmington to the village and estate at Deene, east of Corby.

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.

18.3 CALCAREOUS AND NEUTRAL GRASSLAND HABITAT RESERVOIRS AND LINKS

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

- Collyweston / Easton on the Hill;
- King's Cliffe cuttings to disused railway line;
- Old Sulehay Forest cuttings to disused railway line and former quarries;
- Fineshade Ábbey Road Verge and cuttings to disused railway line;
- Corby Old Quarries / Priors Hall and Stanion Plantation, southeast of Corby;
- Brookfield Plantation, north of Corby;
- South of Great Oakley and Corby;
- Weekley Hall Wood, north of Kettering;
- Fermyn Woods /Country Park;
- Alledge / 'Twywell Valley' in the vicinity of Cranford St Andrews / St John;
- South of Finedon area; and
- Irchester Country Park area.

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:

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- East of Northampton around Sywell Reservoir and west of Wellingborough, comprising three separate but closely linked reservoirs;
- South and east of Wellingborough;
- East of Kettering within the 'Twywell Valley' through Cranford St Andrew / Cranford St John;
- West of Kettering, surrounding but not including the village of Loddington;
- North of Kettering, extending form Geddington westwards to Desborough and Rothwell;
- Harrington to Desborough;
- Stoke Albany complex; and
- Welland Valley slopes to north of Cottingham.

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 35 and 36.

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.

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.

FIGURE 47 – NORTH NORTHAMPTONSHIRE: THE STRATEGIC SUSTAINABLE MOVEMENT NETWORK

19.1 THE PRIMARY NETWORK OF GREEN WAYS AND BLUE WAYS

Green Ways and Blue Ways in North 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.

19.2 THE GREEN WAY NETWORK:

19.1.1 JURASSIC RIDGE AND ROCKINGHAM GREEN WAY

The Jurassic Ridge and Rockingham Green Way principally follows the course of the Jurassic Way, although it also follows a short stretch of the Macmillan Way in the vicinity of Braybrook. To the east of Corby, the route deviates from the course of the Jurassic Way to take in Kirby Hall, Deene Park and Blatherwyke, which offer points of interest along the route.

It comprises an important east-west connection between the Brampton Valley Way to Stamford via Corby and points of interest in Rockingham Forest. At Stamford the route adjoins the Welland and Maxey Cut Blue Way, which provides a strategic link into north Peterborough.

It passes through a variety of distinctive landscapes. The route begins at Great Oxendon, at the eastern limits of the hilly rural landscapes that characterise the West Northamptonshire Uplands. It then follows the scarp slopes that overlook the Welland Valley, weaving in and out of contrasting landscapes around Corby that form part of the wider Rockingham Forest. At Ketton, the route exits the county for a short distance providing access to a Countryside Connector that links to Rutland Water, before climbing the scarp again to enter the attractive stone village of Easton on the Hill on the Collyweston Plateau.

At the village of Cottingham there is a major junction with the Corby and Aldwincle Green Way, which provides a southeasterly route through the centre of Corby on to Fermyn Woods Country Park and close to Fermyn Woods and Lyveden New Bield to meet the Nene Valley Blue Way.

There is the opportunity to create a number of recreational viewpoints along this route in locations that afford wide panoramic views across the Welland into neighbouring Leicestershire. A substantial section of the route also passes through the well known landscape of Rockingham Forest, with its rich biodiversity and cultural heritage interests. Here, there are opportunities for sensitive waymarking to reflect the forest location and interpretation for key sites of interest along the route. Also of significance is the high occurrence of designed parklands along the route, notably East Carlton Country Park, Rockingham Park (Grade II*), Deene Park (Grade II) and Kirby Hall (Grade II*) all of which are located on or adjacent to the Green Way.

19.1.2 DESBOROUGH AND KETTERING GREEN WAY AND ROTHWELL SPUR

The Desborough and Kettering Green Way branches off the Brampton Valley to the south of Great Oxendon and provides an easterly link through Desborough and onto Kettering where it provides linkage into the Wellingborough, Kettering and Brixworth Green Way, and the Wellingborough, Kettering and Corby Green Way. The Rothwell Spur provides an important strategic link from Rothwell into the Green Way at Newbottle Bridge where the main route crosses the upper reaches of the River Ise.

The route links three significant towns into the wider network, offering direct routes through urban as well as rural areas. From the junction with the Brampton Valley Green Way, the route travels eastwards, closely following the route of the juvenile River Ouse. With the exception of Arthingworth, this route traverses the rural farmland of the West Northamptonshire Uplands before entering Desborough. After passing through the town, the route passes through a transitional landscape between the wooded landscapes of Rockingham Forest and the more intensively farmed landscapes of the Central Northamptonshire Plateaux and Valleys. Here the route passes adjacent to Rushton Triangular Lodge, a monument built by Sir Thomas Tresham, a local landowner, to mark his allegiance to the Catholic faith in the 16th century. At the village of Rushton, to the east of the Triangular Lodge, the route crosses the River Ise again before heading south into Kettering.

Tresham also built Lyveden New Bield and a link to this landmark building can be achieved by following the Countryside Connector route to Geddington and then eastwards to the Corby and Aldwincle Green Way at Fermyn Woods Country Park, from where Lyvden New Bield lies in the vicinity.

19.1.3 WELLINGBOROUGH, KETTERING AND CORBY GREEN WAY

The Wellingborough, Kettering and Corby Green Way provides a direct north-south route between the three main towns in North Northamptonshire and is one of only two strategic Green Way links across the north of the county that join two main east-west corridors, comprising the Jurassic Ridge and Rockingham Green Way, and the Nene Valley Blue Way.

The route commences in the centre of Corby, exiting the town at the EuroHub site before traversing the agricultural landscapes of Rockingham Forest. The Green Way passes through open countryside for this section of the route, although it does pass through the attractive villages of Little Oakley, Geddington and Weekley, where it skirts the western perimeter of Boughton Park (Grade I).

South of Weekley, the route passes close to the eastern fringes of Kettering, but occupies a rural setting, exploiting the green corridor formed by the River Ise that separates the town from its neighbour Barton Seagrave. Here, significant opportunities exist for the creation of a series of linear parks and habitats to provide a significant greenspace resource for the neighbouring populations. Wicksteed Park is located along this section of the Green Way and offers further opportunities to enhance its established popularity and resources for formal and informal recreation. To the east of Wicksteed Park a series of earthworks survive that mark the location of medieval fish breeding ponds. Opportunities exist to enhance the setting of these features and their interpretation and incorporate the site into the wider linear park concept.

The route continues south past Barton Seagrave along the River Ise before entering the town of Burton Latimer, south of which it returns to open countryside, before re-entering the Ise floodplain to the west of Finedon. After a short distance of following the river valley floor, the Green Way enters the urban rural fringe of Wellingborough, characterised by rail infrastructure and industrial estates before reaching the centre of the town.

The route of the Wellingborough, Kettering and Corby Green Way encompasses many contrasting experiences, providing access to open countryside, rural stone villages as well as designed parklands, degraded urban rural fringe and busy town centres. Of particular importance is the protection and enhancement of the character of the open countryside that acts as a buffer around these three major towns, as well as significant enhancement of the transitional landscapes at their fringes. Where these landscapes are particularly degraded, exciting opportunities will exist for the creation of new multi-functional landscapes that perhaps provide energy, food and recreational facilities for residents of the towns. Of particular significance are the opportunities that exist to enhance the narrow River Ise corridor that separates Kettering and Barton Seagrave. Here, as in the countryside that separates Kettering from Corby and Wellingborough, development should be prevented that creates physical or perceptual coalescence of these built up areas.

19.1.4 WELLINGBOROUGH, KETTERING AND BRIXWORTH GREEN WAY

The Welingborough, Kettering and Brixworth Green Way forms an important strategic link between Kettering and Wellingborough to the wider rural landscape in the vicinity of the northern edge of Northampton. It consists of two separate sections that extend from the two towns and converge at Walgrave before linking into Brixworth to the north of Northampton.

The route traverses the open countryside of the Northamptonshire Plateaux and Valleys Environmental Character Area. This is a varied and complex area of open modern arable fieldscapes separated by valleys that possess a more intimate and small scale character.

The southern section of the Green Way (from Wellingborough) leaves the town adjacent to the Industrial Estate adjacent to the busy A508 from where it follows a watershed between a series of streams that drain southwards to the Nene and eastwards into the River Ise. A significant stretch of the route travels through Sywell Wood, offering a contrast of experience to the more open character of the adjacent arable landscape. Beyond the wood the route passes through Hannington and on to the southern fringes of Walgrave where it meets the northern arm.

The northern section of the Green Way (from Kettering) exits the town at a busy road crossing before entering the rural landscapes around the villages of Great Cransley and Broughton and then on to the junction with the southern route at Walgrave.

Significant stretches of the Green Way traverse degraded urban rural fringe landscapes and opportunities exist for the creation of more vibrant and enriched landscapes along these corridors, particularly within the urban rural fringe areas where the towns and countryside meet. Both arms of this route exit the main built up area at busy road crossings, and opportunities exist for the creation of new pedestrian and cycle bridges, as in both cases the road corridor forms an abrupt barrier limiting movement from the town into the wider countryside in this direction.

19.1.6 CORBY AND ALDWINCLE GREEN WAY

The Corby and Aldwincle Green Way is the principal route connecting Corby to the rural and wooded landscapes of Rockingham Forest and on through to the Nene Valley Blue Way. It also provides the most direct link between the Nene Way and Jurassic Ridge and Rockingham Green Way that are the main east-west routes through this half of the county.

The route starts at Cottingham and follows the Roman Road through the centre of Corby where it takes advantage of the significant area of ancient woodland and parkland that occupies the heart of the town. At the Civic Centre, the route travels north in order to provide access to the characterful ancient heart of Corby before crossing beneath the mainline railway into the Stanion Plantation woodland. Here the route takes advantage of a stretch of disused railway to the village of Stanion beyond which it passes into rural landscapes typical of the Rockingham Forest.

Beyond Stanion, the Green Way closely parallels the course of Harper's Brook, traversing open countryside, but at all times in sight of significant areas of woodland that are an important characteristic of the Rockingham Forest landscape. At Brigstock, the route deviates from the course of the river to rise up the valley sides into Fermyn Woods Country Park, noted for its various themed walks through areas of woodland. The imposing and symbolic structure of the National Trust owned Lyveden New Bield, designed by Sir Thomas Tresham, lies in close proximity to the Green Way via the Countryside Connector to the north of Lady Wood / Titchmarsh Wood.

Beyond Fermyn Woods Country Park, the Green Way passes through further areas of woodland, comprising Lady Wood and Titchmarsh Wood, and then through the open rural countryside that extend down to the Nene Valley, and the junction with the Nene Valley Blue Way. The attractive stone village of Aldwincle is located close to the River Nene at the intersection of these Green and Blue Ways, and is famed for having two parish churches. The 73 hectare Titchmarsh Local Nature Reserve is located to the south in close proximity to the Green Way and is one of the top five sites in the country for wintering wildfowl. The Reserve has car park provision and a defined footpath route to explore this former gravel extraction site which includes two lakes, as well as smaller ponds and woodland.

19.2 THE BLUE WAY NETWORK:

19.2.1 NENE VALLEY BLUE WAY (NORTH NORTHAMPTONSHIRE)

The Nene Valley Blue Way extends between the urban centres of Northampton and Peterborough. It follows the course of the River Nene through a sequence of contrasting landscapes, with the broad, flat and often tranquil floodplain landscape providing a distinctive setting for the this portion of the network. Since the earliest times the Nene has been a major cross country transport corridor, and as such this Blue Way continues a long tradition of strategic movement along the river valley.

East of Northampton, the town continues to exert a strong urbanising influence, particularly evident in the line of electricity pylons, proximity of built development and infrastructure, restored gravel workings and perhaps more subtly in the urban fringe character of the farmland. This is also evident in the great diversity of land uses which includes a water sports centre and a nature reserve. A short distance to the south of the Blue Way and to the southeast of Wellingborough is Irchester Country Park. This important resource began life as an ironstone quarry. The old quarry face displays distinctive rock formation horizons and fossil evidence and is designated as a Regionally Important Geological Site.

Beyond Northampton, there are further urbanising influences where the Nene Valley Blue Way passes close to Wellingborough, Rushden, Higham Ferrers, Irthlingborough and Raunds. This stretch coincides with significant areas of former sand and gravel extraction sites that have been restored to open water habitat. Perhaps the most significant former gravel workings are located to the west of Stanwick at the easternmost limit of this stretch of the river. The Stanwick Lakes complex offers a large recreational resource comprising a series of walks through a range of habitats. Whilst the lakes are a modern imposition

on the landscape, a result of half a century's extraction, they represent a significant habitat resource, particularly for overwintering birds. Significant opportunities exist for improving the available habitat and utilising sections of the site for active and passive recreation.

Beyond Stanwick Lakes the river channel occupies a more naturalistic floodplain of improved pasture with the course of the Blue Way closely bordering the natural meandering course of the river. The route is punctuated by a series of sites and places of interest including the site of a deserted medieval village at Mallows Cotton and a number of attractive stone villages that fringe the floodplain including Woodford, Denford, Aldwincle and Wadenhoe.

Further northeastwards, the route follows a wide meander around Oundle, a town noted for its architectural heritage and distinctive character. To the north of the town is Fotheringhay, where the castle site, village and church mark the site where Mary Queen of Scots was executed in 1587.

For much of the route, the Nene Valley Blue Way follows the course of Nene Way National Long Distance Footpath. However, unlike a number of sections of the Nene Way the course of the Blue Way follows the river more closely. This is particularly evident in the section between Pilton and Oundle. Here the Nene Way travels some distance away from the river to enter the historic village of Barnwell, whereas the Blue Way maintains its route bordering the river past Lilford and Oundle Marina.

Given that the Nene Valley Blue Way closely follows the river, detailed routing and design will need to consider the impact of seasonal flooding. A range of options are available including porous paving, raised walkways as well as stretches that are perhaps seasonally impassable without getting wet. Of paramount importance is ensuring that the design of the route mirrors the changing impact of rural and urban influences and is sensitive to the high nature conservation value of long stretches of the route.

19.2.2 WELLAND AND MAXEY CUT BLUE WAY

The Welland and Maxey Cut Blue Way is located entirely beyond the county boundary. As a consequence a detailed description of the route, and the associated features and landmarks, has not been provided. However, it is included in this study to highlight its importance as an important component of and linkage with the wider sub-regional sustainable movement network.

The route provides linkage between Stamford and the Jurassic Ridge and Rockingham Green Way to the north of Peterborough, and importantly the Peterborough Green Wheel. From Stamford the Blue Way initially follows the course of the River Gwash and passes between the notable parkland landscape of Burghley Park located to the south of the Gwash, and Uffington Park, to the north of the river. To the east there is a notable transition along the route to a flat, open and drained landscape that is not typical of Northamptonshire. Indeed the Maxey Cut, which the Blue Way runs along, is one of a large number of drainage channels that divide the landscape up into the rigid geometry that characterises the fenland landscapes of Cambridgeshire.

The route also passes in close proximity to the village of Helpston, located 1.5.km to the south of the Blue Way. The village is the birthplace of the renowned 'nature poet' John Clare. His poetry is a testimony to rural life in the late 18th and early 19th centuries. The evocative 'enclosure poems' in particular attest to his anger about the changing rural landscape resulting from the Enclosure Acts and provide a fitting reminder of the effects of landscape change and our perception of landscape character.

20 SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS IN NORTH NORTHAMPTONSHIRE

FIGURE 48 –THE NORTH NORTHAMPTONSHIRE STRATEGIC GREEN INFRASTRUCTURE FRAMEWORK page 00

20.1 THE SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS

The Sub-Regional corridors within North Northamptonshire broadly following the strategic waterways and valleys, comprising the Nene Valley from the eastern edge of Northampton to the county boundary near Wansford, and beyond into Peterborough, and the valleys of the Ise, Harper's Brook and Willow Brook. At the eastern side of the county at Elton Park the sub-regional corridor extends beyond the county to the south of Peterborough where it links into the Peterborough Green Wheel. These strategic corridors also follow notable concentrations of biodiverse areas, or well defined movement patterns and opportunities, notably the Jurassic Way, and often incorporate 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 North Northamptonshire.

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

- Nene Valley (Northampton Wansford)
- Nene Valley (Wansford to Peterborough)
- Ise Valley
- Harper's Brook
- Jurassic Wav
- Willow Brook
- Elton Park to Peterborough South (Peterborough Green Wheel Link)

The names proposed are based on the geographic features and places within which they pass or connect to. 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.

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.

20.2 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 'multifunctionality' 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 doorstop to countryside 'connections'.

SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS IN 20 NORTH NORTHAMPTONSHIRE

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:

- Ecton Wilby
- Rushden Souldrop
- Sywell Reservoir Broughton Hockley Lodge Finedon Valley
- Finedon Little Addington
- Little Addington Hargrave
- Rothwell (Triangular Lodge) Wicksteed Park
- Wicksteed Park Thrapston
- Thrapston Bythorn;
- Top Lodge Desborough
- Macmillian Way
- Stoke Albany Little Oakley
- Boughton Park Titchmarsh Wood
- Achurch Clopton
- Geddington Stanion
- Stanion Deene Park
- Brigstock Country Park Oundle
- Oundle Great Gidding
- Oundle Wood Shire Hill Wood
- Blatherwycke Fotheringhay
- Gretton Harringworth (Jurassic Way)
- Wakerley Wood Fineshade Wood
- King's Cliffe Wansford
- Welland Valley

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

20.3 URBAN AREA CONNECTIVITY

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.

In conjunction with the North Northamptonshire study a Local GI pilot study was undertaken for Corby. The findings of this urban GI study demonstrated how both Sub-Regional and Local GI corridors link into the heart of the settlement. The details of this pilot study of are set out as Study C – Urban Green Infrastructure- Methodology and Pilot Study.

20.4 NORTH NORTHAMPTONSHIRE GI FRAMEWORK: SCHEDULE OF POTENTIAL PROJECTS AND GREEN INFRASTRUCTURE BENEFITS

A schedule of existing, emerging and potential Green Infrastructure projects within North 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; Rural Sites; and Improvements to the Rights of Way Network. 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.

Town Centre and Urb.	an Sites			
Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Corby Town Centre Woodlands: Thoroughsale Wood and Hazel Wood	Detailed review of ancient woodland resource in heart of town with purpose of bringing woodland back into positive environmental management and also delivering a range of social, and economic benefits including recreational use, and addressing anti-social uses inhibiting use and access to woodlands.	 Biodiversity: potential for biodiversity enhancement and management of ancient woodlands and contributing to meeting BAP Targets; Sustainable Movement Network and Access: footpath creation and improved access for local communities; Strategic and Local Green Space: Enhancement and creation of publicly accessible green space; Environmental Character: Enrichment of landscape character of area; 	Harper's Brook	

Town Edges				
Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Corby Public Realm and Environmental Improvements	Environmental enhancement and landscape works along key routes into Corby including new street furniture, signage and hard and soft landscaper schemes Will create high quality entrance routes into Corby to underpin the step- change in investors / residents attitudes to the town, stimulate interest and investment in the town and engender civic pride of the existing residents.	 Biodiversity: potential for biodiversity enhancement and management and creation of wildlife corridors in association with green space projects and strengthening of linear routes; contributing to meeting BAP Targets; Sustainable Movement Network and Access: footpath creation and improved access for local communities, and potential for links from Corby town centre to wider countryside network; Strategic and Local Green Space: Enhancement and creation of publicly accessible green space; Leisure, Recreation and Tourism: development of landmark features and gateways enhancing town as a leisure destination; Environmental Character: Enrichment of landscape character of area; Heritage and Culture: potential to celebrate historical development of Corby including industrial archaeology links and strengthening of local identity; 	Jurassic Way; Harper's Brook	Stoke Albany to Little Oakley; Stanion to Deene Park; Gretton to Harringworth;
Wellingborough Arboretum	This project would be the first in a network of tree planting initiatives in the Borough of Wellingborough to form a boroughwide arboretum linked to the Nene Valley, and the new urban extension of Stanton Cross to the east.	 Biodiversity: potential for biodiversity enhancement and contributing to meeting BAP Targets through enhancement of tree cover across Borough; Strategic and Local Green Space: Creation of publicly accessible green space where appropriate; Heritage and Culture: development of educational resource. Environmental Character: enhancement of landscape character of Borough; 	Ise Valley Nene Valley	Borough wide project with opportunities for: Ecton to Wilby Hockley Lodge to Finedon Finedon to Little Addington

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Wellingborough Embankment to Hardwater – Greenway	This will link the centre of Wellingborough, from the refurbished Embankment car park that is part of the project, into the heart of the Nene Valley, along the route of a disused railway line.	 Biodiversity: potential for biodiversity enhancement and contributing to meeting BAP Targets; Sustainable Movement Network and Access: footpath creation and improved access for local community and visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Ise Valley Nene Valley	
Ise Valley Meadows	This project would aim to take a substantial existing area of green space to the east of Kettering and increase its biodiversity. This would provide increased learning opportunities, and enhanced public accessibility, utilisation and enjoyment. The project would also aim to re-instate natural river flow around meanders, and developing 'dipping' ponds and education facilities such as a pier. The project would also involve creation of wild flower habitat areas, and the establishment of foot and cycle paths.	 Biodiversity: potential for biodiversity enhancement and management and contributing to meeting BAP Targets; incorporation of enriched wetland habitats and creation of wild flower meadows; Sustainable Movement Network and Access: footpath and cycleway creation and improved access for local community and visitors; Heritage and Culture: development of educational resource. Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Environmental Character: enhancement of landscape character of valley; Healthy Living: activities provided encourage healthier lifestyle; 	Ise Valley	Wicksteed Park to Thrapston

Rural Sites				
Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Top Lodge at Fineshade Woods, East Northamptonshire	A community visitor centre providing a new and improved access to the ecologically and historically important ancient woodland of Rockingham Forest creating a northern Gateway to the River Nene Regional Park. Provides and protects Open Access to 300 ha of ancient woodland with new all-ability paths. Employment, Tourism Education and community opportunities, enhanced Biodiversity and historic landscape.	 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; 	Harper's Brook	Wakerley Wood to Fineshade Woods King's Cliffe to Wansford
Deenthorpe Airfield	Upgrading of runway and infrastructure to accommodate a 'living' air museum, comprising 50 historic aircraft, creating a tourist attraction to bring in further historic aircraft plus general aviation facilities.	 Heritage and Culture: promotion of the understanding of historic resource and 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 site; Sustainable Communities and Economy: commercial benefits from visitor use of facilities and sustainable management. 	Willow Brook	Stanion to Deene Park

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Fermyn International Arts Centre	This project will be a centre of excellence for creativity and the environment at Fermyn Woods, near Brigstock. Both the new, sustainably designed facilities and the adjoining landscape will become the focus for a creative, educational and research programme of events and interventions exploring new forms of art making in collaboration with environmental services.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors to facility; Strategic and Local Green Space: Creation of additional publicly accessible facility within an accessible green space; Heritage and Culture: development of educational and cultural resource. Leisure, Recreation and Tourism: enhancement of leisure destination, including wider accessibility; Environmental Character: celebration and opportunity for enhancement of local landscape Healthy Living: encouraging exercise and healthier lifestyle for visitors to site; 	Harper's Brook	Brigstock Country Park to Oundle Boughton Park to Titchmarsh Wood
Stanwick Lakes	The project will build on the first phase of outdoor infrastructure works / play areas which have been completed. The following elements will be added Central building providing indoor activities Visitor interpretation Iconic outdoor theatre Infrastructure incorporating bicycle hire facilities, adventure trails, water sports and fishing	 Biodiversity: biodiversity enhancement and management and contributing to meeting BAP Targets Sustainable Movement Network and Access: footpath creation and improved access Heritage and Culture: promotion of the understanding of archaeological resource and 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 valley; Healthy Living: activities encourage exercise and healthier lifestyle; Sustainable Communities and Economy: commercial benefits from visitor use of facilities and sustainable management; 	Nene Valley (Northampton to Wansford)	

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Wetland Wilderness, Summer Leys	This project will provide essential management for an internationally important wetland habitat. This will increase its biodiversity and create an inspiring place for the public to learn about the site's wildlife facilities, including an innovative new bird hide, cycle and walking routes, improved moorings and a new waterside café.	 Biodiversity: biodiversity enhancement and management and contributing to meeting BAP Targets; Sustainable Movement Network and Access: footpath and cycleway creation and improved access Heritage and Culture: 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 Nene Valley; Healthy Living: activities encourage exercise and healthier lifestyle; Sustainable Communities and Economy: commercial benefits from visitor use of waterside café facilities and sustainable management; 	Nene Valley (Northampton to Wansford)	
Lyveden New Bield	Acquisition of land for provision of a new access route to the historic National Trust property, together with a new car park and visitor reception building. Part of the land will be established as a wildflower meadow and part re-established as wood pasture.	 Biodiversity: biodiversity enhancement and management and contributing to meeting BAP Targets; Sustainable Movement Network and Access: footpath and car park creation and improved access; Heritage and Culture: wider accessibility to and promotion of the understanding of heritage resource; Strategic and Local Green Space: Creation of additional publicly accessible green space; Leisure, Recreation and Tourism: enhancement of visitor destination, including accessibility; Environmental Character: enhancement of landscape character of site including architectural refurbishment of listed buildings; Sustainable Communities and Economy: commercial benefits from visitor use of facilities and sustainable management. 	Harper's Brook	Boughton Park to Titchmarsh Wood Brigstock Country Park to Oundle

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Project Chester Farm Heritage Park training and research centre	Brief Description The development of a key component of the Gateway Network of visitor sites in the Regional	Multi-functional Green Infrastructure Themes and Benefits Heritage and Culture: Long term protection and enhancement of archaeological resource; promotion of the understanding of historic resource and	Sub-Regional GI Corridor Nene Valley (Northampton to Wansford)	Local GI Corridors
	Park. Securing the long term protection and enhancement of listed buildings. Securing the refurbishment of Chester Farm. Protects and enhances the Scheduled Monument, Roman Station and Deserted Medieval Village. Provides a regional educational and research facility for the management of the wider environment for the benefit of local government officers, elected members, schools and educational establishments, professionals as well as community and special interest groups.	development of comprehensive regional educational and research facility; • Strategic and Local Green Space: Creation of additional publicly accessible green space; • Leisure, Recreation and Tourism: enhancement of visitor destination, including accessibility; • Environmental Character: enhancement of landscape character of site including architectural refurbishment of listed buildings; • Sustainable Communities and Economy: commercial benefits from visitor use of facilities and sustainable management.		

Improvement to Righ	ts of Way Network			
Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Rights of Way Network Improvements - general	Improvements will enable residents and visitors to have increased leisure choices to enable them to make healthier lifestyle choices and sustain the ROW network through increased use and satisfaction. Improved inks will provide local residents with viable alternative travel choices which will reduce traffic flows, enabling the county to incorporate the predicted future growth without having a detrimental impact on traffic flow, congestion and the environmental impacts of such.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	All Corridors	
Nene Way	Enhancement to the existing rights of way network linking new initiatives such as Upton, Cultural Mile, Waterside Northampton (in West Northamptonshire) and wider areas including the Fens Waterway link, Yarwell and Peterborough Green Wheel network.	Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle;	Nene Valley (Northampton to Wansford)	

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Ise Valley Way Network	Delivery of a high level network of accessible links between urban and rural areas to projects along the Ise Valley including increased biodiversity, arts and visitor gateway sites. Creation of a new access project linking local towns around a green infrastructure network. Villages to valley, and town to country.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Ise Valley	Hockley Lodge to Finedon; Finedon to Little Addington; Rothwell to Wicksteed Park; Wicksteed Park to Thrapston
Rothwell to Desborough Link Rights of Way	Enhancement to the existing rights of way network	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Ise Valley	Sywell Reservoir to Broughton Rothwell to Wicksteed Park Top Lodge to Desborough
Higham Ferrers to Irthlingborough Link Rights of Way	Enhancement to the existing rights of way network	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Nene Valley (Northampton to Wansford)	

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional Gl Corridor	Local GI Corridors
Summer Leys Discovery Walk	Enhancement to the existing rights of way network.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Nene Valley (Northampton to Wansford)	
Burton Latimer to Isham Link Rights of Way	Enhancement to the existing rights of way network.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Ise Valley	Wicksteed Park to Thrapston
Great Cransley to Mawsley Link Rights of Way	Enhancement to the existing rights of way network.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 		Sywell Reservoir to Broughton Rothwell to Wicksteed Park

Project	Brief Description	Multi-functional Green Infrastructure Themes and Benefits	Sub-Regional GI Corridor	Local GI Corridors
Oundle Riverside Walk	Enhancement to the existing rights of way network.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Nene Valley (Northampton to Wansford)	Brigstock Country Park to Oundle Oundle to Great Gidding
Oundle to Cotterstock Link Rights of Way	Enhancement to the existing rights of way network.	 Sustainable Movement Network and Access: footpath creation and improved access for visitors; Strategic and Local Green Space: Creation of publicly accessible green space; Leisure, Recreation and Tourism: enhancement of leisure and tourism destination, including accessibility; Healthy Living: activities provided encourage healthier lifestyle; 	Nene Valley (Northampton to Wansford)	Brigstock Country Park to Oundle Oundle to Great Gidding

21.0 NORTH NORTHAMPTONSHIRE SUB-REGIONAL GREEN INFRASTRUCTURE CORRIDORS AND PRIORITIES FOR ACTION

The North Northamptonshire Sub-Regional Green Infrastructure Corridors

- Nene Valley (Northampton Wansford)
- Nene Valley (Wansford to Peterborough)
- Ise Valley
- Harper's Brook
- Jurassic Way
- Willow Brook
- Elton Park to Peterborough South (Peterborough Green Wheel Link)

Nene Valley (Northampton – Wansford) Sub-Regional Corridor

The Nene Valley (Northampton – Wansford) Sub-Regional Corridor follows the River Nene floodplain and lower valley sides from the eastern side of Northampton in the vicinity of Cogenhoe to the county border at Wansford. By following the principal river system through the county, the Corridor forms the backbone of the GI framework within North Northamptonshire. Other Corridors link into it, comprising the Ise Valley at Wellingborough, and Harper's Brook in the vicinity of Aldwincle and Islip. The Corridor encompasses the rich floodplain and valley bottom landscapes of the Lower Nene to the north of Thrapston and the settled and extraction scarred floodplains of the Middle Nene, which have been extensively worked for the sand and gravel reserves.

The mosaic of wetlands, open water and semi-natural grasslands are common habitats within this corridor, and are important for national and county level sites of nature conservation value, as well as providing opportunities for future water management in relation to the growth settlements of Northampton and Wellingborough. The wetland and open water habitats within the Nene floodplain are particularly significant and a series of Habitat Reservoirs have been identified with key opportunities for protection and enhancement, and where appropriate creation. These are connected by Priority Habitat Links resulting in a continuous chain of opportunities to further enrich the resource.

There are numerous heritage features associated with prehistoric settlement in the river corridor, particularly archaeological artefacts, many of which are scheduled, and other heritage features, such as the site of Fotheringhay Castle. In the northern part of the corridor there are notable views of the sequence of valley bottom settlements, such as Oundle, Thrapston and Irthlingborough, which include many buildings constructed in the local vernacular and stone. These contrast markedly with the more recently constructed settlement edges of Northampton and Rushden which are dominated by distribution related land uses and prominent large industrial scale buildings. Visually significant landmarks within the southern portion of corridor are limited to modern industrial buildings, notably Victoria Mills in the case of Wellingborough, while local church spires and towers provide more iconic features in the north. Water towers are also recurring features on the skyline.

The Nene Way Long Distance Walk weaves between the banks of the River Nene for the length of the proposed corridor providing access from the urban communities of Northampton, Wellingborough and Rushden to the wider floodplain. There are a number of strategic leisure and recreation sites. These include the Grendon Lakes Water Centre, Summer Leys Nature Reserve, Irchester Narrow Gauge Railway Museum and Irchester Country Park. Barnwell Country Park is located in the northern and more rural section of the corridor adjacent to Oundle. The Stanwick Lakes development, focused on a series of restored gravel pits, is developing as an important outdoor recreation site and also offers appreciation of the wildlife and archaeological heritage.

Nene Valley (Northampton – Wansford) Sub-Regional Corridor: Summary

The overall GI resource found within the Nene Valley corridor is relatively extensive; however existing links from this important nature conservation and recreation corridor to GI assets within the wider North Northamptonshire landscape are poor and there is also a need to develop the landscapes 'functionality' with regards to its role for water storage and sustainable movement:

Priorities for Action:

- In biodiversity terms there is a need to enhance and link the wetland habitat reservoirs through the river corridor and the woodland reservoirs at Titchmarsh Wood, Barnwell and Ashton Wood.
- Connection to the strategic leisure and recreation sites at Titchmarsh Wood, Ferymn Woods, Laundimer Woods (all Forestry Commission owned), Brigstock Country Park and Wicksteed Park should be strengthened, centred on the improvement and promotion of facilities along the Lyveden Way to improve access between the Nene Valley and Corby within the Harper's Brook Sub-Regional GI Corridor.
- Further enhancement and improvements to the access connections between the Nene floodplain and Finedon, Kettering, and Brigstock should be undertaken to provide for sustainable movement use at the inter-settlement and local levels.
- There are a number of existing landmarks within the floodplain, due to its central location within the County, and
 proximity to principal transportation corridors. However, as a consequence of its fragmented visual qualities within
 the Lower Nene area, opportunities should be sought to introduce iconic landmarks and features into the landscape.

Nene Valley (Wansford - Peterborough)

As the Nene Valley (Wansford – Peterborough) Sub-Regional Corridor is located outside of the county, a detailed description of this Corridor and Priorities for Action have not been provided. However, the continuity of green infrastructure corridors beyond the county into neighbouring Cambridgeshire is important, hence the inclusion of this link from the boundary of Northamptonshire at Wansford into the heart of Peterborough. Beyond the city, the Sub-Regional corridor would broadly follow the course of the Nene to the North Sea and The Wash.

Ise Valley Sub -Regional Corridor

The Ise Valley Sub-Regional Corridor follows a north – south route along the River Ise Valley from Northampton to the north to Kettering. It then continues on a westerly course to the settlements of Desborough and Rothwell. To the north of Desborough, the Corridor links with the Jurassic Way Corridor, and also with the River Nene Corridor to the east of Wellingborough.

Although not as broad as the Nene Corridor it is an important natural physiographic feature within the intensively farmed land that extends across the valley bottom and onto the rolling Ironstone Valley slopes that rise above the floodplain. In view of the agricultural practices, the habitat resource is often limited within this corridor. Nevertheless, there are some notable, albeit intermittent habitats and resources of importance that have been identified, notably wetland habitats within the valley bottom, for example isolated areas of grazing marsh occur in the floodplain in the vicinity of Burton Latimer. The entire Ise Valley has also been identified as a Wetland and Open Water Priority Habitat Link which confirms the potential for providing opportunities for enhancement of the resource. The neutral grassland resource is particularly notable with numerous fragmented sites scattered through the valley corridor. Concentrations of this resource occur along Wellingborough's eastern edge, and to the north of Kettering, and also between Desborough and Rothwell. These have been grouped into Neutral Grassland Habitat Reservoirs in order to provide core areas for the protection, enhancement and extension of this resource. Similarly, a concentration of calcareous grassland is located at Geddington Chase, to the north of Kettering. This is a particularly notable assemblage associated with the Weekley Hall Woods and Ise Valley bottom and rising slopes to the north, with the Ise Valley bottom designated as a SSSI. Although there are few nature conservation sites of national or county significance within the Corridor, with the Geddington Chase calcareous grassland area is a notable and valuable exception.

Boughton House and Park are important heritage features in the corridor, and the Registered Park is also significant as a Sub-Regional green space although public access is limited to when the park is open. The Triangular Lodge within the landscape to the north of Kettering is a notable local feature, and of county renown, although not visible from the wider area. The wider visual quality of the corridor is influenced by communication infrastructure and the industrial built edges of the adjacent settlements of Wellingborough and Kettering.

There are no long distance routes currently linking through this Corridor, nor a continuous routeway for local level use including links between Wellingborough and Kettering. The only strategic recreation sites are Wicksteed Park within the built edge of Kettering, and Boughton House to the north of Wellingborough.

There is a notable local link between the Ise Valley and Harper's Brook corridor through the extensive woodland of Geddington Chase to the north of Boughton House and parkland. From the village of Geddington there are public rights of way through the Chase to Stanion, and to Brigstock, the latter via the ancient route of Clay Dick that skirts the eastern edge of Geddington Chase.

Ise Valley Sub-Regional Corridor: Summary

The overall GI resource found within the Ise Valley corridor is relatively poor indicating the that opportunities are being missed for the delivery of GI objectives in these landscapes so near to key growth settlements. There is therefore a need to develop the landscape's 'functionality' within many of the strategic theme areas:

Priorities for Action:

- The potential for water storage and flood risk management should be established in close combination with growth area development.
- In biodiversity terms there is a need to enhance and link the calcareous grassland habitat reservoir at Geddington Chase through to those sites located in the Stanion area of Corby by way of the railway line. Wetland and neutral grassland habitat creation and enhancement would also provide important linkage between the biodiversity resource in the Nene Valley with the Rockingham Forest area.
- Continuous recreation routes from the Nene Valley to Wellingborough, and from Wellingborough to Kettering should be developed to improve connectivity at the inter-settlement level, to provide access to the strategic destination of Wicksteed Park and Boughton Park and sustainable movement options for local users.
- A further routeway between the Ise Valley and Harper's Brook Sub-Regional GI corridors (via the Geddington Stanion local corridor) should be considered in due course to provide sustainable access between Kettering / Wicksteed Park and Corby (and its accessible Sub-Regional greenspace in due course.
- Subject to demonstration of need there may be an opportunity for a strategic accessible recreation / greenspace site within the Kettering locality to provide for the growth communities in this area.

Harper's Brook Sub-Regional Corridor

The Harper's Brook Sub-Regional Corridor follows a broadly northwest – southeast alignment and provides an important link between the Nene Valley (Northampton to Wansford section) and Jurassic Way Sub-Regional GI Corridors. A substantial part of this corridor follows the course of the Harper's Brook valley, from the village of Aldwincle at the confluence of the Brook with the River Nene northwestwards to the settlement of Stanion, southeast of Corby. Beyond Stanion, the Sub-Regional Corridor extends northwestwards to and through the settlement of Corby to link with the Jurassic Way Sub-Regional Corridor at Cottingham.

The section of the Corridor that follows the Harper's Brook Valley is a quiet rural landscape with a well managed and productive agricultural character. Within the valley bottom and gently sloping lower slopes tree cover is limited to intermittent small woods and copses and linear vegetation following the course of the Brook. However, on the rising slopes that extend up to the Wooded Clay Plateau to the east, a sequence of extensive woodlands define the sky line and provide a more enclosed and wooded character. Settlement is generally sparse, limited to the series of small stone and brick built villages of Lowick, Sudborough, Brigstock and Stanion, and linked by the A6116 that follows the valley bottom. In contrast to the quiet rural character of the Harper's Brook valley section, the extension through Corby has an urban character although the extensive ancient woodland of Thoroughsale Woods within the heart of Corby is an important green space and biodiversity asset.

The biodiversity value of the Harper's Brook Corridor is particularly important as a consequence of a substantial network of large scale broadleaved ancient semi-natural woodlands within and in the vicinity of the corridor. The Forestry Commission managed woodlands of Titchmarsh Wood, Fermyn Woods, Mounterley Wood and the Laundimer Woods mosaic, and to the west, Cowthick and Stanion Lane Plantations, South Wood and Oakley Purlieus together form a substantial woodland resource. They make an important contribution to the character of the Corridor to the southeast of Corby and a habitat link to the Nene Valley.

Heritage features within the valley are generally limited although the parkland landscape associated with Fermyn Woods Hall and associated Deer Park between Laundimer and Mounterley Woods is a notable heritage feature. Drayton Park, a Grade 1 listed Registered Park and Garden to the southwest of the corridor and the village of Lowick is also important. Beyond and to the northeast of the corridor, the iconic building of Lyveden New Bield and associated garden earthworks is a significant heritage feature and landmark. Elsewhere within the corridor a number of the dwellings within the small historic villages within the lower valley slopes of Harper's Brook valley, and also within Cottingham to the west of Corby are designated as

Listed Buildings. The route of the Roman Road that extends through the heart of Corby and Thoroughsale Wood is also of note. The Corridor follows the alignment of this ancient route within and beyond Corby to Cottingham and the Jurassic Way Sub-Regional Corridor.

Recreational opportunities within the Harper's Brook Corridor principally comprise Brigstock Country Park and public access to the Forestry Commission woodlands, which together provide a valuable network of Sub-Regional Green Space. To the west of Corby, the East Carlton Countryside Park is another important recreational destination. A network of public rights of way is evident throughout the corridor but sections of Harper's Brook have limited access.

Within and on the perimeter of Corby the Corridor will be influenced by the effect of development associated with the town's allocation as a growth area.

Harper's Brook Sub-Regional Corridor: Summary

The overall GI resource within the Harper's Brook Corridor is enhanced by the important biodiversity value of the network of mature woodlands that extend across the rising valley slopes and plateau area. While public rights of way are evident throughout the corridor, some areas have more limited access and there are opportunities to improve the network of sustainable movement, and also develop further multi functional opportunities within the corridor.

Priorities for Action:

- In respect of the biodiversity resource, opportunities should be sought to conserve and create further habitat linkage between the extensive woodlands between the Nene Corridor and Corby to ensure continuity and strengthening of this important habitat resource;
- A wider system of recreation routes should be created through the Valley Corridor both along the Harper's Brook and
 to the west of Corby, and to the strategic leisure and recreation sites at Titchmarsh Wood, Ferymn Woods, Laundimer
 Woods and Brigstock Country Park to expand leisure and recreational opportunities, and to provide for sustainable
 movement use at the inter-settlement and local levels;
- Opportunities should be sought within Corby to create further accessible greenspace to strengthen and consolidate the existing urban woodland assets and memorable green corridor through the town;
- It should be ensured that multi-functional green infrastructure opportunities are incorporated within new residential and mixed use developments within and on the perimeter of Corby;
- Agricultural land management practices should be encouraged that reverse the decline in hedgerow and woodland management;
- The establishment of a further routeway between the Ise Valley and Harper's Brook Sub-Regional GI corridors should be considered via the Geddington Stanion local corridor in due course to provide sustainable access between Kettering and Corby and its accessible Sub-Regional greenspace;
- In biodiversity terms, opportunities should be sought to enhance and link the calcareous grassland habitat reservoir at Geddington Chase through to the sites located in the Stanion area of Corby by way of the railway line.

Jurassic Way Sub-Regional Corridor

The Jurassic Way Corridor mainly following the route of the Jurassic Way and the wider landscape through which this long distance path passes. It links with the Willow Brook Corridor to the north of Corby at Rockingham and follows a broadly southwest alignment to the village of Cottingham, where it links with the Harper's Brook Corridor, and beyond to East Carlton and Wilbarston and Stoke Albany. From here it takes a southerly alignment to the small town of Desborough where it links with the Ise Corridor. This interconnection with other Sub-Regional Corridors ensures that the GI Network is fully integrated in this northern section of North Northamptonshire.

Although short in length relative to other Corridors in North Northamptonshire, a range of contrasting landscapes are evident with a diversity of landforms and character. In the eastern section, between the villages of Rockingham and Cottingham, the Corridor broadly follows the imposing steep west facing Farmed Slopes of the Welland Valley that support a mosaic of rich farmland, woodland and heritage features, notably Rockingham Park and associated estate managed farmland. Further west, the landform softens into undulating hills and valleys with the villages of East Carlton, Wilbarston and Stoke Albany located on the upper slopes. The final section of the corridor extends south to Desborough and follows a broader, flatter and more open agricultural landscape interspersed with some substantial areas of woodland. This area comprises the Wooded Clay Plateau which is underlain by extensive deposits of Boulder Clay. Throughout its length the corridor has a generally quiet rural character with agriculture forming the predominant land use. It character and quality is enriched by the mosaic of woodlands

that extend across the Welland Valley slopes and onto the plateau area.

The principal biodiversity resource within the corridor comprises mosaics of broadleaved woodlands, principally within the Rockingham Estate but also within the plateau area between Stoke Albany and Desborough. Both these woodland reservoirs have potential for extension to further enhance and link these important resources. There are also some notable areas of neutral species rich grassland within the Rockingham Estate, and a further reservoir of grassland surrounding Stoke Albany, with potential for extension and linkage to promote connectivity of these habitats. A further area of neutral grassland is present to the north of Desborough forming part of a much more extensive habitat reservoir to the south and southwest.

Rockingham Castle is the most notable heritage resource within the corridor, with its imposing setting on the upper slopes of the Welland Valley. Originally a Norman stronghold, the Castle was converted in Tudor times to the fine building that is evident today. It is set within a former 13th century deer park that was subsequently modified in the 18th century into a landscape park and now a Registered Park. The Rockingham estate as a whole has a strong influence on the character and quality of this section of the Jurassic Way Corridor. The heritage resource is further enriched by some well preserved areas of ridge and furrow along the steep Welland Valley slopes where the gradient has precluded their destruction by modern agricultural practices. There are also some notable villages along the upper slopes of the Welland Valley which provide further heritage interest.

Rockingham Castle is a principal destination, and an important Sub-Regional Green Space. East Carlton Countryside Park also attracts many visitors. The Jurassic Way is an important county wide long distance route through the corridor as far as Stoke Wood to the south of Stoke Albany after which its follows a westerly course beyond the corridor. A local network of interconnecting footpaths link Stoke Albany and Desborough but there is potential for further linkage and enhancement of these routes.

Jurassic Way Sub-Regional Corridor: Summary

The GI resource within this short Corridor is generally of good quality. The woodland resource is well established and of important biodiversity value, with broadleaved woodlands extending across the Welland Valley slopes, notably within and in the vicinity of the Rockingham Estate, and to the south of Stoke Albany. There are also notable areas of neutral grassland. There is potential for further enhancement and extension of both of these valued habitats. In addition to the Jurassic Way, which is a major long distance route through much of the Corridor, a network of local public rights of way connects the main settlements. There is potential to strengthen and enhance the intersettlement links to improve the network of sustainable movement, as well as developing further multi functional opportunities within the corridor. Rockingham Park and East Carlton Countryside Park provide notable accessible Green Spaces and destinations.

Priorities for Action:

- The valued broadleaved woodlands that extend across the steep Welland Valley slopes within Rockingham Park should be conserved, and also those to the south of Stoke Albany. These are of considerable biodiversity value and make an important contribution to the landscape character with their interrelationship with the landform. Where possible their enhancement and extension should be promoted in order to increase the woodland reservoir and habitat links:
- Encourage, through Environmental Stewardship, the protection and where possible extension of neutral grassland habitats to strengthen the connectivity between the exiting reservoirs of this habitat within Rockingham Park and around Stoke Albany;
- Rockingham Park and East Carlton Countryside Park are notable destinations and also provide strategic accessible
 green space. Opportunities should be sought to improve the access to these green space and heritage sites through
 the provision of enhanced sustainable transport modes and recreation routes;
- The establishment of further sustainable movement links between settlements within the Corridor should be encouraged, including enhanced links to the Jurassic Way from surrounding settlements including Desborough.

Willow Brook Sub-Regional Corridor

The Willow Brook Corridor crosses a range of landscape types and contrasting landforms ranging from the steep Welland Valley slopes to the broad valley of the Willow Brook that crosses the Ironstone Quarried and Wooded Clay Plateaux, and the Wooded Limestone Hills and Valleys. In the county's northern extremity the corridor also follows the fringe of the open Limestone Plateau. Within this range of landscapes there is a mosaic of mainly broadleaved woodlands, riparian vegetation within the valley bottoms, and a number of attractive stone villages and historic houses and their associated parkland estates. This diversity of local landscapes contributes to the corridor's rich and varied rural character and a generally high quality throughout derived from the intactness of the landscape features and their interrelationship.

At its western extremity at Rockingham, where it links with the Jurassic Way, the corridor extends along the steep wooded and farmed slopes of the Welland Valley to the north of Corby followed by the broad and gently sloping valley of the Willow Brook between Corby and the western side of King's Cliffe, and the extensive mixed and broadleaved ancient woodland at Westhay and Fineshade Wood. From here the corridor extends northwards to again follow the Welland Valley encompassing both the pastoral valley bottom and the steep west facing farmed valley slopes between the lower lying floodplain and the expansive limestone plateau to the east.

Agriculture is the principal land use throughout with a mosaic of rich farmland contained within a network of hedgerows and many broadleaved woodlands of varying scales ranging from small copses and linear tree belts to some substantial areas of ancient semi-natural woodland.

The Willow Brook Corridor supports a range of biodiversity rich habitats. A series of small and medium size woodlands, many of which are broadleaved, occur throughout the corridor, and these coalesce to form valuable woodland habitat reservoirs. Westhay Woods, and the linked area of Forestry Commission managed Top Lodge and Fineshade Woods, is the largest and most notable. This extensive area of ancient woodland is important for its biodiversity value and historic link with the Rockingham Forest. There are also some notable areas of calcareous grassland to the north and east of Corby where the Ironstone has been quarried to reveal limestone strata, and also to the west of West Hay Wood in the cuttings of a now derelict railway line. The valley bottoms of the Willow Brook and River Welland support a sequence of local wetland habitats with an area of grazing marsh to the west of Duddington of particular note. All of these habitats have potential for the habitat reservoirs to be enhanced and wider linkages and enhanced habitat connectivity

There are a number of heritage features within the corridor that contribute to its rural character and interest. In addition to the imposing Grade 1 listed Jacobean Kirby Hall to the east of Corby, there are a number of other historic houses and associated parkland estates, notably Deene Hall, with its Registered Park, and Laxton and Bulwick Halls, both of which are also set within parkland. In addition, Fineshade Abbey is located to the west of Westhay Wood. There are also a number of compact historic stone built villages within the corridor, notably the Ironstone village of Rockingham with its distinctive warm brown vernacular buildings, and further east a sequence of villages along the Willow Brook Valley comprising Deene, Bulwick and Blatherwycke where limestone is the predominant stone for the vernacular buildings. Further north the villages of Duddington, in the Welland Valley bottom, and Collyweston and Easton on the Hill on elevated locations on the limestone plateau again contain many attractive dwellings in the local limestone as well as the use of Collyweston Slate roofs. The legacy of historic landscapes features and buildings all contribute to the corridor's rich and diverse character and a sense of continuity and cultural associations over many centuries.

A short section of the Jurassic Way follows the Welland Valley slopes east of Rockingham together with a further section passing though Duddington and Westhay Woods. The Macmillan Way also links into this route from Easton on the Hill. Elsewhere, a network of footpaths link the villages along the Willow Brook valley although access to the Brook itself is more limited. There is also limited access within the steep Welland Valley slopes north of Corby including the extensive Brookfield Plantation. The Forestry Commission managed Top Lodge and Fineshade Woods is accessible to the public, and a Community Visitor Centre is to be provided to further enhance visitor enjoyment. In addition to this facility, there are also a number of other strategic destinations and green spaces linked to the important historic houses and parkland notably at Kirby Hall and Deene Hall. There is limited provision for sustainable transport links to this sequence of heritage sites and their fine landscape settings.

Willow Brook Sub-Regional Corridor: Summary

The GI resource within the Willow Brook Corridor is generally well established and of a high quality. In addition to the important biodiversity value of the network of mature woodlands that extend across the rising valley slopes and plateau area, there is also a rich heritage resource linked to the historic houses and their associated parklands, and stone built villages. While public rights of way are evident throughout the corridor, some areas have more limited access and there are opportunities to improve the network of sustainable movement, particularly linking into Corby, and also to develop further multi functional opportunities within the corridor where opportunities arise.

Priorities for Action:

- The network of biodiversity rich woodlands is an important asset within the corridor, and their continued conservation and management is essential. Where possible, further woodland planting should be encouraged in order to increase the extent of the principal woodland reservoirs and habitat links, notably at Westhay and Fineshade Woods and Priors Hall plantations;
- Wider accessibility to woodlands should be promoted building on the benefits demonstrated by the Forestry Commission's Top Lodge and Fineshade Woods where a Community Visitor Centre is to be provided to further enhance the visitor experience and the value of this Strategic Green Space.
- There are a number of wetland habitats along the Willow Brook and Welland valleys, but these are sometimes
 isolated. Opportunities should be sought through environmental stewardship to extend and link these valued
 habitats to improve habitat connectivity;
- There are reservoirs of calcareous grassland within the corridor which should be conserved and where possible extended in order to increase the areas of this limited resource within the county;
- The corridor benefits from a rich heritage resource. The wider understanding of and access to these heritage sites should be promoted through provision of sustainable transport modes and recreation routes to these notable sites and green spaces, including easier access from the nearby town of Corby;
- Opportunities should be sought to enhance and create further footpath and recreation routes along the Willow Brook in order to promote wider access to the watercourse, with links into the heart of Corby, as well as to the villages within the Valley. Greater accessibility across the farmed and wooded slopes of the Welland Valley should also be considered including the extensive woodland to the north of Corby to enhance the availability of Sub-Regional Green Spaces.

Elton Park to Peterborough Sub-Regional Corridor (Peterborough Green Wheel Link)

As the Elton Park to Peterborough Sub-Regional Corridor (Peterborough Green Wheel Link) is located outside of the county, a detailed description of this Corridor and Priorities for Action have not been provided. However, the continuity of green infrastructure corridors beyond the county into neighbouring authorities is important, hence the inclusion of this link from the boundary of the county at Elton Park, on the eastern side of the River Nene. From Elton Park the corridor extends eastwards to link into the section of the Peterborough Green Wheel to the south of Peterborough.

FIGURES

PLEASE REFER TO THE DOCUMENT 'GI_STUDY B - FIGURES'.