

Green Infrastructure Plan



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1. Introduction

Local authorities have powers to promote social, environmental and economic well-being within their administrative areas. They also have a range of statutory roles and responsibilities relating to land use planning, minerals, waste, education, transport, land reclamation, pollution and land drainage. All of these are relevant to the purposes and interests of Green Infrastructure (GI). Local authorities can improve the Green Infrastructure network by putting green assets at the heart of urban design and management.

Green Infrastructure is made up of a range of 'green' resources which can form a network of multi-functional open spaces. These include parks, open spaces, woodlands, gardens, river corridors, allotments, open countryside and landscaping around buildings. The importance of Green Infrastructure lies in its interconnected nature and the ability to recognise where additional linkages and existing linkages enhanced through the planning system. This includes recognition of the benefits that Green Infrastructure brings to people through the provision of cycle routes, public rights of way, as well as connecting them with the 'outdoors'.

The concept of Green Infrastructure planning is based on a strategic approach to ensuring that environmental assets of natural and cultural value are integrated with land development, growth management and built infrastructure planning at the earliest stage.

Therefore, the purpose of a Green Infrastructure Plan is to identify all the components of Green Infrastructure which are pertinent to the Borough of Oadby and Wigston, whilst identifying the needs and opportunities for protecting, enhancing and extending networks of green spaces. This will be used as an important evidence base for the Local Plan to ensure that the environmental and social importance of the network of green sites continue to serve the population of the Borough.

The following policy and strategy documents set out the objectives, policies and targets for delivering Green Infrastructure and are pertinent to the development of this Green Infrastructure Plan.

1.1. National Policy and Guidance

- UK Sustainable Development Strategy (2011)
- UK Sustainable Communities Act (2013)
- National Planning Policy Framework (2012)
- National Planning Practice Guidance
- Natural England's Housing Growth and Green Infrastructure Policy
- Natural England GI Guidance
- DEFRA Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services (2011)

1.2. Regional Policy and Guidance

- Leicestershire Environmental Strategy 2011- 2021
- Space4trees, The Regional Forestry Framework for the East Midlands (2005)

- Green Infrastructure Guide for the East Midlands
- East Midlands Public Benefit Mapping Project (2006)

1.3. Sub-Regional and more local Policy and Guidance

- Local Biodiversity Action Plans
- Leicester and Leicestershire Strategy for Economic growth 2010-2020
- Rights of Way Improvement Plan
- Landscape Character Assessments (updated 2017)
- River Soar and Grand Union Canal Partnership Action Plan (2016)
- Stepping Stones Community Countryside Management Project

1.4. Oadby and Wigston Borough documents

The Oadby and Wigston Local Plan aims to ensure that Green Infrastructure is an integral part of new developments, seeking not only to address the needs of new developments, but also to address shortcomings in already developed areas. The Core Strategy policies related to Green Infrastructure will be supported by the Green Infrastructure Plan and future Supplementary Planning Documents which will set out further guidance about how Green Infrastructure principles should be applied to proposals for new development.

Local Plan Policy 8 Green Infrastructure sets out the overall aim for green infrastructure planning within the Local Plan. However, due to the cross-cutting nature of Green Infrastructure there are references in several other policies namely: Policy 37 Biodiversity and Geodiversity; Policy 38 Climate Change, Flood Risk and Renewable Low Carbon Energy; Policy 39 Sustainable Drainage and Surface Water; Policy 42 Green Wedges; Policy 43 Countryside; Policy 44 Landscape and Character; Policy 45 Local Green Space.

The Green Infrastructure Plan should be read in conjunction with the following Oadby and Wigston Borough documents as they contain valuable evidence in relation to Green Infrastructure:

- Landscape Character Assessment
- Extended Phase 1 Habitat Survey (2017).
- Nature Conservation Strategy 2007 - 2017
- Biodiversity Action Plan
- Oadby and Wigston Green Wedge Management Strategy
- Oadby and Wigston Green Wedge Review
- Oadby, Thurnby, Stoughton Green Wedge Management Strategy
- Annual Open Space Audit
- Conservation Area Appraisals and Supplementary Planning Document
- Town Centre Area Action Plan (Area Action Plan Guidance upon adoption of the Local Plan)
- Climate Change Evidence Base Study (2015)
- Joint Strategic Flood Risk Assessment (2014)

1.5. The 6Cs Green Infrastructure Strategy

The 3 cities of Leicester, Derby and Nottingham and the 3 counties of Leicestershire, Derbyshire and Nottinghamshire make up the 6Cs area.

The 6Cs Green Infrastructure Strategy aims to protect, enhance and extend networks of green spaces and natural elements in and around the three cities and their surrounding towns and villages. This includes the Borough of Oadby and Wigston which is expected to accommodate 2,960 new houses up until 2031. Therefore the 6Cs Green Infrastructure Strategy sets the strategic context for the Borough's Green Infrastructure Plan which will look at the existing Green Infrastructure, as well as the potential to create new Green Infrastructure and the mechanisms to achieve it.

2. Green Infrastructure Assets in Oadby and Wigston

Four themes set the scene for the assessment, planning and provision of Green Infrastructure in the Borough:

- 2.1. Biodiversity
- 2.2. Access and recreation
- 2.3. Landscape Character and Historic Environment
- 2.4. Natural Processes and Environmental Systems

A fifth theme, '2.5 Groups delivering Green Infrastructure' has been included as it is considered pertinent for the delivery of the Borough's Green Infrastructure Plan. This section describes and evaluates each of the five themes in relation to the Borough.

2.1. Biodiversity

The Borough of Oadby and Wigston has two important advantages in terms of promoting biodiversity. Firstly it has urban, suburban and rural habitats in close proximity and secondly, the two Green Wedges bring these habitats closer together. This enables species to use features within all these elements of the rural and urban landscape.

The main habitats and species which are important within the Borough and which have been identified through the Extended Phase 1 Habitat Survey (2017) include:

Habitats

Veteran trees

The National Planning Policy Framework paragraph 18, states that the loss of aged or veteran trees should be avoided. The Extended Phase 1 Habitat Survey (2017) demonstrate that the Borough has a high quantity of veteran trees and trees as potential bat roosts and reinforced the point that these should be protected and monitored. In addition, whilst many of the trees are not considered to be 'Veterans', by protecting them now, they become Veteran trees of the future.

The Stoughton Grange Area has been identified as having the finest examples of veteran and potential veteran trees within the Borough outside the Local Wildlife Sites.

The Grand Union Canal and the River Sence are likely to be important sites for bats in the Borough. As well as feeding on insects hatching from the water, bats will use these linear features as corridors to help them travel to other foraging areas.

Urban trees

Urban trees play a vital role in urban heat exchange which will become increasingly important within the climate change agenda. Trees also have many other qualities which also include filtering pollutants from the air, providing shade in the summer, providing habitat for invertebrates and softening the often harsh townscape. It is

also possible that having trees outside a property can increase the value of the property.

Trees can be protected through Tree Preservation Orders or Conservation Area status although these do offer limited protection and therefore there is no guarantee that trees will be in situ in years to come. The Borough undertakes a tree planting programme, but community projects encouraging householders to plant suitable trees for front gardens and using the opportunity to create new woodlands as part of new development should be encouraged.

Hedgerows

Hedgerows provide important networks of linear corridors weaving through both the urban and rural landscape and provide the ability to link up woodland areas.

The Extended Phase 1 Habitat Survey (2017) determined that there are 85km of hedgerow within the Borough, all of differing quality. Almost 7,000 metres of hedgerows have been identified as being species-rich with trees which are of high biodiversity value. 13 of the hedgerows meet the Hedgerow Regulations with many more almost meeting the Hedgerow Regulation criteria. Work should be done to improve the existing network.

Woodland

A range of woodland areas have been identified in the Borough, mainly broad-leaved plantations. However the woodland is very fragmented and exists as scattered remnants of once larger stands, with the main woodland area being concentrated in Oadby at Fludes Lane Woodland. Brocks Hill Country Park in Oadby has increased the woodland potential through planting schemes since 1997.

The major habitat deficiency in the Borough is the very small total area of woodland and through the process of the Green Infrastructure Plan there should be opportunity to identify areas which can be planted to enhance the deficit.

Ponds

83 ponds have been identified in the Borough with the majority being in the rural area. Like hedgerows, ponds can play a crucial role in the landscape as stepping stones for specific wildlife, which strengthens the biodiversity at a spatial level. Further survey work is required to identify the potential for great crested newt species and where these populations are in relation to hedgerows, mature trees and unimproved grassland.

Species

Habitats in the Borough support priority species. The Grand Union Canal and the River Sence are important for otter and water vole. The agricultural landscape around the Kilby Bridge area is also recognised at a regional level as being an important area for supporting farmland birds, such as tree sparrow and lapwing.

Bats will utilise suitable habitat in both the urban and rural landscape, although no strategic surveying has taken place to confirm the extent of their use of the landscape. It is considered that the main corridors of the River Sence, the Grand Union Canal and the railway along with woodland edge linking to hedgerows will be important to support bat species.

A population of Marbled White Butterfly is supported by the habitats on the Wigston Railway Triangle and is considered to be the most northerly population of this species, although as a result of climate change, populations could move further north.

2.1.1. Biodiversity Designations within the Borough

2.1.1.1. *Local Nature Reserves*

Lucas Marsh Local Nature Reserve

Immediately adjacent to Brocks Hill Country Park in Oadby, this nature reserve is owned by the Borough Council but leased to the Leicestershire and Rutland Wildlife Trust. Habitats include a reed-bed, ponds, rough grassland, dense scrub, scattered trees and a mature hedge.

Clifton Bridge Local Nature Reserve

Clifton Bridge is also owned by the Borough Council. This is a site of unimproved mesotrophic grassland, scrub and mature hedgerows adjacent to the Grand Union Canal in Wigston provide an oasis for grass snake and farmland birds which are becoming scarce in the wider agricultural landscape.

2.1.1.2. Country Parks

Brocks Hill Country Park, Oadby and proposed Oadby Grange Country Park

Although primarily designated for recreation, country parks under the National Parks and Access to the Countryside Act 1949 also serve to act as an introduction for visitors to the wider countryside and nature. Both country parks (could) contribute to biodiversity by planting of trees and hedgerows to create new woodland belts within the landscape, thus creating connectivity between the urban edge and the wider countryside. This is also achieved by managing grassland which favours invertebrates and mammals, by planting orchard trees of local Leicestershire origin and by managing ponds which favour wildlife.

2.1.1.3. Local Wildlife Sites

There are numerous wildlife sites within the Borough. Local Wildlife Sites (previously known as Sites of Importance for Nature Conservation) are designated because they represent good examples of habitats supporting various aspects of biodiversity within Leicestershire. The majority of the Local Wildlife Sites in the Borough are on private land with two sites (Fludes Lane Woodland, Oadby and Clifton Bridge Local Nature Reserve, Wigston) being in the ownership of Oadby and Wigston Borough Council. Together the wildlife sites contribute to the conservation of woodland, veteran trees, ponds and species-rich hedgerows.

2.1.1.4. Site of Special Scientific Interest (SSSI)

The Kilby-Foxton Canal and Lime Delves SSSI

The Grand Union Canal from its junction with Welford Road eastwards into Harborough District is scheduled as the Kilby-Foxton Canal and Lime Delves SSSI. Within Oadby and Wigston Borough, this relates to the stretch from Kilby Bridge (SP 609 969) to the eastern boundary of the Borough at Turnover Bridge (SP 623 961). The SSSI has been designated because 'the plant and animal communities of the site represent excellent examples of those characteristically associated with slow-flowing lowland rivers in eastern and central England'.

This section of the canal and the adjacent wetland which is an excavated pit from an old lime-stone quarry make up an important site for water plants and animals due to the quality of the underlying geology which gives rise to clear, clean and very hard water.

2.1.1.5. Regionally Important Geological Site

Regionally Important Geological and Geomorphological Sites (RIGS) are currently considered important places for Earth science outside statutorily protected land such as Sites of Special Scientific Interest (SSSIs).

Kilby Bridge Quarry, Wigston is the one and only Regionally Important Geological and Geomorphological Sites within the Borough and this is situated immediately to the north of the railway line at Kilby Bridge and sits within the wider Local Wildlife Site designation known as Barn Pool Meadow. This site is ecologically interesting within a wider agricultural landscape, but the quality of the habitat has deteriorated since its original designation as a Local Wildlife Site.

2.2. Access and Recreation

This section sets out those aspects of Green Infrastructure that contribute towards providing local residents with access and recreational opportunities throughout the Borough.

2.2.1. Green Wedges

The purpose of Green Wedges is to protect important areas of open land which influence the form and direction of urban development, ensure that open land extends outwards between the existing and planned development limits of the urban area; preserve strategic landscape and wildlife links between the countryside and urban open spaces; prevent the coalescence and maintain the physical identity of settlements adjoining the main urban areas and allow recreation and access to the countryside; and provide opportunities for leisure and recreation

2.2.1.1. Oadby and Wigston Green Wedge

The Oadby and Wigston Green Wedge separates the settlements of Oadby and Wigston and is a green lung incorporating Brocks Hill Country Park, former Golf Course and Leicester Racecourse, all of which retain the 'open nature' of landscape required within a Green Wedge.

A Management Strategy was produced to direct the development of the Green Wedge and is delivered by Oadby and Wigston Borough Council. Management focuses on improving the nature conservation value and landscape character across the Green Wedge whilst seeking to address issues such as access.

2.2.1.2. Oadby, Thurnby, Stoughton Green Wedge

The Oadby, Thurnby, Stoughton Green Wedge lies to the north of the Borough and is different to the Oadby and Wigston Green Wedge in that the primary land use is agriculture with small villages. A management strategy published in 2005 focuses on maintaining key characteristic landscape features and continuing the good accessibility for the different user groups.

2.2.2. Brocks Hill Country Park, Oadby

Brocks Hill Country Park is situated within the Oadby and Wigston Green Wedge and is a site that residents and visitors to the Borough can access and have a feel for the wider countryside, since its development as a Millennium Project in 2000. A visitor centre built and designed with sustainable technology developed by De Montfort University, acts as a focal point for many different groups, including schools and general visitors.

The country park relies on volunteers to help with the management of the site by running volunteer work days one day a week.

2.2.3. Proposed Oadby Grange Country Park

Situated in the eastern side of the Borough, the area of land to be leased from the land-owner is expected to come into the ownership of the Borough Council in due course. A management plan has been written to direct the management of the country park to encourage biodiversity and will be implemented once the site is under lease.

2.2.4. Fludes Lane Woodland

A linear ash-oak woodland which stretches from the A6 to the east of the Borough and which links up with the proposed Oadby Grange Country Park, is a strategically important habitat within the Borough, also enabling pedestrian access to the wider open countryside.

A management plan has been written for the site and is being implemented through community projects which encourage local residents and tree wardens to have a sense of 'ownership' and assist the Borough Council in managing the woodland.

2.2.5. Leicester Racecourse and former municipal golf course, Oadby

The racecourse and former golf course combine to provide a significant open space in the north of the Borough, linking to Knighton Park in Leicester City. Together they form about 130 acres with large areas of woodland planting and hay meadow. Birch trees from the woodland are coppiced to make the jumps on the racecourse.

2.2.6. Glen Gorse Golf Course

Glen Gorse Golf Course is located to the south-east side of the Borough, off the A6. Two public right of ways across the site enables access both to the north and south of the site onto Mere Lane, a historic path and boundary to the Borough, and west towards Coombe Park.

2.2.7. Parks and Open Spaces

A network of parks, playing fields, churchyards, cemeteries, allotments and other open spaces throughout the Borough provide stepping stones which act as 'breathing spaces' as well as formal areas for exercise for the residents. Examples range from Blaby Road Park, the largest area of open space in South Wigston to numerous small areas of open space. This includes Green Flag Award holding Peace Memorial Park in Wigston which has areas for quiet reflection and Brocks Hill Country Park in Oadby. The highway verges, though formally maintained do provide a link between all these areas with the majority having trees planted, but which provide the opportunity for also creating further habitat improvements such as wildflower meadow.

2.2.7.1. Sport and recreation

The parks provide facilities for a range of sporting activities such as football, cricket, bowls, play-areas for children and walking. These activities all contribute to residents' health and well-being.

2.2.8. Allotments

There are four allotment sites within the Borough: Aylestone Lane Allotments and Manchester Gardens in Wigston, Wigston Road Allotments and Brabazon Road allotments in Oadby.

2.2.9. Grand Union Canal

The Grand Union Canal is a strategic green corridor in the south of the Borough with a towpath which provides good access for walking both west into Leicester City and east towards Foxton. The towpath also enables other footpaths adjacent to the canal to be accessed, thus providing wider access benefits.

The towpath can be accessed at a range of locations including Kilby Bridge and Crow Mills car park, the latter of which provides a small picnic site adjacent to the canal at the Borough boundary in South Wigston with Blaby District Council.

The canal is also accessed for fishing from the towpath. Immediately adjacent to the canal at Kilby Bridge is the Limedelves SSSI which is also being used by fishermen, a

practice that seems to have developed over a number of years, but is potentially damaging to the water quality and the overall habitat.

2.2.10. Public rights of way

There are public rights of way throughout the Borough, with provision in Oadby, Wigston and South Wigston. A public right of way from the A6 entrance of Fludes Lane Woodland provides access into the proposed Oadby Grange Country Park. Footpath provision which will be created through the establishment of the country park will result in additional access to unite footpaths out towards Stoughton.

Elsewhere, a network of parks, open spaces and local wildlife sites provide a mixture of both formal and informal access across the Borough. There is scope for increasing public access across the Borough which could be achieved through developer contributions or with negotiation through land-owners.

2.3. Landscape Character and Historic Environment

The Oadby and Wigston Borough Landscape Character Assessment, (updated in 2018), serves to identify what is distinctive and important about the landscape of the Borough.

The assessment states that the Borough contains a diverse range of landscapes including three main centres, residential areas, two green wedges, country parks and areas of open countryside encompassing the Grand Union Canal and the River Sence. The term landscape covers not only natural features such as landform, water features and natural features subject to human management processes, but also man-made constructed features such as roads and buildings.

Within the rural landscape, natural and managed natural landscape features are likely to determine the landscape character, for example woodland cover, single mature trees and hedge patterns. Within the urban areas whilst the built environment such as street pattern and building use will determine the character, the pattern of street trees, garden trees and hedgerows will also be important for determining the 'greenness' of the built environment.

2.3.1. Rural Landscape Character Assessment

The Landscape Character Assessment determined that differences in the character of the landscape are very subtle. In essence the Borough is a transition zone between the more distinct plateau and steep sided valley landscapes to the north and east and the more open, rolling landscapes to the south and west.

Natural factors such as geology, landform, drainage, soils and landcover/vegetation appear to have had little effect in limiting the spread of urbanisation into the countryside. Generally, the urban edge is well integrated into the landscape, with hedgerows, trees and subtle changes in landform helping to limit views of the urban edge from the countryside. This is considered to be an important positive characteristic of the rural-urban fringe in the Borough and one that should be protected and strengthened where necessary.

The over-riding aim should be to retain a predominantly open, natural, rural transitional area between town and country, which is well integrated with the countryside and which allows good public access to it and through it.

2.3.2. Grand Union Canal Conservation Area

The Grand Union Canal built between 1793 and 1814 as part of a (pre railway age) national transport link, has been protected from encroaching residential development so that it retains its fundamental rural character within the Borough.

The Grand Union Canal Conservation Area was designated by Leicestershire County Council in October 2000. It is a 48 kilometre long linear area extending from Welford on the Northamptonshire and Leicestershire border to the City of Leicester at Aylestone.

The Conservation Area covers the canal and its related facilities such as aqueducts, boatsheds, wharves, mileposts, and bollards, lock keepers cottages, ponds, clay pits and canal side facilities. The canal is essentially a narrow linear waterway flanked by a towpath, crossed at regular intervals by bridges and controlled in height by locks.

The width of the Conservation Area boundary varies along its designated length according to the type and nature of features and boundaries present.

The Canal towpath offers possibilities of walking either into Leicester or towards Foxton / Market Harborough, and joining up with existing footpaths into the countryside towards Countesthorpe in Blaby District.

River Soar & Grand Union Canal Partnership 2016 / 2019 Action Plan has recognised that improvements could be made to access along the canal.

2.4. Natural Processes and Environmental Systems

2.4.1. Hydrology

The main features of the Borough relating to hydrology are the River Sence, the Grand Union Canal, the Limedelves quarry pit, Kilby Bridge Pit (Regionally Important Geological Site - RIGS) in the south of the Borough and the Washbrook in the north. A brook also runs from Coombe Park in Oadby, follows the valley through and partly culverted under the Wigston Harcourt estate before emerging into the River Sence, by Kilby Bridge. The Borough also has a large number of ponds throughout the rural area and ditches which contribute to the overall management of water. A man-made concrete water-course (flume) also drains a substantial part of South Wigston, in the direction of the River Sence.

The EU Water Framework Directive Standards will be identified for all water bodies in the River Basin Management Plans. River Basin Management Plans were prepared by the Environment Agency (EA) and set out measures in order to achieve 'good status' (ecological, chemical and physical) in designated water bodies. The first plans were completed in 2015.

Depending on where any new growth is sited in the Borough, there may be potential negative impacts on any nearby water-bodies from the development. The Water Framework Directive recognises the potential impacts on water bodies from new development as a pressure that must be addressed. For example new development can affect aquatic ecology and water quality by changes to the volume and quality of surface water runoff and increases in treated sewage effluent and frequency of storm discharges from the foul sewerage network. A system needs to be in place to prevent this occurring. For example ensuring that new water infrastructure is designed and located to improve the quality of local watercourses and is resilient to the effects of climate change can be achieved by a system of Sustainable Urban Drainage incorporating reed-beds, swales, grey water recycling, buildings with green roofs, porous hard standing surfaces and water-courses with buffer zones of vegetation all contribute to managing water within development and its immediate area.

2.5. Groups delivering Green Infrastructure

2.5.1. Oadby and Wigston Borough Volunteer Tree Warden Scheme

The Volunteer Tree Warden Scheme has been in existence since the mid 1990's and works closely with the Borough Council to raise awareness about trees amongst the residents of the Borough. They organise tree planting projects and undertake practical conservation work both within the community and school-grounds, and assist the Borough Council Officers with specific projects and events.

2.5.2. Volunteer Community Allotment Plot

The Volunteer Community Allotment Plot supersedes the Green Gym and Local Food Champion established by Oadby & Wigston Borough Council. The project is established on an unused section of the allotments on Aylestone Lane and is managed by volunteers. The site offers local residents and groups the opportunity to learn horticultural, construction and nature conservation skills to be replicated at home or on other sites in the Borough.

2.5.3. Pride of the Borough

Whilst the vast majority of areas are maintained by Oadby & Wigston Borough Council Grounds Maintenance, there are many examples of enhancements made by volunteers working in partnership to improve the Borough, all of which contributes to the Borough's entry into East Midlands in Bloom.

3. Opportunities to increase Green Infrastructure in Oadby, Wigston, South Wigston and for the Direction for Growth

3.1. Introduction

As new development takes place green infrastructure needs to be strengthened and increased so that it benefits not only the quality of life of the residents within the new development, but also positively benefits landscape and wildlife. The following looks at proposals required for increasing green infrastructure in the Borough.

3.2 Oadby

3.2.1. Biodiversity

The Extended Phase 1 Habitat Survey (2017) illustrates the potential for increasing biodiversity within the Borough and this is outlined below:

3.2.1.1. Woodland

There are very small pockets of woodland throughout Oadby which are isolated to the extreme and therefore any tree planting that can extend the existing woodland areas of the Borough will be doing much to improve the townscape. This is particularly pertinent in relation to Fludes Lane Woodland which is a very narrow linear site and therefore has little buffering effect from the weather. Increasing the width of the site by tree planting along its outer edges, for instance along the banks of the Flood basin area and Windrush Open Space would improve the long term sustainability of the woodland.

Some of the wider grass verges adjacent to pockets of woodland could be planted up with standard oak and ash trees. Other pockets of land could be planted up with more 'urban' species of trees.

This has served to buffer the existing hedgerows, mature trees and neighbouring plantation woodland. Brocks Hill Country Park in Oadby was planted up circa 2000 with broad-leaved woodland, much of which is now reaching maturity and coppice management is now creating diversity of habitat.

The 6Cs Green Infrastructure Strategy has outlined several biodiversity opportunity areas. Area 15 which covers Oadby has potential for creating additional woodland areas and in particular to the south of Brocks Hill Country Park, subject to agreement with landowners. Dry grasslands have also been proposed.

The provision for a new cemetery in Oadby has been allocated within the Local Plan and this could be an ideal opportunity to include a woodland burial site which would contribute to increasing woodland in the area either in the form of an Arboretum, an orchard or a general group of trees.

3.2.1.2. Grassland

The proposed Oadby Grange Country Park on the north eastern boundary of the Borough is immediately adjacent to an unimproved scrub and grassland area. The combination of both these sites and habitats adds to a mosaic of conservation potential for managing both sites to favour specific farmland birds and could be considered in light of any future development coming forward in the area as potential greenspace managed for its habitat potential but with access.

The quality of grassland habitat has reduced dramatically, particularly within the rural areas of the Borough through modern agricultural practices of either fertilising or converting pasture to arable. In the urban areas of the Borough, some degree of mitigating for this loss is by managing small areas of grassland by cut and bale to improve the grassland diversity. This is already carried out in some areas with potential for further expansion of this practice. To further mitigate loss of grassland and to support species of invertebrates, particularly bumble bees which are in decline, areas of Oadby such as road-side verges, small pockets of land between housing estates and within some of the parks, could be sown with wild-flower mixtures. There are many examples of where this has been effective in other urban areas.

The Extended Phase 1 Habitat Survey (2017) recommends that species-rich grassland needs to be increased in the Borough and states that this can be achieved within the country parks.

As mentioned in paragraph 4.2.1.2.2. the draft 6Cs Green Infrastructure Strategy has outlined several biodiversity opportunity areas. Area 15 which covers Oadby and Wigston, has potential for dry grasslands as well as woodland to the south of Brocks Hill Country Park and this opportunity could come to fruition should Brocks Hill Country Park's boundary be increased to incorporate much of this landscape.

3.2.1.3. Wetlands

Oadby is a predominantly built-up area and therefore wetlands tend to be in the form of flood-basins which only hold temporary standing water; ditches; the Washbrook and ponds within Brocks Hill Country Park; or, in residential gardens. There is potential to establish a wetland facility which favours recreational access in the form of a fishery. Wigston is served by two fisheries, albeit not formerly, yet Oadby has none. Oadby Angling had made representation that whilst local anglers were well served by the Grand Union Canal it was noted that there was a strong local demand for a carp fishery. It was further suggested that a fishing lake could be provided as part of recreational provision in any future development. This would require further investigation to identify need. It has been suggested that the flood basin off Florence Wragg Way adjacent to the proposed country park could be suitable, but as its function is that of a flood-basin and designed to only hold water temporarily, this site is not suitable.

Glen Gorse Golf Club which is on the outskirts of Oadby has expressed an interest in establishing a wetland facility on adjacent land if it became available, the reason being that it would like to become self sufficient in providing water for irrigation of the course.

Ponds are an important component of both the urban and rural landscape. Although the rural landscape has a large number of ponds, urban ponds play a vital role in conserving biodiversity and a project to engage residents in urban biodiversity should be considered.

3.2.2 Access and Recreation

3.2.2.1. Brocks Hill Country Park

Brocks Hill Country Park is a successful site enabling residents to access a less formal landscape than that of other open spaces within the Borough, and offer them a taste of the countryside but is experiencing a large amount of pressure in terms of numbers of visitors and having the resources to accommodate the services that are required. Creating an extension to the country park in a southwards direction would provide further benefit to the residents of the Borough, the visiting public and biodiversity gain. Biodiversity gain could be achieved through habitat creation in the form of wetland, woodland, grassland and hedgerow habitats, thus benefiting important species supported within the Borough.

3.2.2.2. Landscape Character

The Landscape Character Assessment for Oadby states that the single factor that would result in a decline in the quality of the urban character of the town is the loss of tree cover. It is critical that the current level of vegetation and tree cover is maintained. The development of the wider green network, including tree cover, the quality of open space and biodiversity networks is the single factor that would improve the overall urban quality of the town.

Woodland has already been mentioned as a biodiversity priority in itself, but woodland also plays a strategic role within landscape and new planting sites for woodland should be identified where they buffer existing woodland, hedgerows and current planting schemes.

3.3. Wigston

3.3.1. Biodiversity

The Landscape Character Assessment has recognised that the links between the town and the river and canal corridor are not extensive but nevertheless do offer important opportunities for green links and wildlife 'stepping stones' into the urban area and should be protected and managed accordingly. There is opportunity in Wigston for better management of the unimproved grasslands in particular close to the railway line, which is another important corridor. Many of the improvements to biodiversity for Wigston are mentioned in section 3.5. Wigston, Direction for Growth Area. Navvy's Pit, a wildlife site adjacent to the railway line, has the potential to provide an oasis for species inhabiting unimproved habitats along the railway line itself. Should the opportunity arise to create a buffer zone to this site, consideration could be given to create a wildlife buffer zone in the fields all the way along the railway line itself.

The main reduction in areas of good semi-improved grassland has been between the River Sence and the Grand Union Canal. Consideration should be given to looking at the potential for managing the sites through agri-environment schemes.

To mitigate for this and to support species of invertebrates, particularly bumble bees which are in decline, areas of Wigston such as road-side verges, small pockets of land between housing estates and within some of the parks, could be sown with wild-flower mixtures. There are many examples of where this has been effective in other urban areas.

3.3.2. Access and Recreation

There is the potential to establish a new footpath along Cooks Lane, past Tythorn Farm to join up with Glebe Farm and beyond to link with the existing public right of way at Mere Lane. A current footpath already links Mere Lane to Tendring Drive in Wigston. By linking these two paths together, a circular route could be created. This is also pertinent in relation to section 3.5 on the Wigston Direction for Growth Area.

Kilby Bridge has the potential to deliver recreational provision with regards to its close proximity to the canal. This has been recognised within the River Soar and Grand Union Canal Strategy. 'Kilby Bridge, South Wigston and Blaby' are one of seven 'hubs' which have been proposed to consider the full potential of the waterway as a leisure and tourism resource. A strategy would need to be written in order to develop recreational facilities of the hub and ensure that conflicts of interest are resolved. For example, the Canal is a SSSI and any increase in recreation centred around the canal could be detrimental to the SSSI status.

In addition, the potential canal side improvements in South Wigston which could potentially link the Pochin's Bridge development to the towpath of the Grand Union Canal could also enable pedestrian access to Kilby Bridge. This could have an effect on reducing car traffic.

The canal towpath could benefit from improvements to its surfacing and this could become suitable for cycling. However consultation with Canal and Rivers Trust would need to take place, as currently cyclists have to apply for permits to access the towpath. There could be the potential for people with limited disability to access the towpath if improvements were made to the access.

3.3.3. Landscape Character and Historic Environment

The Landscape Character Assessment states that the current level of tree cover in the Borough makes a major contribution to the general attractiveness of the Borough. In order to ensure that the appearance and environmental quality of the Borough does not decline, then a programme of tree planting could be put into place. The general level of tree cover in the urban area is considered to be less in Wigston than Oadby and therefore the character of many of the urban areas of Wigston could be improved by additional planting. Improvements to the wider green network including open space quality, the public realm in the centre of the town (commensurate to that along Bell Street) and the biodiversity network would also contribute to raising the urban character quality.

3.4. South Wigston

3.4.1. Biodiversity

There is very little woodland in South Wigston, albeit a new woodland was planted alongside the Pochin's Bridge development in the vicinity of the Grand Union Canal a few years ago. This site is also adjacent to an area which has had a mixture of broad-leaved woodland and conifer trees planted on it in the past. Any potential to increase woodland on the farmland adjacent to Pochin's Bridge would further benefit and strengthen the buffering effects of the climate.

There are no wetlands within South Wigston. However there is a large concrete watercourse (flume) which takes excess surface water away from the housing estates but still extends as a concrete watercourse into the fields before flowing into a tributary of the River Sence. This has the potential to take away a large volume of water very quickly, but conversely this raises the issue of water quality entering the river. If the concrete flume was not in place, any pollutants should have the potential to be gradually absorbed and filtered through the soil prior to the water entering the river thus acting as a buffer zone to the river.

The River Sence has been identified as being eutrophic i.e. indicative of pollutants. Therefore should the possibility arise to turning the flume into a more natural substrate, removing all of the concrete along its length, then this should be considered as this will have more benefit for biodiversity and help towards cleaning the river along part of its course.

3.4.2. Access and Recreation

There are few rights of way in South Wigston, the main one being that of the public towpath along the Grand Union Canal which links pedestrian access to Leicester City in the West and Kilby Bridge to the east. The towpath is served by Crow Mills Picnic site on the boundary with Blaby District Council. The towpath is situated on the south side of the canal and therefore can be difficult to access from the town itself.

Blaby Road Park provides an access link between the urban area of South Wigston, the canal and the wider countryside towards Countesthorpe has been subject to recent improvements.

3.4.3. Landscape Character and Historic Environment

The development of South Wigston has been influenced by the rail and canal network rather than by strong topographical influences and therefore the landscape context is difficult to perceive from within its urban area. Its interface with the open countryside is only apparent to the south where on the whole the boundary is abrupt, but often well treed.

The Landscape Character Assessment suggests that care should be taken to maintain the openness and mature treescape of the western fringe character area of South Wigston and to ensure that the terraced areas around the town centre retain their integrity as a distinctive built environment. The newer areas of housing offer few possibilities for significant townscape improvements, but the Gloucester Crescent and Ervin's Lock areas would benefit from increased urban tree planting. The links

between the town and the river and canal corridor are not extensive but nevertheless do offer important opportunities for green links and wildlife 'stepping stones' into the urban area and should be protected and managed accordingly.

Bounded by urban areas to the west, east and north, South Wigston enjoys a rural setting on its southern boundary where it abuts the Sence Valley and canal corridor. The Sence valley affords relatively easy access to countryside of recognised landscape value and to recreational opportunities along the towpath and footpath network.

3.5. Direction for Growth Area, Wigston

Due to the scale of the development proposed at the Wigston Direction for Growth, further details are provided, suggesting possible opportunities for Green Infrastructure provision.

3.5.1. Biodiversity

There are no areas of woodland within Wigston and therefore there is huge potential for encouraging local landowners through agri-environment schemes to plant new woodlands. The proposed new growth area would also be an ideal opportunity to increase the woodland coverage within the Borough. Newton Lane acts as a Gateway into the Borough and strategic woodland planting could create a good visual landmark for people entering from the east. Depending on the nature of the planted woodland, this could act as a buffer zone between the development and Newton Lane and which could include a further 'wrap around' into the countryside stretching up towards Brocks Hill Country Park. Part of the woodland could be managed for access and recreation as well as conservation of biodiversity.

3.5.2. Barn Pool Meadow - Local Wildlife Site

The Extended Phase 1 Habitat Survey (2017), as baseline evidence for the Local Plan, determined that the wildlife site has deteriorated through lack of appropriate management. The reports make the case that should development take place in the area, that biodiversity gain is achieved through ensuring the calcareous grassland is brought back into appropriate management and that scrub is kept under control. Consideration should be given to restoring and managing the calcareous grassland which is part of the Local Wildlife Site as this type of grassland is quite rare within the Borough.

This site could be incorporated into new development with provisions made to increase its biodiversity and bring it in to effective management, whilst encouraging public access, but balancing recreational needs and ecological requirements. In order to achieve this, the boundary of the wildlife site should be increased to mitigate for loss of habitat elsewhere and should include strategic management of grassland, scrub, and trees adjacent to the railway corridor to assist with conserving farmland birds such as tree sparrow, bullfinch and yellowhammer. Further wetlands should be included where possible to establish suitable habitat for amphibians.

3.5.3. Kilby Bridge Pit

Incorporated within the boundary of the Barn Pool Meadow Local Wildlife Site, the quarry pit is being managed as a fishing pond. This has the potential to reduce the biodiversity value of the site and introduce alien species which can have a detrimental affect on the habitat. Consideration should be given to establishing an alternative lake for wildlife conservation only.

As Kilby Bridge Pit is a Candidate Regionally Important Geological Site, development will not be permitted in or adjoining this site unless it can be shown that development will not adversely affect the conservation of the geological exposure. In addition to this because there is an aquifer link with the SSSI development will also not be permitted unless it can be demonstrated that it will not impact on the aquifer or the SSSI.

3.5.4. The Kilby-Foxton Canal and Limedelves SSSI

Natural England has identified that the section of the canal designated as a SSSI is in an 'unfavourable declining' condition due to 'damage by boats, siltation, public access/disturbance and a lack of long term management plan to allow a planned dredging programme'. The Extended Phase 1 Habitat Survey (2017) identifies that eutrophication of the canal could be from nutrient-rich runoff and seepages from adjacent land and that this would need to be addressed for future conservation through the provision of buffer zones along the canal.

Limedelves, which is the old lime quarry to the north of the canal, and which incorporates the surrounding grassland and small areas of scrub and woodland, is also considered to be in 'unfavourable condition' and similarly to the canal, will not reach a favourable condition unless there are changes to its management resulting from external pressures. The increased pressure of a fishing syndicate on the SSSI and in particular carp anglers means that the site is unlikely to improve its aquatic and marginal plant cover or provide favourable conditions for fauna typical of a SSSI.

Due to the fact that the fishermen have probably been using the site for some number of years now, it may prove difficult to stop this occurring. In this case, it may be appropriate in mitigation to dig out a new 'quarry pit' somewhere else in the vicinity where the geology is the same, and thus the water quality, and ensure that this is managed in a way that would be appropriate to a SSSI and ensure that the site is not fished. The alternative could be to create a fishing lake in the nearby area, re-siting the fishing syndicate from the SSSI to the newly created lake, making it clear that the site must not be fished in the future. Both of these options would require intensive negotiation with the land owner and the fishing syndicates.

3.5.5. Kilby Bridge

There is potential to create a lake in the immediate vicinity for biodiversity gain and in mitigation of further potential decreases in water quality of any further recreational use of the canal, the Kilby Bridge Pit and Limedelves quarry. This would potentially safeguard the plant communities which created the original SSSI designation. A new lake could also potentially provide appropriate habitat for water vole and otter, both priority species and both which inhabit the Borough with recorded field signs both along the canal and the River Sence.

The area of farmland within the Kilby Bridge area is a priority area for lapwing, and tree sparrow and has been recognised as such by the Department for Environment, Food and Rural Affairs (DEFRA). Any development therefore has huge potential to remove suitable habitat that these species rely on. One way of mitigating this would be to provide suitable habitat as green roofs where appropriate in any new building incorporating shingle as habitat, nesting places and feeding areas for lapwing and a planned programme of hedge, shrub and tree planting with grassland areas for tree sparrow sites.

3.5.6. Access and Recreation

New development will need to include appropriate elements of open space and rights of way which will enable access to the countryside.

3.5.7. Landscape Character and Historic Environment

The Borough Council recognises that a high quality and locally distinctive rural environment can make a substantial contribution to quality of life in the Borough and that sustainable development is essential to maintain this quality.

3.5.7.1. Landscape Character for the Wigston Direction for Growth

The Oadby and Wigston Borough Landscape Character Assessment, serves to identify what is distinctive and important about the landscape of the Borough so that the distinctiveness and characteristics of the Borough can be conserved in any future change which may occur through development.

The area designated as the main location for a direction for growth has been categorised as Landscape Sub-Area as A(v), Wigston East which borders the character area of the Sence Valley south of the railway line.

3.5.7.2. Landscape Sub-Area A(v): Wigston East

The sub-area lies between the A6, the southern extent of the built up edge of Oadby and the Oadby and Wigston Green Wedge to the north, the borough boundary to the east, the River Sence Valley to the south and the eastern extent of the built up edge of Wigston to the west.

This area is a distinctly rural landscape comprising predominantly of medium sized, roughly rectangular, regular arable fields with some pasture. A series of individual farms lie at regular intervals either side of Newton Lane. Landform is a series of undulating ridges and valleys of boulder clay over lias clays and limestones, generally falling from north-east to south-west. The Borough boundary runs along a ridge of high ground which rises approximately 123m Above Ordnance Datum (AOD) at the A6 and falls southwards to around 80m Above Ordnance Datum (AOD) south of the railway where a water-course falls towards the River Sence. Between the Borough boundary and the Oadby and Wigston Green Wedge the land rise and falls to further two water-courses which drain beneath Newton Lane and into the Grand Union Canal and River Sence via Wigston Harcourt.

Fields are bounded by hedges which are mostly tall and dense close to the urban edge but become more open, lower and gappy further east. Hedgerows are

predominantly hawthorn with mature trees, mostly ash. The landscape has a fragmented appearance due to the small copses and spinneys.

The undulating topography is the over-riding characteristic which dictates the extent of visibility throughout this sub-area. From the higher ridges, along footpath Z12 panoramic views enable a pedestrian view northwards to Oadby beyond the Green Wedge. The combination of topography and vegetation along field boundaries ensures that entrances into the Borough from the east through this area are characterised by a gradual transition from countryside to the town. Houses on the urban edges are generally well screened except to the eastern edge of the houses on Long Meadow and Well Spring Hill in Wigston Harcourt, immediately north of Cooks Lane. Despite the low density hedgerows, views of the houses are limited by natural landform.

There is one Local Wildlife Site (Barnpool Meadow) and one Regionally Important Geological and Geomorphological Site (Kilby Bridge Pit).within the Wigston Direction for Growth area.

3.5.7.3. Landscape Character Strengths

The undulating topography and distinctive landform, with boundaries that are well-hedged with established trees are strong characteristics of the sub-area. The gradual strength from town to country and vice-versa is a particular visual strength of this area, which also lends itself to creating wildlife links along vegetation corridors.

The following characteristics of this Landscape Sub-Area are important to maintain the predominantly open transitional area between town and country:

- Undulating ridges and valleys
- Water-courses
- Medium sized, rectangular, regular agricultural fields
- Ponds
- Distinctive pattern of hedgerow field boundaries
- Mature hedgerow trees.
- Meadows
- Ridge and furrow

The Landscape Character Assessment indicates that any development occurring in this sub-area should be sensitive to the landscape and maintain the hedgerow field boundaries with mature trees, ponds and ridge and furrow. This is echoed by the neighbouring urban character area W(x) Harcourt which states that 'good tree cover' is a defining characteristic and strength for that area.

3.5.7.4. Green Infrastructure Opportunities Delivery Plan

The following section summarises the key opportunities for the enhancement and creation of green infrastructure as identified through this plan. It also provides some suggested prioritisation of opportunities, costs and funding mechanisms which should guide the planning, design and management of all green infrastructure in the Borough.

It should be noted that all of the opportunities identified are deemed 'optional' rather than 'essential', therefore it is not required that they are subject to viability testing in the context of the Local Plan.

Green Infrastructure Plan
January 2018

Green Infrastructure required	Costs (Essential or Optional)	Phasing	Responsibility for delivery	Possible funding sources
Oadby				
Extend Brocks Hill Country Park	TBC Optional	2018 – 2031	OWBC	OWBC; Developer Contributions; Possible Biodiversity Grants
Tree cover to be increased: Mature Tree Avenue to be planted along A6; Extend the width of Fludes Lane Woodland to incorporate land on Severn Road flood-basin and Windrush Open-space; Plant trees along Washbrook between Wigston Road and Borough Council depot	TBC Optional	2018 – 2031	OWBC; Leicestershire County Council	OWBC; Leicestershire County Council; Stepping Stones Countryside Management Project; Tree Council
Plant roadside verges and pockets of land with species rich grassland	TBC Optional	2018 – 2031	OWBC; Leicestershire County Council;	Developer Contributions
Investigate suitable site for angling lake	TBC Optional			TBC
Wigston				
Tree cover to be increased	TBC Optional	2018 – 2031	Leicestershire County Council; OWBC;	Developer Contributions

Green Infrastructure Plan
January 2018

Green Infrastructure required	Costs (Essential or Optional)	Phasing	Responsibility for delivery	Possible funding sources
Create new wetland in light of recreational proposals at Kilby Bridge	TBC Optional	2018 – 2031	OWBC; Developer	Developer Contributions
Improve habitats between Grand Union Canal and River Sence via agri-environment scheme	TBC Optional	2018 – 2031	OWBC; Developer	Developer Contributions
Leave buffer strips on grassland next to hedges uncut, unfertilised and ungrazed to boost insect abundance for tree sparrow. Graze or cut in September every three years.	TBC Optional	2018 – 2031	OWBC; Landowners	Developer Contributions
South Wigston				
Install pedestrian foot-bridge over canal at Ervin's Lock.	TBC Optional	2018 – 2031	OWBC; Leicestershire County Council Canal and Rivers Trust	Oadby and Wigston Borough Council; Developer Contributions
Re-design flume to be a more natural substrate	TBC Optional	2018 – 2031	Environment Agency; OWBC; landowner	Regional Biodiversity Funding; Environment Agency; Severn Trent
Tree cover to be increased	TBC Optional	2018 – 2031	Highways, Leicestershire County Council; OWBC; Stepping Stones	Developer Contributions

Green Infrastructure Plan
January 2018

Green Infrastructure required	Costs (Essential or Optional)	Phasing	Responsibility for delivery	Possible funding sources
			Countryside Management Project;	