



FIGURE 8.5 KIRKBY PARK SQUARE ILLUSTRATIVE DESIGN

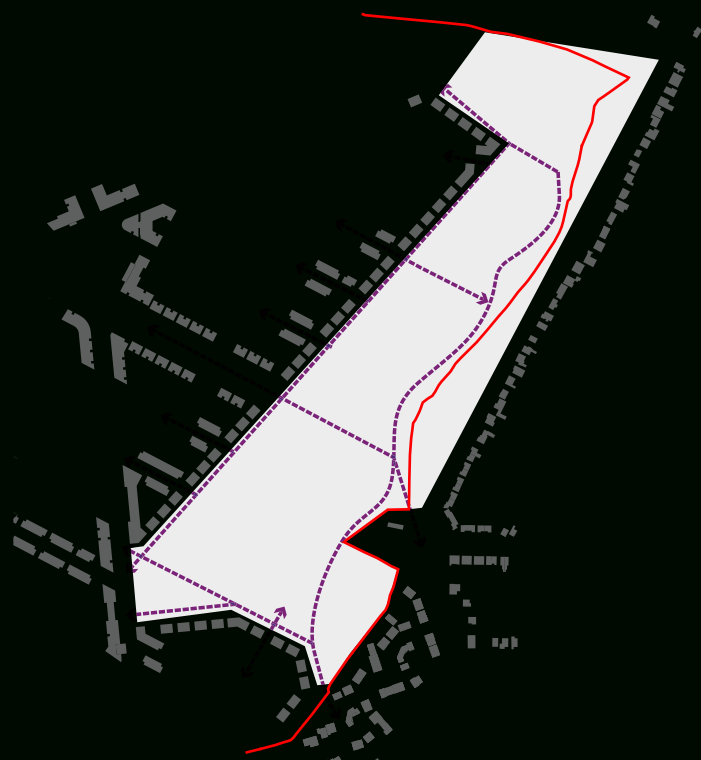
- ① Play area
- ② Green space
- ③ Large native trees
- ④ Green connections towards the wider landscape
- ⑤ Green link towards Kirkby Park

KIRKBY PARK

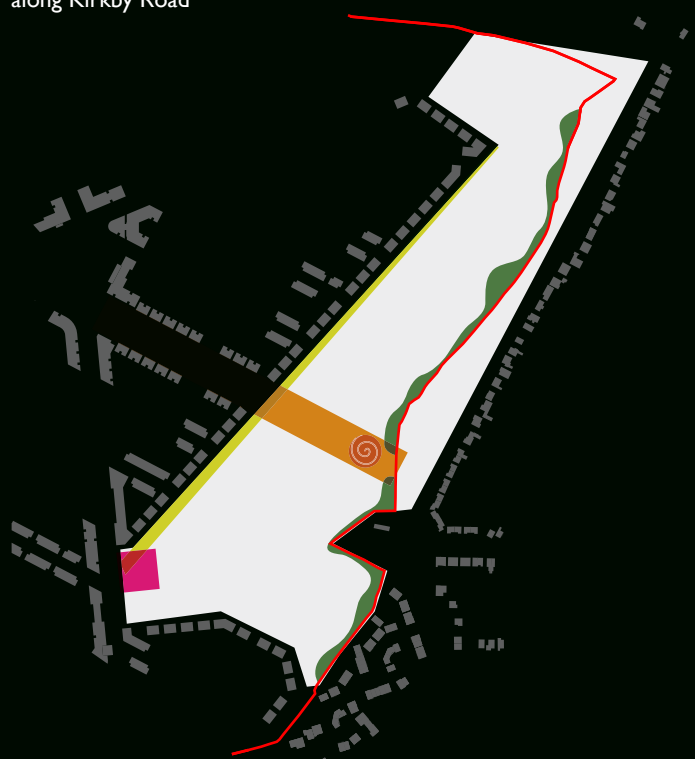
8.2.22 A new sport focused park overlooked by new and existing communities that incorporates existing green uses and landscape assets found along Kirkby Road into the larger green space. The park accommodates a variety of sports pitches and facilities including a new pavilion as well as providing local amenity green space and play facilities.



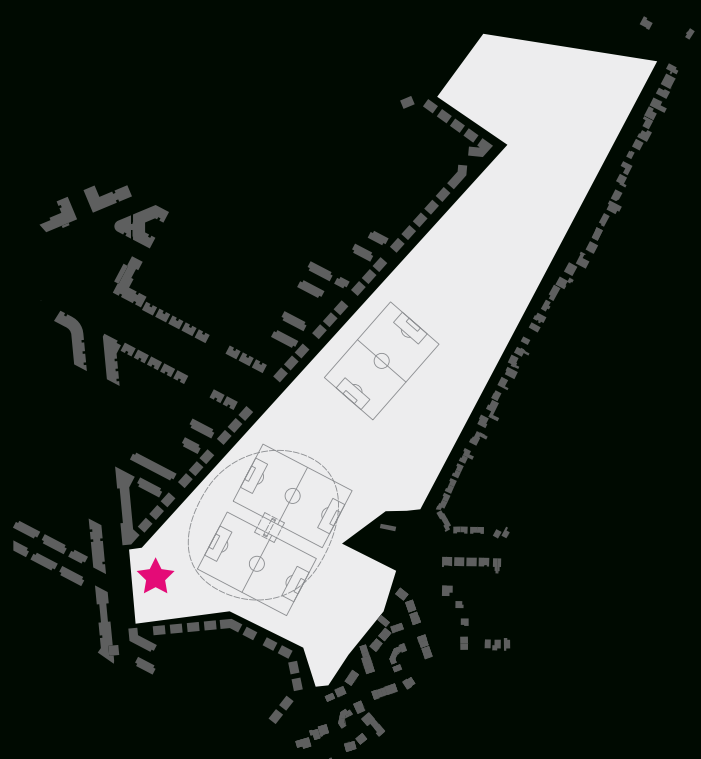
8.2.23 The Park creates a contained green space well overlooked by both existing and proposed dwellings which incorporates existing green uses along Kirkby Road



8.2.24 Strong connections are created to neighbourhoods adjacent to the Park



8.2.25 A number of landscape gestures help define the Park edges including a broad pedestrian promenade which gives character form and containment to the space and aid intuitive navigation



8.2.26 The Park provides play and sport facilities for the local community



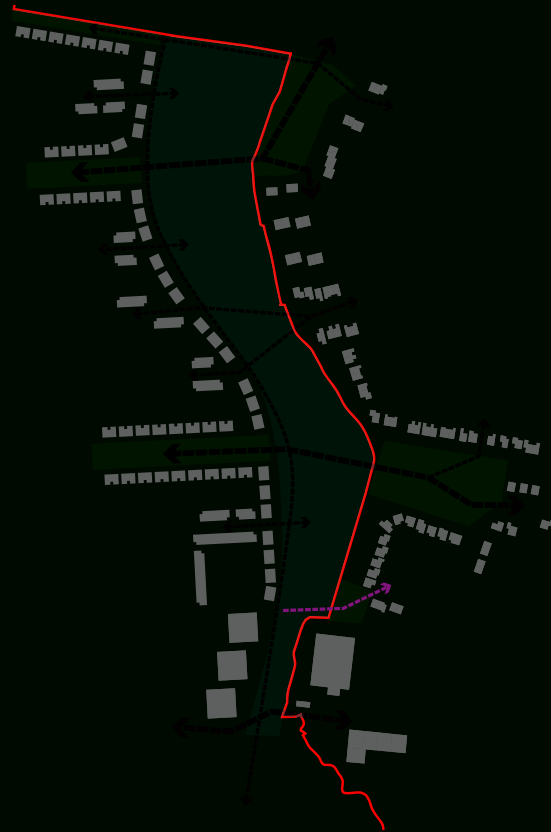
- 1 Green link to Kirkby Square
- 2 Landscape landmark
- 3 Sports pavilion
- 4 Sports pitches
- 5 Bowling green
- 6 Landscaped edge
- 7 Play area and cherry orchard
- 8 Attenuation meadows



FIGURE 8.6 KIRBY PARK ILLUSTRATIVE DESIGN: (INSET SHOWS HOW A RANGE OF SPORTS FACILITIES CAN BE PROVIDED)

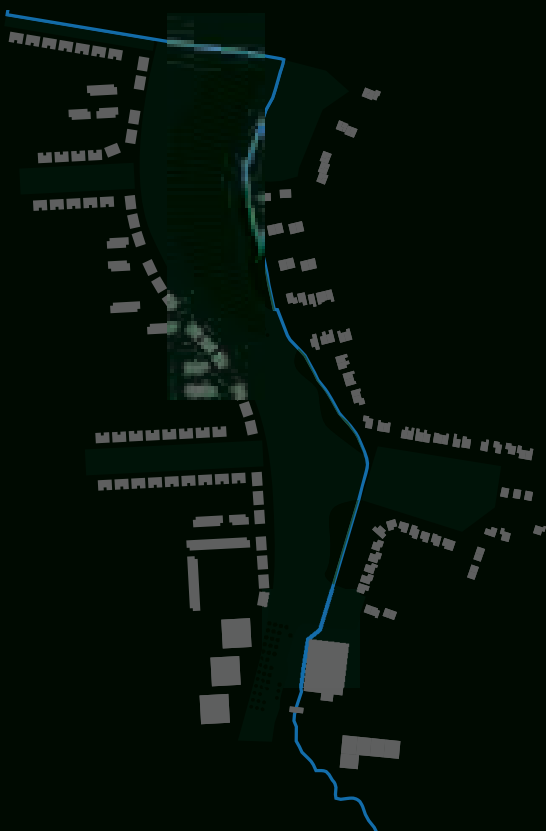
TWEED SPINNEY

8.2.27 A generous sweeping space that follows the Tweed River. The park, containing fruit trees, meadows and native planting, consolidates existing green spaces to the east into Barwell West's wider green network.



8.2.28 The Spinney creates a contained green space well overlooked by both existing and proposed dwellings.

8.2.29 It will establish strong connections through and within the park allowing easy access to neighbouring communities and green spaces



8.2.30 The proposals use native tree planting to give a distinctive landscape form to the space.

8.2.31 The Spinney will accommodate attenuation and flooding needs



- ① Sweeping meadows
- ② Spinney trees
- ③ Strategic woodland planting
- ④ Community orchards
- ⑤ Existing green spaces

FIGURE 8.7 TWEED SPINNEY ILLUSTRATIVE DESIGN

8.3 GREEN INFRASTRUCTURE

8.3.1 The site lies within the '6C's Green Infrastructure Strategy Area' which falls within the East Midlands Green Infrastructure Network (EMGIN). EMGIN published the 6C's GI Strategy in 2010 and this identified the Tweed River as a Strategic GI asset and set the site within an 'Urban Fringe GI Enhancement Zone'.

8.3.2 Hinckley and Bosworth B.C. commissioned a Green Infrastructure (GI) Strategy for the district and this was adopted in October 2008 and forms part of the Core Strategy evidence base to guide development of policy criteria.

8.3.3 The GI Strategy identifies several issues pertinent to the site:

"Strategic footpath routes that pass through it will need to be retained, there is an issue with development and flooding as one of the streams that drains Hinckley passes through this area, and there is a definite lack of public accessible green space. The main strategic intervention would be the retention of the Tweed River corridor as an open watercourse – this could become a strategic route for recreation and will maintain access between the area of Barwell to the east of the SUE and the open countryside."

8.3.4 The GI Strategy makes reference to the Leicester, Leicestershire and Rutland Landscape and Woodland Strategy, where it seeks to tie in the relationship between landscape character and the multifunctional green infrastructure.

8.3.5 Although the GI Strategy identifies the issues which need to be addressed on the site, it does not provide any specific recommendations for creation of GI assets and management of existing assets.

8.3.6 In developing the masterplan for the site, careful consideration has been given to the retention of existing GI assets as follows:

- An interconnected hedgerow network comprising the better, stronger features of the site;
- The majority of the existing trees, focussing on the better specimens (as determined via BS5837 tree survey);

- The retention of a broad strategic corridor associated with the Tweed River and interconnected with existing public open space and proposed open spaces to the south and north;
- Retention of existing floodplain areas and associated 'damp' habitats and watercourses;
- Retention of the Little Fields Farm Meadow Local Wildlife Site, connected to the Tweed River strategic corridor; and
- Retention of all public footpath links, with limited need for diversions.

The Barwell SUE GI Strategic Intervention

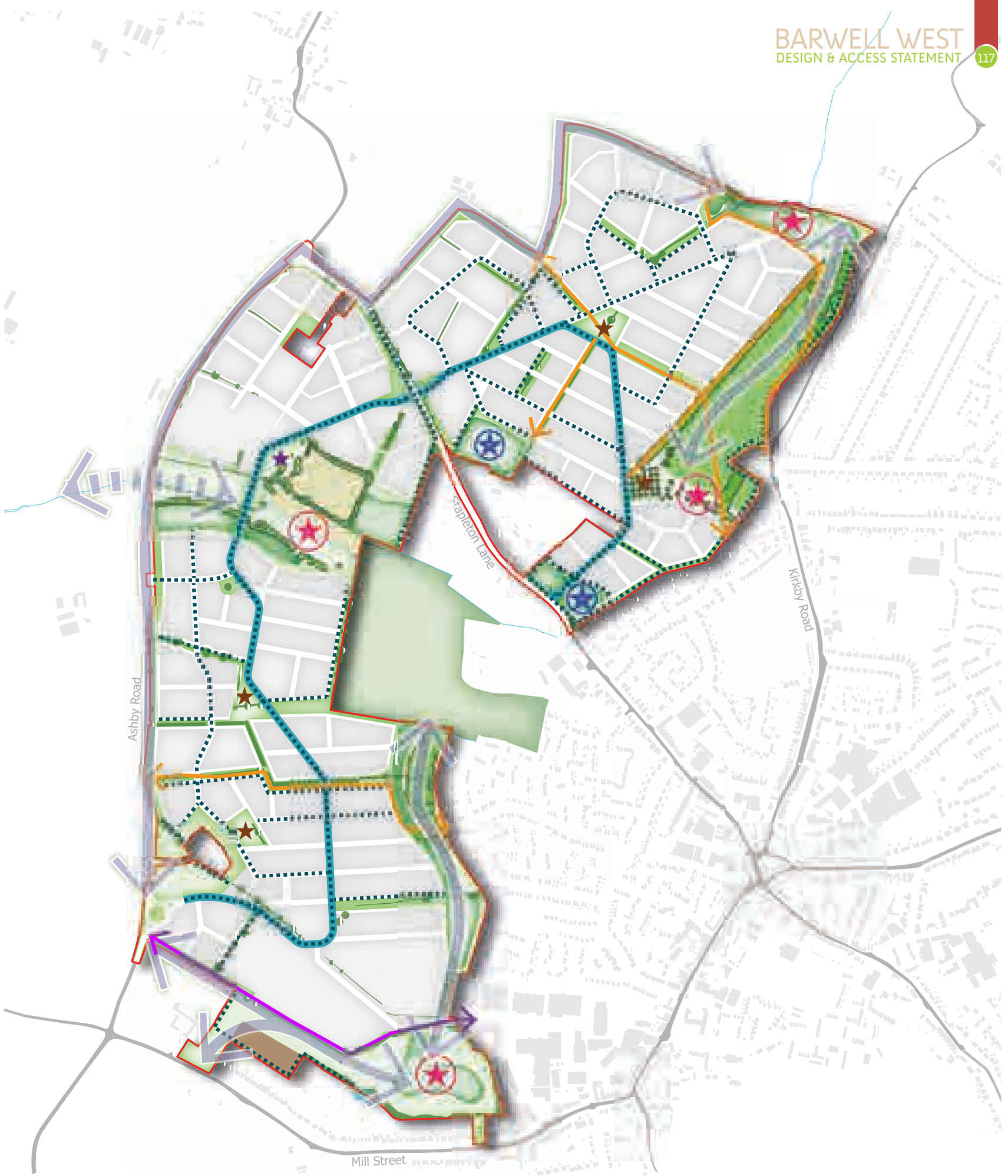
8.3.7 Within the site's framework of existing retained landscape assets – principally the trees, hedgerows, open space and water courses, a network of major and minor on-site GI corridors have been identified which incorporate landscape, ecological, arboricultural and hydrological features which have been combined with the recreational needs of new and existing residents, to create a comprehensive network of interlinked GI assets. The Barwell SUE aims to deliver the following GI assets:

- A Strategic GI corridor will establish an informal recreational route between the site and the wider landscape to the west, incorporating existing rights of way. This corridor will have the potential to develop into a richly biodiverse environment to be referred to locally as Tweed Park.
- The Tweed Park Strategic GI corridor could support many different habitats re-connected through the interaction between the open character of the Tweed River watercourse, the retained trees and hedgerows, the Little Fields Farm Meadow Local Wildlife Site and Barwell's recreation park to the east of the corridor.
- A major GI corridor is created along the perimeter of the site where hedgerows and trees are retained and enhanced with additional planting. This reinforced corridor will improve visual amenity, increase local biodiversity along the development edge and re-connect with off-site habitats.
- Along the north-eastern boundary, a major GI corridor will extend along 'Kirkby Park' and will feature playing fields within formal open space and separated from existing residential properties by new broadleaf

copses and scrub planting. Species will incorporate seed and fruiting species where possible to create opportunities for community food operations. A landscaped 'vista' will extend east-west linking the open space with the urban 'Kirkby Park Square' thus adding to the multifunctional role of this major GI corridor.

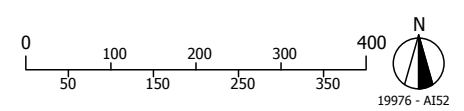
- The major GI corridor extending down the south-eastern boundary will feature seasonal SUDS ponds within 'Tweed Spinney'. It will feature wet woodland planting set either side of the watercourse, opened up to enhance biodiversity. This will create a wide transition between existing and proposed residential and commercial development, as well as providing an attractive urban-rural interface with Barwell.
- Minor GI corridors will incorporate retained hedgerows and trees into the more localised street tree planting within the development to create contiguous green linkages across the site. Urban parks will form minor GI nodes in which a variety of trees, shrubs and amenity grassland can be enjoyed by residents.
- Several major GI nodes will be created within larger areas of public open space, where there will be a variety of features such as allotments and seasonal SUDS ponds. These will provide new wildlife habitats and retain and enhance existing habitats.
- Several public rights of way pass through the site. The Leicestershire Round strategic footpath will be diverted through new, attractive public open space which features ecological enhancements including wetland planting around new seasonal SUDS ponds. The route will follow retained trees and hedgerows reinforced with new planting.

8.3.8 Overall, the development proposals for the site offer an opportunity to greatly strengthen and enhance the local GI network, increase the number and quality of GI assets and introduce a far greater degree of multi-functionality into this intensively farmed agricultural landscape, adjacent to the existing urban edge. Such enhancement will be of value not just to local wildlife but to residents of both the existing and proposed urban areas.



- | | | | |
|--|--|---------------------------------|---------------------------------------|
| Outline Planning Application Boundary | LEAP | Informal Open Space & Corridors | Drainage & SUDS Ponds |
| Off-site G1 Assets* | Strategic corridor reconnects habitats and recreational routes in the wider landscape | Allotments | Local Wildlife Sites |
| Retained Trees & Hedgerows | Major corridors have a multifunctional role and distinctive characters, offering sustainable movement corridors for people and wildlife linkages | Formal Play Space & Corridors | Proposed Trees (Indicative Locations) |
| Existing / Diverted Public Rights of Way | Minor Corridors may comprise a hedgerow, footpath or avenue of trees and provide linkages to GI corridors | | |
| Diverted Leicestershire Round | Major Corridors may comprise a hedgerow, footpath or avenue of trees and provide linkages to GI corridors | | |
| Proposed Development | Major Nodes provide a combination of features to create a more enhanced, multifunctional experience | | |
| NEAP | Minor Nodes are features with limited multifunctionality such as woodlands, wetlands or heritage and recreational features | | |

FIGURE 8.8 GREEN INFRASTRUCTURE PLAN



8.4 LAND FORM AND DRAINAGE

8.4.1 The drainage strategy for the site has been developed in relation to the site topography and has been designed and modelled to facilitate a 1 in 100 year rainfall event, including a 30% rainfall increase due to Climate change. The strategy ultimately seeks to manage the discharge rate based in line with EA requirements as is described in more detail with Chapter XX of the Environmental Statement.

8.4.2 Figure 8.8 identifies 13 catchment areas and the indicative direction of surface water run-off based on the topography of the land. Catchments within the residential areas have assumed to consist of 60% impermeable surfaces, whilst the employment area has been assumed consist of 80% impermeable surfaces.

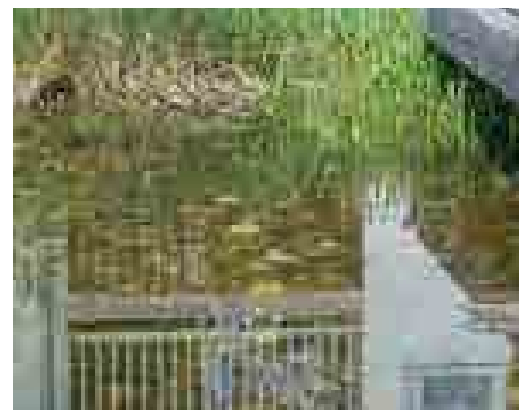
8.4.3 Attenuation features across Barwell West are located at the lowest point of the respective catchment areas across the site and are outside of the 100 year floodplain, with the exception of ponds 2,3, and 4. In these instances the floodplain and attenuation feature will be re-modelled to ensure that there are no conflicts between the two uses.

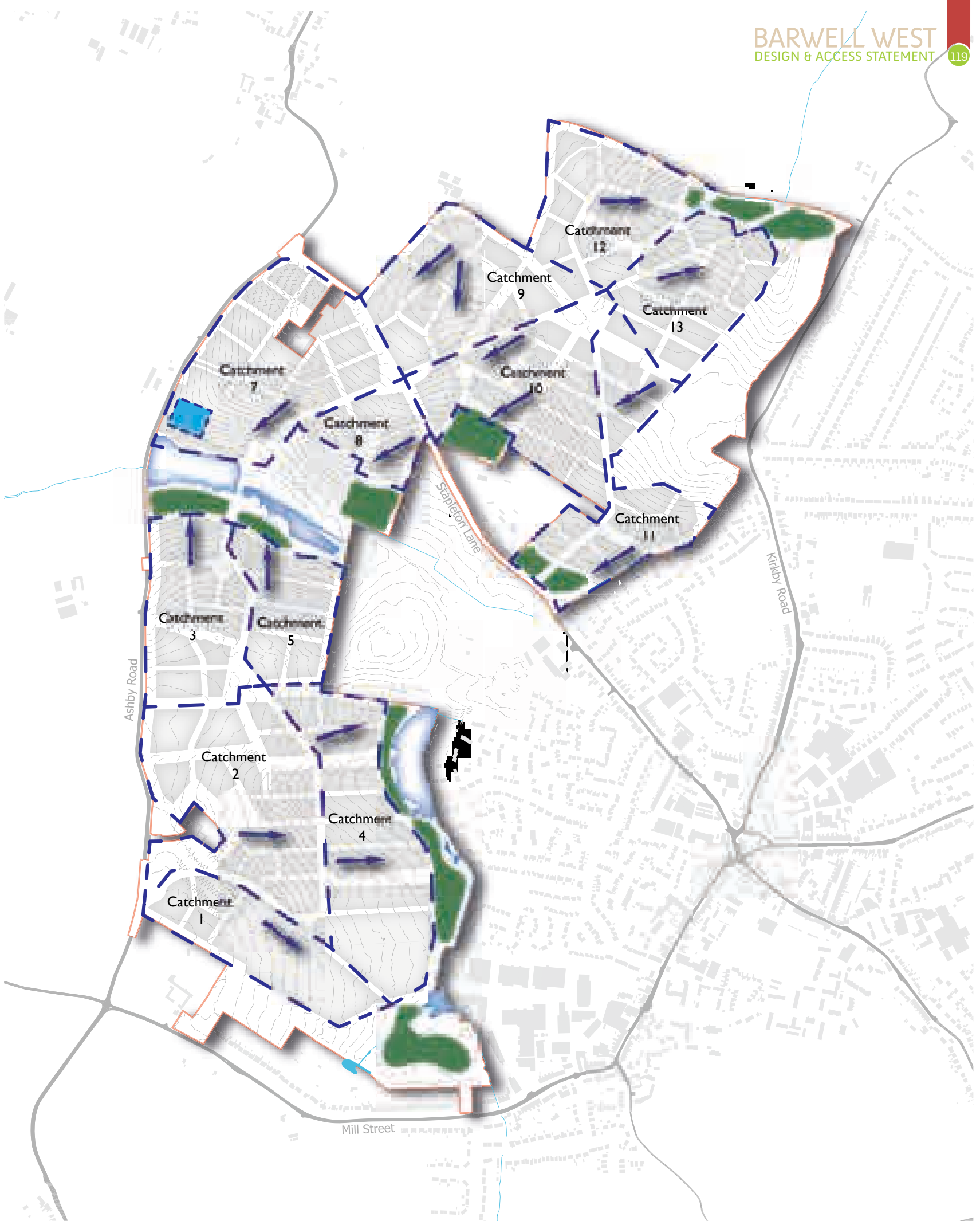
8.4.4 Whilst the overwhelming proportion of attenuation is on the surface it is assumed that an underground storage facility will be placed within the proposed primary school grounds to make up any shortfall within catchment areas 7 and 9. It is also assumed that the employment area will have its own underground storage facility.

8.4.5 All the ponds indicated in Figure 8.8 have been designed to meet ROSPA standards for inland water features and are designed with a 300mm freeboard to allow for any residual risk related to blockage or an extreme rainfall event (in excess of 100 years).

8.4.6 As part of the consultation with the local authority it was also calculated that 15% of the attenuation area can be allocated to Natural Green Space. Figure 11.4 identifies how this percentage was calculated with the immediate areas surrounding landscape can be used.

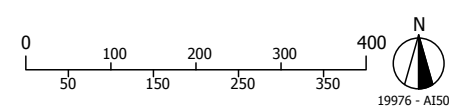
8.4.7 In addition to the attenuation features shown in fig 8.8, surface water also be transported through a range of underground channels, open swales and open drainage channels as illustrated in the images below.





- Outline Planning Application Boundary
- Drainage Catchment
- Direction of surface water travel
- Attenuation area
- Tweed River floodplain
- Indicative Underground Storage Facility

FIGURE 8.9 DRAINAGE STRATEGY PLAN



8.5 MANAGEMENT AND MAINTENANCE

8.5.1 A management and maintenance schedule for landscape areas will be submitted as part of the detailed application. This will consider the possibilities of the landscape maintenance being adopted by the Parish Council and/or Hinckley and Bosworth Borough Council to their own specifications.

8.5.2 Each element of the landscape will be considered separately to ensure the correct maintenance prescriptions are carried out for each area, ensuring the successful establishment and long-term care of habitats to maintain the aesthetics of the landscape, ecological value and functionality. Detailed maintenance schedules will be set out for existing woodland/mature trees, newly planted woodland, newly planted specimen trees, retained hedgerows, newly planted hedgerows, structural shrub planting, marginal/aquatic planting, and amenity planting. Other key features of the landscape, such as SUDS features, hard surfaces, site furniture, signage and fences and gates will also be included in the maintenance schedules to ensure all features are kept in a safe condition, good state of repair and maintain their intended function.

8.5.3 For general planting works maintenance operations during the defects period (years 1-2 after planting/construction) will include:

- Weeding to reduce competition from unwanted species and ensure healthy strong growth and establishment;
- Watering;
- Checking plants and associated planting features such as stakes, guards and rabbit proof fences are firmly bedded in and in good condition;
- Pruning;
- Cutting/mowing to maintain species diversity in new grassland habitats;
- Replacement, in the next planting season, where planting has failed or suffered from pest damage or vandalism;
- Litter removal;
- Maintaining SUDS features to ensure they are fully functioning; and
- Checking hard surfaces, signage, site furniture and fencing or defects and repairing as necessary in line with the original specification.

8.5.4 Operations will generally be carried out monthly, quarterly, twice yearly, or annually.

8.5.5 During the establishment period (years 3-5) maintenance operations will continue to ensure the successful establishment of the new planting works, to maintain the existing habitats, and keep the site in a good state of repair. Operation will include:

- Weeding to maintain a weed free ring around newly planted trees and shrubs for the third year. After this planting should be sufficiently established to keep weeds to a minimum however periodic checks will take place to ensure that inappropriate weeds are removed;
- Stakes, guards and rabbit proof fencing will be removed once planting is sufficiently established;
- Pruning and cutting/mowing will continue to maintain grassland species diversity, promote healthy growth and ensure access ways and paths are kept clear for vehicles and pedestrians as required;
- Litter removal and maintenance of all hard landscape features will continue to ensure they are maintained in a good state of repair.

8.5.6 Operations will generally be carried out quarterly, twice yearly, or annually.