



Kidderminster North Green Infrastructure Concept Statement

"Green Infrastructure is the network of green spaces and natural elements that intersperse and connect our cities, towns and villages. It is the open spaces, waterways, gardens, woodlands, green corridors, wildlife habitats, street trees, natural heritage and open countryside. Green Infrastructure provides multiple benefits for the economy, the environment and people."

West Midlands Green Infrastructure Prospectus (nd)

The Worcestershire Green Infrastructure Partnership (WGIP)

The WGIP is a collaboration between statutory agencies including the Forestry Commission, Natural England, Worcestershire County and District Councils, and voluntary sector organisations such as the Worcestershire Wildlife Trust. The Partnership's aims are to protect, create, restore and promote Green Infrastructure (GI) assets throughout the County of Worcestershire to provide multiple benefits for the environment, economy and communities.

The Worcestershire Green Infrastructure Partnership welcomes this opportunity to establish what we believe to be the key strategic issues and opportunities for development within the Kidderminster North area; this GI Concept Statement is made without prejudice to the allocation process and applicants should be minded that further, more detailed advice may be provided by GI Partners at a later stage in the planning process. We hope therefore that in these early stages of planning this GI Concept Statement will help shape future developmental design parameters and assist in delivering the environmental acceptability of schemes in the Kidderminster North area.

Summary of GI Concept Statement

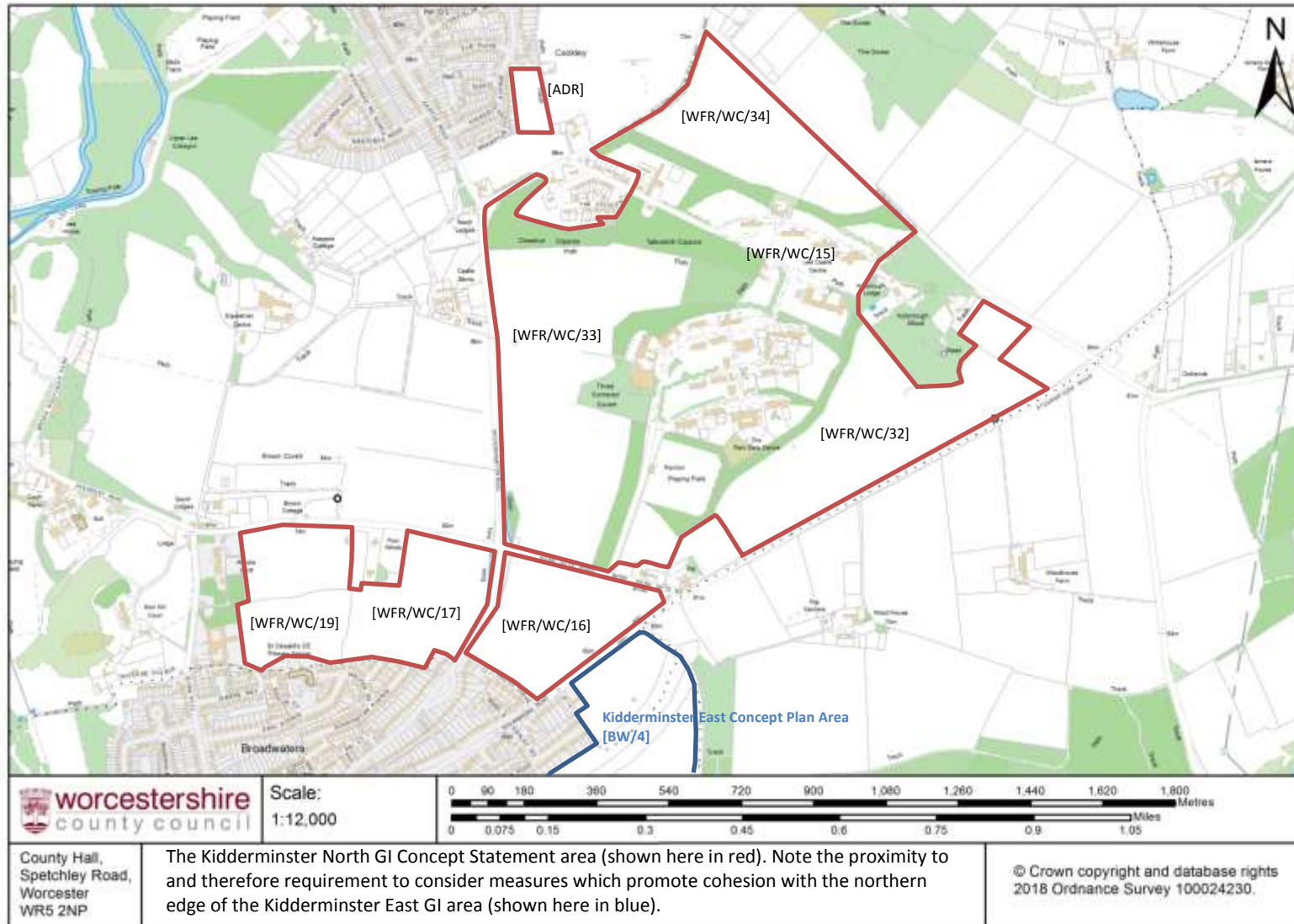
We contend the following 5 principles for development are of critical importance for the Kidderminster North area:

- 1. Overall net-gain for biodiversity must be achieved.**
- 2. Restoration and recreation of large manageable blocks of the distinctive Wyre Forest acid grassland habitat.**
- 3. A strong multi-functional woodland network which contributes to the locations' biodiversity, landscape and visual amenity. At a larger-scale, opportunities are realised to enhance linkage to the Kidderminster East area.**
- 4. Containment and on-site surface water treatment utilising exemplar SUDs approaches.**

The Kidderminster North Statement has been prepared by a working group of the Worcestershire Sub-Regional Green Infrastructure Steering Group including Worcestershire County Council, Wyre Forest District Council, North Worcestershire Water Management, Natural England, Worcestershire Wildlife Trust and The Forestry Commission.

While the Concept Statement has benefited from scrutiny and input from stakeholders, it is not a statutory document and holds the status of a guidance paper to provide a framework for the master planning of a comprehensive multifunctional green infrastructure.

Whilst this document sets out the Green Infrastructure Partnership's position and advice, individual members of the Partnership reserve the right to provide further representation through the normal planning process as schemes develop.



Policy Context

The policy context for this concept statement is primarily influenced by the central Lea Castle site which is core to the Kidderminster North area and forms a 'hub' from which GI assets radiate to connect via the surrounding proposed allocation sites to the wider countryside. The Lea Castle site is referred to within the Wyre Forest District Council Core Strategy (2006-2026), adopted December 2010. Further reference is made to Wyre Forest District Council's Green Infrastructure Strategy (October 2012) and the Site Allocations and Policies Local Plan (adopted July 2013). Key policies are therefore:

SAL.PDS1

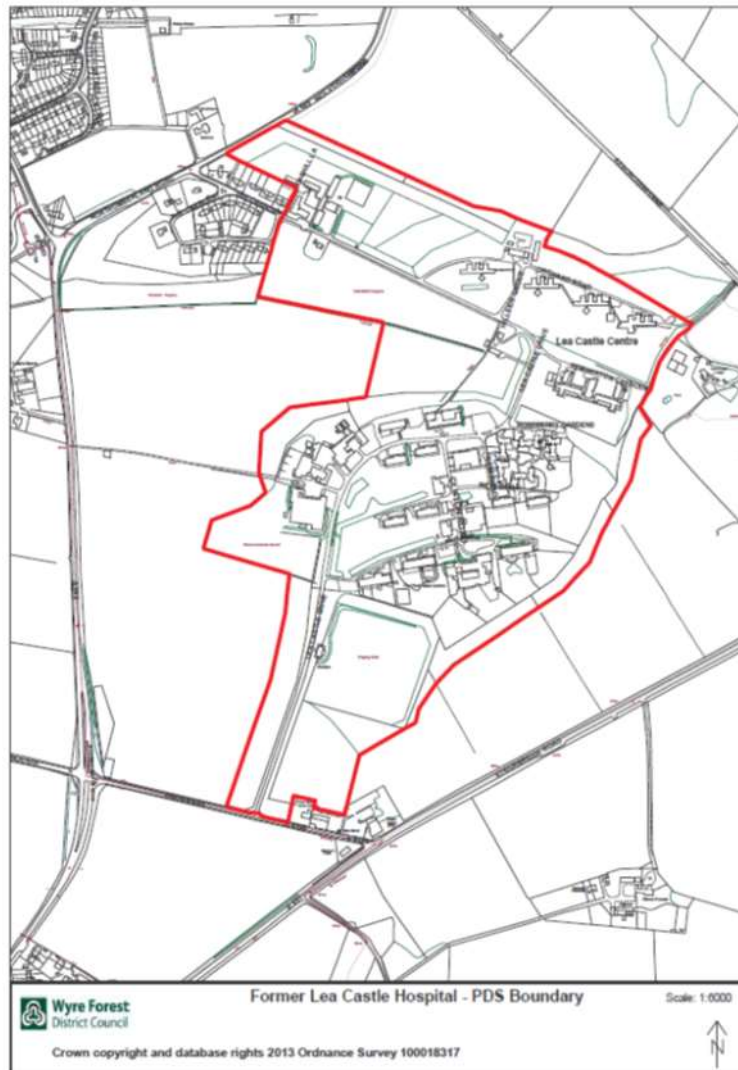
Lea Castle Hospital Site

Within the Previously Developed Land (PDL) boundary of the former Lea Castle Hospital, the following development is acceptable in principle:

- C3 (Dwelling Houses)*
- C2 (Residential Institutions)
- B1 (Business)
- health and sport facilities

Planning permission for the development/redevelopment of any part of the site will not be granted in isolation unless the application is accompanied by a

comprehensive masterplan for the whole site, which has been prepared in consultation with the local community and the District Council.



Development Principles for the Lea Castle Site

As a minimum, the District Council will require development proposals to:

- demonstrate no greater visual impact on the openness of the Green Belt than existing development.
- be focused on the previously developed parts of the site.

- supplement and enhance existing strong landscape framework surrounding the site to improve ecological and landscape value.
- retain Talbotshill Coppice.
- retain existing sport pitches for community use.
- investigate opportunities for providing safe, attractive and convenient pedestrian and cycle links between the site, Cookley and Kidderminster to ensure that local facilities are accessible by alternatives to the car.
- make a financial contribution to the provision of affordable housing off-site in accordance with the adopted Core Strategy Policy CP04.

SAL.UP3 Providing a Green Infrastructure Network

The existing green infrastructure network, as set out within the Green Infrastructure Strategy, and the open spaces identified within the Wyre Forest District Open Space, Sport and Recreation Assessment, will be safeguarded from development. Proposals should create new, or enhance and retain existing, open space or green/blue infrastructure. New development should incorporate open space in accordance with the quantity, quality and accessibility standards set out within the most up-to-date open space, sport and recreation assessment.

1. Green Infrastructure Corridors

The Green Infrastructure Strategy identifies the following key green infrastructure corridors which new development will be required to contribute towards the delivery and enhancement of:

- River Severn and River Stour Corridors - development along these corridors will be required to improve the attractiveness of the riverside environment, remove culverts where appropriate, enhance the biodiversity value and water quality of the river corridor, and ensure that the functional floodplain is maintained and restored. Development should recognise and enhance the multi-functional nature of these corridors and seize opportunities to link them with the wider green infrastructure network.
- Staffordshire and Worcestershire Canal - development along the canal corridor must not have a detrimental impact on the existing sustainable transport route or the character of the Conservation Area. Development should seek to enhance the biodiversity and water quality of the canal corridor whilst recognising the multi-functional nature of the corridor.
- Public Rights of Way Network - where appropriate.

To the north of Kidderminster Town Centre, the Council will safeguard the areas shown on the Policies Map in the Stour Valley for future development as a Country Park. Proposals for development which would prejudice the provision of a Country Park in these areas will not be permitted.

2. Public Rights of Way

Developments which affect Public Rights of Way will be required to make adequate provision for the continuation or diversion of the route. New

developments will be required to link into Public Rights of Way where appropriate. New Rights of Way will be established where possible.

Kidderminster North - Context

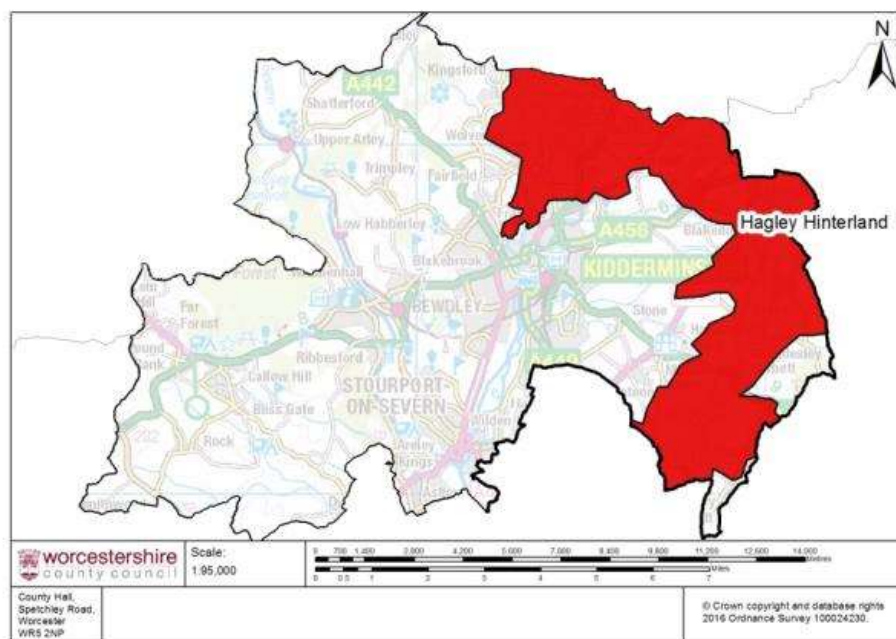
The Kidderminster North area is located west of the A451 Stourbridge Road with the A449 Wolverhampton Road forming the north-western periphery between the 'core' Lea Castle site and enclosed agricultural landscapes beyond. The Kidderminster North area extends beyond the core Lea Castle complex by encompassing proposed allocations within the northern fringe of Broadwaters, extending to the Wolverley Road and providing further opportunities for GI connectivity to the south-east by including the proposed allocation at the junction of Park Gate Road and the Stourbridge Road. A parcel of land identified as an Area of Development Restraint (ADR) from the current Local Development Plan can be found to the north-west of the Kidderminster North area, in close proximity to the Lea Castle site, and therefore forms part of the cohesive treatment of geographically clustered emerging allocations addressed within this Concept Statement.

The GI Concept Statement area therefore contains a variety of habitats, buildings, formerly landscaped grounds and large areas of grassland, planted tree belts, hedgerows and woodland as well as a significant number of scattered, established and mature trees. The central area of the Lea Castle site currently comprises a mixed cluster of one and two storey derelict prefabricated hospital buildings dating principally from the 1950s. These buildings, together with other former hospital buildings located in the north-west corner of the Lea Castle site, have a total estimated footprint of approximately 25,000sqm and a gross floor area of around 30,000sqm. There is also an extensive network of underground ducts serving the buildings. A sports pitch and club house is located immediately to the south of the main hospital site.

The Lea Castle site benefits from a current planning application (reference 17/0205/OUTL) from which this Concept Statement draws appropriate references in order to facilitate refinement and enhanced integration of proposed GI measures, where deemed beneficial to do so by the Worcestershire GI Partnership.

In many ways the Kidderminster North area is inexorably linked with the emerging Kidderminster East corridor. At a fundamental level the history, landscape and ecology of these areas are entwined, and this also offers an opportunity to address site-level constraints by finding solutions which occur at a larger-than-site level, by considering how best to entwine development principles and Green Infrastructure assets between the two development corridors. There is a very strong argument that BW/4 should be located within the Kidderminster North area, and that proposals associated both with the Kidderminster North and BW/4 sites should aim to mitigate the broader impacts upon the Hurcott Woods SSSI and LNR through the provision of measures designed to address the anticipated increase in visitor pressure to this important GI asset.

Environmental Character Area Context¹ of the Allocated Site



ECA: Hagley Hinterland

Strategic GI Approach Primary Objective: Protect and Restore

Overarching Principles: Maintain and restore habitat connectivity. Protect and restore acid grassland and wooded habitats.

¹ http://www.worcestershire.gov.uk/downloads/file/3775/worcestershire_green_infrastructure_framework_2

Green Infrastructure Principles for Development

Blue Infrastructure

Principal objective:

1. *Containment and on-site surface water treatment trains*

Hydrologically the 'Kidderminster North' allocation site falls in two catchments, with the majority of the 'core' Lea Castle site draining towards the Blakedown Brook and the majority of the other sites draining towards the Stour. The Blakedown Brook is a tributary of the Stour which feeds several pools along its way from the Clent Hills to its confluence in Kidderminster. These pools include the Hurcott and Podmore Pools SSSI. The catchment does not show an abundance of natural surface water features, which suggests that originally the area was predominantly drained via infiltration, and the watercourses were mainly fed by groundwater recharge as supposed to overland flow. The outline application for the core site showed that a culverted watercourse is actually in place, discharging water from the site directly into Podmore Pool. This culvert was presumably constructed when the Lea Castle site was developed.

In line with both national and local policy it is expected that applications for any of the sites are accompanied by a drainage strategy that sets out how the natural drainage is mimicked, both in quantity and quality, using SuDS.

Runoff from the sites needs to be limited to Greenfield runoff levels. As the Hurcott and Podmore Pools SSSI is water dependent any hydraulic connectivity between the sites and this SSSI must be maintained. Discharges from all the sites must be sufficiently treated prior to discharge. Appropriate protection measures must be in place during both construction and operational phases to prevent contamination (including spill events or sediment accumulation) to the water environment. It is important to ensure that designs address exceedance pathways, so that in exceptional flooding events features within the flow paths and downstream receptors (and particularly Podmore Pool SSSI) are adequately protected.



Moorland Wetland – under [Creative Commons Licence](#)

As the sites sit atop an aquifer, treatment of road runoff and other contaminated flows must utilise sealed systems to discharge to on-site treatment before infiltration or discharge off-site. Multi-functional sustainable drainage solutions (SuDS) should utilise wetland systems and surface water attenuation basins of appropriate size. If carefully designed these SuDS features will constitute a key community asset supporting a sense of place. Detailed designs should be prepared showing profile and planting to demonstrate how storage and conveyance features will also provide visual amenity and biodiversity value. Elements of the SuDS plan should be included within the Ecological Constraints and Opportunities Plan.

Attenuation ponds and standing water in swales should be landscaped based on *Molinia* communities (eg M25 mire) in preference to *Phragmites* reed beds. Where SuDS design is sensitive to appropriate planting and lighting mitigation, the surface water conveyance and attenuation features might also provide on-site foraging and commuting resources for wildlife such as bats. Any attenuation features and sensitive infrastructure such as a foul pumping station must avoid areas susceptible to surface water flooding; we note that the surface water flood risk maps show a surface water flood flow route in the south-eastern area of the core site. Conveyance and storage features must not compromise existing or newly created high-value biodiversity areas of potential surface drainage routes.

Opportunities for betterment at Hurcott Pool, particularly with regards water quality and value for biodiversity, are to be encouraged. This could be achieved, for instance, through developer contributions. Similarly, any opportunities to explore opening up the culverted discharge to Podmore Pool replacing this with an open and biodiverse watercourse would be welcomed.

The Lead Local Flood Authority will seek compliance with the Non Statutory Technical Standards for SuDS (Defra, 2015), taking into account the latest Climate Change guidance provided by the Environment Agency. In reaching exemplar status we would anticipate that a detailed SuDS design will be in compliance with CIRIA report C753² and the Wyre Forest SuDS Design and Evaluation Guide (2018) which can be found on the authority's website).

² The SUDS Manual http://www.ciria.org/Resources/Free_publications/SuDS_manual_C753.aspx

Sustainable Transport

Principal objectives:

1. *Improve the Caunsall to Stourport-on-Severn Canal Towpath infrastructure and promote the Active Travel Corridor's opportunities for access to the wider countryside*

The Kidderminster North settlements will be remote from Kidderminster's urban centre and risks adding significant levels of additional traffic to the local road network. With the additional employment, retail and other uses a broader Kidderminster North area offers over the 'core' Lea Castle site, additional opportunities arise to mitigate the effects of this additional traffic through infrastructure improvement and promotion of multi-modal movement. Worcestershire's Local Transport Plan (2018-2030) outlines the opportunity to improve the Staffordshire and Worcestershire Canal's towpath as a means to promote sustainable transport through the local network of settlements and also to the wider countryside.

It's considered a relatively low cost to promote increased use of the towpath from residents within the Kidderminster North developments and therefore developer contributions would be sought to enhance the towpath itself. This may include surfacing, wildlife-sensitive lighting (the Staffordshire and Worcestershire Canal is a designated Local Wildlife Site) and public realm improvements to create an attractive and coherent network.

Future junction upgrades at the A451/Park Gate Lane must offer provision for pedestrian and cyclist crossing offsite, promoting access to central Kidderminster as well as to GI assets in the wider landscape. There may also be opportunities to explore benefits at a wider strategic scale, of linking the site to the wider



Staffordshire and Worcestershire Canal © Christine Johnstone under [Creative Commons Licence](#)

walking and cycling network, noting that Hurcott/Podmore SSSI complexes are receptors which are sensitive to increased anthropogenic pressure.

It is essential that opportunities to integrate the proposed development into the bus network are explored.

Access and Recreation

Principal objectives:

1. *Enhance multi-modal access to urban Kidderminster and the wider countryside*

There are good connections for walking and cycling within and beyond the Kidderminster North area to the nearby urban fringes, wider countryside and public rights of way network. The existing infrastructure offers good connectivity to Cookley (and from there to Kinver Edge and Kingsford Forest Park) and there are opportunities to enhance linkages between on-site bridleways to the northern fringes of Kidderminster.



Informal play area – under Creative Commons CC0

A key opportunity lies in creating an expanded and enhanced woodland network which would provide multifunctional benefits for access and recreation without compromising biodiversity, particularly protected species

and historic environment objectives. Our preference is for the creation of informal and natural play areas where these can be included sensitively (for example buffers to ancient woodland are considered incompatible with this recreational end-use).

The nature of the woodland network allows for natural play opportunities through a combination of coniferous and broadleaved woodland across the Kidderminster North area. In places other than the coniferous stand along Lea Castle Drive a gradual reversion to broadleaved woodland is desired; this could allow for the use of felled conifer material to create play features. All play and informal recreation areas should be maintained to Green Flag Award standards.

The existing infrastructure within 'core' assemblage of Lea Castle sites (WFR/WC/15, 32, 33 and 34) offer good connectivity to Cookley (and from there to Kinver Edge) and opportunities to enhance linkages through the Kidderminster North area using on-site bridleways connecting to the northern fringes of

Kidderminster. However all connective measures must be sensitive to other receptors. For instance a key connective route along the north-south axis of WFR/WC/15 traverses coniferous woodland on Lea Castle Drive and would therefore benefit from the woodland whilst its value for biodiversity would be better protected if a combined foot and cycle path were moved *adjacent to* rather than *within* the woodland. Our preference is to create a circular route around the core aggregation of Lea Castle sites (WFR/WC/15, WFR/WC/32, WFR/WC/33 and WFR/WC/34).

Health

Principal objectives:

1. *Design detail should evidence how it promotes active and healthy lifestyle options*

It is increasingly recognised that the places and spaces where we live/work have an impact on health and wellbeing and that an individual's actions to improve their lifestyle or health status are likely to be influenced by the environmental and socio-economic context within which they take place. The design of the built environment can have a significant impact on physical and mental health and how people perceive their environments. The location, density and mix of land uses can have wide-reaching implications on how individuals live their lives; it can affect user experience of access to and provision of key community facilities such as public services, employment opportunities, healthy food choices and parks and green spaces.

Green infrastructure can support the health and wellbeing of the future residents of Kidderminster North site and existing communities living near the site by providing opportunities for active, happy and healthy lifestyles. As such we would encourage that any GI plans provide the following (where appropriate):



Park Bench with a view –under [Creative Commons Licence](#)

- Formal and informal recreation areas
- Green spaces which are well-maintained and accessible for the residents of the site including those more vulnerable such as disabled and elderly
- Walking and cycling links within the site and connect the site with the centre and important facilities including shops, GPs etc
- Opportunities for healthy food provision through allotments, community orchards, fruit street trees
- Green spaces and walking routes which include benches placed in strategic places to encourage community/intergenerational integration
- Ensure that any seating/resting places along the walkaways are placed under trees to provide shade
- Consider possibility of circular recreational routes to cater for the need of people living with dementia
- Segregated and well-lit cycling walking routes would be preferred to serve well all groups of the population
- Use activities such nature/historic trails to encourage physical activity and mental stimulation by learning about and contact with nature/history
- Visually attractive environment which gives people strong sense of place

Biodiversity

Principal objectives:

- 1. Transparent and genuine net gain for biodiversity must be achieved.*
- 2. Restoration and recreation of large manageable blocks of acid grassland should be a priority*
- 3. A strong multi-functional woodland network which contributes to biodiversity, landscape and visual amenity and which is both strategically meaningful at a landscape scale.*

The Worcestershire Green Infrastructure partnership recognises the strategic value and large scale of the development within its District context and contends that the principals of biodiversity net-gain should be embedded from the outset of the scheme. To this end we would advocate use of the DEFRA metric in undertaking a robust and transparent habitat auditing exercise in support of the masterplanning exercise and outline planning application.

Grassland

Worcestershire is thought to hold 20% of England's total area of botanically rich lowland grasslands. Acid grassland is recognised as both a UK and County BAP habitat and also a strategic and significant conservation priority within the Wyre Forest Biodiversity Delivery Area and Wyre Forest Site Allocations and Policies Local Plan (2013). The latter document notes (at SAL.UP5: 7.37) that "*Wyre Forest is nationally recognised for its acid grassland communities. Many of these are found immediately surrounding the proposed areas for development. The small scale and exclusive nature of this habitat means that special consideration will need to be given to this issue*". As of 2010, heathland and acid grassland comprised just 0.6% of the county's area.

The Primary Objective of the local Environmental Character Area is to "Protect and Restore" GI assets, and the Worcestershire GI Framework's Overarching Principle for the delivery of the ECAs Objectives is to "maintain and restore habitat connectivity" and to "protect and restore acid grassland and wooded habitats". Therefore, where opportunities exist to retain *in situ* any large block of grassland which occurs on an acidic substrate within this ECA, especially where grassland already supports even a small number of acid grassland indicators, we contend that every effort should be deployed to configure the built environment so as to retain, restore and enhance acid grassland in a manner which will be manageable post-development. This approach is succinctly summarised in the WFDC Green Infrastructure Strategy (2012) which, for the Hagley Hinterland area, states that biodiversity objectives for newly created GI features should concentrate on: "*the main priorities for protection and creation including acid grassland and veteran tree connectivity through linking, merging and buffering existing and newly created habitats*".

Within the 'core' Lea Castle site there is an opportunity to amalgamate translocated turves of acid grassland to one or more receptors and secure the delivery of a management plan designed to improve the condition of this iconic Wyre Forest habitat.

Inclusion of conservation grasslands within Public Open Space is discouraged, due to high risk of deterioration from anthropogenic impacts, but receptors could be located adjacent to P.O.S. for example buffering amenity grasslands from nearby ancient woodland habitats, so that footfall within sensitive grasslands and woodland is reduced and combined management logistics become more viable.

WFDC may be able to extend assistance through their established conservation grazing scheme but several criteria would need to be met first. This includes consolidation by translocation of the most botanically diverse parcels of grassland within the largest retainable 'block' and establishing suitable infrastructure for access and welfare for grazing or mechanical management. Some of this detail could reasonably be secured through appropriately worded condition however we would anticipate the configuration of the outline masterplan will be capable of reflecting this key GI priority will be achieved.



Conservation Grazing – © Wyre Forest District Council

In line with the Primary Objective of the local Environmental Character Area the Green Infrastructure Partnership's preference is for *in situ* grassland conservation wherever possible. However, the Partnership recognises that, pragmatically, it might not be possible to fully address impacts to grassland habitats arising within the 'core' Lea Castle site's developmental boundaries. Subsequently, an advantage of applying a vision for Green Infrastructure at a wider than site scale is that suitable compensation packages can be developed where the preferred

avoidance and mitigation measures are anticipated to leave a residual negative impact. As the habitat network of acid grassland is currently highly fragmented, the translocation and positive management in perpetuity of 'stepping stone' acid grassland sites would be welcomed. Therefore we would support efforts to translocate, restore or recreate acidic grassland elsewhere within the Kidderminster North and adjoining Kidderminster East GI Corridor areas.

Agricultural improvement of the surrounding landscape is likely to mean that there are technical challenges to consider, in both the establishment, aftercare and monitoring of translocated grasslands. These challenge, in addition to the logistical and financial implications typically associated with this mitigation approach warrant the Partnership's preference for *in situ* grassland conservation measures where possible. Where translocation is unavoidable, a careful evaluation of potential receptor sites within and around the Kidderminster North area will be required, together with appropriate ground preparation and a robust and funded programme of post-translocation management and monitoring in order for the Partnership to have confidence in the success of this approach.



For example: a number of fields within the Kidderminster East area (refer to Kidderminster North Concept Statement Area Plan) are already known to host areas of damaged/destroyed acid grassland or have a geology likely to support recreated acid grassland if more fertile topsoil were scraped aside and a positive management plan, such as conservation grazing, were secured; The proximity to existing WFDC managed land would mean the overall costs of a cohesive management strategy for these combined areas would subsequently decrease in

comparison to management of translocated or recreated acid grassland elsewhere within the Kidderminster North area. The cumulative biodiversity value of these sites would be also enhanced.

Wherever the acid grassland is located the Partnership believes that there is a valuable opportunity to recognise and celebrate the local significance of acid grassland habitats, both in its biodiversity, historic, landscape and ecosystem service roles. Grassland set-aside for nature conservation purposes should be promoted as part of any place-shaping efforts, for instance through public interpretation and engagement opportunities.

Woodland

Existing woodland throughout the Kidderminster North area must be improved for its value to dormouse: thinning coniferous components (commencing with the coniferous plantation along Lea Castle Drive), replacing with broadleaved and ground flora with fruit/nuts, scrub and artificial nesting opportunities.

The Partnership advocates that appropriate forestry plans which include thinning of coniferous and successional planting of broadleaved trees along the Lea Castle Drive stand must be prioritised and implemented at the earliest phase of development; this will maximise the time available for this enhanced GI feature to establish, and reduce risk of this important and multi-functional GI measure being unduly perceived as a modification of an established community setting.

Promoting woodland's value as a connective feature between the Lea Castle complex, the adjacent BW4 and concomitant Kidderminster East corridor is a significantly valuable GI opportunity. In this context, the value of woodland as a screening feature could be replicated through more sinuous and curvilinear planting schemes providing filtered and screened views of the development while still contributing both in terms of biodiversity and landscape value. This could be achieved through carefully designed planting specification, for example utilising appropriate understorey species selected for their ability to provide light screening for populations of light intolerant bat species.

Species

With large scale and multi-phase developments the likelihood of cumulative impacts increases and we note of at least one badger clan likely be displaced by the 'core' Lea Castle development; we consider a detailed mitigation plan will need to take account of the surrounding agricultural landscapes of the Kidderminster North area in order to ensure that any compensation setts are appropriately located, ensuring access to sufficient and appropriate foraging areas whilst minimising risk of conflict with the residential and amenity areas not set-aside and managed primarily for their biodiversity value. This is equally applicable elsewhere throughout the Kidderminster North area.

We are aware that the 'core' Lea Castle site also supports a significant colony of lesser horseshoe bats and have previously highlighted the need for the scheme's bat mitigation strategy to fully take into account the effects of topography, street/house/road lighting and the disturbance and deterioration of foraging and commuting habitats likely to be associated with occupied residential development taking into account the seasonal and ecological use of existing and proposed assets. The mitigation strategy must be robust, transparent, and capable of being appropriately assessed by the Local Planning Authority as proportionate, deliverable, realistically successful in achieving their clearly stated objectives and capable of being secured through planning condition. Critically, there is a key opportunity to thread measures which promote connectivity between the known roost site and surrounding foraging and commuting opportunities throughout the Kidderminster North and Kidderminster East allocations in order to achieve net-gain for lesser horseshoe bats at a wider scale than the Lea Castle site alone. Landscaping strategies must therefore offer cohesive treatment promoting continuous and unlit woodland and scrub links between developments.



Lesser Horseshoe Bat - [Matthieu Gauvain](#)

There are very few records of dormouse within Worcestershire east of the River Severn and no other records east of the Severn within the Wyre Forest district, making the dormouse population at the 'core' Lea Castle even more significant. Given the small size of Axborough Wood, it is unlikely this block of ancient woodland alone would support a colony and therefore we anticipate the breeding colony will utilise other blocks of woodland and hedgerows throughout the Kidderminster North and Kidderminster East areas, adding importance to maintaining links around and through developments and site boundaries as well as supporting the favourable management of woodland for dormouse and horseshoe bats through means such as financial contributions. We contend that the adjacent highway constitutes a likely obstacle rather than an impermeable barrier to dormouse movement meaning that operations such as removal of roadside verge scrub or hedgerows (e.g. for visibility) may cause significant impact on dormice and horseshoe 'crossing points'.

Preservation of biodiversity value for these protected species within dense residential settings will be highly challenging. We anticipate further details within subsequent mitigation plans which will, by necessity, look at landscape-scale connectivity for these species beyond individual red line boundaries. We would encourage the applicant to make use of Natural England's Pre-Submission Screening service and to share the advice garnered by the licensing team with the District Council and WGIP.



'On-plot' permeability for wildlife should be designed-in from the outset. New housing development should ensure garden boundaries include at least a 125mm² (5 inch²)

Worcestershire's Ancient Woodland – Bob Embleton under this [Creative Commons Licence](#)

hole in garden fences and walls to allow access for wildlife, such as hedgehogs, frogs and toads. Pre-formed gravel boards are available commercially.

The use of hedgehog shelters and bug hotels (e.g. installed on buildings and fence posts), to provide food and nesting opportunities is encouraged.

Garden landscaping should make use of native and 'wildlife-friendly' species, avoiding use of peat and chemical fertilisers or insecticides.

In proximity to watercourses and ponds (including SuDS waterbodies) and particularly where presence of herpetofauna is considered reasonably likely, gutters should be inset from the kerb and highway gulleys should include rescue ladders similar in design to Enkamat³

³ www.taysidebiodiversity.co.uk/wp-content/uploads/2015/10/2014_Angus-Amphibian-Ladders-Trial.pdf

Woodland, Trees and Hedgerows: Historic Environment, Landscape and Visual Amenity

Principal objectives:

- 1. Protect, restore and enhance woodland, ancient woodland and veteran trees*
- 2. Ensure compensation and enhancement hedgerow planting provides multi-functional value: improving woodland connectivity, offering value for wildlife, mitigating impacts to views whilst responding to current enclosure patterns*

The woodland habitats will clearly provide multiple functions: there will be a need to protect and buffer the existing semi-natural ancient woodland where this occurs within or in proximity to the red line boundary. The proximity of development to Axborough Wood is considered inappropriate due in part to the likely cumulative indirect effects. Significant additional planting (increasing size of connective woodland blocks) is likely to be required to prevent edge effects and the inevitable increase in recreation pressure.

An appropriate buffer zone of semi-natural habitat must be maintained between any development and ancient woodland. While the extent of this will depend on the size of the development, a minimum buffer should be at least 15 metres. Veteran trees should be protected by designing open space around them. Buffer zones should be planned which are at least 15 times the diameter of a veteran tree (or 5m from the edge of its canopy, whichever is greater). Trees that could become veteran trees in the future should be identified, protected and appropriate management secured.

The strategic value of connective woodland blocks also supports the integrity of the landscape vernacular for this site; the eastern and western approaches to WFR/WC/15 are currently set to woodland which must radiate through the adjacent WFR/WC/32 and WFR/WC/33 into the surrounding landscapes. The historic late-enclosure heathland and acid grassland patterns can be appropriately referenced through the block-developments of the 20th and 21st century as these are broadly sympathetic to the local landscape character.

Compensation planting would see careful strengthening of hedgerows both for connective value, for visual amenity and as a screening measure for offsite receptors. Softening visual screening is an essential element of avoiding coalescence with the nearby settlement of Cookley.

Hedgerows are a historic feature; the surrounding farmsteads are 19c in origin and tie into a period of rapid field enclosure, hedgerows may therefore be likely to be relatively species-poor but in compensating for hedgerow modification or loss there are opportunities to replace these in the development area in order to serve wider GI functions. However this must maintain their value as connective

features, for example connecting Axborough Wood to retained and created woodland buffers.

Development within WFR/WC/32 should withdraw from and feather densities in to the ridgeline separating this site from the adjacent WFR/WC/15. This approach will have a dual benefit of protecting and buffering the GI corridor between the two developments whilst also reducing light pollution, and therefore will pose reduced visibility footprint during day and night time along what is a visibly



Landscape Type Information Sheet: Sandstone Estatelands
Worcestershire Landscape Character Assessment:
gis.worcestershire.gov.uk/website/LandscapeCharacter/

prominent area of the site from receptors to the south and users of the A456. This approach is likely to be challenging with anything over moderate housing densities.

Buffer planting along the A456 and Axborough Lane will offer some local screening and

while this is likely to be an insignificant benefit to receptors to the south-east it will offer some value as a connective feature for other GI themes.

A robust and detailed Habitat Management Plan will be required which addresses appropriate planting, successional planning and long-term monitoring. Dead wood should not be removed other than where it poses a clear and present danger to public and property, in which case it should be translocated to core woodland areas to the benefit of flora and fauna. Standing deadwood provides a particular benefit to biodiversity and should be retained within woodland areas identified for their biodiversity (rather than recreational) value.

Conversely we recognise there will be opportunities to improve pedestrian access and introduce natural play areas within and through areas of coniferous woodland where this has been demonstrated as holding lower biodiversity value. However, key to this approach is the value of woodland for multiple protected species (refer to Access and Recreation statement above).

In principal we anticipate that measures to strengthen and enhance the woodland quality and flows between the Kidderminster North and Kidderminster East suite of sites will be critical in ensuring that the rare and regionally important wildlife populations are retained.

Whilst the re-use of existing sports pitches within WFR/WC/15 are welcomed, if impacts such as noise and light are appropriately mitigated, we also feel it would be broadly acceptable to mitigate for impacts elsewhere on site if the residential quanta were reconfigured to make use of some or all of this area in order to assist in reducing densities along the ridgeline separating WFR/WC/32 and WFR/WC/13.

Built Environment

Opportunities for the inclusion of green roofs, living walls and other biodiversity / sustainability enhancements should be explored to provide multiple benefits including biodiversity, thermal insulation and reducing the visual impact of development.

Gardens can form a part of the green infrastructure of the site and should be used to deliver connectivity.

We would strongly encourage consideration of Table 1 (Roost and nest site provision in new development) as proposed within joint TCPA, CLG and Natural England eco-towns biodiversity worksheet (2009)⁴.



Bat roost brick – courtesy of Habitat

Table 1 Roost and nest site provision in new development

| Potentially appropriate species (depending on location) | Recommended number of roosts/nest sites |
|---|---|
| Crevice dwelling bats | 1 in 20 structures |
| Bats requiring flight space | 1 in 5 public buildings (non-residential) |
| Horseshoe bats | 1 in 5 public buildings (non-residential) |
| Swifts | 1 in 20 buildings |
| House martins | 1 in 50 buildings |
| House sparrows | 1 in 40 buildings |
| Starlings | 1 in 100 buildings |
| Swallows | 1 in 50 buildings |
| Barn owls | 2 per medium-size development; 3 per large development |
| Peregrine | 1 per medium-size development; 2 per large development |

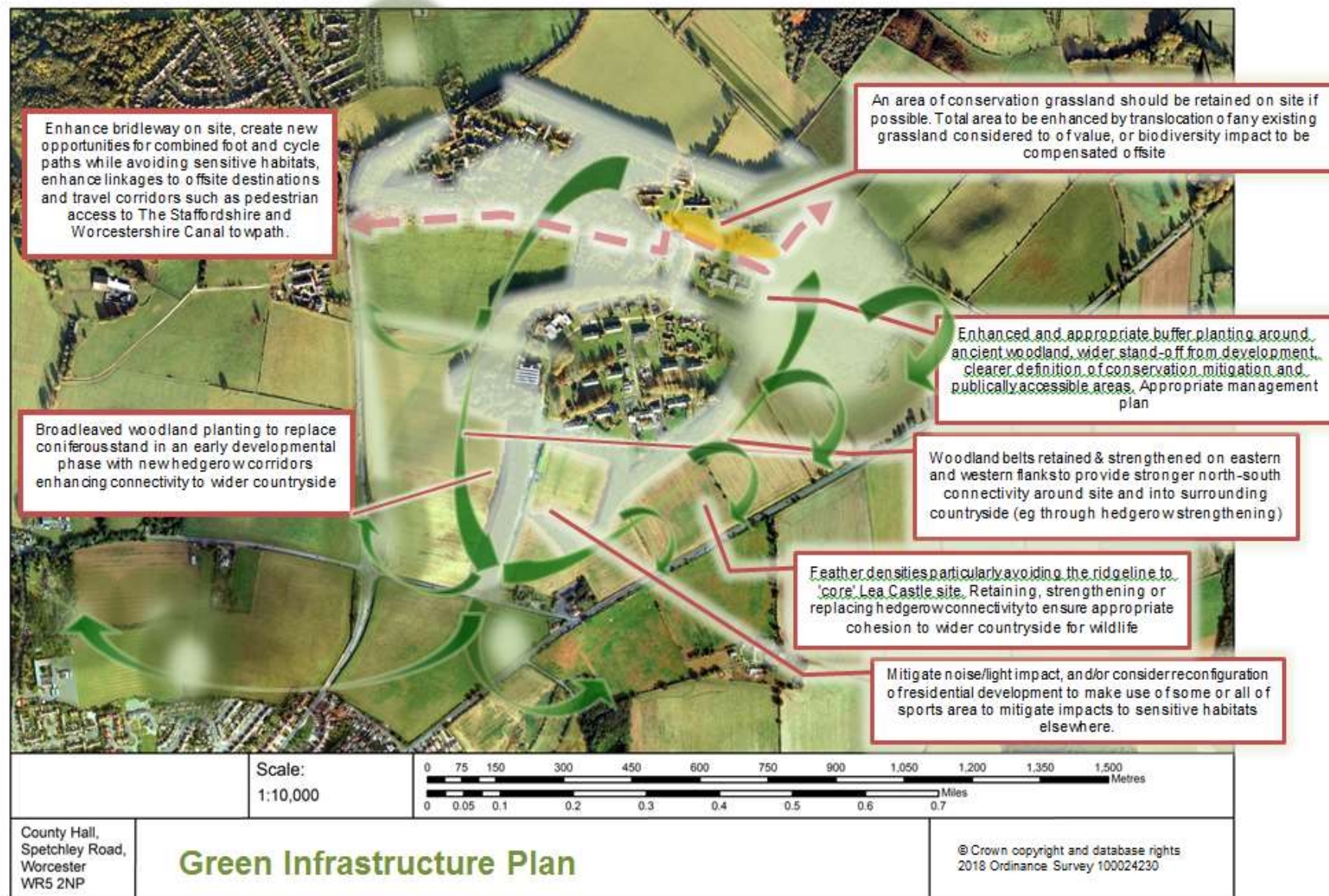
Source: Bat Conservation Trust

⁴ www.thenbs.com/PublicationIndex/documents/details?Pub=TCPA&DocId=294168

Prioritisation of the Green Infrastructure Assets

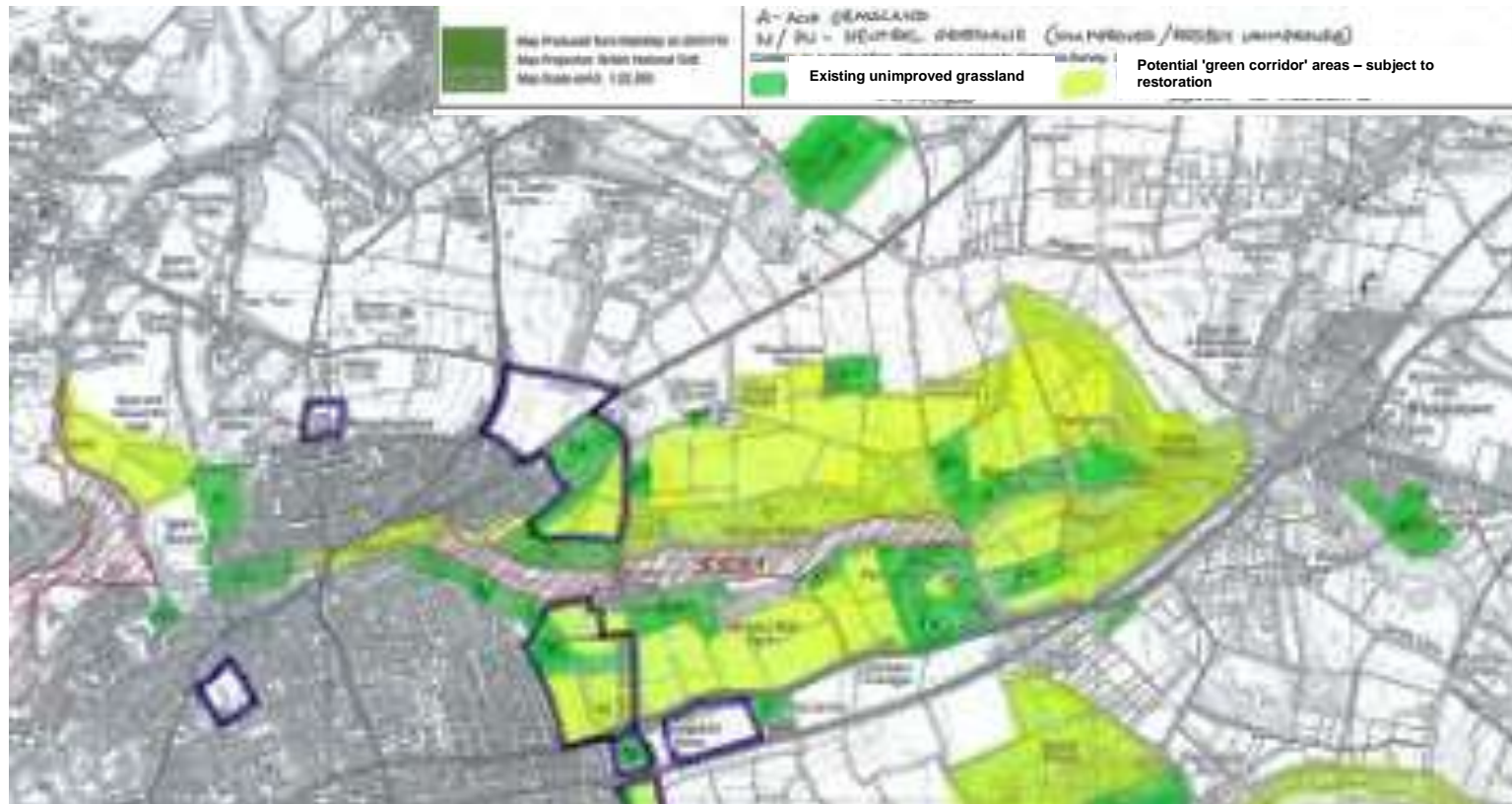
| Number | Assets | Primary function and current value | Links to other asset / priorities |
|--------|--|------------------------------------|-----------------------------------|
| 1 | Hedgerows and trees | Medium | 3,5,6,9 |
| 2 | Grasslands | <i>Unconfirmed</i> | 1,5,6,9 |
| 3 | Woodland | High | 1,5,6,9 |
| 4 | Built Environment | Low - Medium | 6 |
| 5 | Bridleway | Medium - High | 1,2,3,9 |
| 6 | Protected species (bats, dormice, plus others) | High | 1,2,3,4,9 |
| 7 | Roads | Low | 2, 3, 4, |
| 8 | Sports Pitches | Low | 3,7 |
| 9 | Land adjacent to site boundaries | Low – Medium | 1,3,4,5,6, |

As portrayed above, the key features of GI value identified and prioritised within the Kidderminster North area are grassland, mature trees and woodland with connective features including bridleway. While this chart indicates these priorities have potential to meet open space and multifunctional requirements for the site, it is imperative that clear delineation is achieved as the suite of developments progress so that where conflict between GI themes arises (such as recreational and nature conservation land use) it is identified and appropriately addressed, especially where this calls for compensation measures deployed cohesively throughout the assemblage of sites.



Please note that these are only indicative GI corridors. They do not specify the exact locations and size of the green infrastructure features on the site

Preliminary and indicative unimproved/acid grassland (re)creation opportunity map, courtesy of Natural England



Please note that, as with interpretation of the Worcestershire Habitat Inventory, analysis should be informed by ground-truthing, botanical investigation and soil sampling alongside detailed Historical and Biological Record analysis. Here green shading indicates areas of unimproved grassland while areas highlighted in yellow indicate potential through restoration to create 'green corridors' of priority habitat.

Delivery, management and funding

The long term success of the GI assets delivered will be dependent upon the establishment of an appropriate management body with sustainable funding and governance mechanisms.

Options for management organisations include:

- Local authority(ies)/partnerships;
- Parish Council(s);
- Existing voluntary organisations;
- Private management companies; or
- Community Development Trusts.

Potential sources of management funding include:

- Parish, District or County Council contributions;
- Developer contributions;
- Endowment from private sector; and/or
- Revenue from endowed assets, such as hire or parking charges.

The option of creating a Community Development Trust (CDT) is being considered. CDTs are independent, not for profit organisations which aim to respond to local needs and are intended to bring about lasting social, economic and environmental benefits to the local community. The overall aims of a CDT include the ownership, maintenance and effective management of GI and other facilities, encouraging healthy lifestyles and the use of sustainable transport by residents and businesses and encouragement of community cohesion.

The funding for CDTs can derive from a range of sources, including:

- Pump-priming (through Section 106 agreements and in-kind);
- A levy raised on residential and commercial property;
- hire or lease income from ownership of community facilities and other assets;
- Project management through service delivery;
- User charges for facilities such as car parks and community halls; and/or
- Potential commercial activity.