HERTSMERE BOROUGH GREEN INFRASTRUCTURE PLAN

Prepared for Hertsmere Borough Council
by
Land Use Consultants

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43 Chalton Street
London NW1 1JD
Tel: 020 7383 5784
Fax: 020 7383 4798
london@landuse.co.uk

14 Great George Street
Bristol BS1 5RH
Tel: 0117 929 1997
Fax: 0117 929 1998
bristol@landuse.co.uk

37 Otago Street
Glasgow G12 8JJ
Tel: 0141 334 9595
Fax: 0141 334 7789
glasgow@landuse.co.uk

28 Stafford Street
Edinburgh EH3 7BD
Tel: 0131 202 1616
edinburgh@landuse.co.uk

DOCUMENT CONTROL SHEET

Version	Issued by:	Approved by:
DRAFT FINAL	Andrew Tempany	Kate Ahern
	Senior Landscape Architect	**Principal-in-Charge**
	16th March 2011	16th March 2011

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Land Use Consultants team comprised: Kate Ahern (Principal), Andrew Tempany (Project Manager), Alex Massey, Emma Deen, Fearghus Foyle, Graham Savage, Sofie Swindlehurst, Matthew Parkhill and Diana Manson.

1 Introduction

1.1 Green infrastructure (GI) is increasingly recognised as a cornerstone of sustainable development and communities. It is a 'must have', due to the many social, environmental and economic benefits it offers.

1.2 Green infrastructure planning and delivery completes Hertfordshire's consideration of sustainable land use and landscape planning, expressed in **Green Infrastructure in Hertfordshire: A Framework**[i]. It helps bridge the gap between strategic planning and site design and management, providing messages to inform spatial land planning and development management decisions.

1.3 Working on behalf of a network of stakeholders, in particular members of the Hertfordshire Technical Chief Officers Association (HTCOA), Natural England, Environment Agency, Forestry Commission and the Herts & Middlesex Wildlife Trust, Land Use Consultants was commissioned by Hertfordshire County Council in September 2010 to develop the Hertfordshire GI Plans. This encompassed a county wide strategic Green Infrastructure Plan for Hertfordshire/the Green Arc and 'local level' district Green Infrastructure Plans for seven Hertfordshire districts. The Hertsmere Borough Green Infrastructure Plan has been developed in parallel with the strategic county wide plan and with those for Watford, Dacorum, Three Rivers, Welwyn Hatfield, St Albans and East Herts. Account has also been taken of existing GI plans to ensure links across boundaries, with the strategic GI Plan also considering existing GI work in Hertfordshire, such as the North Hertfordshire District Green Infrastructure Plan.

1.4 This is a high level Green Infrastructure Plan, which identifies further work which will be needed in future to deliver green infrastructure. Where further, more detailed green infrastructure planning work will be required, this is also referenced.

1.5 The Green Infrastructure Plan for Hertsmere Borough:

- Provides an overview of existing green infrastructure assets within the Borough;
- Sets out an assessment of the ability of green infrastructure to provide multiple environmental and social and in some cases economic functions;
- Considers opportunities for enhancement and creation of green infrastructure;
- Outlines a series of potential projects to deliver multiple functions and benefits, and
- Provides advice on taking green infrastructure proposals forward through spatial planning and practical delivery.

What is green infrastructure?

1.6 Green infrastructure is described in **Planning Policy Statement 12: Local Spatial Planning**, as:

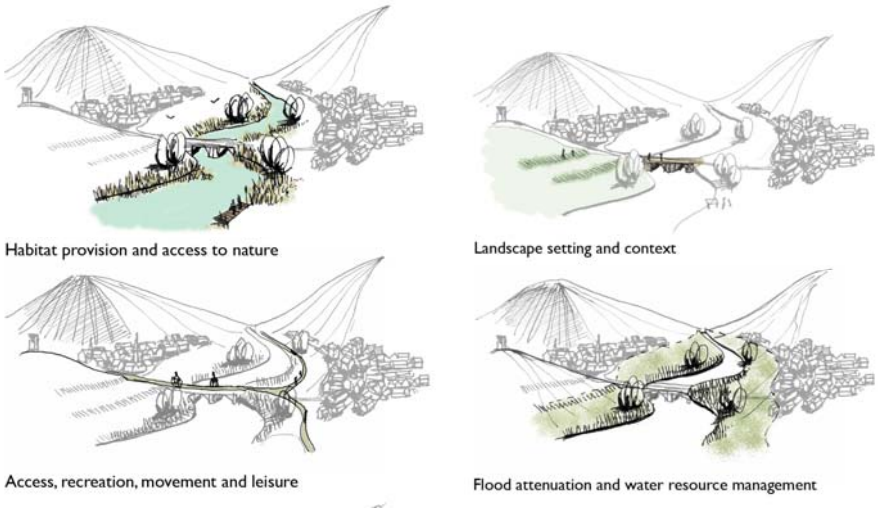
*a **network** of **multi-functional greenspace**…both **new** and **existing**…both rural and urban…which **supports** the **natural and ecological processes**…and is **integral** to the **health and quality of life** of sustainable communities…"*

1.7 This definition is reinforced and expanded in **Green Infrastructure in Hertfordshire: A Framework** and in Natural England's **Green Infrastructure Guidance**[ii].

Aspects of multi functional green infrastructure – links and spaces for people and wildlife

Benefits and relevance of the green infrastructure approach to Hertsmere Borough

1.8 In the face of competition for resources and environmental change, now more than ever we must look to our landscape and to sites to perform the widest range of functions for people, communities and quality of life, wildlife and ecosystems. This concept of 'multi functionality' is shown in the illustration on the right, from Natural England's Green Infrastructure Guidance.



The green infrastructure approach: One site performing multiple functions (source: Natural England, Green Infrastructure Guidance)[iii]

1.9 Hertsmere Borough has a varied green infrastructure resource, centred primarily on an extensive network of promoted shared use greenways which have been developed to deliver aspirations of the Watling Chase Community Forest, which washes over large parts of the Borough. Other key features are the wetlands and reservoirs associated with Aldenham Country Park and Hillfield Reservoir, the River Colne and a network of minor brooks and tributaries such as Tykeswater and the Catherine Bourne, which often intersect the main settlements and the distinctive parkland estates of the Shenley Ridge. These include Wrotham and Dyrham Parks, and often also have 20th Century historic

associations as locations for the film industry at Elstree Studios, within the Borough. In addition there are a series of important links to the wider greenspace network, particularly to London and the All London Green Grid via the London Loop and Aldenham Country Park.

1.10 As described above, there is a wide array of existing green infrastructure initiatives in the Borough, such as promoted greenway routes delivering the aspirations of the Borough Greenway Strategy[iv], and the Watling Chase Community Forest. In addition there a number of successful examples of green infrastructure delivery, such as the Shenley Park Trust.

1.11 Aldenham Country Park is one of the primary green infrastructure assets in the Borough as well as a significant recreational resource for North London. It was highlighted as an example of good practice peri urban landscape planning in Nan Fairbrother's *New Lives, New Landscapes* of 1970. At the time of writing (March 2011), Aldenham Country Park is due to close as a Country Park.

1.12 Against existing provision must be considered issues of green infrastructure need and demand, how existing green infrastructure is performing, and the potential for green infrastructure to contribute to landscape and environmental enhancement in more fragmented, southern parts of the Borough (presence of major transport corridors and associated barriers).

1.13 In some cases, existing GI assets are delivering the necessary functionality, in others not. This pattern of demand and supply forms the basis for the analyses undertaken and proposals made in this plan. For example, issues relate to access and links, and the variable ability to reach assets as part of a green travel network.

1.14 This Green Infrastructure Plan seeks to address links and connections, alternative greenspace provision and low cost, maximum benefit interventions such as improved landscape management to deliver a wider array of functions. It also looks at ways to influence sustainable living modes and transport choices through non spatial and educational projects to support spatial proposals.

The green infrastructure planning process – a summary

1.15 For the purposes of this study, the green infrastructure planning process can be summarised in the diagram overleaf.

Developing the Green Infrastructure Plan: Summary of Process

INCEPTION

- Scoping and brief development
- Agree main areas of focus
- Understand key GI issues

CONTEXTUAL STUDIES

- Baseline document review
- Plan/policy/programme context

MAP ANALYSIS

- Organisation of Geographic Information Systems (GIS) map layers, to understand spatial information
- Identifying green infrastructure functions to focus proposals development

UNDERSTANDING GI FUNCTIONAL PROVISION

- Applying provision standards
- Evaluating GI supply and need (consider growth, physical barriers, etc)

FIELD SURVEY

- Test/Confirm

GI PROPOSALS DEVELOPMENT

- Developing strategic network of spatial projects and new/ enhanced existing links (for people, landscape, habitat)
- Respond to functional needs
- Develop supporting non spatial projects (interpretation/education/ promotional)

STAKEHOLDER CONSULTATION

- Validation/'buyin'

ALIGN WITH OTHER PLANS & POLICIES

DEVELOP RECOMMENDATIONS

- Justifying proposals and projects
- Next steps, to guide future delivery
- Linking proposals to the Local Development Framework

STRUCTURE OF THIS GREEN INFRASTRUCTURE PLAN

1.16 The remainder of this Green Infrastructure Plan is set out as follows:

- Section 2: Green infrastructure demand and opportunity in Hertsmere Borough by function
- Section 3: Proposed green infrastructure network and projects
- Section 4: Linking the green infrastructure proposals to local spatial planning

1.17 Appendices are presented in a separate volume. **Appendix 1** shows the summary findings from a thematic document review undertaken to set the GI Plan in context. **Appendix 2** sets out the summary findings from the functional analysis.

Aspects of the green infrastructure of Hertsmere: Left to right: Aldenham Country Park, grazing pasture at Bushey, London Loop at Merry Hill

2 Green infrastructure demand and opportunity in Hertsmere Borough by function

2.1 To evaluate existing green infrastructure opportunities, a rapid thematic document review was undertaken to understand the environmental and social context. The themes for the document review are different from but are linked to and have informed the separate analysis of GI functional provision (the 11 functions of green infrastructure defined for this study are set out and mapped at the end of this section).

2.2 Themes for the literature review were:

- Access and recreation
- Landscape character and experience; settlement setting
- The historic environment
- Health and deprivation
- Functional ecosystems and flood risk
- Productive landscapes (orchards and allotments) and land in Higher Level Stewardship
- Land remediation (issues concerning mineral sites and restoration, derelict and previously developed land)
- Nature conservation

2.3 Key messages from each theme which have informed the planning of the GI network are shown in **Appendix 1**, as are documents reviewed for each theme.

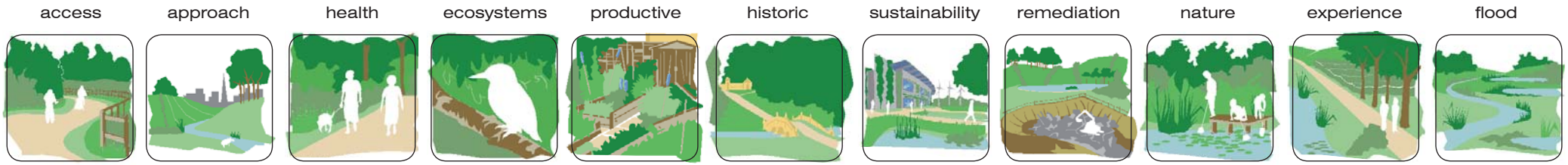
GREEN INFRASTRUCTURE FUNCTIONS

2.4 Key to understanding green infrastructure and to justifying green infrastructure proposals is consideration of the functions green infrastructure can and needs to perform (that is, attributes of green infrastructure), whether for people and communities, wildlife or ecosystems in general.

2.5 The eleven functions which have been identified for this Green Infrastructure Plan are shown overleaf.

2.6 These functions have been defined and mapped to understand geographical/spatial provision of green infrastructure assets in Hertsmere Borough. When considered alongside main settlements, an indication of GI demand is also provided. Consideration has been given to shortfalls and potential need in the context of future growth as identified in the emerging Core Strategy, where these areas are known. The functions have also been used to develop proposals in response to identified need and to evaluate proposals, for prioritisation and future implementation by others.

Green infrastructure functions



2.7 The analysis methodology for each function (including provision standards applied) is set out at **Appendix 2**, together with a summary of the main issues with regard to deficits of provision and potential need and opportunity. Supporting mapping showing the distribution of GI assets and their functions is shown in relation to each function, below.

THE FUNCTIONS – SUMMARY OF NEED, SUPPLY AND OPPORTUNITY IN HERTSMERE BOROUGH

2.8 The findings from each functional analysis are summarised below.

Access to recreation

2.9 Accessible open space forms a key part of the quality of life of communities, although it is recognised that functionality varies according to the type and size of spaces. Areas may not always be well served due to settlement evolution and the presence of barriers to access. These issues are both relevant to some degree in parts of Hertsmere Borough, due in part to the presence of large scale transport corridors such as the A1(M).

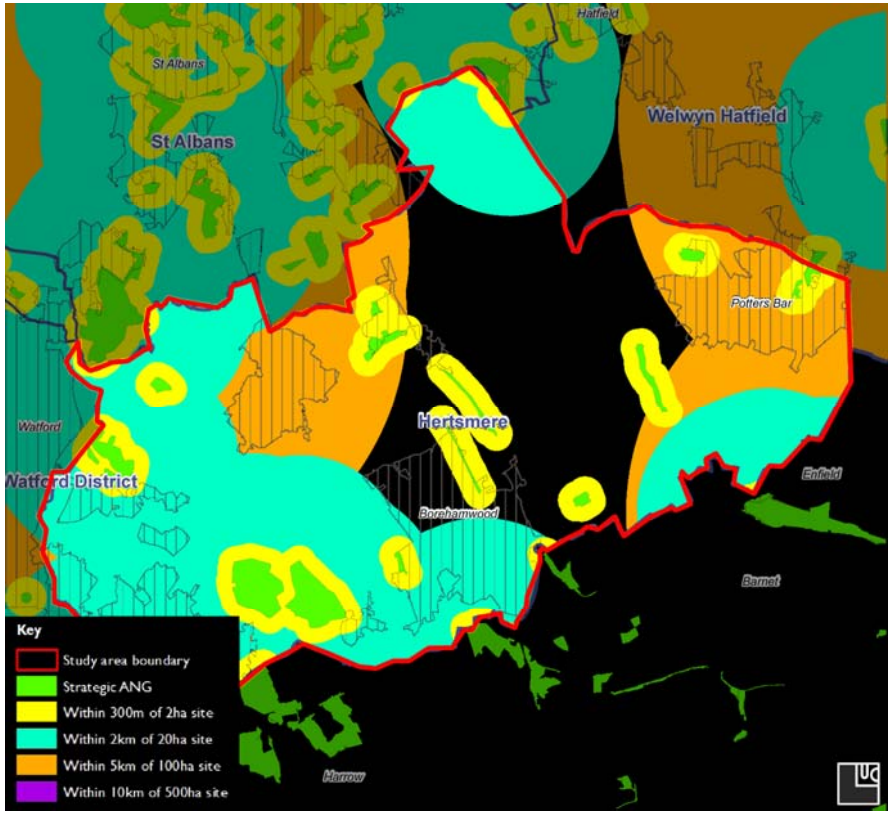
2.10 Key issues in relation to accessible natural greenspace and links are summarised below.

2.11 No formal assessment of quantitative and qualitative open space provision in the Borough has been made available. However, mapped information indicates open space deficiencies to the west and south of Borehamwood, to the west and south of Potters Bar, to the northern and eastern parts of Radlett, and to the northern, eastern and southern parts of Bushey.

2.12 In terms of performance against the Natural England Accessible Natural Greenspace (ANG) standards, key deficiencies are in terms of local (300m) and strategic provision, in all the main settlements. In addition, Radlett and Potters Bar also experience deficiency at the 2km scale, as does the northern part of Borehamwood.

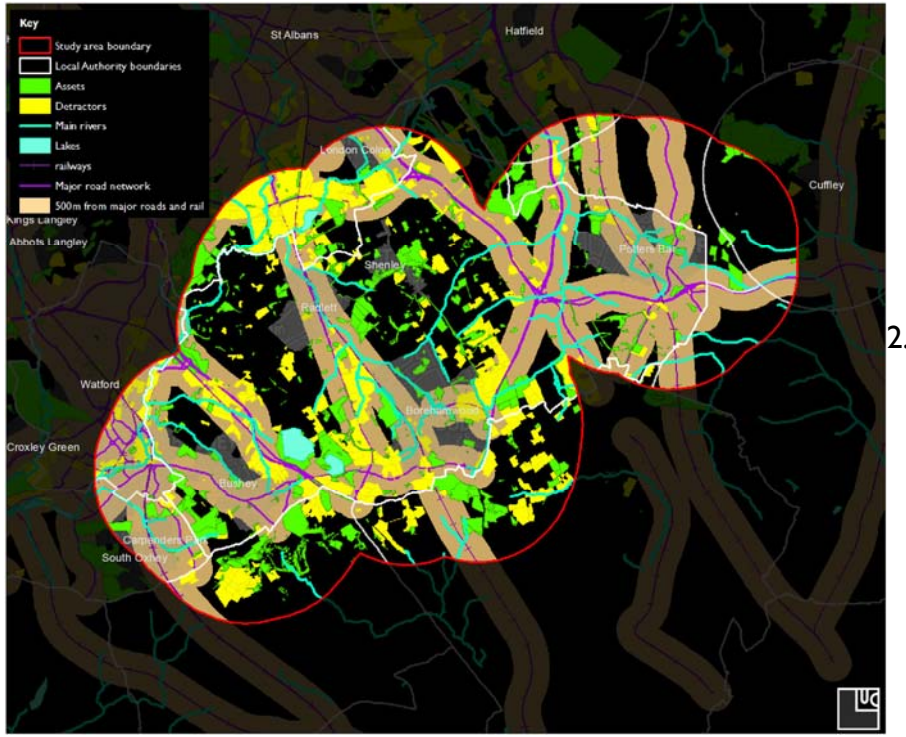
2.13 With regard to access links, at Borehamwood, links are provided to the south, west and north, with an absence of cycle routes to the south and west. In Potters Bar, whilst the Hertfordshire Way skirts the north of the town, paths and rights of way are sparse to the south of the town, and there are no cycle routes within the settlement. At Radlett, visual map analysis suggests there is a reasonably good path network within the town and links to the surrounding countryside, although cycle route provision is patchier, with gaps in the northern and southern parts of the town. Bushey has no cycle routes within the town,

and just one cycle route which skirts the northern part of the settlement. With regard to path provision, key areas of deficiency appear to be the southern and eastern parts of the town, with the M1 to the east creating severance. The above analysis indicates a need for enhanced access links to the countryside for all main settlements (see **Figure 3.1** for access link proposals).



Accessible Natural Greenspace (ANG) provision, applying the Natural England ANGSt standards (source: Natural England[v])

Prestige on settlement approach corridors

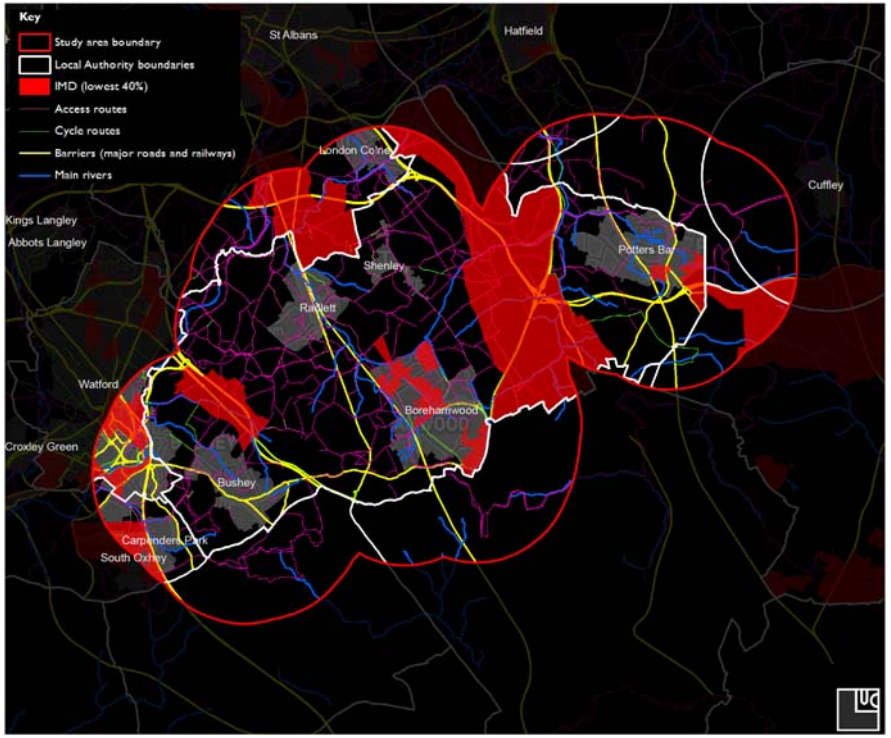


2.14 The concept of prestige, that is, the experience and perception of settlement approaches, is a key part of the green infrastructure approach and for positive planning of settlement fringes. Within the context of the principal transport corridors on the Hertsmere main settlement approaches, this functional analysis has referred to spatial mapping of assets and detractors produced for Hertfordshire[vi], as well as consideration of landscape condition and quality in the Hertfordshire Landscape Character Assessment[vii]. Given the time at which baseline data was drawn up (e.g. assets and detractors mapping), this does not reflect ongoing positive land management and conservation (and which has been considered in developing the proposed GI network). As such that data represents a 'point in time' not necessarily now reflected at site level, but the data nonetheless provides a guide to help focus GI proposals development.

2.15 Within the main settlement approaches, key issues revealed by the analysis are severance created by the A1(M) and Watling Street at Borehamwood, leading to an impaired settlement approach. Community Forestry and the aspirations of the Watling Chase Community Forest Plan are likely to be key opportunities for enhancement of the approach, as well as buffering of main transport corridors (see **Figure 3.1**). Similar issues and opportunities are apparent at Potters Bar (A1 and A1000), where woodland planting and community forestry could also be used to create better landscape linkages with key assets such as Northaw Great Wood, Nyn Park and Gobions Open Space (within the adjacent Welwyn Hatfield Borough). At Radlett, main issues are in respect of the impairment to the northern approach by the A5183 and the railway line, and also associated opportunities in respect of landscape restoration linked to the wetland environment of the Ver-Colne Valley. Bushey is

characterised by areas of eroded, fragmented landscape character (landscape character areas of relatively low quality to the northern settlement fringe). This location is also defined by large scale transport severance (M1, A41) and by detracting elements to the settlement fringe/linked to the Watford urban area e.g. industrial estates). Opportunities are mainly in respect of re-connecting areas of fragmented landscape character and also in securing improved links with cross district GI assets such as the Colne Valley (see **Figure 3.1**) – links to the Watford Borough GI network.

Health



2.16 In this analysis, access links and proximity to areas of deprivation were mapped. Main road corridors were also considered to understand where there were linked issues of 'unhealthy environments' (air quality and pollution), or

need to target tree planting as described in relation to the 'prestige' function above.

2.17 With reference to the Indices of Multiple Deprivation (IMD), main issues in Hertsmere Borough are as follows.

2.18 There are significant pockets of health deprivation at Cowley Hill Ward in Borehamwood, with moderate health deprivation at Brookmeadow, as well as in the Oakmere ward at Potters Bar and St James Ward, Bushey. Radlett has no recorded health deprivation issues. Note that 'moderate' deprivation (in the 40-60 percentile) falls below the thresholds used for the mapping in this report. In addition the IMD mapping in this report shows wider social deprivation issues than health deprivation, with severance by main transport barriers also being a key issue (e.g. A1 corridor).

2.19 Linked to the access functional analysis above, there is therefore a need for enhanced links to the countryside from all the main settlements.

2.20 Areas of potential strategic woodland planting which could help address air quality issues in main transport corridors are shown on **Figure 3.1**.

Sound ecosystems

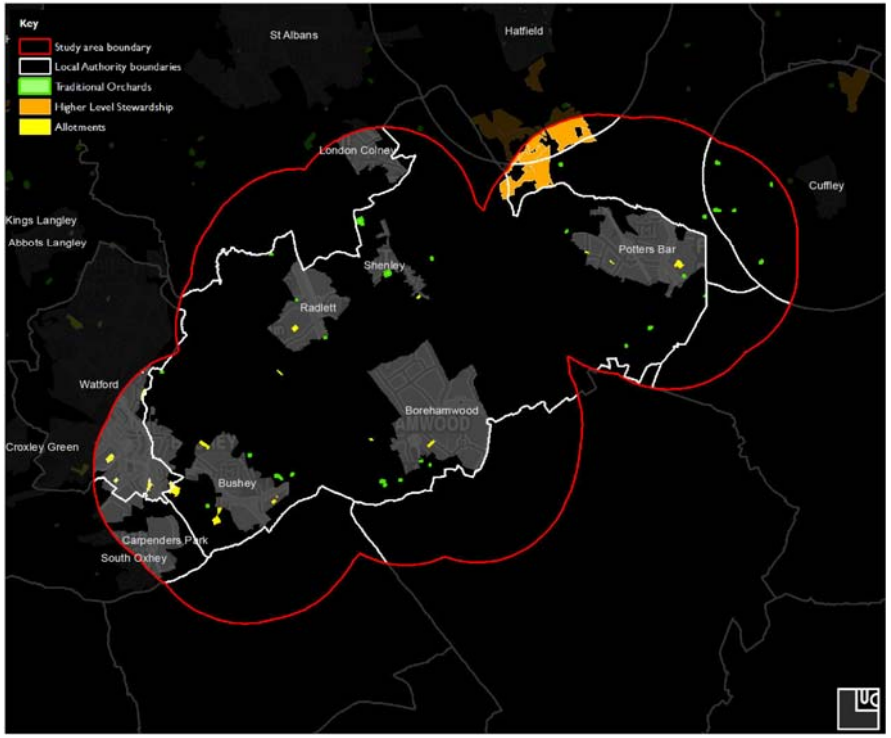
2.21 Sound ecosystems are a key part of a green infrastructure network, and proposals should seek to contribute to positive and proactive management of these for community benefit. The focus for this analysis has been the key services of water and air quality.

2.22 Interpreting the Water Framework Directive (WFD) data produced by the Environment Agency for river catchments, the riverine environment of the Colne Catchment (confluence with the Gade and Ver) is **at risk** in terms of low flows and abstraction pressures. The upper eastern arm of the Colne (including Mimmshall Brook) is considered by the WFD to be 'probably at risk' in terms of low flows and abstraction pressures, although Tykeswater is not deemed to be at risk.

2.23 The analysis therefore indicates a need for positive management of the River Colne and its various brooks within the Borough, as well as reinstatement of native wetland and riparian river corridors. These issues have formed the focus for a wetland habitat zone and for projects such as the Catherine Bourne Greenway on **Figure 3.1**. Note also links to the Colne Valley Wetland Enhancements project in the adjacent Watford Borough Green Infrastructure Plan.

2.24 Whilst large parts of the principal transport corridors are partly wooded (M1 & M25) there is a need for additional woodland and hedgerow belts to reconnect existing woodlands and improve air quality (also potential to extend woodland creation proposals set out in the St Albans Trees Against Pollution or TAP Project[viii]). Areas of opportunity for enhanced woodland linkage are shown in the Woodland Enhancement Zone on **Figure 3.1**.

Productive green environments



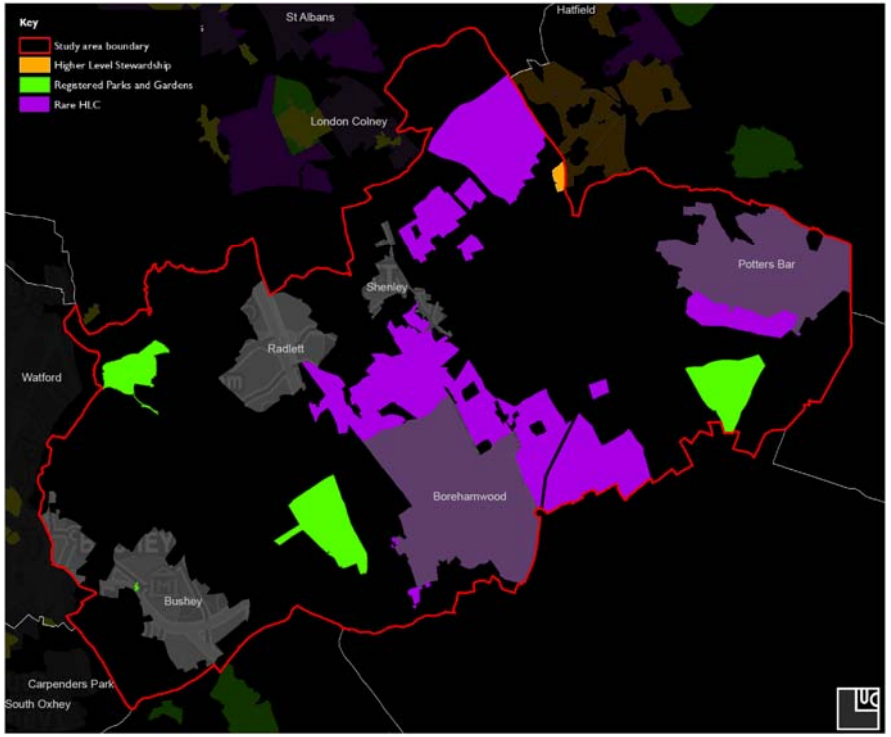
2.25 Consideration of the wider farmland landscape in Hertsmere Borough reveals that only small parcels of land within the Borough are in Higher Level Stewardship (mainly around the Walsingham Woods/Mimmshall Woods complex). None of these lie within the 2.5km envelope of the main settlements and no land is in organic stewardship within the Borough. As such, there is a clear opportunity

for enhanced Higher Level Stewardship (HLS) and organic stewardship uptake to secure greater landscape connectivity and functionality. This could be complementary to the Farmland Conservation and Enhancement Zone and the Small Scale Landscape Zone shown on GI Plan **Figure 3.1**.

2.26 In terms of local productive landscapes, there is a thin scattering of traditionally managed orchard sites across the Borough, mainly to the fringes of larger settlements such as Bushey and Borehamwood. These should be conserved as integral parts of the Farmland Conservation and Enhancement Zone, to maximise functionality of the farmland landscape.

2.27 Mapped information illustrates a small scattering of allotment sites within the principal urban areas, although no information has been provided as to quality, quantity or demand.

Conserving historic landscape character



2.28 The historic environment and historic legacy provides a rich resource for conservation and interpretation as part of a multi functional green infrastructure network. It also clearly links to other functions such as prestige, experience and the potential for recreation. This analysis considered the distribution of designated heritage assets in addition to rare historic landscape character types, as a basis for

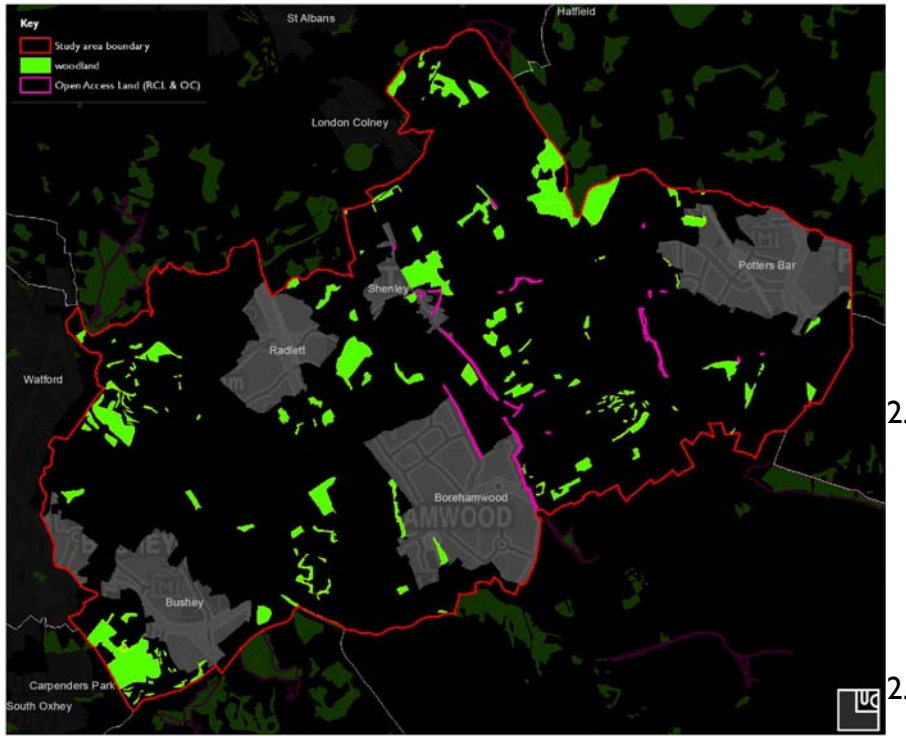
identifying aspects of historic legacy to be conserved as part of the GI network.

2.29 Interpreting the Hertfordshire Historic Landscape Characterisation (HLC) reveals that the principal rare historic landscape type in the Borough is co axial enclosure (early, sinuous field boundary systems). Significantly, these occupy over 24% of the rural landscapes of the Borough, principally north east of Borehamwood and Shenley, and to the southern edge of Potters Bar (a large area of this historic landscape type has also been absorbed within 20th Century development within Potters Bar and Borehamwood). This historic landscape type has formed part of the focus for several action zones shown on **Figure 3.1** in the GI Plan – Farmland Conservation and Enhancement Zone and Small Scale Landscape Conservation Zone.

2.30 In terms of designated heritage GI assets, none of the Borough's four registered parks and gardens (Wrotham Park, Wall Hall, Aldenham House and the Rose Gardens at Bushey) are protected through Higher Level Stewardship. There is 150ha of ancient woodland within Hertsmere Borough which is 1.49% of the Borough area. Of the entire ancient woodlands in the Borough, 0.1% of them are protected through HLS schemes. This and the information in relation to registered landscapes indicates a need and opportunity for more positive management of heritage assets through enhanced uptake of HLS. Woodland grant schemes, providing opportunity for improved woodland linkage and for restoration and interpretation of the landscape setting of the designed landscapes, may also be an opportunity.

2.31 No information has been provided in relation to Conservation Areas.

Sustainability and responding to climate change



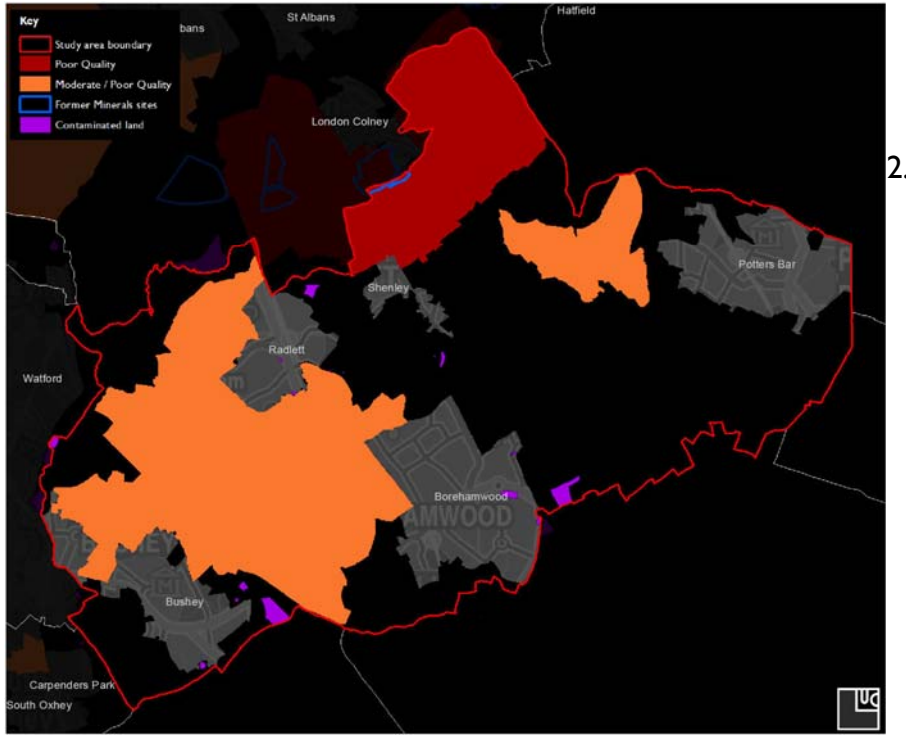
2.32 Urban greening, shading and cooling is a key part of community focussed green infrastructure. This analysis has therefore considered only tree cover. There are however clear links with other functions such as flood attenuation and water management, as part of a climate change adapted response to spatial planning.

2.33 Generally the main settlements have a relatively high density of tree cover, although the majority of this is on private land (rear of properties and domestic gardens). However, particular wards such as St James (Bushey), Furzefield (Potters Bar), Kenilworth and Cowley Hill (Borehamwood) have a deficiency in tree cover. An opportunity also exists to provide a buffer between the M25 and Potters Bar to enhance the green wedge along the motorway, however effective buffer planting along the motorway can be achieved by a lower density of trees directly alongside the motorway rather than a large dense buffer.

2.34 Main GI opportunities relate to conservation of existing tree stock, and seeking to apply Town and Country Planning Association (TCPA) standards for tree planting in relation to any new development proposed either within the settlements or to the edges of Radlett or Bushey. The TCPA Standard seeks to incorporate street tree planting at a density of 80 street trees per linear kilometre.

2.35 Beyond the main settlement, principal opportunity areas for new woodland creation, and which could contribute to community forestry objectives and the aspirations of the Watling Chase Community Forest Plan, are set out on **Figure 3.1**.

Land remediation

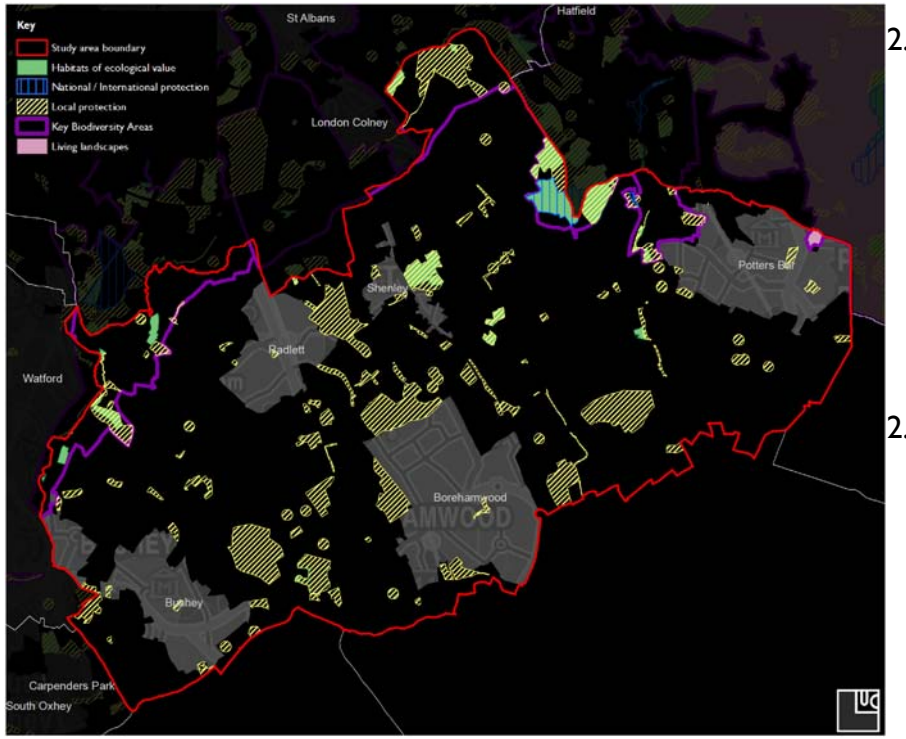


2.36 Green infrastructure planning and design can play a key part in delivering enhancement and restoration of landscape character and quality, and in enhancing areas of degraded landscape (e.g. mineral and re restoration sites).

2.37 No former mineral or land fill sites have been identified and as a result there are no opportunities for remediation or restoration of such sites within the District. The southern boundary of one re-restoration site within St Albans District (south of London Colney) lies just within the north eastern boundary of the Borough, however this site has been considered in the analysis for the adjoining St Albans Green Infrastructure Plan.

2.38 Main land remediation opportunities relate to areas of more eroded or degraded landscape character, as identified in the Hertfordshire Landscape Character Assessment. These are the landscapes north of Bushey: the *Aldenham Plateau* and *High Canons Valley and Ridges*. Also the landscape west of Borehamwood: *Borehamwood Plateau*. These have formed foci for action zones targeted towards landscape enhancement within the GI Plan (**Figure 3.1**) – see Farmland Conservation and Enhancement Zone on **Figure 3.1**.

Nature conservation



2.39 Conservation and enhancement of habitats, together with planning for sustainable communities, is a key consideration of multi functional green infrastructure planning. This plan has taken a landscape scale approach, considering Hertfordshire Biodiversity Action Plan Key Biodiversity Areas (KBAs) and Living Landscapes, in addition to statutorily and locally designated nature conservation sites and areas of local protection (Local Wildlife Sites).

2.40 Primary issues relate to the connectivity of habitats in light of future landscape change and climate change, and barriers to habitat connectivity created by the transport network. Main barriers to habitat links are the M25, M1 and A1(M) corridors. Also fragmentation due to limited patch size, although a significant cluster of locally protected sites (local wildlife sites) is located within the central part of the Borough. Other issues in respect of habitat fragmentation are likely to result from future residential growth, for example the north east arc around Radlett and Bushey.

2.41 Key nature conservation opportunities relevant to GI planning revealed by the analysis include connection of the South Mimms Key Biodiversity Area (KBA), across the Shenley Ridge, to the locally designated sites between Radlett and Borehamwood. Also to strengthen GI along the River Colne KBA, linking north to Bricket Wood and feeding south into Watford. Mitigation for the M25 widening may provide a linear feature (woodland) which can be enhanced and reinforced as part of the GI network. The action zones described at **section 3** and mapped on **Figure 3.1** can all be complementary to these aspirations.

2.42 With reference to BAP habitat targets, main opportunities for GI planning are as follows. Woodland planting to expand the existing resource, particularly focussing on Watling Chase Community Forest (a target of 30%

woodland cover is set out in the BAP). Also heathland – the Borough may contribute expansion of heath / acid grassland in the Upper Colne Valley (restoration of c.35ha e.g. Colney Heath and Bricket Wood Common) and south of St Albans (50ha of heathland-type habitats created associated with restoration of mineral workings). Neutral grassland also presents an opportunity, with the BAP stating the aspiration for Restoration and creation of at least 500ha across south Hertfordshire, set within a well-wooded landscape, and to include 200ha restoration and 150ha created from arable.

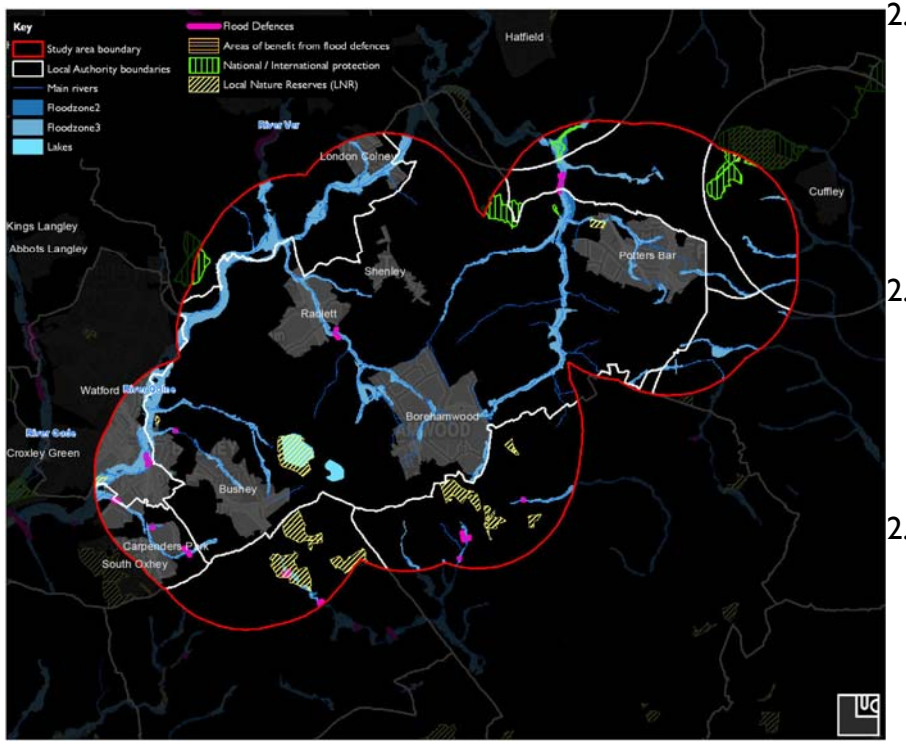
2.43 Many of these areas focus on the Colne Valley, on the Borough boundary and such GI opportunities must be considered with adjacent local authorities such as St Albans and Watford, as described at **section 3**.

Experience

2.44 For this analysis, the 27 regional landscape types were mapped and the three rarest landscape types identified by percentage distribution at regional and local authority level. However, applying this to Hertsmere Borough showed there to be no regionally rare landscape types. As such this has been excluded from the functional analysis for Hertsmere Borough. Other important aspects of the landscape experience, such as historic landscape character, and landscape condition and quality, are picked up in other functional analyses.

2.45 All of the Borough lies within areas of intrusion as mapped by the CPRE, indicating a need for structural green infrastructure enhancement to main road corridors, to enhance the experiential landscape. **Figure 3.1** show main areas of opportunity for woodland planting (focussing on connectivity), which could help mitigate this and also contribute to delivery of WCCF aims).

Flood attenuation and water management



2.46 Planning for and making space for water forms a key part of considering future landscapes in the face of climate change, particularly through sound flood risk management.

2.47 In addition to the water courses within the Borough, a significant flood attenuation and water management function is also provided by the two large reservoirs at Aldenham and Hillfield.

2.48 By main settlement, the analysis has identified the following issues. Large areas of the flood zone within Borehamwood are in areas of open space, although the residential development near the recreation ground to the north of the settlement is a potential flood risk. Surface water flooding is often exacerbated by culverting of existing watercourses in the town.

2.49 At Potters Bar, part of the Mimmshall Brook flows through the town. The narrow flood zone lies mostly within areas of residential development, exacerbating pressures during high flows. In addition, large areas of developed land are at risk of flooding within the settlement, where the Brook splits and runs through the town.`

2.50 Radlett has a narrow flood zone (part of Radlett Brook), with the flood zone being a mix of open space and residential development (vulnerable to high flows). Where the tributaries split to the north of the settlement at High Bridge there is a potential flood risk. Surface water flooding has been an issue at Radlett in the past. This relates mainly to topography and the fact that Watling Street is located in the valley (generation of run off, thereby exacerbating the problem, which is compounded by limited capacity of culverts in the town).

2.51 Bushey has a relatively narrow flood zone (Colne tributaries). Pressures are likely to be exacerbated by pinch points such as weirs and bridges. The flood zone is located mostly in open space, although some areas are also developed. High flow pressures are alleviated in areas of open space (Mostfield and King George Recreation Ground). Bushey has issues in respect of surface water flooding from a variety of sources such as pinch points (weirs, bridges, culverts).

2.52 The issues raised in the analysis have formed part of the focus of a wetland habitat zone described at **section 3** and mapped on **Figure 3.1**. See also the Catherine Bourne Greenway project proposal at **section 3**.

3 Proposed green infrastructure network and projects

GREEN INFRASTRUCTURE VISION

3.1 The green infrastructure vision for Hertsmere Borough is:

To conserve and enhance

- Strategic greenspaces and GI resources such as the Aldenham Country Parks site;
- The network of registered and minor historic parklands (and their landscape setting and context), as these form a distinctive component of the Shenley Ridge and an integral part of the cultural GI network;
- Areas where an intact small scale or historic field boundary network persists (e.g. areas of co axial enclosures), seeking to reinforce and re-connect these as part of the rural green infrastructure network;
- The network of minor watercourses and tributaries which thread through the rural landscape, enhancing the riverine environment and 'making space for water' outside of main settlement pinch points;
- The individual character of, and setting and sense of separation between, main settlements, through conservation and enhancement of the wetland network, and using woodland and re-connection of landscape structure and woodlands where appropriate (also contributing to the objectives of the Watling Chase Community Forest).

To improve and create

- Enhanced green travel links to key green infrastructure sites such as the Aldenham Country Park site, to reduce car dependency, and also green links to key GI assets on the border with Hertsmere Borough, e.g. Northaw Great Wood and Gobions Open Space in Welwyn Hatfield Borough;
- Enhanced green links with the North London greenspace network and the All London Green Grid, particularly via the London Loop;
- Wetland and riverine environments creating space for water, spaces for people to enjoy access to and contact with nature, and for habitat connectivity;
- Landscape and habitat connectivity in general, particularly where this is severed by main transport corridors.

To recognise and value

- The significance of greenspaces such as the Aldenham Country Park site;
- The film heritage of Elstree and various film locations within the Borough, seeking to interpret these as part of the green infrastructure network;

- The large body of positive work already done in relation to GI planning in the Borough, such as through the Watling Chase Community Forest and the network of promoted greenways and health walks, seeking to integrate with and take forward through future GI planning;
- The importance of joined up working with adjacent Hertfordshire authorities and with the London Boroughs in delivering a connected GI network.

3.2 The vision is necessarily aspirational and long term, since it will need to consider GI significantly beyond the plan period. Proposals to begin achieving the vision and initial consideration of delivery are set out in the remainder of this section.

DELIVERING THE VISION – THE NETWORK

Rationale, key messages

3.3 The proposed green infrastructure network has been developed in response to the key messages from the document review and the functional need and supply analysis in **section 2**, and to deliver the points of the vision above. It has been proofed against the adjoining authorities' green infrastructure context and other relevant spatial plans, policies, programmes and projects.

3.4 The proposed Green Infrastructure Network is shown on **Figure 3.1** and the component action zones and green infrastructure types which make up the GI network are described below. Spatial projects and non spatial proposals which deliver the GI network are explained at the end of this section (with spatial projects cross referenced to **Figure 3.1**). This includes high level consideration of cost, phasing and delivery and management mechanisms. Recommendations to link the green infrastructure proposals to delivery through spatial planning are set out in **section 4**.

Green infrastructure action zones

3.5 Several 'action zones' have been defined for the wider green infrastructure network. Shown on **Figure 3.1**, these are:

- **Wetland Habitat Zone:** Restoring and enhancing the quality of the river valley network and associated wetland habitats, to create landscape links to adjacent and nearby authorities (e.g. St Albans, Welwyn Hatfield and Watford). The zone and component projects such as the Catherine Bourne Greenway can also contribute to delivery of Natural England's Thames and Tributaries Integrated Biodiversity Delivery Area (IBDA). An enhanced riverine environment also responds to the need to 'make space for water' and to issues of ecological quality of the wetland environment, as identified by the functional analysis in **section 2** (Sound Ecosystems and Flood Attenuation and Management analyses).

- **Woodland Enhancement Zone:** linking woodland habitats and restoring landscapes/defining the network of valleys and important topographic features such as the Shenley Ridge. This would also be complementary to the community forestry aspirations in the Watling Chase Community Forest Plan.
- **Small Scale Landscape Conservation Zone:** Responding to the sense of intact historic landscape character persisting in the field systems between Borehamwood and Radlett (as revealed in the functional analysis at **section 2**). Conserving and enhancing the historic network of co axial enclosures as an integral part of the GI network, and in maintaining separation between the two settlements.
- **Farmland Conservation and Enhancement Zone:** Conserving and reinforcing the rural green infrastructure network, securing landscape and habitat connectivity. Also encouragement of agri environment schemes take up (at both entry and higher level) to deliver landscape and GI improvements across the farmland landscapes of the Borough.

3.6 These zones are colour coded on **Figure 3.1**. They indicate broad areas in which future small scale projects could contribute to the objectives of the zone. They do not relate to large scale or 'blanket' proposals. For example, the Woodland Enhancement Zone does not indicate mass woodland planting, rather an area where woodland enhancement and linkage, of even small scale, is desirable/meets a range of functional criteria, and should therefore be supported.

Green infrastructure types in Hertsmere Borough

3.7 A series of green infrastructure types have been defined to organise proposed green infrastructure projects in Hertsmere Borough, these are:

Urban greenways

Urban blue links

Urban wildspace

Peri urban wildspace

Rural wildspace

Rural blue links

Proposed green infrastructure projects

3.8 Working with Hertsmere Borough (and with internal consultation undertaken by the Hertfordshire County Council contract manager with key strategic stakeholders), a series of potential projects have been identified to take forward the GI network and to deliver the functions identified and analysed in **section 2**. These are described at the end of this section, which also identifies supporting non spatial GI projects. **Section 4** identifies potential future work for Hertsmere Borough to consider in

delivering green infrastructure. Due to the high level nature of this study, more detailed work will be needed to test and develop proposals (e.g. further ecological work and advice to determine requirements for suitable habitat creation and enhancement at a local level).

3.9 The GI projects (shown on **Figure 3.1**), are as follows:

- **1. Potters Bar Greenspace Links – Gobions and Northaw Great Wood**
- **2. Elstree and Parkland Links**
- **3. Catherine Bourne Greenway**
- **4. Aldenham and Bushey connections**
- **5. Links to the London Loop and London Greenspace Network**

3.10 These are described in the sheets at the end of this section. A further, non spatial (thematic or interpretative) project (**project 6: Green Hertfordshire**) is identified at the end of this section.

3.11 Also identified at the end of this section are GI links with adjacent Hertfordshire authorities, to signpost where 'joined up', cross authority working will be required.

3.12 Projects are prioritised according to the functions and benefits they offer, with an indication of steps likely to be required to deliver. Broad consideration is also given to costings, to give a guide as to future levels of investment in delivering capital works, using the following indicative rates/bands:

£ = Up to £50,000

££ = £50,000 – 100,000

£££ = £100,000 – 500,000

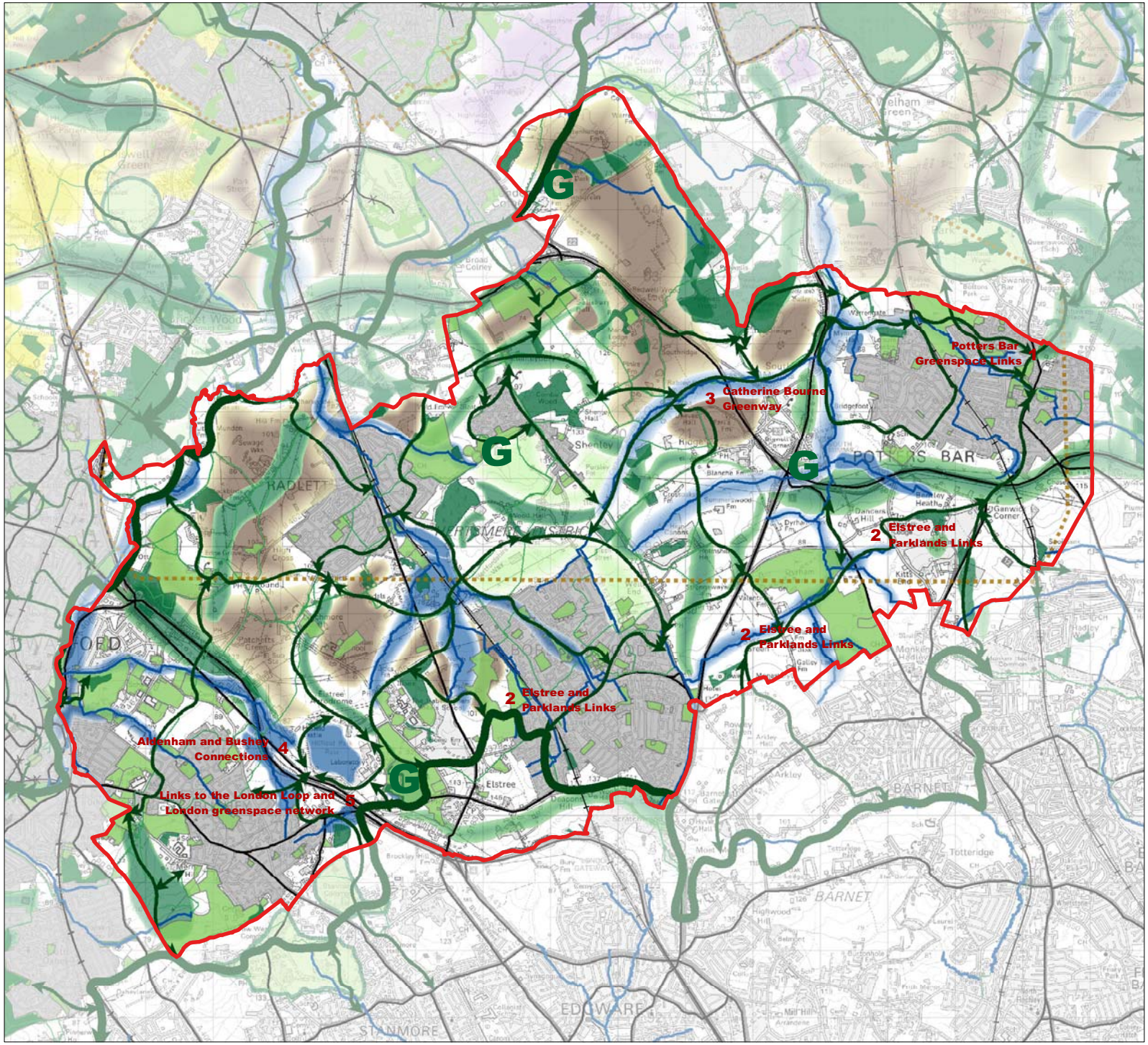
££££ = £500,000 – 2million

£££££ = £2million +

3.13 Note that costs are indicative/guidelines only and are based LUC's knowledge and experience of delivering comparable schemes. Where a project is a series of component sub projects, this will have an effect on costs. As such, proposals are a 'palette' of projects which Hertsmere Borough and partners can pick from as appropriate funding streams become available, but which will still help deliver the overall green infrastructure vision. In considering cost ranges, account has also been taken of match funding and grant aid in broad terms e.g. that where this applies, the net effect is to reduce costs of schemes in real terms. Potential funding sources are identified as appropriate in the project sheets at the end of this section.

3.14 Consideration is given in broad terms to further work needed to deliver projects in the following project sheets. As a general rule, in addition to the liaison, consultation and negotiations identified, each capital project will also

require further survey work – land, ecological and archaeological surveys, in addition to impact assessment of proposals and projects in ecologically sensitive areas.



Hertfordshire Green Infrastructure Plans - Hertsmere

Figure 3.1: Proposed Green Infrastructure Network

Key

Proposals

- Strategic link
- Local link
- 1 Green infrastructure projects
- Farmland conservation/enhancement and landscape restoration zone
- Wetland habitat zone
- Woodland enhancement zone
- Small-scale landscapes - conservation zone

Existing

- Long distance and promoted routes
- Rivers
- Accessible open space
- G Watling Chase gateway site
- Woodland
- Main settlements
- Watling Chase Community Forest

Barriers

- Major road network
- Railway
- Disused Railway

N W E S

0 0.5 1 2 Km

DRAFT

Date: 16/03/2011
Revision:

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LOCAL AUTHORITY : HERTSMERE

PROJECT : 1. Potters Bar greenspace links - Gobions & Northaw Great Wood

: £££+

RURAL GREEN LINKS - Brief description / snapshot of the project :

- Creating enhanced countryside links from the urban environment at Potters Bar, including shared use links (walking, cycling, &, to the rural fringe, riding) - a Potters Bar 'loop'
- Car free access to main green infrastructure assets on the Potters Bar 'doorstep' - Gobions & Northaw Great Wood (within Welwyn Hatfield Borough) & also to countryside to the west - links to Project 3 (Catherine Bourne Greenway). Also links to the ALGG to the south
- Including woodland linkage to existing woodland sites north of Potters Bar (enhanced settlement setting & edge) & to the south (M25 attenuation), to contribute to WCCF Partnership community forestry aspirations, & create links to WCCF Partnership gateway site at South Mimms
- Improved signage & interpretation from the town centre & railway station to greenspace destinations (route effectively forms a historic sites themed heritage trail: parklands & ancient woodland - links to project 6: Green Hertfordshire interactive mapping project)
- Providing legible/enhanced links to local greenspace sites within Potters Bar town

FUNCTIONS MET :

access | prestige | health | ecosystems | productive | historic | sustainability | remediation | nature | experience | flood mgmt

PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Access enhancements are complementary to ROWIP objectives. Linked landscape enhancements such as new broadleaf woodland planting can complement LCA objectives (with appropriate landscape planning & design) & can help contribute to WCCF Partnership planting targets & aspirations for community forestry in the Borough (specifically in the North London River Valleys WCCF Partnership character area - creating an enhanced woodland mosaic. Enhanced links to the countryside, access to nature & key greenspace resources can help address identified ANG deficiency (local & strategic). Associated woodland planting to M25 corridor would not only improve experience of recreational routes, but would also potentially address habitat severance issues created by the M25 (identified in functional analysis). Potential for sustainable woodland management to enhance biodiversity & contribute to woodfuel production. Enhanced settlement edge created by woodland would improve sense of prestige (functional analysis). Could add to the WCCF Partnership network of promoted greenways in the Borough & also as part of linked programme of health walks.

ISSUES ASSOCIATED WITH DELIVERY : Legalities & route/path creation issues, & ongoing maintenance in relation to green way links. Cross boundary links & liaison with Welwyn Hatfield Borough re: managing access to Northaw Great Wood Country Park/managing balance between visitor/nature conservation interests. Also with Herts & Middlesex Wildlife Trust re: managing access & entry points to Gobions Open Space. Need for user survey, feasibility study, consultation & signage strategy for creating access link. Should be linked to promotional project 6: Green Hertfordshire. Need for landowner liaison & with Natural England/ Forestry Commission in relation to woodland planting (through HLS & WGS schemes - opportunity for enhanced HLS uptake in the Borough, as identified in the productive agri environments functional analysis). Need for liaison with Farming & Wildlife Advisory Group (FWAG) for this part of the project.

DELIVERY PARTNERS & MONITORING MECHANISMS : Hertsmere Borough Council (in enabling & partnering role, with Welwyn Hatfield Borough Council). Natural England, Forestry Commission, landowners & Farming & Wildlife Advisory Group (FWAG). Potential funding through WCCF Partnership Partnership as the project could contribute to many of their objectives (& through creation of physical links to identified WCCF Partnership Gateway site). Potential private sector sponsorship from local businesses (Elstree Studios), potential cross boundary working & delivery with London Boroughs to the south.

WHAT HAPPENS NEXT? PRIORITY / RANKING : Make links with Welwyn Hatfield Borough Council & ALGG to co ordinate delivery & also with landowners re: access & to encourage uptake of relevant grant schemes. Access route is mainly a case of promoting & signage (plus limited improvement of existing). Costs are relatively low. Priority should be high due to functional need/benefit.

LOCAL AUTHORITY : HERTSMERE

PROJECT : 2. Elstree & Parkland links

: £££+

URBAN / RURAL GREEN LINK - Brief description / snapshot of the project :

- Creation of enhanced physical green links to parklands & key green assets (e.g. Haydon Hill Parkland, Bushey), as well as enhanced urban areas, such as the Bushey 'Metroland' suburbs
- Recognise & celebrate the heritage of Elstree & Borehamwood & it's film industry past (& present), through a series of 'film heritage' green trails promoting the rich cultural heritage & unique link Hertsmere has with the British Film Making Industry, taking in familiar sites & scenery from popular cinematic & television productions
- Create stronger green links between the parklands of Hertsmere (such as Wrotham Park & Dyrham Park), providing improved ecological corridors for biodiversity, wildlife movement & multifunctional landscapes as well as improved settlement approaches through buffering consistent with the aims of the Watling Chase Community Forest (WCCF Partnership)
- Creating links for access to the wider network such as south to the London Loop, east to the Catherine Bourne (links to GI Projects : 3, 4 & 5) & also west to the Colne Valley

FUNCTIONS MET :

access prestige health ecosystems productive historic sustainability remediation nature experience flood mgmt

PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : New green links & heritage trails can address ANG deprivation & IMD issues (especially within Borehamwood & adjacent to the film studios & associated industries) whilst complementing the Herts ROWIP. Potential to connect to the wider network & contribute to the aspirations of Hertsmere GI Project : 5 (London Loop & London Greenspace network). Improved green links to parklands for ecology through hedgerow restoration & woodland enhancement (to arable land) will assist with WCCF Partnership & BAP aims for the Arkley Plateau, South Mimms & Aldenham Plateau character areas. Hert & Middlesex Wildlife Trust (HMWT) objectives will be enhanced by the creation of wildlife corridors improving biodiversity & connectivity between key green spaces (e.g. Haydon Hill Parkland & Aldenham Country Park).

ISSUES ASSOCIATED WITH DELIVERY : The project involves several strands of GI, from access & experience to ecosystems, which means individual aims should be clearly identified & prioritised for successful delivery. Creation of a heritage GI asset within Hertsmere to recognise the film industry will involve 'new' partnerships with industries from different fields (e.g. Hertsmere Borough Council -HBC, Sustrans & British Film Institute - BFI) to achieve a successful & accurate delivery of 'film heritage' (& associated promotion of the route). Funding for the access & heritage links will require significant capital input, which could be contributed to by existing film studios based in Hertsmere - as a joint venture. Wildlife sub projects, which can be low key & associated with changes in management to existing arable land & settlement fringe greenspaces, will need to be achieved through promotion & take up of the project aims by relevant landowners & interested parties (e.g. WCCF Partnership, HLS & Woodland Grant Scheme). Note: 2010, restrictions on HLS revenue payments (access).

DELIVERY PARTNERS & MONITORING MECHANISMS : HBC, HCC & the BFI for delivery of a coherent & recognisable film heritage trail within Elstree & Borehamwood, research archive information from BFI will be key, with possible funding through the HLF, monitoring through visitor user groups. HMWT, WCCF Partnership & CMS to be important partners for ecological green link enhancements (e.g. to parks such as Aldenham Country Park), as well as landowners through funding, such as Natural England's HLS & Access to Nature scheme. Small scale initiatives (such as local route repairs) & quick gains through local funding & interested parties (e.g. Friends of Aldenham Country Park), Groundwork, CMS & BTCV to assist with delivery & management.

WHAT HAPPENS NEXT? PRIORITY / RANKING : Landowner take up of schemes such as HLS & WGS will be key for rural green links. Liaison with the film industry & relevant partners indicating the project aims within Hertsmere will be key to estalish priorities & potential for film studio 'buy in'/other funding (e.g. HLF). Local promotion to interested parties to identify areas for quick wins & funding opportnunities for enhancements & green links. Links to GI Project : 6)

LOCAL AUTHORITY : HERTSMERE

PROJECT : 3. Catherine Bourne greenway

: ££-£££

RURAL BLUE LINKS - Brief description / snapshot of the project :

- Enhancing the functionality, quality & diversity of the rural landscape
- Creation & promotion of an enhanced shared access route, linking rural & urban area
- Improve condition & riverine character of the Catherine Bourne within the rural landscape & enhance ecology & identity of the Bourne as a water course, addressing WFD issues
- Punctuate & express the Catherine Bourne corridor with arable landscape enhancing the presence of a greenway for both access & nature (e.g. through appropriate tree planting)
- Improve access under/over major transport corridors & promotion wetland of the greenway as a means for green transport within Hertsmere linking to the wider green infrastructure network
- Greenway links to the Watling Chase Community Forest (WCCF Partnership), existing promoted greenway network, enhancing South Mimms / Shenley Ridge gateway & contributing to planting targets, through appropriate wet woodland & hedgerow buffering to detracting aspects

FUNCTIONS MET :

access | prestige | health | ecosystems | productive | historic | sustainability | remediation | nature | experience | flood mgmt

PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Contribute to bridging access barriers (e.g. between Potters Bar & Borehamwood), improved connectivity & opportunities for GI transport routes to settlements such as South Mimms, Shenley, Shenleybury, & larger towns of Potters Bar & Borehamwood, addressing ANG & the Hertfordshire ROWIP, with connections to strategic Herts GI project : 4. Addresses health deprivation issues (indices of multiple deprivation). Aims of Landscape Character Assessments, WCCF Project & Herts & Middlesex Wildlife Trust could be achieved through enhancement & restoration of the Bourne associated wetland landscape & greenway corridor - through improved arable farmland interface, hedgerow restoration, woodland management, enhancement & connectivity of existing woodland pockets. Secures better connectivity with local wildlife sites. Enhanced access could provide green transport access to Shenley Park Trust site as a GI asset & key resource within the WCCF Partnership Shenley Ridge gateway site.

ISSUES ASSOCIATED WITH DELIVERY : Need for coherent vision with set aims & objectives, this could be achieved & identified through a partnership of interested parties (e.g. Environment Agency, Natural England, WCCF Partnership, CMS, Hertsmere Borough Council - HBC & Sustrans). Landowners will need to be involved in delivery of Borough wide project, with key bodies such as Highways Agency pivotal to delivery (e.g. for landscape improvements to transport corridor interfaces, such as the M25). Surface upgrades & creation along greenway will require significant capital input, with continuous standard of surface to be delivered at key linking points of corridor, improved access will be achieved through funding streams such as Higher Level Stewardship schemes & advice from Farming & Wildlife Advisory Group (FWAG). Other issues relate to enhanced signage & interpretation, with Herts Rights of Way & Herts Highways. Note that as of 2010, restrictions on HLS revenue payments (access) apply. Need to make links with London Boroughs (All London Green Grid - ALGG).

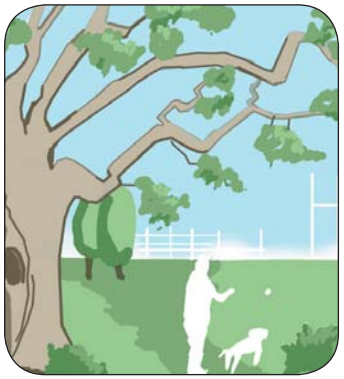
DELIVERY PARTNERS & MONITORING MECHANISMS : Key delivery partners will be the landowners & their take up of HLS schemes through Natural England & through the Woodland Grant Schemes. Herts Rights of Way & the Local Access Forum. HBC, CMS, Herts & Middlesex Wildlife Trust & Watling Chase Community Forest for delivery, monitoring & on-going management of enhancements to woodland, landscape restoration & promotion. Access & Bourne restoration initiatives also through Sustrans, ROWIP & governmental bodies such as Highways Agency & Environment Agency (wetland restoration).

WHAT HAPPENS NEXT? PRIORITY / RANKING : HLS & WGS take up is high priority as this could deliver many aspects of the work. Promotion & awareness raising to stakeholders & landowners is key, with clear set of aims & objectives defined within a vision which they can 'buy into', (identifying the GI functions & potential green links from the Catherine Bourne, local settlements & into the wider network - cross district & county, e.g. south to London Borough of Barnet & the ALGG). Monitoring through delivery of part of the promoted greenway network, also thought take up of HLS schemes & species surveys.

LOCAL AUTHORITY : HERTSMERE

PROJECT : 4. Aldenham & Bushey connections

: £££££+



Peri urban wildspace- Brief description / snapshot of the project :

- Enhanced shared use car free access to key site of recreational focus (Aldenham & Hillfield Reservoirs) from principal residential areas
- Improved connections to the London greenspace network via the London Loop (link to Project 5) - a network of promoted walking routes from other recreational/leisure foci, such as pubs on the route e.g. to the south of the existing Country Park. Links to Elstree & Parkland Links Project (project 2). Also enhanced signage from local railway stations e.g. Elstree & Borehamwood
- Future landscape for Aldenham Country Park site -potential for future inward investment from the London Boroughs as this is a primary North London semi natural greenspace resource. Linked to an enhanced future offer/selling points for the site e.g. improved zoning to include greater level of space for informal recreation away from the wider, extending the urban farm to include local food, produce (expanded shop/cafe & revenue generating activity) & community garden/orchard, sustainably managed wet woodland to contribute to biomass production
- Delivery of woodland planting & habitat creation to contribute to aims of WCCF Partnership Plan at the identified Gateway site (Aldenham Country Park) - woodland wildspace & enhancement of the greenway route/links to Bushey/A41 corridor through woodland planting

access | prestige | health | ecosystems | productive | historic | sustainability | remediation | nature | experience | flood mgmt

PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Can deliver some of the aspirations for a WCCF Partnership Gateway Site & for the Aldenham Plateau WCCF Partnership character area (creation of enhanced woodland wildspace). Also complementary to Hertsmere's Greenways & Health Walks programmes & to delivery of Herts ROWIP objectives. Can secure enhanced links with All London Green Grid & with adjacent London Boroughs.

ISSUES ASSOCIATED WITH DELIVERY : Legalities/dedication issues. Need for land ownership liaison & negotiation, in relation to enhanced greenway links (access rights/wayleaves etc) & also through Higher Level Stewardship & Woodland Grant Schemes take up, to deliver capital works for landscape & access improvement (including woodland planting as part of the Bushey link). Need for joined up working with the London Boroughs to secure a sustainable future for Aldenham Country Park, including resources to manage & keep open, dedication of enhanced & better promoted greenway links & enhanced revenue offer/ rejuvenation of facilities. Work with existing Friends Group (Aldenham Country Park). Subject to viability of pooled resources, is likely that future proposal for Aldenham Country Park would form part of a package let to a facilities contractor, as a commercial concern, for ongoing management.

DELIVERY PARTNERS & MONITORING MECHANISMS : Hertfordshire County Council, Hertsmere Borough & the 5 Boroughs taking the All London Green Grid forward in North London (Harrow/Hillingdon/Camden/Barnet/Brent). Watling Chase Community Forest Partnership. Also landowners, Natural England & Forestry Commission in relation to greenway links. At the Aldenham site, there is considerable scope for community/local schools/volunteers involvement to help with management activity (e.g. tree/orchard planting -focus for events/activities), as well as existing Friends Group. Also through work with local green teams, volunteer groups such as BTCV or through rehabilitation activities.

WHAT HAPPENS NEXT? PRIORITY / RANKING : In view of the current situation at Aldenham (March 2011) & its value as a community & wider North London greenspace resource & the fact that health & safety could rapidly become an issue without appropriate resourcing, this is a high priority project. Liaison with the adjacent London Boroughs should take place as soon as possible regarding possible collaboration/resource pooling, as the site could also link well to ALGG's proposed Regional Park on the northern London boundary e.g. that Aldenham could form a key part of that function/could connect to this.

LOCAL AUTHORITY : HERTSMERE

PROJECT : 5. Links to the London Loop & London greenspace network

: £££+

RURAL / PERI URBAN GREEN LINK - Brief description / snapshot of the project :

- Creation of enhanced green links for shared access, such as green transport routes from the principle GI Borough settlements & key GI assets to the neighbouring London Boroughs (e.g. Barnet) & the assets of the All London Green Grid (ALGG)
- Promotion & enhancement of local green links between key strategic links such as from the London Loop (linking to key GI assets such as Stanmore Common) to Aldenham Country Park, providing greater access to existing green assets for a greater number of people living within urban areas (e.g. residents of Bushey, Elstree, Borehamwood, Edgware & Stanmore)
- Complement & improve connectivity/awareness with related GI initiatives such as the Watling Chase Community Forest (WCCF Partnership) & ALGG, creating a combined approach to a green infrastructure network between Hertsmere & North London Boroughs
- Link to the network of promoted greenways in the Watling Chase Community Forest, providing sustainable transport & commuter opportunities (e.g. cycling) for the local population base

FUNCTIONS MET :

access | prestige | health | ecosystems | productive | historic | sustainability | remediation | nature | experience | flood mgmt

PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Address deprivation & IMD issues (especially to Borehamwood & Potters Bar) & ANG, with links south to the ALGG from Hertsmere, as well as in neighbouring North London Boroughs (such as Harrow & Barnet). Enhanced green access links to key GI assets (e.g. Aldenham Country Park, contributing to the aims of the Hertsmere GI Project : 4) within the Borough, increased signage, multifunctionality & accessibility (green transport), will complement the Herts ROWIP. North south links between Hertsmere & London strategic routes such as the London Loop will increase connectivity to London Boroughs & the ALGG & GI assets (e.g. Stanmore Common), as well as indirectly to the adjacent Boroughs of Watford & Welwyn Hatfield. Green link improvements will assist the aims of the WCCF Partnership (promoted greenways network), & the ALGG.

ISSUES ASSOCIATED WITH DELIVERY : Project encompasses series of links across key sites & settlements within Hertsmere to the wider GI network of Herts & the London Boroughs. Delivery involves cross authority working overseen by Herts County Council & in partnership with associated London Boroughs (e.g. Barnet & Harrow) in order to create coherent & functional green links between green assets (e.g. from Harrow Weald Common to Aldenham Country Park). Shared delivery & funding of links & enhancement to key destinations by authorities working together will ensure a maximised green network resource for the immediate & more far reaching communities within their catchment. Promotion of project aims would need to be communicated to landowners & potential project partners, scope for small scale community involvement through Friends groups (e.g. Friends of Aldenham Country Park). Note that as of 2010, restrictions on HLS revenue payments (access) apply.

DELIVERY PARTNERS & MONITORING MECHANISMS : Hertsmere Council, Herts County Council, London Boroughs (e.g. Harrow & Barnet) & WCCF Partnership. Liaison with landowners is key for possible take up of funding through the Natural England HLS schemes (for Access). Potential developers - ensuring buy in to the project aspirations in accordance with new development (through s:106 & CIL), & possible developer input, as off site contributions, (monitoring for rural links - between settlements & GI assets - through the BTCV & CMS). Sustrans & Groundwork may be able to assist with securing funding for local level initiatives, at 'destinations' & gateways (e.g. settlement edge signage & path surfacing). Monitoring for developer led components to occur through planning conditions & site inspections. Monitoring for HLS through relevant grant aid agreements.

WHAT HAPPENS NEXT? PRIORITY / RANKING : Promotion of project aims to relevant authorities (e.g. London Boroughs) & interested parties such as the WCCF Partnership & local stakeholders (e.g. Friends of Aldenham Country Park). Priority green links to be identified (e.g. London Loop/Stanmore Common to Aldenham Country Park), & funding options explored (e.g. HLS & Sustrans), landowner take up of funding schemes such as HLS (for access) is a key priority.

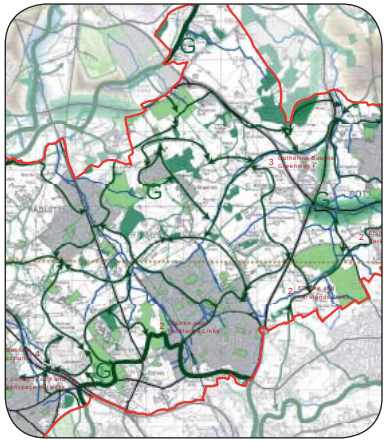
LOCAL AUTHORITY : HERTSMERE

PROJECT : 6. 'Green Hertfordshire' Interactive map project (non spatial/interpretative)

: ££

Brief description / snapshot of the project :

- Accessible electronic GI map based/navigator resource, also providing the opportunity to link to/ bring all existing GI promotional/leaflet information together in one place
- Web based & Smartphone app (application) based outputs for easy access & to reach the widest audience, including schools & colleges
- Translate information on the GI network & new green links for people, to users
- Provide information on GI assets (landscape, habitat, historic etc) to users, to aid understanding & appreciation of the natural environment - educational resource
- Development of a series of themed walking/cycling & riding trails & routes from pubs etc & promotion of these to offer low key, 'low environmental impact' fun/recreation for all ages
- Link to other relevant programmes e.g. Transition Towns web presence - use of the interactive mapping for people to identify 'green' ways of living life - green transport routes for commuting to work & school as well as recreation, places to buy local produce etc, community events in a greenspace setting



access | prestige | health | ecosystems | productive | historic | sustainability | remediation | nature | experience | flood mgmt

PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Contribute to objectives of Local Transport Plans & ROWIP, in promoting routes for people to use for green travel. Embed most of the aims of much of the spatial planning at county & local authority level (landscape conservation in the Landscape Character Assessments for example) in the wider sub conscious of the communities who use & enjoy these environments. Recognises the full functional potential of green infrastructure (interpretation/education/skills development - 'soft' skills) as expressed in the Natural England Green Infrastructure Guidance.

ISSUES ASSOCIATED WITH DELIVERY : The main issue is with hosting, managing & updating a comprehensive, but relevant, usable & above all visually engaging & appealing on line resource, as well as marketing & promoting the use of the Green Hertfordshire brand/app to the widest possible audience. Need for specialist ICT, GIS & graphic design skills to help develop the package. Link to a potential GI marketing & communications strategy to launch the GI work & embed the concept. A communications strategy & user groups market research (e.g. school & youth groups) should be undertaken prior to & during development of the App. Map licensing protocols & restrictions on use of Ordnance Survey data would need to be worked around (lead in times associated with delivery of project are likely to be an issue). Need for compatibility with main Smartphone platforms. Could be compatible with traditional leaflet media using Smartphone scannable 'QR' codes with links to interactive material on the web.

DELIVERY PARTNERS & MONITORING MECHANISMS : The Hertfordshire Districts, Hertfordshire County Council, Hertfordshire Chief Technical Officers Association (HTCOA) landscape group, & Countryside Management Service, as well as key agencies & organisations with an interest in promoting GI (e.g. Natural England, Herts & Middlesex Wildlife Trust, British Waterways) & landowners of key sites within the Hertfordshire districts - potential for funding/'in kind' contributions & sponsorship. Liaison with local green groups e.g. Transition Towns. Possible private sector involvement.

WHAT HAPPENS NEXT? PRIORITY / RANKING : This is a key project to translating GI to a wider audience beyond planners & decision makers. The initial skeleton of the interactive map (which could be added to & developed as & when new information & funding became available), should be developed as a high priority project across the districts, with liaison between Herts County Council, the Countryside Management Service & HTCOA representatives.

GI projects and cross authority connections

3.15 An essential part of effective GI delivery is a strategic, co ordinated approach, to ensure that projects are resourced appropriately in terms of capital works and ongoing revenue activity. This section notes potential connections with adjacent authorities in terms of GI links and projects:

- **1. Potters Bar Greenspace Links – Gobions and Northaw Great Wood:** Need for links with Welwyn Hatfield Borough.
- **2. Elstree and Parkland Links:** Links to All London Green Grid and London Borough of Harrow. Also links to St Albans District and Watford Borough (connections to the Colne Valley).
- **3. Catherine Bourne Greenway:** None, as project is entirely within Hertsmere Borough.
- **4. Aldenham and Bushey connections:** Links to Watford Borough and All London Green Grid, particularly London Borough of Harrow.
- **5. Links to the London Loop and London Greenspace Network:** Liaison with All London Green Grid, in particular London Borough of Harrow.

3.16 In addition, account should be taken of projects proposed in adjacent Hertfordshire district GI Plans, which are located on the boundary with Hertsmere Borough. These are the Colne Valley Wetland Enhancements Project proposed in the Watford Borough Green Infrastructure Plan and the Woodland and Heathland/Grassland landscape links proposed in the Welwyn Hatfield Borough Green Infrastructure Plan (part of this focuses on the area around Northaw Great Wood and the surrounding landscape north east of Potters Bar). Also the Commons Grassland and Heathland Enhancement Project proposed in the St Albans District Green Infrastructure Plan (part of this focuses on Bricket Wood Common, abutting the north western Borough boundary).

3.17 It should also be noted that large parts of the Borough and the woodland enhancement zones identified on **Figure 3.1** also fall within a project area (the Woodland Arc) identified in the county wide Strategic Highlights Green Infrastructure Plan for Hertfordshire. This strategic project seeks to deliver the aspirations for community forestry stated in the Watling Chase Community Forest Plan.

4 Linking the green infrastructure proposals to local spatial planning and development management

4.1 It is intended that this Green Infrastructure Plan will form part of the evidence base for Development Plan Documents (DPDs) in the Local Development Framework and for green infrastructure issues to be included and addressed in the Development Plan Documents. In order for any **future** policies that deal with green infrastructure to be found to be 'sound' when going through public examination they will have to comply with the three tests:

- To be consistent with National Policy; a green infrastructure approach is clearly advocated by national policy.
- To be justified; evidence needs to be provided to prove why it is justified for there to be a green infrastructure policy (why something is being proposed and that there is a problem or a need)[ix] (see **sections 2 and 3**).
- To be effective; where a policy proposes tackling a green infrastructure issue there is a need to ensure that the mechanism for tackling the issue will be effective and that there is some basis for taking this course of action.

4.2 The tests of soundness point to the need for a clear link between policy formulation and the evidence that has been gathered.

4.3 PPS12, the Planning Inspectorate[x] and the Planning Advisory Service (PAS) all give more detail on what is meant by effectiveness and the Green Infrastructure Plan has sought to ensure that all these aspects have been addressed through the development of the Plan. The proposals developed in this Plan have been proofed against other relevant plans, policies and programmes. The Green Infrastructure Strategies and Plans of neighbouring authorities have been reviewed to ensure consistency between this Plan and those of neighbouring authorities. A robust and transparent methodology has been used to ensure that proposed solutions are clearly linked to addressing issues and needs identified in the evidence base. Potential delivery partners have been identified for GI projects in **section 3**. Suggestions for monitoring have also been included in the Plan.

4.4 The key findings of the Green Infrastructure Plan that are relevant to planning policy, are set out here. This will aid plan makers, those assessing the plan (SA/SEA practitioners) and consultees in successfully embedding green infrastructure into the DPD process.

Evidence Base

4.5 The Green Infrastructure Plan is to be included as part of the evidence base for the LDF. There may be benefits to including or referring to parts of the evidence gathering and analysis undertaken for this Plan in other LDF supporting documents such as Sustainability Appraisal baselines. The following may be useful:

- An overall justification for following a green infrastructure approach is provided in **section 1**.
- Background information on environmental character can be found in **Appendix 1**.
- Key green infrastructure issues are set out by function in **section 2** and **Appendix 2**. These issues should be used by plan makers, SA practitioners and consultees to identify what the broad green infrastructure (and environmental) issues are in the Borough.
- The assessment of need for green infrastructure is given by function in **section 2** and **Appendix 2**.
- **Section 3** sets out the proposed green infrastructure vision, network and supporting projects. This may be useful for plan makers when they are developing policies, and for SA practitioners and Consultees when reviewing policies to help ensure options have been presented that take full advantage of potential opportunities and are most likely to help solve current and future problems.

Core strategy

4.6 Key GI points for the Core Strategy to take into consideration are:

- Making space for water and enhancing the riverine environment outside the main settlements and associated pinch points (see the Wetland Habitat Zone and the Catherine Bourne Greenway Project on **Figure 3.1**);
- Joined up working with the county council and the All London Green Grid, to secure enhanced links to the London greenspace network (also to secure a sustainable future for the Aldenham Country Park site);
- Increased green access links to the countryside from the main settlements, including via new greenway routes such as the Catherine Bourne, which can also complement the existing promoted greenway network;
- Conservation and enhancement of the distinctive network of historic parklands along the Shenley Ridge, as well as their settings. Interpretation of this historic resource as part of the green infrastructure network;
- Continued recognition and promotion of the Watling Chase Community Forest, through identified opportunities for woodland enhancement (see **Figure 3.1**) and through links to the Woodland Arc Project proposed in the Hertfordshire Strategic Highlights Green Infrastructure Plan;
- Improved strategic links with adjacent district GI (including via the Colne Valley – links to Watford Borough and St Albans District);
- Using green infrastructure to contribute positively to landscape character enhancement, restoration and linkage (e.g. areas for wetland and woodland enhancement or conservation of historic landscape [small scale landscape conservation zone] as shown on **Figure 3.1**).

DEVELOPMENT MANAGEMENT

4.7 The green infrastructure zones and component projects identified in **section 3** form a basis for evaluating future development proposals against the proposed green infrastructure network, and to ensure that they contribute to the desired environmental outcomes and functions. A model process for ensuring that green infrastructure is embedded in development management, and that appropriate account is taken of green infrastructure recommendations, is set out in **Figure 4.1**. A standardised approach to the design and implementation of a generic green infrastructure development project is shown in the central column of this Figure, with respective responsibilities of the applicant and the Borough Council, as they relate to GI, shown to the left and right hand sides respectively.

4.8 **Figure 4.1** is designed to assist Development Management officers and planning applicants ensure that green infrastructure is embedded in the scheme design from the outset, as part of the development process. The diagram can be applicable to any scale of proposed development. The starting point is to identify the green infrastructure zone or elements in which a specific site lies and whether it relates to, can contribute to or affects any proposed projects in this GI Plan. Reference should be made to the key messages for the relevant projects e.g. the important green infrastructure assets and links to conserve and enhance, and this should be used as a starting point for site planning and design – a 'greenprint' or a green infrastructure led basis for masterplanning, to ensure that green infrastructure assets are considered and protected from the first.

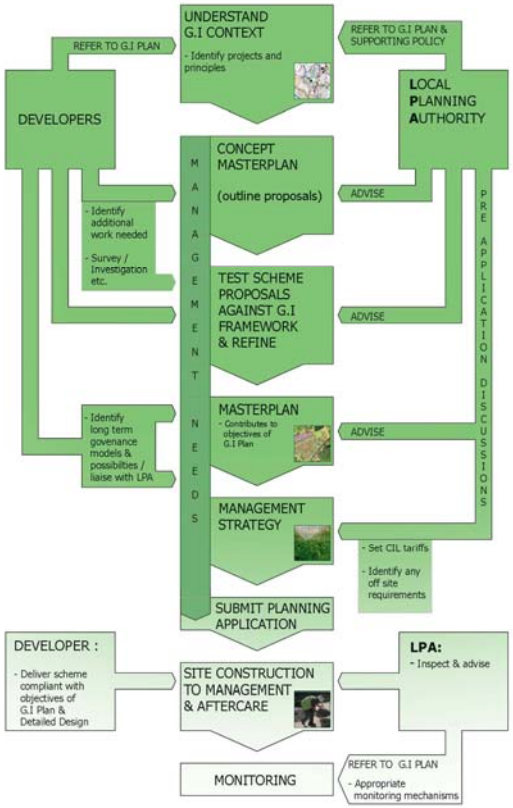


Figure 4.1: Embedding GI in Development Management

NEXT STEPS

4.9 The following steps/alternatives are recommended in order to take forward green infrastructure delivery within the Borough:

- Creation of a dedicated **Green Infrastructure Delivery Officer** role at County level (subject to resources – this may be a desirable long term aspiration);
- **Taking the GI Plan forward in the Borough through existing mechanisms** (Hertfordshire Environmental Forum) and with assistance and advice from the Countryside Management Service e.g. to deliver community forestry;
- Attendance at and participation in a potential new Hertfordshire wide/cross district **GI Delivery Panel** (potentially linked to HTCOA's landscape group and other stakeholders such as the Herts and Middlesex Wildllife Trust, as well as the Parish Councils, and relevant consultees identified in the potential projects at **section 3**). Management of this panel could be commissioned from a relevant commercial organisation such as Groundwork or other GI implementation consultancy. This should have a practical focus in securing on the ground delivery.

4.10 Whichever approaches are selected, clearly there will be a need for close partnership working with other organisations with parallel interests and objectives (Hertsmere Borough in an enabling/facilitating role, liaising as appropriate with adjacent Districts and Boroughs). By doing this and through intelligent use of existing mechanisms and processes, a SMART approach to GI delivery could be achieved in the Borough, as described below. Possible future responsibilities in relation to green infrastructure delivery, whether through a Delivery Officer or through participation in a Delivery Panel, at Borough level, are as follows:

- **Actively promote green infrastructure**, liaising with relevant members of the Local Strategic Partnership, to ensure that green infrastructure contributes to the objectives of spatial planning;
- Preparation and implementation of a **Communications Strategy for green infrastructure** in the Borough, to raise public awareness of the concept. This should link to the interactive GI mapping/web/app based project described in **section 3** (Project 6: Green Hertfordshire). Focus on projects with a community emphasis, to engender greater public support and ownership, as well as embedding positive informal management/stewardship, in addition to any more formal management structures identified;
- **Advise and assist a nominated green infrastructure 'champion'**, (ideally a Council member, to ensure greater potential for 'buy in' from members);

- Provide constructive advice to the Council on GI delivery, considering the points below:
- **A checklist** for evaluating development proposals in terms of GI and against the components of the GI network in this GI Plan. Possible components of such a checklist are set out under 'Potential future work', at the end of this section;
- **Consider potential for further work** and additional studies to bring GI forward, including more detailed GI planning work, as highlighted at the end of this section;
- Identification of constraints, challenges and potential conflicts of interest in relation to practical delivery, making early links with appropriate bodies (e.g. in relation to ecological advice, surveys and flood risk etc). **Land ownership liaison and negotiation** (this is a key stage);
- Where appropriate, as part of liaison with landowners **seek to encourage take up of grant schemes** which could contribute to the aims of the GI Plan e.g. agri environment and woodland grant schemes;
- As a consultee, comment on relevant planning applications through the pre application and application processes, using the proposed GI Network;
- **Liaise with developers early in pre application stage**, ideally at site acquisition, so that GI is factored into schemes from the start, and as part of section 106 contributions (identification of the proportion of GI to be met through the Community Infrastructure Levy - CIL, section 106 and through the local authority New Homes Bonus). Cross refer to the work of Sustainability East for embedding sustainable development considerations in relation to business development[xi];
- Ensure that developers and others bringing forward green infrastructure not only take account of the key messages in this GI Plan, but that they also identify sustainable, resourced mechanisms and models for long term governance to deliver design intentions and desired environmental outcomes;
- **Make appropriate links with future delivery and funding partners** identified in the projects in **section 3** of this GI Plan, in relation to **co ordination of funding bids**, and also in **making links with adjacent authorities** for projects on authority boundaries/in considering adjacent District GI projects which could impact on/benefit Hertsmere Borough;
- **'Grass roots' delivery:** Continue to develop links with Parish councils and relevant local, community and volunteer groups such as the Shenley Park Trust, British Trust for Conservation Volunteers (BTCV), allotment societies/associations, local schools (tree planting activities) and Friends Groups, as appropriate. Also potential for formation of **local green groups** working with a Delivery Officer/panel (e.g. linked to allotment societies). As part of this grass roots approach, ensure

that reasons for changes to greenspace management (e.g. to enhance urban biodiversity) are translated to the community (perception and awareness raising);

- Liaise with the relevant Local Strategic Partners, **noting and using where appropriate existing processes** that may be of relevance to GI delivery, for reasons of efficiency and avoiding duplication of work;
- Develop appropriate consultancy briefs for masterplanning and detailed design services in relation to key GI projects, making appropriate reference to key messages in the GI network and projects at **section 3**;
- Create an audit trail of appropriate monitoring mechanisms in relation to green infrastructure delivery, making use of existing tools such as site inspections to adoption, and visitor surveys. This will help monitor performance of the green infrastructure proposals in relation to the environmental functions, to inform and refine future iterations of the spatial plan for Hertsmere Borough;
- With the Council, convene regular updates, meetings and opportunities for progress reporting during the life of the GI Plan and wider spatial plan, to disseminate results, good practice and lessons learned (e.g. with reference to good practice case studies, such as Shenley Park Trust).

POTENTIAL FUTURE WORK

GI checklist for development management decisions

4.11 In addition to the general pointers shown on **Figure 4.1**, this could cover the following subject areas:

- Sense of place: Including historic character and landscape management;
- Nature conservation enhancement and management;
- Sustainable resource management and climate change adaptation;
- Healthy and cohesive communities including access for all;
- Choices for responsible travel;
- Sustainable design and construction techniques and specifications.

GI Design and Delivery Guide

4.12 This could take the form of accessible, concise, written and illustrated design principles aimed at developers and to inform Development Management Officers in evaluating planning applications in terms of green infrastructure. The aim with such a document should be to ensure that the most positive consideration is given to GI planning, design and management, from the outset of the development process.

GI Supplementary Planning Document (SPD)

4.13 It may be desirable for the Borough (possibly with adjacent authorities) to consider production of a green infrastructure SPD, although this must not detract from the wider need to embed green infrastructure more generally within the LDF, the Core Strategy and relevant policies. It may be more useful to include aspects of the Green Infrastructure Plan and potential future work within other SPD (e.g. Planning Obligations/Developer Contributions, or a Design SPD).

More detailed and local level GI planning work

4.14 This is a strategic level GI Plan and more detailed and 'site specific' GI planning work, drawing on this plan, is likely to be required within the Borough, particularly as growth locations and areas of change become more fixed. This may also relate to parish level consideration of GI in time, e.g. linked to Parish Plans.

Outward facing projects to 'launch' the GI concept

Interactive/web/app based mapping project – GI for people – 'Green Hertfordshire'

4.15 This is described in the 'Green Hertfordshire' project (Project 6) at **section 3** of this GI Plan (note that this is a proposed cross district project, in partnership with the County Council).

[i] http://www.hertsdirect.org/infobase/docs/pdfstore/giframework.pdf
[ii] http://naturalengland.etraderstores.com/NaturalEnglandShop/NE176
[iii] NE176, **Op Cit**
[iv] Hertsmere Borough Council, 2010 **Watling Chase Greenways Strategy** (Draft)
[v] Natural England/The Landscape Partnership **Analysis of Accessible Natural Greenspace Provision in Hertfordshire**
[vi] Source: V4C Project. Study produced for Hertfordshire County Council
[vii] http://www.hertsdirect.org/libsleisure/heritage1/landscape/hlca/
[viii] Groundwork Hertfordshire 2004 **Trees Against Pollution: A Strategy for Tree Planting and Air Quality**
[ix] Planning Advisory Service 2008 **Local Development Frameworks: Evidence Base**
[x] The Planning Inspectorate 2008 **Local Development Frameworks: Examining Development Plan Documents – Soundness Guidance**
[xi] http://www.sustainabilityeast.org.uk/index.php?option=com_content&view=article&id=17&Itemid=22

www.landuse.co.uk