

# Harworth & Bircotes

## Green Infrastructure Project Proposal



August 2014



## Contents

Introduction	Page 2
Background	3
Concept	5
Fig 1 – GI / Green Wheel Map	6
Basic Principles	8
Standards / Specifications	9
Key Components of the Green Wheel	13
Principal Delivery Issues	15
Conclusion	24

## **Introduction**

Harworth & Bircotes Town Council have commissioned BRCC to undertake local Green Infrastructure (GI) Planning work. This GI Planning work is intended to feed into the Harworth & Bircotes Neighbourhood Plan as Project 6 within the 'Community Projects' (section 8) of the Neighbourhood Plan.

The overall Community Aim of the Neighbourhood Plan is:

*In 20 years' time Harworth & Bircotes will be a thriving community, a place where people are proud to live. It will be a safe and happy place, an area that values its people and its environment. It will have a variety of homes, jobs, shops, schools and recreational facilities; something for everyone. Harworth & Bircotes will be a place people want to move to.*

Having a well planned and well managed GI network will be vital in enabling the community to meet this aim.

This report also links to the Bassetlaw District Council GI Plan (May 2010), the vision for which states:

*In 2026 green infrastructure will be an integral part of the development process, ensuring that people and places in Bassetlaw benefit from a strong network of multifunctional green spaces.*

*Strong connectivity within and between urban centres, rural villages and the wider countryside will minimise habitat fragmentation and contribute to green and attractive places where people enjoy living, working and visiting. Accessible, well managed areas of the core habitats of woodland and river valley wetlands will encourage greater levels of biodiversity, support climate change mitigation and facilitate recreational opportunities for local residents.*

The Bassetlaw DC Local Development Framework defines GI as:

*"Green infrastructure comprises networks of multi-functional open space, at all scales. Its fundamental principles are therefore the multi-functionality of open space resources, to enable them to maximise public benefit, and the connectivity of these resources into functional networks to ensure that the overall value of the network is greater than the sum of its component parts."*

GI comprises 5 overlapping themes: Open Space, Access, Biodiversity, Historic Environment and Landscape. Examples of GI assets include:

- Accessible Countryside
- Urban parks
- Canals and Water space
- Pocket Parks
- River Meadows
- Cycleways
- Playing Fields
- Nature Reserves
- Woodlands
- Historic Sites
- Cemeteries

## **Background**

To inform the production of this report, site visits were undertaken by BRCC in March and April 2014. These visits enabled the identification of existing and potential GI assets and how these could be linked to create a coherent GI 'network'. The creation of this network over the coming years, in parallel with further anticipated housing and employment development, will result in Harworth and Bircotes becoming a thriving community, served by and caring for its local environment.

The main existing GI assets are focussed in the central and eastern areas of the settlement.

In the centre of the community are a number of linked green spaces including Snipe Park Wood and Well Hill Local Wildlife Site and the amenity land and play area south east of Snipe Park Wood.

To the south east and east are a number of woodland areas including Lords Wood, Layland Plantation, Ruins Plantation and Droversdale Wood to the south of Scrooby Road; and Whitehouse Plantation to the north.

To the north east of the town is Swinnow Wood. Although outside of the parish boundary, this woodland is a major landscape and biodiversity feature with the potential to become a significant recreational resource for the community; especially with the anticipated levels of housing development near Bawtry Road.

The western areas of the community have relatively little green space provision both within and surrounding the housing areas.

Harworth & Bircotes has a relative poor level of Public Rights of Way provision, with just a few short sections of Public Footpath and Public Bridleway. However, in some areas, notably to the north east of Milne Road / Galway Road there is a network of informal paths which have clearly been well used for many years at the agreement of the landowner/ farmer who leaves these cross-field paths uncultivated.



Well used informal paths through arable fields

Given the poor existing formal path provision, a number of new access routes, supported by the upgraded status of existing paths, will be required to deliver a good GI network.

In surveying and mapping the existing and potential GI sites and associated access routes; the possibility of a GI corridor surrounding the settlement, supported by a swathe of green spaces through the centre of the settlement, emerged.

While this report focusses on the proposal of this 'Green Wheel', the presence of and potential for, other GI assets should not be overlooked. These other assets, along with the individual components of the Green Wheel will require more detailed surveys to be undertaken and management plans produced, to ensure that high quality and full GI potential of each site is achieved.

## **Concept**

The 'Harworth & Bircotes Green Wheel' is a concept for the long term linking of publicly accessible green spaces and routes around the town to create an attractive network of GI assets which are rich in biodiversity, heritage and landscape value. The outer wheel will be served by a network of routes leading from the community, to the 'rim'; and where appropriate to the wider countryside beyond. These internal 'spokes' will be based on, and seek to enhance, the existing GI corridor through the settlement which includes Snipe Park Wood, Well Hill and the central amenity / play area to the east of Snipe Park Wood.

Fig 1 shows the main routes and other GI components forming the proposed Green Wheel and GI network.

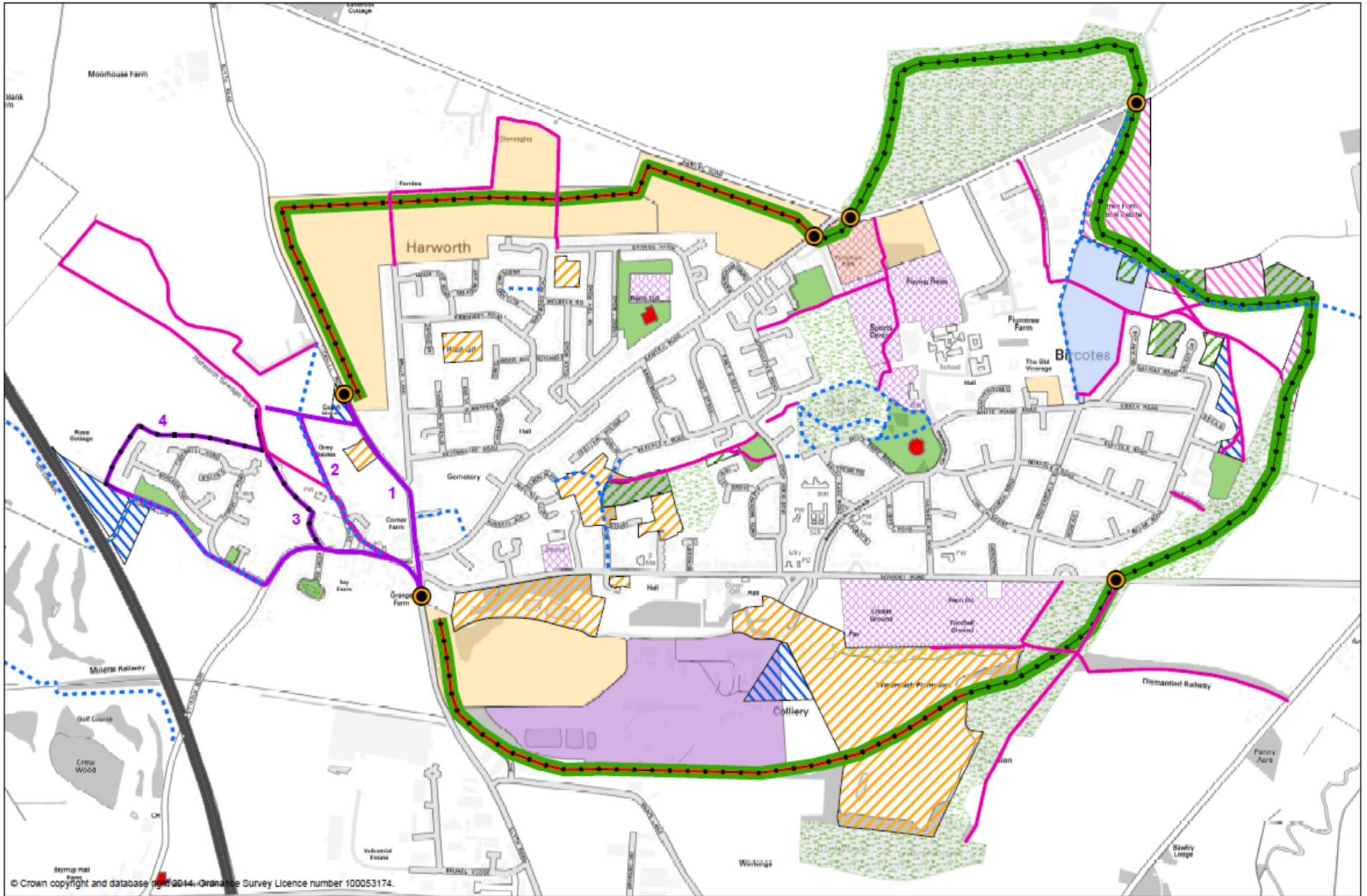
The Wheel is considered 'green' due to both the natural and historic environment components forming it; and the promotion of recreational trips using healthy, non-motorised forms of sustainable 'transport'.

The Wheel will circle the town, creating a continuous accessible corridor. Ultimately it should be freely available to walkers and cyclists, while also providing appropriate routes for horse riders. Green spaces and associated features forming the Green Wheel may both be trip destinations in their own right; or may be corridors to other attractions further afield.

Although primarily delivering enhanced public access, the Green Wheel should also protect, manage, enhance, and promote other Green Infrastructure thematic assets, including biodiversity, landscape and heritage. Where possible, new habitats, landscape features and accessible green spaces should be created to link and extend the existing features to add to the network and contribute to such a Green Wheel.

Harworth & Bircotes will see major changes in the coming years as existing and potential allocated sites come forward for development – both housing development in and around the town and employment development to the south of the town. Although some of this development may have an adverse impact upon existing GI features, there is great potential for the creation of new and embedding of other existing GI assets into these developments. These developments should contribute towards the delivery of this GI Plan / Green Wheel, through financial contributions via CIL and also through incorporating GI corridors and features within the development areas.

Fig 1 shows the main routes and other GI components forming the proposed Green Wheel and GI network.



## Green Wheel & GI Network Key

- Safe road crossings required
- ..... Existing public rights of way
- Used paths to be formalised as public rights of way
- Possible new route
- Western options for Green Wheel
- Desired green corridor through development sites
- Play Area
- Proposed main Green Wheel route
- ▨ Proposed new green space
- ▨ Proposed woodland linkages
- ▨ Committed site for housing
- ▨ Woodland
- ▨ Other habitat/green features
- Allocated site for housing
- Potential Housing
- Contingency Development site
- ▨ Playingfield
- Amenity green space



## **Basic Principles**

The proposed principles below have been developed through extensive consultation elsewhere in the country on similar GI projects. Local consideration should be given as to whether they are all appropriate for Harworth & Bircotes, and whether any additional principles reflecting the local area should be added.

Where possible, linear routes should:

- Be traffic free
- Be safe and inspire confidence in visitors
- Offer 'easy access' i.e. be reasonably easy to use for users with a wide range of mobility levels, including pushchairs and walking aids
- Have the potential for future upgrading to use by cyclists (where not already possible)
- Have designated, safe crossing points over motorised routes
- Provide connections between where people live and where they want to travel (for recreational or employment purposes)
- Be clearly signed and easy to follow
- Be well maintained
- Provide enhanced user enjoyment through the provision of information boards and benches in attractive locations
- Where appropriate provide access for horses, particularly links to existing bridleways
- Be protected from future development. Where future development does occur, any existing sections of the Green Wheel should remain as inner route options and new outer sections created.
- Cause no damage to archaeological sites and their setting
- Provide safe passing places on those paths with shared vehicular use including appropriate management of vegetation to the sides

Accessible green spaces should:

- Be safe spaces that inspire confidence in visitors
- Cater for a wide range of user-types (dog walkers, playing children, joggers, family groups, older people)
- Provide attractive landscapes
- Provide opportunities for wildlife, heritage conservation and interpretation
- Provide informal recreation opportunities (including playing, bird watching, etc)
- Provide interactive interpretation through information boards, play structures/ environments and art features to encourage more people and a wider audience into the countryside
- Be well maintained

The wider landscape should:

- Protect, enhance and create aesthetically pleasing views
- Have well maintained hedges
- Enable interconnectivity of habitats
- Protect, manage and enhance the historic environment

## **Standards / Specifications**

To support the creation of the route within the above basic principles, a series of standards based on national guidance are proposed below. The proposed standards and specifications have been developed through extensive consultation elsewhere in the country on similar GI projects. Consideration should be given as to whether they are all appropriate for Harworth & Bircotes, and whether any local standards required by Bassetlaw District Council should replace these.

### **Widths**

For an un-segregated, shared use path, guidance generally points towards a preferred minimum width of 3m, although a minimum width of 2m may be acceptable where usage is low, provided there are no side constraints (i.e., there should be space to the side of the path to use to allow passing). A greater width will provide an improved level of service.

	Standard	Minimum	Where width is physically restricted*
Shared use path	3m	2.5m	2m
Footpath links	2.5m	2m	1.5m

\*Restricted access will usually be where all or part of the route is using a pre-existing alley way or where there are other significant structures which physically prevent the allocation of a greater width. Paths should conform to the general policy in as far as possible. Where there are localised intrusions and/or short lengths over which the path would be less than 2m wide this may be acceptable depending on the circumstances.

In keeping with the Green Wheel principles, where possible the route should be set within a landscape and wildlife corridor; and not be limited to the width of a path.

### **Surfacing standards for new paths:**

It is anticipated that the Green Wheel routes will have a range of surfacing types. This range of surfacing will form a hierarchy of standards based on the level of expected use, landscape sensitivity and other factors. The optimum level of surface should always be sought for the expected level of use:

Level 1: Bound surface – e.g. Bit Mac Tar/Mac

Level 2: Unbound surface – e.g. road planings and granite dust blinding

Level 3: a) Re-enforced grass

b) Well maintained farm track

Level 4: Rolled/consolidated grass or compacted suitable ground

Routes which are more urban in setting and expected to have high levels of use should be Level 1 (Level 2 minimum). Routes which are more rural in setting and expected to have lower levels of use could be Levels 3 and 4.

### **Structures**

Structures will be required at many locations for a range of purposes including, stock control, limiting unauthorised/ vehicular access and safety (to reduce speed at junctions with roads).

With the exceptions of highway safety, barriers, including motor cycle/ staggered/ kissing gates, should only be a last resort. They should only be used to address actual problems, not to alleviate fears of future potential problems. They should only be installed when other methods have been considered or trialled and been discounted, or have proved to be ineffective. Even when a barrier is installed, it should ideally only be in place for a limited period until the problem has stopped or considerably reduced.

Design solutions should minimise the obstacle to legitimate users as barriers which stop motorcyclists are likely to also exclude wheelchair / scooter users, parents with prams and pushchairs, some users with mobility impairments (for example, sticks and crutches) and some visually impaired people.

### **Gradients**

Green Wheel routes should be designed to achieve a maximum gradient of 3% with the absolute maximum 5% for lengths up to 100m. On the approach to priority junctions this should not exceed 3%. Where steeper slopes are unavoidable the limiting gradient is 7% for lengths up to 30m.

### **Junctions and road crossings**

Where Green Wheel routes meet or cross the public highway, extra consideration to safety must be given; and Road Safety Officers consulted. Clear signage must be provided, for both users of the Green Wheel and the public highway. Dependent upon sight lines, gradients and other local factors, structures may be required to reduce the speed of users of the Green Wheel on approaches to roads and pavements.

Dropped kerbs at road crossings should be used to improve ease of use and safety, improving comfort for all users, especially cyclists and pushchair/ wheelchair users.

### **Signage, way marking and mapping**

Signage for the Sandy Green Wheel should be clear, informative and consistent. A Sandy Green Wheel symbol/ logo and colour scheme will be utilised.

Signposts should be used at all junctions and access points to the 'rim' of the Green Wheel. Destinations and distances, both into town along key 'spokes' and around the 'rim' will be identified.

Waymarking should be used to supplement the main signage and should provide directional information. Waymarking should be undertaken in accordance with CBC's Countryside Access Waymarking Policy.

Additional information about the Green Wheel, including a map of the entire wheel, will be provided at key access points.

The issues of signage, waymarking and mapping, along with identity, marketing, promotion and information provision will be addressed more fully in a supporting document (to be produced once this document is adopted).

## **Fencing and hedges**

The route of the Green Wheel should be aesthetically pleasing, wherever possible maintaining a 'green' setting through appropriate planting and landscaping.

Planting and landscaping requirements will vary greatly around the Green Wheel, influenced primarily by available space and degree of rural/ urban setting.

All planting along the 'rim' and the more rural 'spokes' should be of native, locally distinctive species. Planting within more urban settings should be decided with robustness and maintenance as key factors.

Wherever possible, Green Wheel routes should not be 'fenced-in', with users having a feeling of being contained or funnelled. However, at certain access points and other areas, such as where stock is grazing or for safety, fencing will be required (although the route and adjacent land should provide a corridor feel).

Fencing specifications should be robust and in keeping with their immediate setting. In general, rural settings should have timber fencing which should be of a similar design to any adjacent existing fencing. Where no existing fencing is present, posts should measure a minimum 125mm x 75mm and rails 100 x 50mm.

Fencing specifications in more urban settings will be determined by primary function (safety, security, etc), but in all cases should be as attractive as possible and in-keeping with surrounding structures.

## **Greenspace standards**

Greenspaces forming the Green Wheel will range from linear paths and corridors, through amenity greenspaces to natural and semi-natural open spaces in the wider countryside. All components of the Green Wheel should deliver multiple green infrastructure benefits – linking and maximising the quality and value of access, landscape, biodiversity and heritage. Sites forming the Green Wheel will:

- be clearly signposted to and from the Green Wheel and the wider network
- be welcoming and clean and safe.
- may incorporate public realm features (e.g. sculptures)
- will provide seating, in both sunny and shaded areas
- have a naturalistic appearance
- have attractive views out of or across the site
- make good use of topography, space and planting
- protect, manage and provide opportunities for interpreting the historic environment
- provide informal and engaging activities for people of all ages
- seek to maximise ecological value and opportunities

### Accessible Natural Greenspace Standard in Nature Nearby Natural England, 2010

ANGSt aims to address this by setting a range of accessibility standards for natural sites and areas within easy reach of people's homes. This standard should be used to establish the level of deficit of accessible natural greenspace across the settlement.

## ANGSt

ANGSt recommends that everyone, wherever they live, should have an accessible natural greenspace:

- of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometres of home;
- one accessible 100 hectare site within five kilometres of home; and
- one accessible 500 hectare site within ten kilometres of home; plus
- a minimum of one hectare of statutory Local Nature Reserves per thousand population.

Where appropriate, consideration should be given to certain sites being put forward for designation as Local Green Spaces within the Neighbourhood Plan process.

Sites which are proposed for this designation are:

- Droversdale Wood
- Snipe Park Wood.

In relation to sports pitches and their contribution to the GI network the Bassetlaw Playing Pitch strategy should be used.

### **Wider landscape**

As part of this project we are seeking to increase the quality of the environment surrounding the town. It is critical that this masterplan acts as a challenge to all land managers to seek to maintain and develop the quality of the land they manage through the restoration and creation of interconnecting habitats, including pollarded willows, hedges, and woodlands; wetlands and ponds. Derelict and urban fringe sites should be explored for enhancement opportunities.

### **Maintenance**

To guarantee maximum value, use and longevity of the Green Wheel once it is developed, it will need to be maintained to a proper standard and to encourage people to use it. Ongoing maintenance work will have to include verge cutting and surface spraying for which revenue funding will be required.

Careful consideration should be given, when any planting or landscaping is proposed, to ensure that it will not become a problem in the future. Where appropriate, a sealed surface should be considered at the development stage to reduce maintenance liabilities in the future.

### **Impacts and Constraints**

It is acknowledged that the implementation of any of these above standards have the potential to have a negative impact upon features of ecological, heritage or landscape value. Such features may be both assets and constraints on an individual site basis and the application of standards for the creation and maintenance of the Green Wheel infrastructure may need to be amended accordingly.

## **Key Components of the Green Wheel**

To enable the Green Wheel to be considered, planned and delivered in manageable lengths, the route of the outer rim has been divided into four sections: North, East, South and West. For the purposes of this report, these sections have been named, where considered appropriate, after major features within each area. These are working titles only and it is anticipated that alternative names will be developed over time.

Northern section = 'Swinnow'  
Eastern section = 'White House'  
Southern section = 'Colliery'  
Western section = 'West Harworth'

### **Swinnow**

The Swinnow, or northern, section of the Green Wheel will require the creation of GI assets within housing developments south of Bawtry Road and formalised and enhanced access through Swinnow Wood (a Local Wildlife Site (LWS)).

Spokes leading from the community to this section of the wheel's rim include a path from the western end of Grange View, a path northwards past the schools from the central amenity / play area and the existing Public Footpath north from the junction of White House Road and Droversdale Road.

Links from this section to the wider countryside and settlements surrounding the Green Wheel seem limited to the pavement to Bawtry along the southern side of Bawtry Road / Tickhill Road.

### **White House**

The White House, or eastern, section of the Green Wheel will pass to the east of the Plumtree Farm Industrial Estate and through Whitehouse Plantation (a LWS); linking Bawtry Road and Scrooby Road. There is potential for the linking and extending of the existing woodland / scrub GI assets to deliver significant landscape, biodiversity and amenity benefits.

Spokes leading from the community to this section of the wheel's rim are provided by Cumberland Close and Milne Drive.

A link from this section to the wider countryside and villages surrounding the Green Wheel is provided by Lady's Holt Lane Public Footpath which provides a link to Scrooby via Gibbet Hill Lane.

## **Colliery**

The Colliery, or southern, section of the Green Wheel will link the eastern end of Scrooby Road to Blyth Road, via the existing woodland areas to the east and new GI provision with future developments on the colliery site.

Spokes leading from the community to this section of the wheel's rim will need to be provided within the development of the colliery site. A western spoke could be aligned to link with Galway Mews and Hilltop Court, providing a western connection to the GI corridor through the town centre.

A western link to the wider countryside and to Scrooby could be provided by formalising access along the dismantled railway either side of Bawtry (A614). The presence of the A1(M) and the A614, along with the absence of any village or 'attraction' to the south of the town, mean that further links from this section of the Green Wheel are limited to accessing the existing woodland areas of Lords Wood, Layland Plantation and Ruins Plantation. However, future restoration of the quarry site could potentially create a GI asset which becomes a popular visitor destination.

## **West Harworth**

The West Harworth section of the Green Wheel will link Blyth Road to the proposed Bawtry Road development site. This section of the Green Wheel has the least existing features on which to base a GI corridor and therefore has the least obvious route to include in these proposals. Consequently, four options are identified which will require further consideration.

Spokes leading from the community to this section of the wheel's rim could include a combination of Public Footpath and road links in the vicinity of Saxon Way; and a link into the large allocated housing site from the north of Baulk Lane.

Links from this section to the wider countryside and settlements surrounding the Green Wheel are limited to locations where access to the west of the A1(M) is provided. The principal route provides access to Tickhill via Common Lane, an underpass beneath the A1(M), Low Common and Water Lane. A return link could be provided via Styrrup Hall Golf & Country Club and Styrrup Road.

## Principal Delivery Issues

### **Swinnow**

The main issues determining the viability of creating the Swinnow / northern section of the Green Wheel are:

- Embedding the Green Wheel access route and wider GI provision within the development of the allocated sites off Bawtry Road. A Planning Application (No. 13/00793/FUL, see proposed site layout below) for Land at Plumtree Farm, Bawtry Road was submitted in 2013. Some GI provision, including landscaping and an access route around the perimeter of the site was included in the proposals; and the delivery of this will be a key component of the Green Wheel. Opportunities to maximise the land available for this corridor should be pursued.



- Securing consent for formalising access rights and creating a suitably surfaced path (as per above Standards and Specifications) through Swinnow Wood. Furthermore, opportunities should be sought to undertake ecological assessments to inform the enhancement of biodiversity and amenity value of the woodland through appropriate management (thinning, understorey planting, etc) and installation of interpretation and furniture (information boards and sculptures, benches and bike racks, etc). Consideration should be given to protecting this site through an appropriate designation; however it is not able to be designated as a Local Green Space through the Harworth & Bircotes Neighbourhood Plan process as it lies outside of the Neighbourhood Plan area.





Existing informal path through Swinnow Wood

- Providing safe crossing points of the A631 Bawtry Road / Tickhill Road. Traffic along this road can legally travel up to 60mph and although sight lines are reasonably good, crossing on foot or bike is not easy. The local Highways Authority will need to be consulted on the viability of creating safe crossing points, which may be achieved by a combination of signage, speed reduction measures, speed limit reduction measures and the creation of dropped kerbs and central refuges. Two crossing points will be required towards the western and eastern ends of Swinnow Wood. The western crossing point should be considered in the context of the development of the allocated sites in the vicinity of Plumtree Farm.



Pavement on southern side of A631 at junction with Public Footpath and required safe crossing point to access the eastern end of Swinnow Wood.

## White House

The main issues determining the viability of creating the White House / eastern section of the Green Wheel are:

- Upgrading the existing Public Footpaths (to the east of Plumtree Industrial Estate and the western part of Lady's Holt Lane) to a status permitting cyclists, and ideally horseriders. The width and surfacing of these will also need to be upgraded to be suitable as part of the Green Wheel rim.



Public Footpath, looking north to Swinnow Wood, requiring status and surfacing upgrades.

- Securing consent for formalising access rights and creating a suitably surfaced path through White House Plantation; and extending northwards to link to the Lady's Holt Lane Public Footpath. This latter link could follow either side of the current field boundary, or be set within a new woodland link.



Western end of Lady's Holt Lane Public Footpath, requiring status and surfacing upgrades.

- Linking and extending the existing woodlands and scrub patches to create a continuous landscape and habitat feature from Swinnow Wood in the north to the cluster of woodland sites south of Scrooby Road. This can be achieved through the 'squaring off' and planting of relatively modest areas of arable land.
- Undertake ecological assessments to inform the enhancement of biodiversity and amenity value of the woodland through appropriate management (thinning, understorey planting, etc) and installation of interpretation and furniture (information boards and sculptures, benches and bike racks, etc).

## Colliery

The main issues determining the viability of creating the Colliery / southern section of the Green Wheel are:

- Embedding the Green Wheel access route and wider GI provision within the development of the committed and allocated sites associated with the colliery site south of Scrooby Road. A Draft Design Principles and Indicative Masterplanning document for Scrooby Road and Colliery Site has been produced by Urban Forward Ltd (March 2014). This document shows within its Design Parameters and Final Concept maps the provision of a green corridor to the south of the proposed housing. In addition to the access provision within this corridor, heritage, landscape and habitat assets, including the existing water features, should be incorporated into the GI network of the Green Wheel. This corridor would deliver the majority of the southern section of the Green Wheel.

A safe crossing of Scrooby Road, to link the White House and Colliery sections of the Green Wheel will be required. This crossing will need to be included in the design of the new junction to be created where the main entrance to the development site meets Scrooby Road.



- Securing consent for formalising access rights and creating a suitably surfaced path through Droversdale Wood. The current level of unofficial use (including motorbike access) and antisocial behaviour (including fly tipping) within this area will need to be addressed as part of the formalising of legitimate Green Wheel related access. This green space will become more significant for the large emerging population to the south of Scrooby Road as this will form a valued open space to use and also provides screening to the sloping land to the east of the settlement towards Scrooby.
- It is proposed that Droversdale Wood is designated through the Neighbourhood Plan as a Local Green Space, to protect, enhance and safeguard the biodiversity within the woodland; therefore strengthening the access to green space in Harworth and Bircotes



Green Wheel route to be secured through Droversdale Wood.

- Securing consent for formalising access rights and creating a suitably surfaced path along the disused railway eastwards to the A614 and beyond to Scrooby. The green corridor provided by the route of the old railway has great ecological and amenity potential and securing access rights and associated enhancements would provide a major asset for the local GI network, as well as linking the residents of Scrooby into the Green Wheel.



Disused railway heading east has the potential to be a valued and accessible GI corridor

- Formalising access rights to, and securing consent for ecological and amenity enhancements to the woods and plantations to the south of the disused railway line. These features, along with possible future restoration of the quarry, deliver widespread benefits across all themes of GI – green space, access, biodiversity, landscape and heritage. These sites, along with the adjacent Droversdale Wood can be a significant and highly valued component of the Green Wheel, especially for the large emerging population to the south of Scrooby Road.

## West Harworth

With the least level of existing GI provision and the physical constraints posed by what provision there is, this section of the Green Wheel is the most difficult in which to identify a main 'rim' route. Given this, until further surveys are undertaken and negotiations with landowners can be held, a number of options should be considered.

- The northern part of this section will need to be delivered as GI provision within the development of the allocated site to the east of Tickhill Road (B6463) and south of the Bawtry Road (A631). This provision should link with the proposed corridor within the land at Plumtree Farm development; however, given the larger size of the site, the level of GI provision and the scale of the Green Wheel corridor should be greater. A safe crossing point of Tickhill Road will be required, somewhere between Grey Gables and the Sewage Works. The exact location of such a crossing is likely to be determined by highways issues in relation to the development of the allocated site; but the requirement for safe crossing by Green Wheel users will need to be designed-in to any road alterations.
- For the southern part of the West Harworth section, all options will necessitate the safe crossing of Blyth Road to the south of the Scrooby Road and Main Street / Bawtry Road junctions. This is likely to include the need for a new path to be created on the eastern side of Blyth Road; and / or the existing path on the western side being extended southwards. Highways Authority input into the design of a crossing will be required.



A safe crossing point of Blyth Road is required.

From the small green space on the corner of Blyth Road and Main Street, three options for completing the wheel should be considered.

- Option 1 – Tickhill Road  
The existing pavement along the western side of Tickhill Road could be widened and upgraded to permit cycle use. Although the least ‘green’ of the options, the available width of grass verge and the direct links to the Green Wheel rim north and south dictate that this option is given serious consideration.



Tickhill Road pavement and grass verge, looking south

- Option 2 - Public Footpath and Church Lane  
The use of the existing paths, alleys and footpaths linking Main Street, Gregory Crescent, Church Lane and the cross-field footpaths / tracks to Tickhill Road already provide a link for the Green Wheel which is suitable for walkers. However, many of these paths, ie beside the churchyard and across the fields to the north are too narrow to permit cycle use. Landowner discussions could potentially lead to the widening of the fenced-in footpaths across the fields, but the particularly narrow footpath past the churchyard has no scope for widening.  
It is therefore considered that while this option should be developed as a walkers route, an alternative route (option 1 or 3) for cyclists must also be provided.



Narrow footpaths between Church Lane and Tickhill Road

- Option 3 – Main Street, Church Walk and new path links to Tickhill Road.  
The enhancement of pavement use / road safety along Main Street and the creation of new access rights through / around the woodland to the west of the church could provide the basis of a good Green Wheel route. Following the bank of the Harworth Sewage Dike and then linking east along the track to Grey Gables / Tickhill Road – a largely off-road, attractive multi-user could be created to form a Green Wheel rim.
- Option 4 – Main Street, Styrrup Road, Common Lane and new path links to Tickhill Road.  
By far the most ambitious option, this route would include the housing estate off Common Road within the Green Wheel. The enhancement of pavement use / road safety along Main Street and Styrrup Road; and the creation of new access rights around the north of the estate and east to Tickhill Road would provide a valuable and attractive section of the Green Wheel rim. With the existing green corridor alongside Common Road and its parallel Public Footpath providing a basis for this, further landscape and ecological benefits could be achieved through the appropriate management of the under-used / 'set-aside' land off Common Lane.



Green corridor parallel to Common Lane could be a component of the Green Wheel

It is considered that while Option 2 already provides a usable 'rim' for walkers, further exploration of Option 3 should be undertaken to assess its viability; as when considering the Green Wheel principles, it appears to provide the best Green Wheel route for cyclists.



## Conclusion

This report identifies the clear potential for the creation of a valuable GI network in and around Harworth & Bircotes. Existing GI assets, when combined with the creation of new GI provision, including within the significant development sites around the town, have the potential to provide a high value GI network, built on the concept of a Green Wheel. This GI provision will serve the residents of Harworth and Bircotes, providing recreation and healthy lifestyle opportunities within a landscape rich in heritage and wildlife.

Sites which are proposed for designation as Local Green Space are:

- Site 1: Droversdale Wood

The woodland is situated to the south west of the Settlement and comprises 3.43 hectares. According to the Green Infrastructure study this site is a significant and highly valued component of the Green Wheel. This green space will become more significant for the large emerging population to the south of Scrooby Road as this will form a valued open space to use and also provides screening to the sloping land to the east of the settlement towards Scrooby.

The intention of designating the area as a local green space is to protect, enhance and safeguard the biodiversity within the woodland therefore strengthening the access to green space in Harworth and Bircotes.

- Site 2: Snipe Park Wood.

Ownership of these woods will be transferred to the Town Council from the District Council. Ownership will enable the Town Council to bid for funds to improve the footpaths and make other improvements in the woods in accordance with the status as local green space. Snipe Park woodland is 6.26 hectares that forms part off a green Corridor in the heart of Harworth and Bircotes. This site is an important and valued green space within the community that must be preserved for future generations.

The intention of designating Snipe Park woodland as a local green space is to provide the community with a Country Park at the heart of the town.

