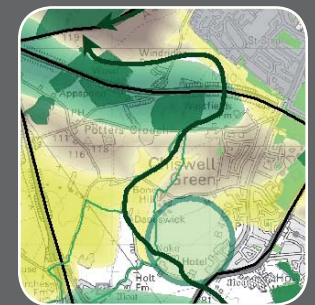


ST ALBANS DISTRICT GREEN INFRASTRUCTURE PLAN

Prepared for St Albans District Council
by
Land Use Consultants
March 2011



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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
	4 th March 2011	4 th March 2011

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Acknowledgements:

The production of this Green Infrastructure Plan represents an important milestone in work developed over several years by a wider partnership of Hertfordshire stakeholders, guided throughout by Rob Rees, Hertfordshire County Council. This Green Infrastructure Plan was developed by Land Use Consultants with a steering group comprising of Richard Hardy, John Chapman, Gill Keeley and Liz Johnson (St Albans District Council), supported by Simon Odell (Hertfordshire GI Plans Contract Manager, based at Hertfordshire County Council/ Hertfordshire Biological Records Centre). In addition consultation was undertaken with a range of stakeholders as the plan developed, and their contribution is gratefully acknowledged. The views in this GI Plan are those of Land Use Consultants.

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

- I.1 Green infrastructure (GI) is increasingly recognised as a cornerstone of sustainable development and communities, a ‘must have’, due to the many social and environmental benefits it offers.
- I.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.
- I.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 Authority 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 St Albans District Green Infrastructure Plan has been developed in parallel with the strategic county wide plan and with those for Watford, Dacorum, Three Rivers, Hertsmere, Welwyn Hatfield 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.
- I.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.
- I.5 The Green Infrastructure Plan for St Albans District:
- Provides an overview of existing green infrastructure assets within the District;
 - 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?

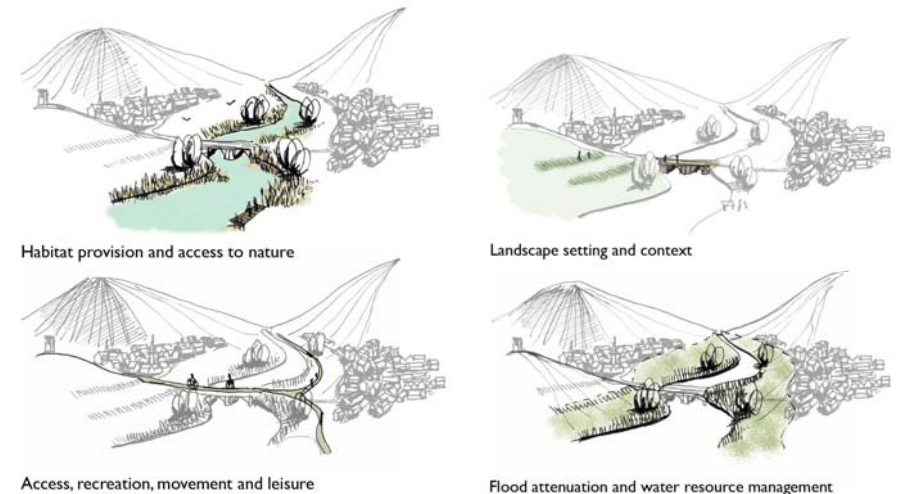
- I.6 Green infrastructure is described in **Planning Policy Statement 12: Local Spatial Planning**, as:
a network of multi-functional greenspace...both new and existing...both rural and urban...which supports the natural and ecological processes...and is integral to the health and quality of life of sustainable communities...”
- I.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 St Albans District

- 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.

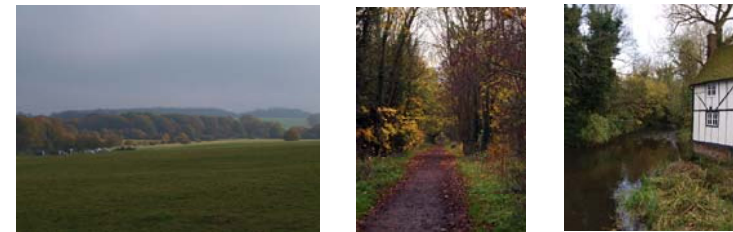


The green infrastructure approach: One site performing multiple functions (source: Natural England, Green Infrastructure Guidance)ⁱⁱⁱ

- 1.9 St Albans District has a rich green infrastructure resource centred on the principal river valleys of the Ver, Colne and Lee, in addition to a varied mosaic of landscape and habitat types, such as heathland, ancient and plantation woodland and farmland. The District has a notable historic legacy relevant to green infrastructure, evident in pre Roman settlements at Prae Wood, the network of Roman road routes which cross the area, the remains of the Roman City at Verulamium and the Cathedral City of St Albans.
- 1.10 There is also a wide array of existing green infrastructure assets and initiatives in the District, such as promoted greenway routes on disused railway lines, the Butterfly

World site at Chiswell Green, the implementation of a new country park at Ellenbrook Fields, the community forestry aspirations of the Watling Chase Community Forest and the ongoing implementation of forestry works at Heartwood Forest (by the Woodland Trust).

- I.11 Against this 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 District (presence of major transport corridors and associated barriers).
- I.12 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.
- I.13 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.

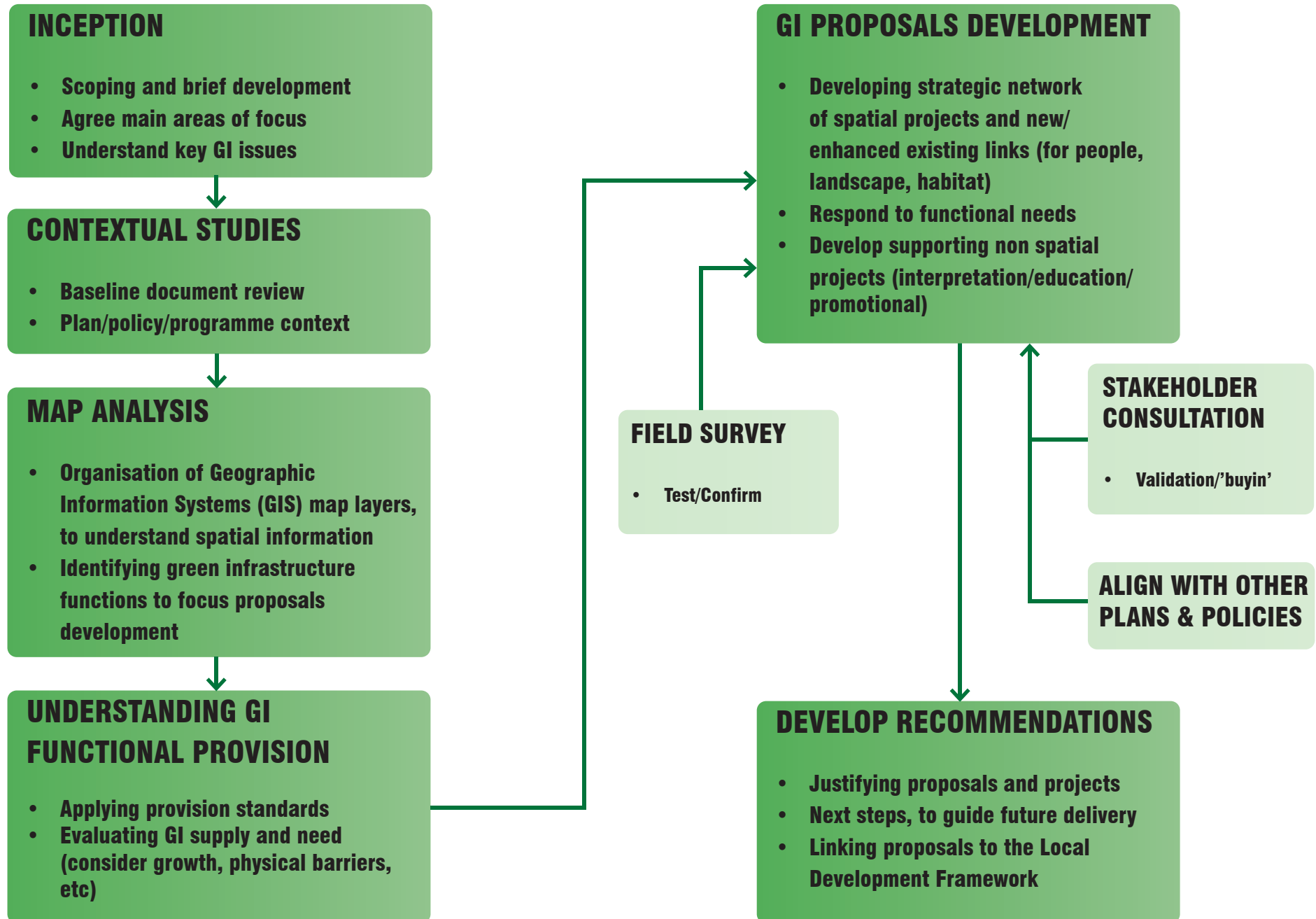


The varied green infrastructure of St Albans

The green infrastructure planning process – a summary

- I.14 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



STRUCTURE OF THIS GREEN INFRASTRUCTURE PLAN

- I.15 The remainder of this Green Infrastructure Plan is set out as follows:
- Section 2: Green infrastructure demand and opportunity in St Albans District by function
 - Section 3: Proposed green infrastructure network and projects
 - Section 4: Linking the green infrastructure proposals to local spatial planning
- I.16 Appendices are presented in a separate volume. **Appendix 1** sets out the record of stakeholder consultation undertaken as part of the study. **Appendix 2** shows the summary findings from a thematic document review undertaken to set the GI Plan in context. **Appendix 3** sets out the summary findings from the functional analysis.



Aspects of the green infrastructure of St Albans Top – (l) The Nicky Line, (r) Lee Valley; Bottom – (l) The Vintry Gardens, St Albans Cathedral, (r) Nomansland Common

2 Green infrastructure demand and opportunity in St Albans District by function

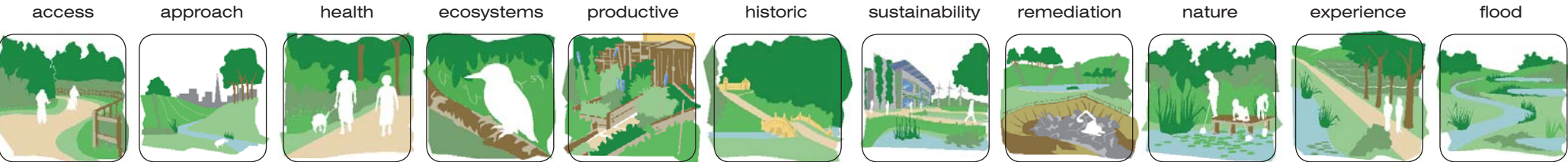
- 2.1 To evaluate existing green infrastructure opportunities, a rapid thematic document review was undertaken to understand the environmental and social context. The themes for the document review are different from but are linked to and have informed the separate analysis of GI functional provision (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 (including local food production – orchards and allotments) and larger scale agriculture – 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 2**, 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 St Albans District. 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

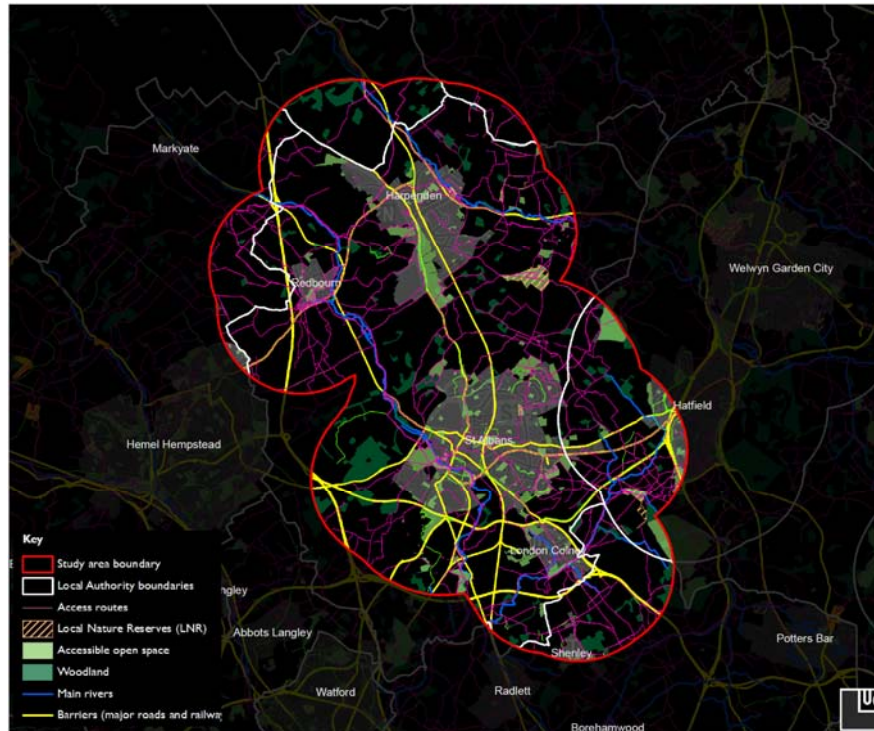


- 2.7 The analysis methodology for each function (including provision standards applied) is set out at **Appendix 3**, together with a summary of the main issues with regard to deficits of provision and potential need and opportunity. Supporting mapping showing asset distribution and which has been used to generate visual and statistical analysis, and to understand nature of provision and shortfalls, is shown in relation to each function, below.

THE FUNCTIONS – SUMMARY OF NEED, SUPPLY AND OPPORTUNITY IN ST ALBANS DISTRICT

- 2.8 The findings from each functional analysis are summarised below. The Geographic Information Systems (GIS) datasets used in the mapping for each function are presented in the maps in the remainder of this section.

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 St Albans District.

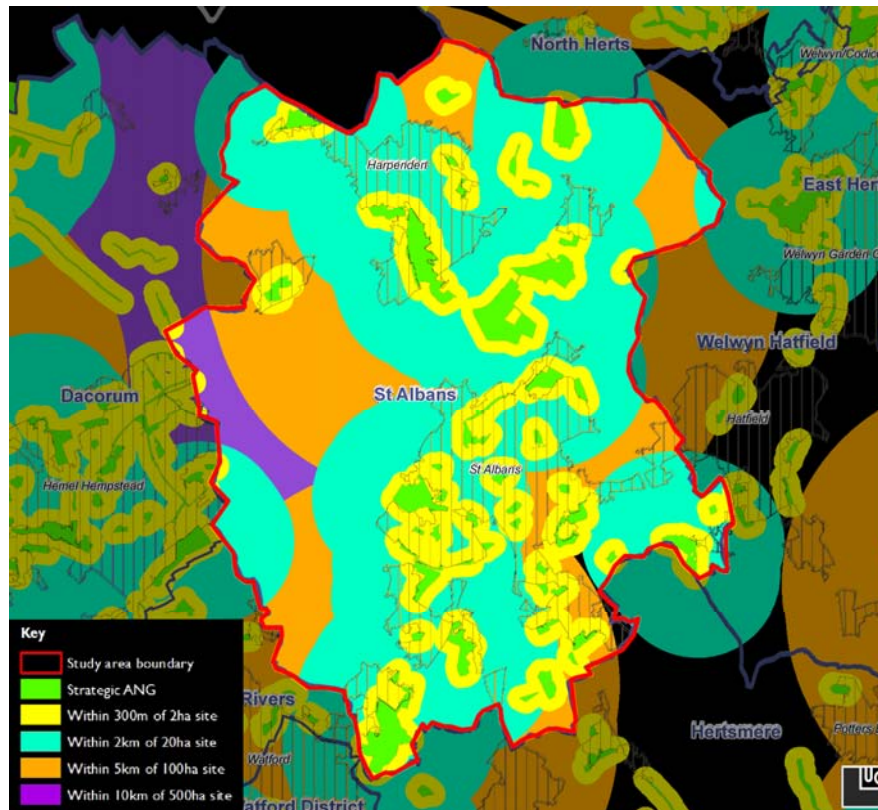
2.10 Applying the Natural England Accessible Natural Greenspace (ANGSt) standards (shown in the diagram at page 14) deficiency in 2ha and 500ha ANG sites has been identified at Harpenden, the former of which should be prioritised for action (mainly through enhanced links to the wider countryside via the Nicky Line and Heartwood – see the proposed GI Network at **Figure 3.1**). Within Harpenden, there are few sustainable access routes to the north of the town, and this is an issue which should be addressed (see **projects 2 and 4** in section 3). Similar ANG deficiency issues apply at Wheathampstead, and the focus has again been in relation to enhancing links as shown on **Figure 3.1**.

2.11 Given the density of the settlement and urban grain, St Albans City also performs poorly in terms of local level (2Ha) ANG provision, and this is the focus of a project addressing enhanced links out from the City (St Albans Radial Greenway – project 2 in **section 3**). There are relatively few off-road links between St Albans and the surrounding countryside to the north west and north east, and the A10 and A414 are barriers to access to the countryside. **Figure 3.1** propose a series of strategic links, including to the Nicky Line to secure cross District connections. Key issues are to make improved links between the City and the wider countryside, particularly if future growth is considered to the city fringe (see **projects 2 and 4** in section 3).

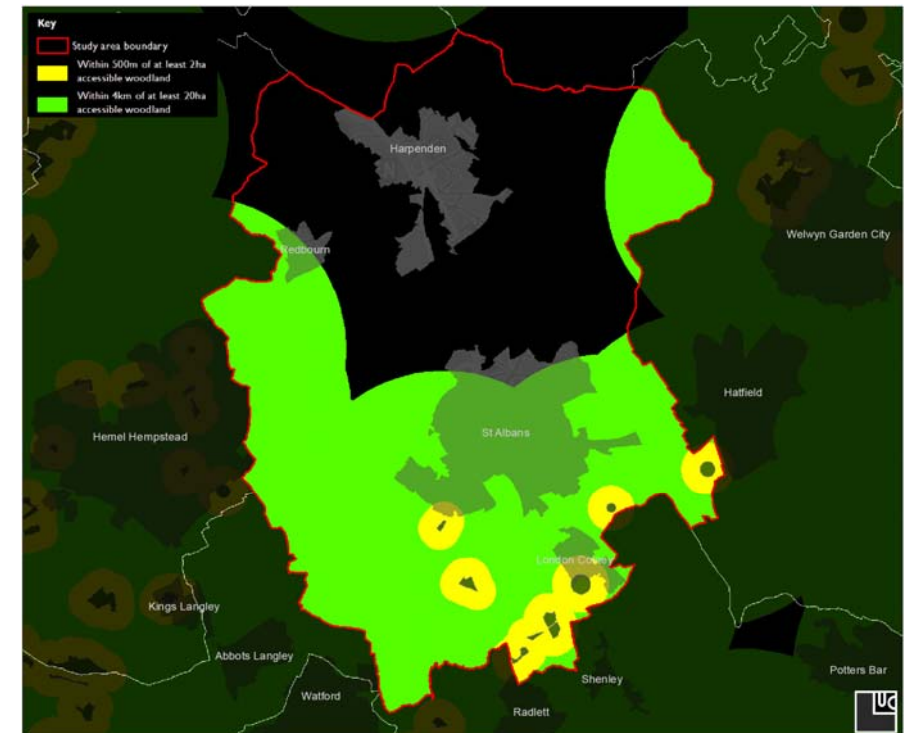
2.12 There is a deficiency in 20ha and 500ha ANG sites identified at Redbourn. There is a range of Rights of Ways

connecting the village to the surrounding countryside. Severance by the M1 is an issue although most footpaths connect to the primary strategic link, the Nicky Line, which passes under the M1.

- 2.13 With reference to the Woodland Trust's Accessible Woodland Standard mapping shown overleaf, the northern half of the District is deficient. This has formed part of the focus for a Woodland Enhancement Zone shown on **Figure 3.1**.
- 2.14 Opportunities for access improvements could be met through proposed projects for the St Albans Radial Greenway and St Albans approaches, as well as improved links to strategic, cross district corridors such as the Nicky Line. These broad principles are shown on **Figure 3.1** and **projects 2** and **4** at section 3.

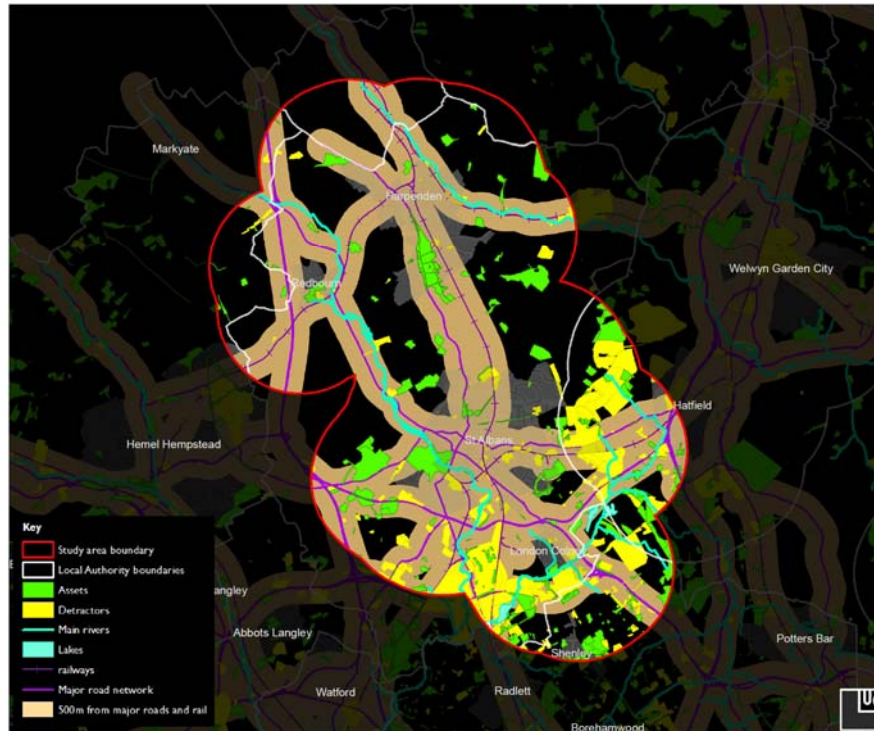


Accessible Natural Greenspace (ANG) provision, applying the Natural England ANGSt standards (source: Natural England^{iv})



Accessible Woodland Provision (Woodland Trust standard)

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 St Albans main settlement approaches, this functional analysis has referred to spatial

mapping of assets and detractors produced for Hertfordshire^v, as well as consideration of landscape condition and quality in the Hertfordshire Landscape Character Assessment^{vi}.

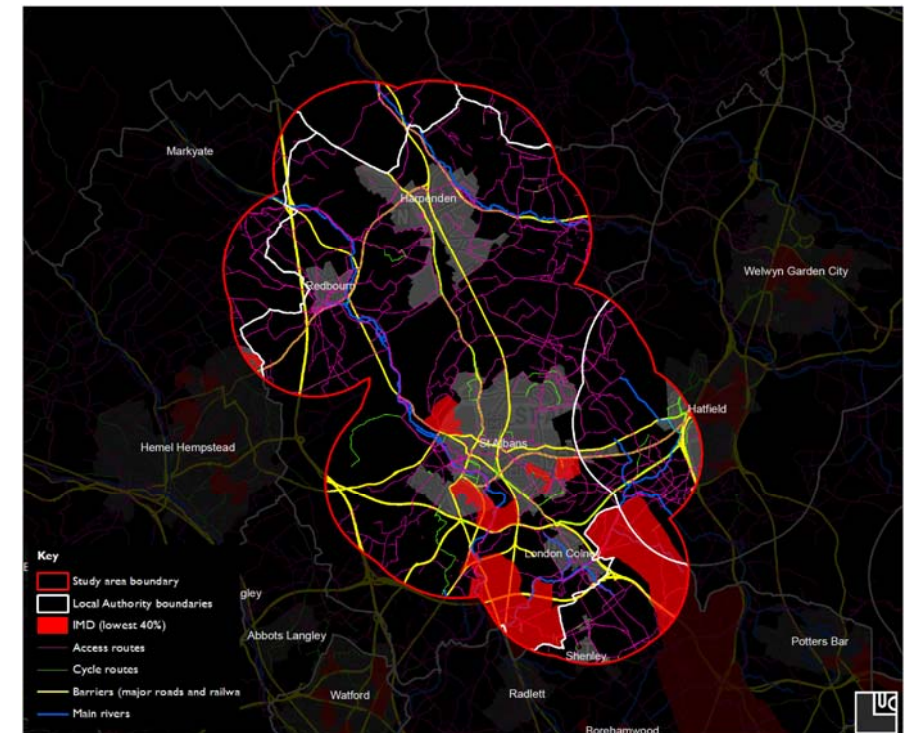
- 2.15 Within the main settlements, the experience of most of the GI assets is impaired to a degree by intrusion of transport corridors. Existing woodlands in the transport corridor buffers should be used as a template for re linking woodland sites e.g. along the B653 south of Luton Hoo and in the Lee Valley on the north east edge of Harpenden, to enhance settlement approach. Harpenden Common and the A1081 approach present an opportunity to create linkages to other heathland sites such as Nomansland Common, as well as to the existing proposals for Heartwood Forest, also enhancing the southern approach to Wheathampstead (see **project 1** in the GI Plan).
- 2.16 The analysis has indicated a need to re link woodlands which have become fragmented due to the M25 and recent/ongoing road widening works (areas of opportunity shown on **Figure 3.1**. Such woodland linkage opportunities provide the potential to assist in delivering Watling Chase Community Forest Planting targets^{vii}. Such opportunities would also assist in enhancing the character of the Colne Valley, helping maintain the sense of separation between St Albans and outlying settlements.
- 2.17 Within St Albans City's approaches, main issues are the need to enhance the settlement approach on the A4147 (notable GI and heritage assets in this location, but a need

for buffering woodland sites at Prae Wood and Gorhambury). Also the presence of detracting features and landscape erosion around Smallford and south of Oaklands College (A1057 Hatfield Road) - a focus for a landscape enhancement and restoration zone at **Figure 3.1**, tying into existing proposals such as for Ellenbrook Fields Country Park.

- 2.18 Other key opportunity areas in St Albans are the southern approaches adjacent to the railway line and the Ver/Colne Valley (Frogmore/Radlett Aerodrome). The presence of minerals sites in this area and existing wetland at Frogmore create opportunities for enhancement and linkage to improve the settlement gateway via Park Street, and to deliver a range of other functions. This is one of the foci for the St Albans Approaches Project (**project 4**) described at section 3.
- 2.19 Other issues relate to severance (M1, A10) and **Figure 3.1** sets out a series of strategic links to provide alternative means of access, as well as a St Albans radial greenway project (**project 2** at section 3), which is complementary to the City Vision^{viii}.
- 2.20 Enhanced woodland planting to the M1 corridor would reduce intrusion and re connect landscape and GI features, as well as improving the experience of key assets such as Redbourn Common and also of the Nicky Line. Enhancement of settlement approaches through new structural landscape could also link to strategic objectives

for wider landscape e.g. wet woodland planting to Watling Street to tie into and re link the Ver Valley landscape.

Health



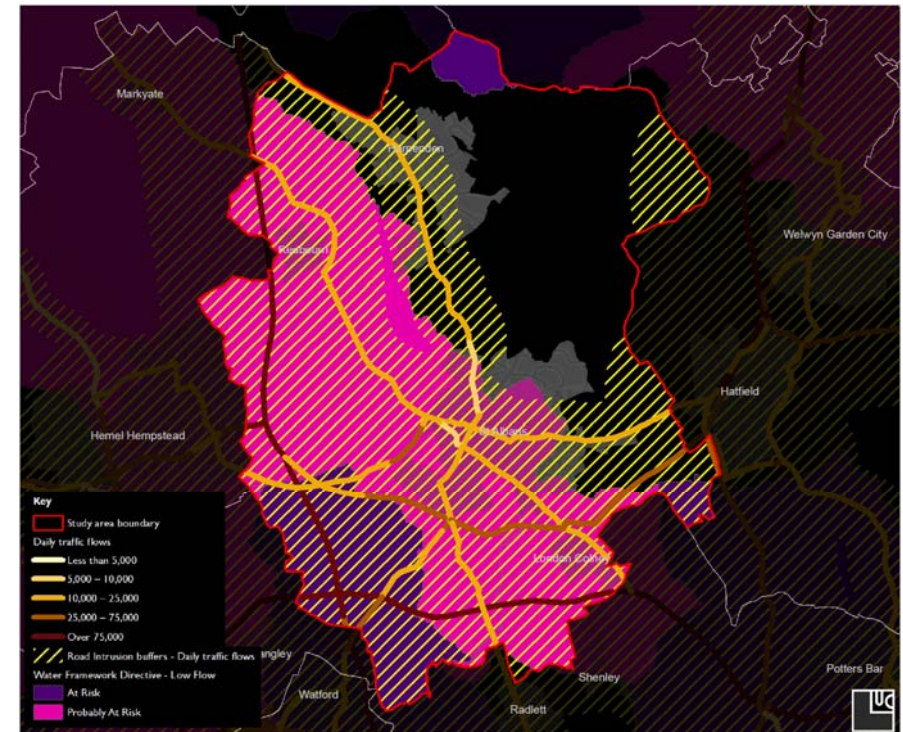
- 2.21 In this analysis, access links and proximity to areas of deprivation were mapped. Areas of intrusion (referring to the CPRE Tranquillity and Intrusion Mapping) were also mapped to understand where there were linked issues of

‘unhealthy environments’, or need to target tree planting as described in relation to the ‘prestige’ function above.

2.22 With reference to the Indices of Multiple Deprivation (IMD) shown on the previous page, moderate areas of health deprivation are evident in Batchwood, Colney Heath, Sopwell and Cunningham wards, with no significant health deprivation issues in Wheathampstead, Harpenden or Redbourn. Open space deficiencies have also been identified in the Colney Heath ward.

2.23 In many of the larger urban areas such as St Albans and locations along major transport corridors, air quality is usually affected. As such, public open spaces, paths and rights of way and cycle routes should be buffered as far as possible through tree and woodland planting. Alternative off road links and areas of woodland creation opportunity are shown on **Figure 3.1**. This also includes areas of strategic woodland planting to high intensity road corridors such as the M25, M1 and A10 (to extend earlier strategic level considerations and proposals set out in the Trees Against Pollution (TAP) Report^{ix}).

Sound ecosystems



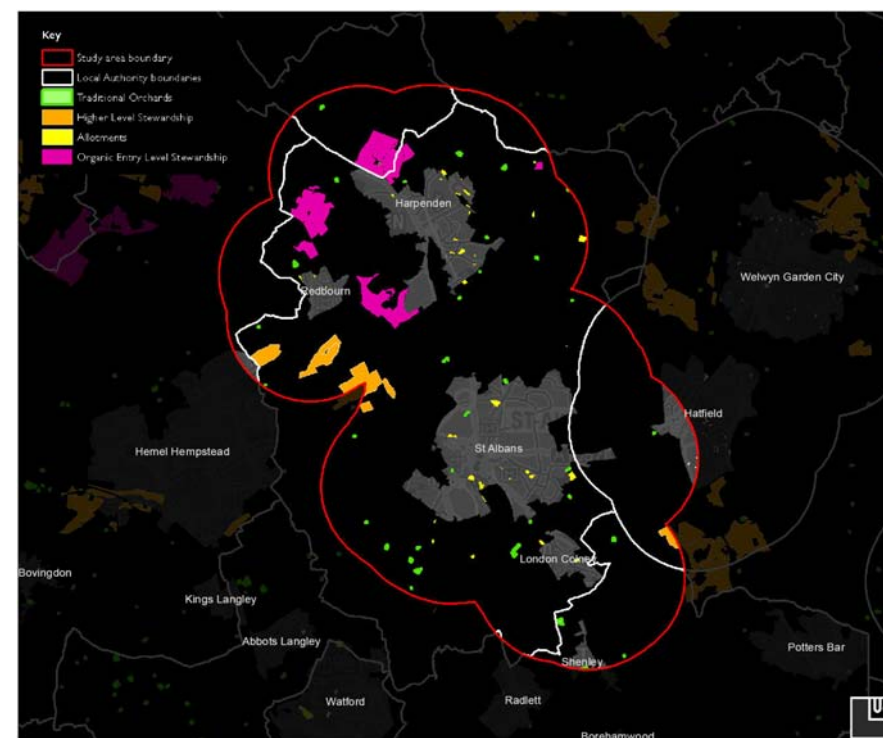
2.24 Sound ecosystems are a key part of a green infrastructure network, and proposals should seek to contribute to positive and proactive management of these for community

benefit. The focus for this analysis has been the key services of water and air quality.

- 2.25 Interpreting the Water Framework Directive (WFD) data produced by the Environment Agency for river catchments, the riverine environment of the Ver and the Colne are identified as being of poor ecological status and vulnerable to abstraction and low flow pressures. Whilst this does not apply to the Lee, all three of the river courses and riverine environments are affected by clusters of invasive species along their length. Only the Ellen Brook (Colne tributary) is unaffected by low flows and invasive species.
- 2.26 The analysis indicates a need for positive management of the Lee, the Ver and the upper stretches of the Colne and its various brooks within the District. Also reinstatement of native wetland and riparian river corridors, and making space for water (see **project 3** at section 3). This proposed wetland project is also complementary to other linked and positive cross district initiatives such as the Management Plan for the Colne River Park^x).
- 2.27 Whilst large parts of the principal transport corridors are partly wooded (A10 & M25), there is a need for additional woodland and hedgerow belts to reconnect existing woodland blocks and improve air quality (see **project 1** in the GI Plan). Primary locations are the M25 (to deliver linked benefits for woodland buffering at Bricket Wood Common) and the A10, focussing on links between existing

large scale woodlands such as Prae Wood, Birch Wood and Park Wood.

Productive green environments

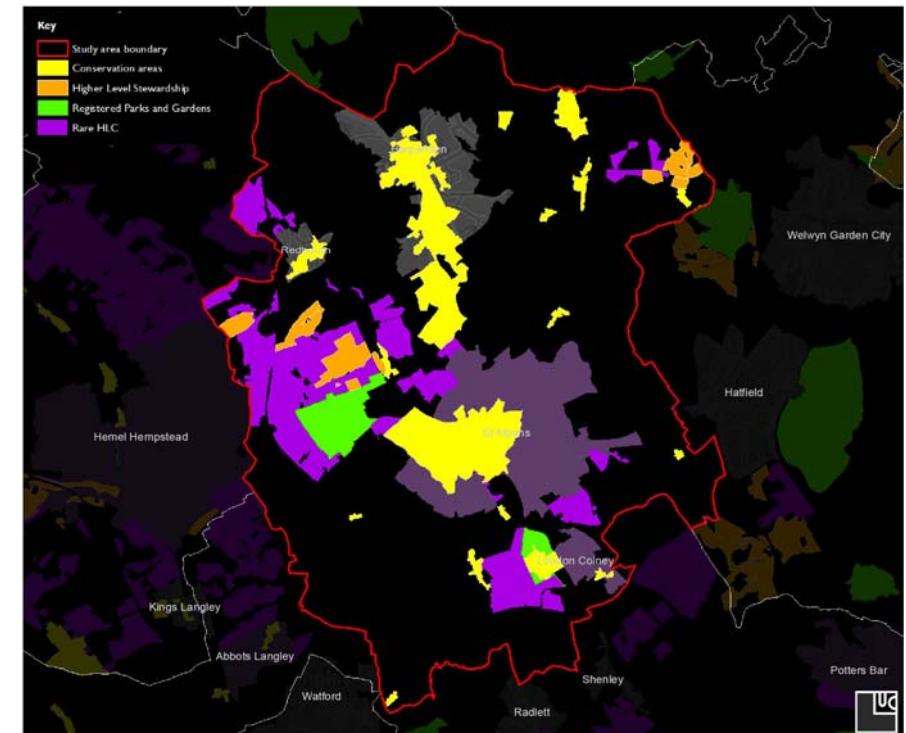


- 2.28 Consideration of the wider farmland landscape in St Albans District reveals that only a relatively small proportion of

the landscape is managed through Higher Level Stewardship. These areas are notably at the eastern fringe of the District near the Ayots north of the Lee Valley, and land east of Hemel Hempstead and south of Redbourn. In addition there is a small area forming part of the Mymmshall and Walsingham Woods complex, most of which lies within the adjacent Welwyn Hatfield Borough. The map on the previous page also shows a concentration of land in Organic Stewardship north and west of Harpenden and north of Redbourn. HLS and organic stewardship uptake are therefore key opportunities to enhance productivity and functionality of farmland landscapes in St Albans District. It would also help deliver the objectives of the Farmland Conservation and Enhancement Zone and Landscape Restoration Zone identified on **Figure 3.1**.

- 2.29 Throughout the District, rural areas with low housing density have poor access to allotments. Allotments are thinly scattered across the City and District with no particular areas of concentration, while the majority of people in demand areas (waiting list) are in the City and Central areas. There is an opportunity to improve the quality and value of many of these allotment sites throughout the District, but also to provide enhanced urban greening and locally productive landscapes as part of GI proposals including river valley enhancement (**project 3**, section 3). Also through **project 4** at section 3 (identification of opportunity for community gardens and orchards to contribute to this objective.

Conserving historic landscape character



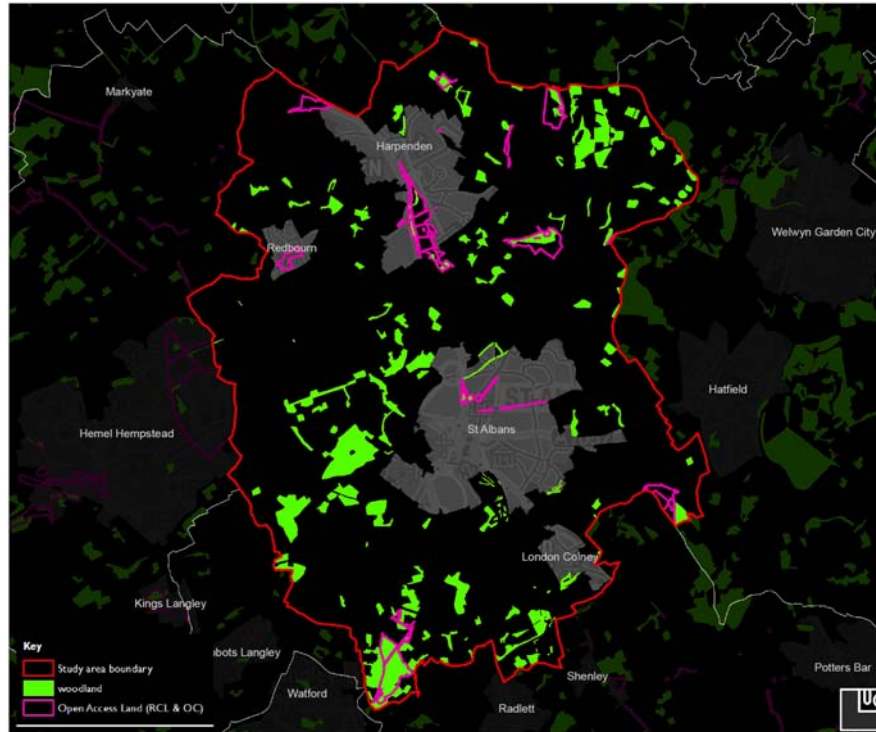
- 2.30 The historic environment and historic legacy provides a rich resource for conservation and interpretation as part of a multi functional green infrastructure network. It also clearly links to other functions such as prestige, experience and the potential for recreation. This analysis considered

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.

- 2.31 Rare historic landscape types in St Albans District are Co Axial Enclosures, which significant occupy around 22% of the District area. Also a very small distribution of Watercress Beds in the river valleys (less than 0.1% of the District). The Co Axial Enclosures form part of the Farmland Conservation and Enhancement Zone on **Figure 3.1**.
- 2.32 With the exception of the two Registered Parks and Gardens and the Conservation Areas little of the heritage resource is protected. Napsbury has additional protection through part designation as a Conservation Area. Of the relatively large ancient woodland resource, most of this is not formally protected. A small area is covered by Conservation Areas (Childwickbury) or by agri environment schemes (Walsingham Wood/Mymmshall Wood complex) or enjoys other protection e.g. through SSSI designation (Bricket Wood, Redwell Wood).
- 2.33 Key opportunities are to secure protection and enhancement for this resource through HLS and Woodland Grant Schemes, and also through additional broadleaf native woodland planting to reconnect sites. If this was concentrated around registered parklands, in particular Gorhambury, this could also help enhance their setting and context (see **Figure 3.1**). Another

opportunity may be more sympathetic/appropriate management of replanted ancient woodland sites e.g. Prae Wood, given its historic significance (pre Roman settlement, setting to Gorhambury estate). Re linking of ancient woodland sites through HLS could also create physical connections to the Heartwood Project, as well as contributing to woodland planting targets set out in Watling Chase Community Forest (WCCF) Plan, which covers a large part of the District (see **Figure 3.1** and **project 4** at section 3).

Sustainability and responding to climate change

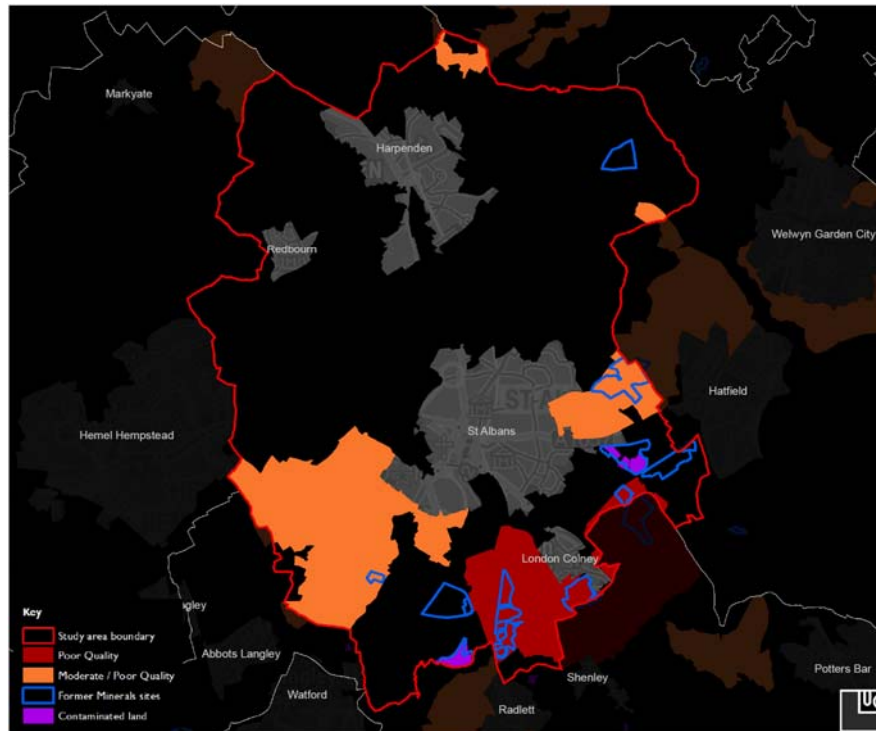


- 2.34 Urban greening, shading and cooling is a key part of community focussed green infrastructure. This analysis has therefore considered only tree cover. There are however clear links with other functions such as flood attenuation and water management, as part of a climate change

adapted response to spatial planning. This is particularly relevant to the higher density settlements within the District, such as St Albans and Harpenden.

- 2.35 Due to the traditional morphology of the main settlements in the District, tree cover within the public realm is relatively limited. It covers occasional areas of street tree planting except in lower density leafy suburbs (e.g. in parts of St Albans and Harpenden), or where mature woodland have become absorbed within later settlement growth (parts of Marshalswick, within St Albans urban area, for example).
- 2.36 Issues and opportunities relate mainly to conserving what exists and managing this appropriately/planning for succession planting and ensuring new tree planting in relation to redevelopment sites – use of the TCPA standards for enhanced urban tree planting of 80 street trees (of appropriately robust grade) per linear km.
- 2.37 Any future growth and redevelopment should plan for street tree planting as an integral part of the masterplan to ensure climate change adaptation. Foci for potential large scale tree and woodland planting to respond to this function and other functional needs, are shown on **Figure 3.1**.

Land remediation



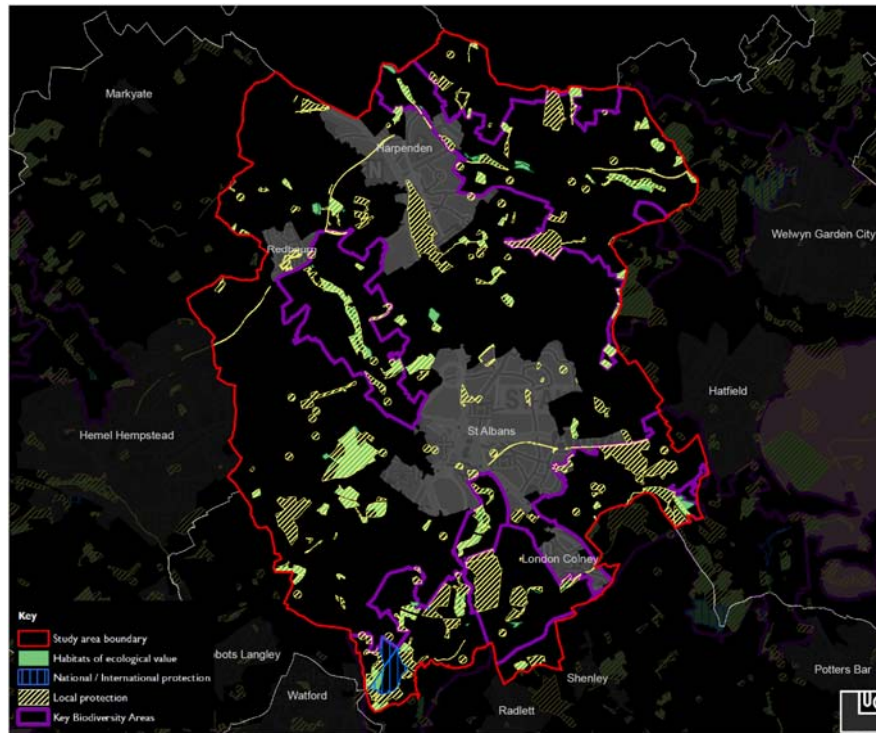
- 2.39 Green infrastructure planning and design can play a key part in delivering enhancement and restoration of landscape character and quality, and in enhancing areas of degraded landscape (e.g. mineral and re restoration sites).

- 2.40 As shown on the plan on the left, there are a number of former mineral sites which could be considered for re restoration^{xi} and which provide opportunities for GI planning. Key opportunities relate to the sites south of St Albans at Frogmore/Moor Mill and west of London Colney, at Smallford and east of Wheathampsted. These have formed foci for enhancement zones shown on **Figure 3.1** and for projects to deliver wider connectivity for green infrastructure assets to settlement gateways. For example the sites at Frogmore/Moor Mill/London Colney (**project 4** at section 3).

- 2.41 Many of the re restoration sites are clustered in areas of lower landscape quality as identified in the Landscape Character Assessment (e.g. around Harperbury, London Colney and Frogmore). As such they form part of the focus for landscape conservation, enhancement and restoration zones as shown on **Figure 3.1**.

- 2.42 Due to the number of mineral sites and their proximity to each other, proposals should aim to connect sites by green links to increase the recreational facilities in the area and to restore the character of the landscape. This could be brought forward as part of the proposed St Albans Radial Greenway (see **project 2**).

Nature conservation



- 2.42 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), in addition to statutorily and

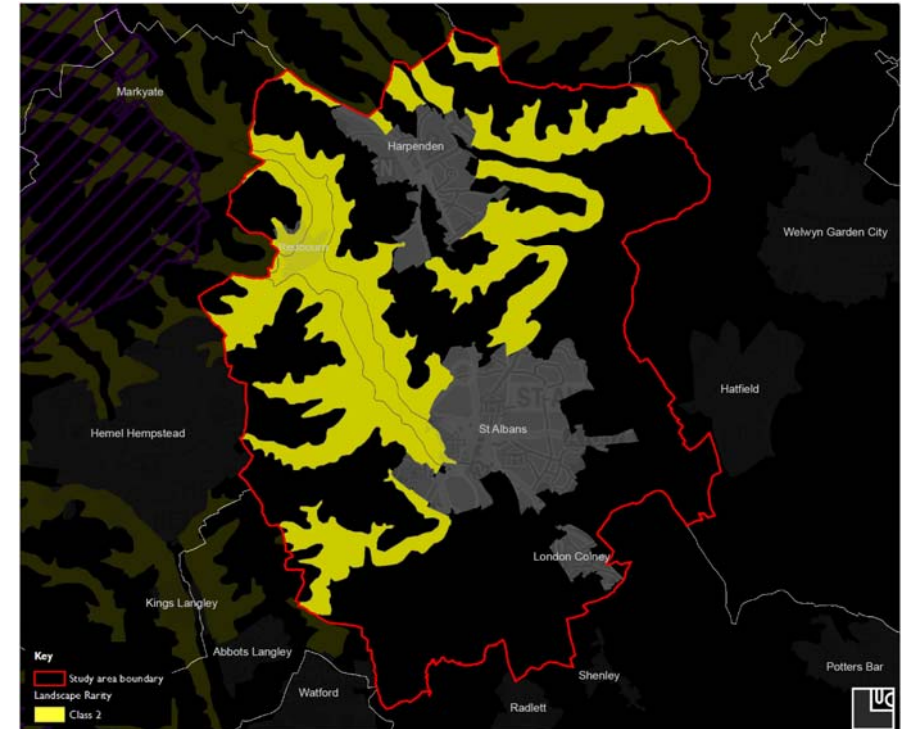
locally designated nature conservation sites and areas of local protection (Local Wildlife Sites).

- 2.43 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 M1 close to the west district boundary, the M25 to the south and the A10.
- 2.44 The analysis has identified opportunities for habitat improvements, restoration and enhancements in St Albans District as follows: Promotion of community forestry (expressing the aspirations of the WCCF Plan), such as at Watling Chase, Oaklands Smallford Campus, Ellenbrook Country Park and Moor Mill as well as the land to the west of Hatfield and east of Redbourn. Also expansion of existing wetland features to create a varied wetland mosaic, including wet grassland, carr woodland and open water e.g. the Colne Valley is identified as a suitable area in the Wetland BAP (see **project 3** at section 3).
- 2.45 Heathland and grasslands are other key habitats within the District. The Heathland BAP identifies core areas for restoration as the Harpenden – Wheathamsptead complex and the Upper Colne Valley (Bricket Wood Common). Heathland and grassland linkage has formed part of the focus of **project 1** in the GI Plan. This project also seeks to create links to the proposals for Heartwood Forest and to the proposed St Albans radial greenway (**project 2** at section 3) – a need to ensure that Heartwood and its landscape and habitat context fit together and to facilitate

car free access to such sites to avoid further pressures on the habitat resource.

- 2.46 The analysis has also identified a need to create connectivity between Key Biodiversity Areas fringing the major settlements and locally designated wildlife sites, as part of a landscape scale approach connecting to initiatives such as Heartwood Forest. The zones and principles underpinning this approach are shown on **Figure 3.1**.

Experience



- 2.47 In addition to conservation and enhancement of our finest, designated landscapes, taking the whole landscape approach of the European Landscape Convention^{xii}, consideration has been given to wider landscape character.
- 2.48 Mapping the distribution of regionally rare landscape types in the District above, we can see that the main regionally rare landscape types in St Albans District are the Settled

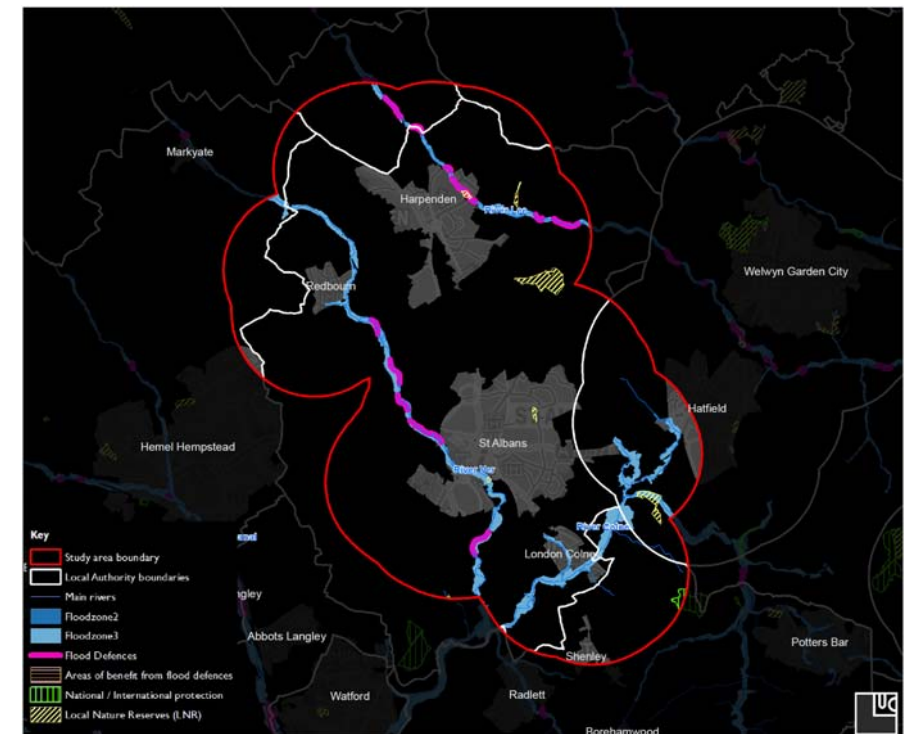
Chalk Valleys and Wooded Chalk Valleys landscape types. The Settled Chalk Valleys represent approximately 3.79% of the District area (note that this also represents 2.92 % of the total regional distribution of the landscape type). More widespread in distribution are the Wooded Chalk Valleys, which cover approximately 22.71% of the District. Significantly the Wooded Chalk Valleys within St Albans District represents some 18.42% of the total regional distribution of this landscape type. Both landscape types also occur within the Chiltern Area of Outstanding Natural Beauty, approximately 500 metres west of the District (covering the headwaters of the Ver Valley), and as such share some common characteristics with parts of the designated landscape.

2.49 The Settled Chalk Valleys and Wooded Chalk Valleys represent key parts of the green infrastructure network in St Albans District (due to accessibility, landscape and visual character, biodiversity value and the fact that in the case of St Albans, the Settled Chalk Valley forms part of the Ver Valley floodplain). These landscape types should be conserved as integral parts of the GI network for these reasons and for the contribution they make to settlement setting (e.g. the Settled Chalk Valleys also form the spatial context for a number of important views to St Albans Cathedral, as identified in the Local Plan^{xiii}).

2.50 The valleys form the focus for a project in section 3 of this GI Plan (see **project 3**). In addition, a number of 'action zones' shown on **Figure 3.1** are complementary to the objectives of conserving these landscape types - Chalk

Valley Conservation and Wetland Enhancement Zones, for example.

Flood attenuation and water management



2.51 Planning for and making space for water forms a key part not only of considering future landscapes in the face of climate change, but also green infrastructure, in terms of sound flood risk management.

- 2.52 The analysis has identified the following issues. A review by the EA of areas at risk of surface water flooding includes areas to the north of St Albans, which will require more effective flood management. The flood defence structure to the north of St Albans reduces pressures from the River Ver; however Sandridge and Marshalswick are at risk of flooding from groundwater and any potential future development in this area will need careful consideration and flood mitigation measures to ensure flood risk is reduced.
- 2.53 Of the other main settlements, the floodplains at Redbourn (River Ver) and London Colney (River Colne) are largely within areas of open space, although there are instances of floodplain development in both settlements (e.g. the floodplain flows through the centre of London Colney).
- 2.54 Future development in close proximity to the rivers within St Albans could exacerbate existing pressures in this area so identifying areas for wetland expansion may help alleviate this pressure. Any future settlement growth is likely to increase pressures during periods of high flows and could inevitably lead to flooding of developed land.
- 2.55 The need to 'make space for water' outside and upstream of main settlement pinch points has formed part of the focus of a River Valleys project (**project 3**) at section 3, and also the Wetland Habitat Zone shown on **Figure 3.1**.

3 Proposed green infrastructure network and projects

GREEN INFRASTRUCTURE VISION

3.1 The green infrastructure vision for St Albans District is:

To conserve and enhance

- The varied landscapes of the District – farmland, ancient woodland, wooded valley crests, heathlands and commons. Also the intricate network of river valleys, and associated visual relationships with important landmarks such as St Albans Cathedral and the historic City;
- The functionality of the riverine environments of Ver, Colne and Lee, in terms of landscape character, ecology and flows;
- The strong sense of place created by aspects of historic legacy, such as Roman and medieval settlement.

To improve and create

- Enhanced landscape and habitat connectivity between river valleys, heathlands and woodlands;
- Accessibility and connections to and along the river valleys;
- Links for a variety of users – walkers, cyclists and riders;

- ‘Space for water’ - naturalising river courses to reduce the potential for flooding in the District and aid creation of additional recreational water spaces;
- Enhanced links to greenspace, particularly in the larger and higher density settlements such as St Albans and outlying suburbs, and Harpenden, as well as opportunities for urban greening for community benefit and value, such as orchards;

To recognise and value

- The District’s rich heritage and diverse cultural pattern, in particular assets such as the Roman settlement legacy;
- The significance of Community Forestry, the aspirations of Watling Chase Community Forest, and the importance of strategic initiatives such as Heartwood Forest;
- GI for people – the importance of provision for low key and informal recreation to enhance the value of existing green infrastructure, and creating/promoting an improved series of links between settlements, commons and the wider countryside;
- The importance of the green infrastructure network for health and quality of life, seeking to promote awareness and appreciation of the network;
- The need for an appropriate balance between community, access, recreation and biodiversity interests;

- The need for joined up working with key partners, landowners, the parish councils and local ‘green groups’ such as the Transition Towns movement in Hemel Hempstead, to deliver sustainable proposals;
- The educational potential of GI - The need to raise awareness of and promote linked agendas such as local food.

3.2 The vision is necessarily aspirational and long term, since it will need to consider GI significantly beyond the Local Development Framework’s lifespan. 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. The proposals have also been validated through stakeholder consultation (the main messages from the stakeholder workshop are in **Appendix I**).
- 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 authorities (e.g. Watford, Dacorum, Hertsmere) and to sites such as Bricket Wood Common. The zone and component projects can also contribute to delivery of Natural England’s Thames and Tributaries Integrated Biodiversity Delivery Area (IBDA) and at a local level are complementary to the aims and objectives of the Chilterns AONB Chalk Streams Project^{xiv} (the AONB lies close to the District, to the west, within the adjacent Dacorum Borough) and the Management Plan for the Colne River Park^{xv}.

- **Woodland Enhancement Zone:** linking woodland habitats and restoring landscapes/defining the network of valleys including regionally rare Wooded Chalk Valleys. This includes enhancement to the setting of historic GI assets such as Prae Wood and Symondshyde Wood—buffering and protecting such sites, through creating woodland linkages.
- **Chalk Valleys Conservation Zone:** conserving key GI assets as part of the movement, habitat and physical landscape network, also securing links to the river valley network and associated Wetland Habitat Zone. Links to landscape restoration and enhancement in the Colne Valley and delivering landscape character assessment objectives in this area (considered jointly with Watford and Hertsmere Boroughs).
- **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 District.
- **Heathland and Grassland Creation Zone:** Farmland is an intrinsic part of the landscape of St Albans District and is woven into its fabric. Whilst it is important that it is recognised and retained, projects should also be identified for heathland and grassland restoration to enhance landscape character and interpret aspects of

historic character. The zone seeks to identify areas where enhanced heathland linkage/corridors could be considered, to reduce fragmentation of existing assets.

- **Landscape restoration zone:** Similar in intention to the Farmland Conservation and Enhancement Zone described above, but with greater emphasis on securing and restoring greater landscape connectivity where this has become fragmented and eroded (responding to landscape condition and quality issues identified in the Landscape Character Assessment).

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 St Albans District

- 3.7 A series of green infrastructure types have been defined to organise proposed green infrastructure projects in St Albans District, 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 St Albans District and key professional and community 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 St Albans District 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. Commons, Grassland and Heathland Enhancements**
- **2. St Albans Radial Greenway**
- **3. River Valleys Project – Ver, Lee and Colne**
- **4. St Albans Approaches and Urban Greening**

3.10 These are described in the tables at the end of this section. A further, non spatial (thematic or interpretative) project (**project 5: 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 St Albans District 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 - St Albans

Figure 3.1: Proposed Green Infrastructure Network

Key

Proposals

↔ Strategic link

↔ Local link

1 Green infrastructure projects

Strategic GI assets

Farmland conservation & enhancement zone

Wetland habitat zone

Woodland enhancement zone

Chalk valleys conservation zone

Heathland/grassland creation zone

Landscape restoration

Existing

Long distance and promoted routes

Rivers

Area of Outstanding Natural Beauty
(Strategic / regional & sub-regional
GI asset)

Accessible open space

G Watling Chase gateway site

Woodland

Main settlements

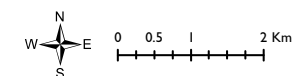
Watling Chase Community Forest

Barriers

Major road network

Railway

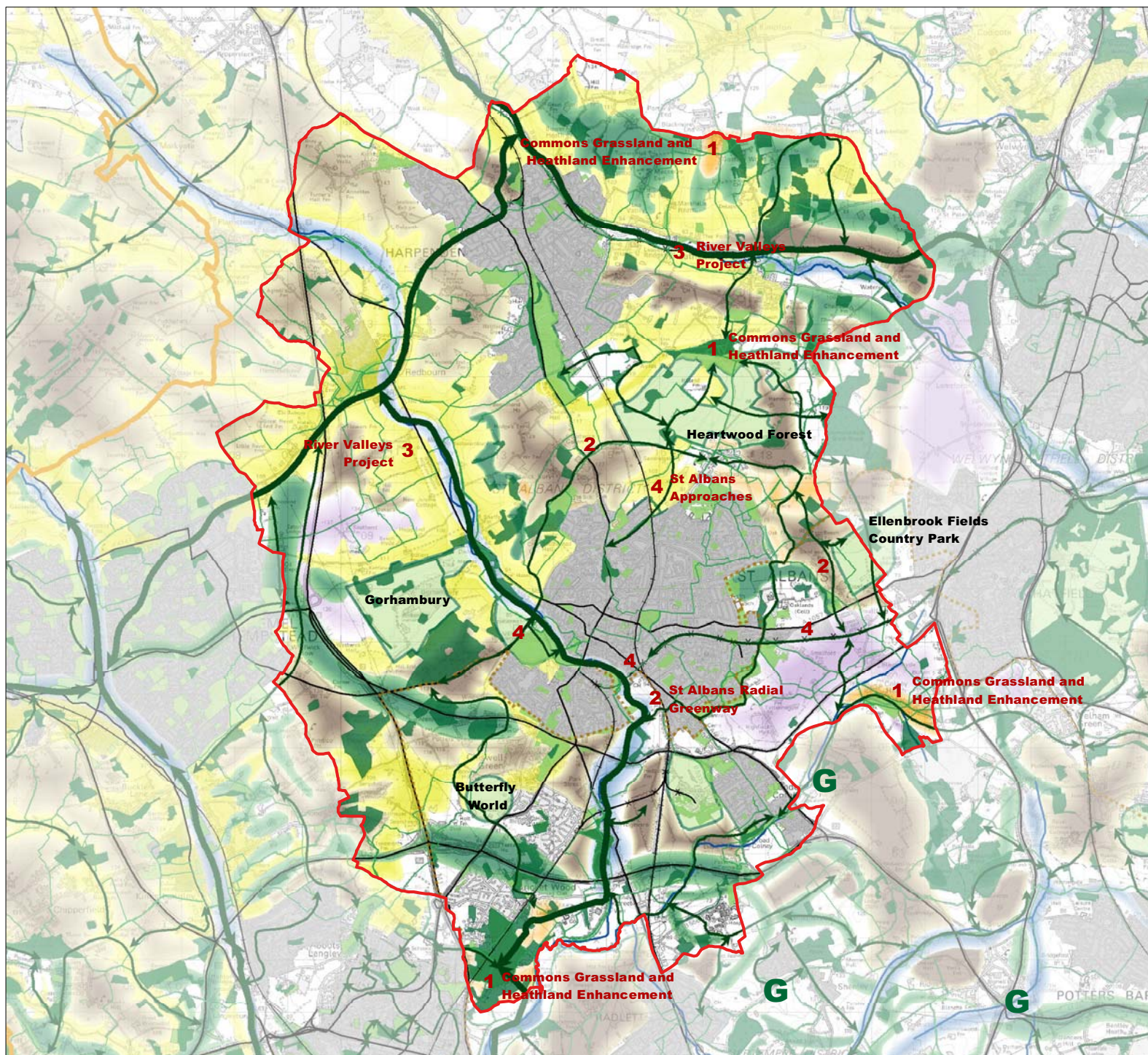
Disused Railway



DRAFT

Date: 04/03/2011

Revision:



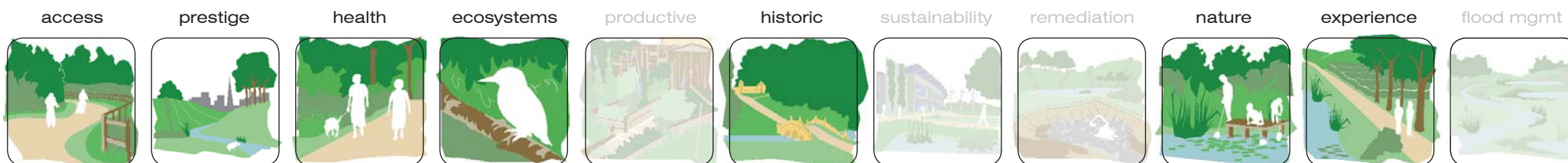


Rural Wildspace - Brief description / snapshot of the project :

- Improving biodiversity and habitat links across the District through heathland corridors and grassland restoration and ensuring provision are met for both walkers and wildlife
- Appropriate management of farmland and grazing practices (sustainable land management) to ensure balanced use and avoiding conflict of user interests
- Sustainable management of other aspects of the habitat mosaic e.g ancient woodland
- Making landscape links to the habitat mosaic proposed in Heartwood Forest
- Consideration of field boundary and roadside verges to link heathland sites, such as at Nomansland, Harpenden and Bricket Wood Commons
- Proposals for improved car parking facilities at Common sites could be more appropriately integrated into their surroundings as part of enhanced landscape and vegetation management



FUNCTIONS MET :



PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Improving heathland and grassland across the District will help support a number of important UK BAP habitats and will help reinstate habitats removed due to over grazing (assist in reversing habitat fragmentation). There is an opportunity for large scale heathland restoration projects to link the District's Commons (Bricket Wood and Nomansland). Green link access enhancements from Commons to settlement areas will be complementary to the Hertfordshire Rights of Way Improvement Plan. Enhancing the functionality of the Commons will help improve the available provision of natural greenspace to the area (contribute to meeting Accessible Natural Greenspace (ANG) needs). Creation of enhanced settlement approaches as part of this wider project responds to issues and opportunities in the 'prestige' functional analysis and would also be complementary to LCA objectives

ISSUES ASSOCIATED WITH DELIVERY : Crown Estate, land ownership and HLS uptake are key issues, while possible management changes and zoning of grazing will require further consultation with land owners and user groups. This project could form part of a county wide programme to enhance heathlands management. Need for District and landowner liaison, for links with Ramblers Association and with Woodland Trust to ensure a joined up approach as the scheme and management plan for Heartwood Forest are implemented.

DELIVERY PARTNERS & MONITORING MECHANISMS : Natural England through HLS agreements, to encourage habitat restoration & capital payments for access, Forestry Commission, Farming and Wildlife Advisory Group (FWAG), Herts and Middlesex Wildlife Trust, Parish Councils, St Albans District Council, Local Access Forum & Ramblers Association. Potential for developer contributions (off-site) CIL/s.106 and other sponsorship e.g. from Rothamsted Research Institute. As part of the wider strategic GI Plan, this could involve joint funding initiatives between Districts/Boroughs (pool resources) to implement a county wide restoration initiative. Contact to be made locally (& District wide) with the relevant parties (Parish Councils) who could deliver smaller projects like promotion & interpretation.

WHAT HAPPENS NEXT? PRIORITY / RANKING : Need for land owner liaison with relevant partners in the area such as Woodland Trust (Heartwood Forest). Much of the project is dependant on HLS uptake and will also need further consultation (grazing/enclosure and managing access). Priority areas are linking between Heartwood and existing sites such as Nomansland to tie Heartwood proposals into their landscape context/can happen in parallel.

PROJECT : 2. St Albans Radial Greenway

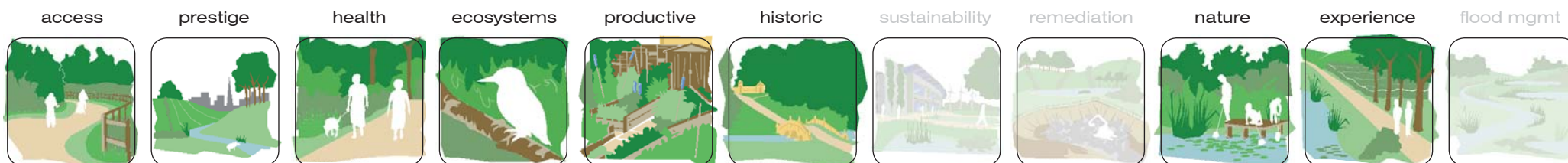


Urban Greenway - Brief description / snapshot of the project :

- Enhanced connections across St Albans City and the creation of a radial loop around the City
- Enhancing greenspace links/spokes - Ver Valley to Chiswell Green and Butterfly World
- Provide for green commuting and recreational links (City Vision initiatives - Alban Circle Walk)
- Enhanced signage e.g. from city centre & the two railway stations
- Improved links from the south of the City through Park Street to Frogmore Meadows along the Ver allowing access to a substantial wetland and woodland resource (meeting ANG deficiencies)
- Extension of recreational routes from Frogmore to adjacent restored mineral sites provides an opportunity to improve deprived areas of the District
- Provision of a link from St Albans via Beech Bottom Dyke through Heartwood to the Lee Valley at Harpenden and Wheathampstead - wider valley links
- Urban & countryside links to deliver aspects of City Vision (Verulamium Park, Abbey Orchards as nodes on the greenway) and to other key GI sites - Butterfly World



FUNCTIONS MET :



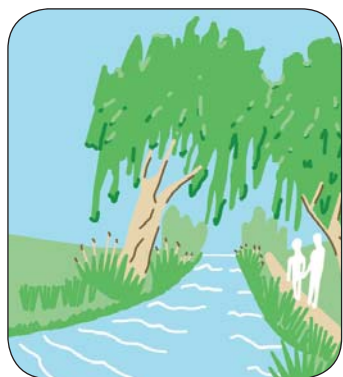
PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Potential to assist in meeting ANG deficiencies in the District through enhanced links. Meets identified needs for enhanced connections between the primary recreational routes (such as The Alban Way, The Nicky Line and The Ayot Greenway). Complementary to the aims of the Hertfordshire Rights of Way Improvement Plan (ROWIP). Additional links to assets such as Verulamium Park, Chiswell Green and Butterfly World would also add to the objectives of the ROWIP by linking areas across the County with strategic assets (e.g. GI as a destination). The proposed inner & outer Radial Greenway is complementary to proposals in the St Albans City Vision and also to the Alban Circle Walk created by the Ramblers Association (Herts and North Middlesex).

ISSUES ASSOCIATED WITH DELIVERY : A co-ordinated approach to this project will be important, requiring St Albans District to work together with landowners & HCC. Need for landowner liaison to establish feasibility of additional links while there is also need for cross authority liaison including engaging with Parish Councils. Also liaison with the Hertfordshire and North Middlesex Ramblers Association (Alban Circle). There is a need for user survey and signage strategy. Although many of these routes are in place, with minimal refurbishment and minor additional links, which link the primary recreational routes within the District, a substantial greenway network can be achieved. Need for consultation with the Herts and Middlesex Wildlife Trust in developing options.

DELIVERY PARTNERS & MONITORING MECHANISMS : Using existing urban greenway initiatives such as Alban Circle & working & liaising with HMWT to avoid user interest conflicts. District & local scale promotion & signage projects to be delivered through CMS & bodies such as Groundwork (who could assist community led schemes) in order to raise awareness of the area. Potential developer contributions through off-site CIL/s.106. Working alongside bodies such as the Woodland Trust to ensure links between woodland projects like Heartwood sit within the District wide GI network. Potential for parts of the network to be delivered through HLS (Natural England) - capital payments for access schemes.

WHAT HAPPENS NEXT? PRIORITY / RANKING : Landowner and partner liaison to determine feasibility of additional links and a feasibility study should be developed. Project can be determined in phases to make cost more manageable and where relevant development opportunities arise. Priority is high in view of functional benefit/alignment with other plans.

PROJECT : 3. River Valleys project - Ver, Lee and Colne

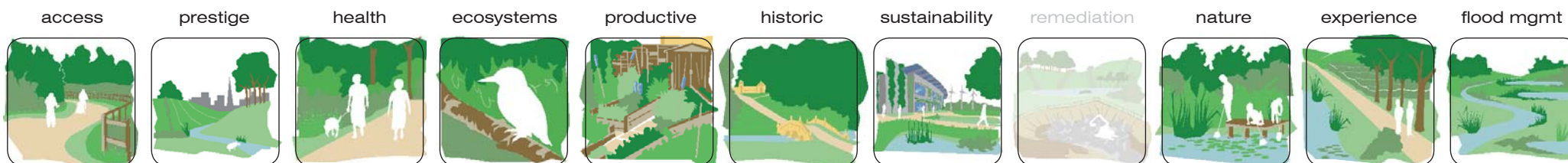


RURAL BLUE LINK - Brief description / snapshot of the project :

- Conservation & enhancement of the distinctive wetland environment including enhanced physical & habitat links to urban stretches of the rivers (Ver at St Albans, Lee at Harpenden - Leasey Bridge)
- Positive approaches to St Albans & Harpenden (vantage points to appreciate cultural heritage)
- Significant opportunity to enhance wetland character near pinch points (Harpenden and Wheathampstead) creating improved recreational and visual linkages between the settlements (potentially using the disused rail corridor in the Lee Valley - integrated bridleway link)
- Potential to create multi-functional spaces serving a multitude of purposes including accessible open space, habitat links, recreational corridors and climate change & flood mitigation functions
- Using the river's course rather than the road network could provide sustainable transport links for those living outside St Albans as well as recreational routes
- Focus for food production (orchards) & sustainably managed biomass/wet woodland creation



FUNCTIONS MET :



PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : The project aims to enhance the riparian character and wetland habitat connections while forming attractive, usable green links, as well as providing enhanced 'space for water' (responds to EA WFD issues of ecological quality /flows identified in functional analysis) and project will also satisfy LCA objectives. Enhancements will deliver improved & continuous access along the network of rivers linking them up to the adjacent Districts & Counties. Improved access and wetland character will enhance the character of the valleys and will contribute to improved functionality, making it more available to a larger number of users, satisfying Hertfordshire ROWIP objectives.

ISSUES ASSOCIATED WITH DELIVERY : Access upgrades, off road links, enhancements & creation can require significant funding to achieve a continuous standard which will satisfy fully a range of existing & new users (shared use). Where large scale funding is not available such as developer contributions (CIL/ s.106), river environment enhancements could be delivered through HLS or through more locally based initiatives under a series of guidelines or a practical 'how to' for local friends groups, parishes & Trusts (e.g. Groundwork) to take forward (e.g. repairing off road links / removal of invasive species as voluntary work). Need for feasibility study for upgrading of footpaths/routes. Need for liaison between landowners and Natural England regarding agri environmental schemes to deliver capital works and also to avoid conflicts of access & grazing. Liaison with HMWT to avoid conflict with user group interests.

DELIVERY PARTNERS & MONITORING MECHANISMS : St Albans Council & relevant bodies such as Sustrans, Ramblers Association & Environmental Agency. Contact should be made with HMWT, NE, landowners, Parish Councils and relevant local scale partners who can offer small scale delivery through voluntary activity, local trusts & friends groups. Also CMS may also be able to assist & advise on delivery. St Albans Council could also help with coordination between landowners enabling and encouraging green infrastructure ideals to be considered in HLS & ELS & cross compliance at start of these agreements. Visitor & species surveys are likely to be main monitoring mechanisms.

WHAT HAPPENS NEXT? PRIORITY / RANKING : Liaison with landowners (HLS) uptake. Priority is the link to the Nicky Line in Harpenden and bridleway section at Leasey Bridge. Raising awareness to locally interested groups, approaching parish councils, liaison with Groundwork, CMS, HMWT friends groups & other user groups.

PROJECT : 4. St Albans approaches and urban greening



Urban Wildspace - Brief description / snapshot of the project :

- Enhancement of sites that act as principal points of entry to St Albans GI network & to the City
- Maximising and interpreting views of heritage significance e.g. to Cathedral at St Albans
- Recognising the historic Roman legacy of St Albans to enhance its sense of identity (tourism)
- Naturalistic approach to landscape management in Verulamium Park to protect archaeology
- Strategic links across to sites such as Heartwood Forest to provide ways to access sites by green transport
- Woodland enhancement links and biodiversity improvements e.g. opportunity for sustainably managed woodland (biomass) to deliver WCCF objectives and to contribute to the restoration of mineral sites south of St Albans



FUNCTIONS MET :



PLANS / POLICIES / PROGRAMMES WHICH THE PROJECT CAN HELP DELIVER : Identified for their unique characteristics (Verulamium Park, Heartwood and Beech Bottom Dyke) are significant open space & semi natural resources. Project can contribute to improving & enhancing the setting of St Albans & creating a greater sense of identity. Creation of positive settlement approaches responding to the functional (prestige) analysis and delivers aspects of the City Vision. Linking strategic sites (e.g. Heartwood & Verulamium Park) can complement ROWIP objectives which aim to link Districts (ROWIP). Restoring landscape structure will contribute to LCA objectives (e.g. at Harperbury and Frogmore) & to climate change responsiveness. Landscape enhancement (landscape links to Heartwood) has potential to link Key Biodiversity Areas as identified in the functional analysis. Complimentary to view management and protection (Cathedral) in the St Albans Local Plan.

ISSUES ASSOCIATED WITH DELIVERY : Need for links to existing initiatives e.g. the HLF work and Conservation Management Plan for Verulamium Park. Liaison with the Woodland Trust regarding links to Heartwood. Land ownership negotiation & liaison e.g. Lafarge (Harperbury/Frogmore). Need for liaison with English Heritage regarding proposals affecting archaeology. Liaison with Woodland Trust to ensure proposed woodlands near settlement approaches (Heartwood) are appropriately integrated within the GI network.

DELIVERY PARTNERS & MONITORING MECHANISMS : Landowners (Lafarge) & Natural England (through HLS agreements to deliver landscape capital improvements). St Albans District Council including government funded schemes (e.g. HLF for the historic restoration elements at Verulamium Park), Sustrans, the Herts Rights of Way & the Local Access Forum & CMS. Monitoring mechanisms for continued green access routes are likely to be through potential CMS implementation, Higher Level Stewardship agreements & the Hertfordshire Rights of Way Improvement Plan (e.g. developing & implementing improved access projects).

WHAT HAPPENS NEXT? PRIORITY / RANKING : HLS initiatives should be encouraged as a priority, as this could deliver some aspects of the overall project. Promotional projects (e.g. Green Hertfordshire - Project 5), to raise awareness of existing and new sustainable transport links (non car), will also be key. Some parts e.g. minerals sites are longer term as part of the restoration process.



Brief description / snapshot of the project :

- Accessible electronic GI map based/navigator resource
- 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 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 as well as recreation, places to buy local produce, community events in a greenspace setting. Link to other relevant websites e.g. Hertsdirect, tourism focus - promoting destinations



FUNCTIONS MET:



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.

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, Sustrans, Network Rail), Parish Councils & landowners of key sites within the Hertfordshire districts (e.g. Heartwood) - 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 HCC, 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. Commons, Grassland and Heathland**

Enhancements: Need for liaison with Welwyn Hatfield Borough to deliver cross boundary projects (e.g. links to Symondshyde/Ellenbrook etc).

- **2. St Albans Radial Greenway:** Is a District specific project but will require working with parish councils at local level, as will all projects identified in this GI Plan.
- **3. River Valleys Project – Ver, Lee and Colne:** need for links with Dacorum, Watford and Hertsmere Boroughs; also with authorities in Bedfordshire and with the Chilterns AONB Partnership.
- **4. St Albans Approaches and Urban Greening:** Links with Hertsmere Borough, particularly in relation to sub projects addressing the southern approaches (e.g. Harperbury and Frogmore/Radlett Aerodrome).

3.16 In addition, delivery of the objectives of a number of the action zones described earlier in this section, will require cross authority and cross county links. For example the Wetland Habitat Zone links to Bedfordshire, whilst the Woodland Enhancement Zone requires links with

Dacorum, Welwyn Hatfield and Hertsmere Boroughs (and with the latter two LPA's in particular to help deliver community forestry aspirations set out in the Watling Chase Community Forest Plan).

3.17 Account should also be taken of parallel GI projects in adjoining Hertfordshire authorities, e.g. the Hemel Hempstead Urban Greening Project in the Dacorum Borough Green Infrastructure Plan, which relates to the eastern edge of Hemel Hempstead and connections to St Albans via the Nicky Line. Also the Post Industrial Heritage (former railway routes) project in the Welwyn Hatfield GI Plan, which links to the District via the Alban Way and Ayot Greenway.

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)^{xvi} (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^{xvii} and the Planning Advisory Service (PAS) 48 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. A workshop and consultation with delivery partners has ensured that proposed solutions (**section 3**) are deliverable, flexible and that potential delivery partners are identified. 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 2**.
- Key green infrastructure issues are set out by function in **section 2** and **Appendix 3**. 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 District.
- The assessment of need for green infrastructure is given by function in **section 2** and **Appendix 3**.
- **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:

- Wetland enhancement and sustainable water management in the Ver, Colne and Lee Valleys, making

‘space for water’ up and downstream of the main settlement pinch points;

- Increased green links to the countryside from high density settlements in particular St Albans and Harpenden, seeking enhanced links along the river valleys network, where these do not conflict with nature conservation interests;
- Enhancement of strategic links to GI assets and points of focus such as Heartwood, facilitating greater levels of car free access;
- Improved strategic links with adjacent district GI (such as via the Nicky Line), particularly in light of potential future growth;
- Using green infrastructure to contribute positively to landscape character enhancement, restoration and linkage (e.g. areas for heathland and grassland restoration and woodland enhancement as shown on **Figure 3.1**);
- Green infrastructure to interpret and appreciate significant cultural heritage assets (e.g. Roman legacy, protected views identified in the Local Plan);
- Context, sense of place and local distinctiveness: Recognition, conservation and enhancement of the key assets of river valleys, woodlands, heathland and commons.

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 District 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.

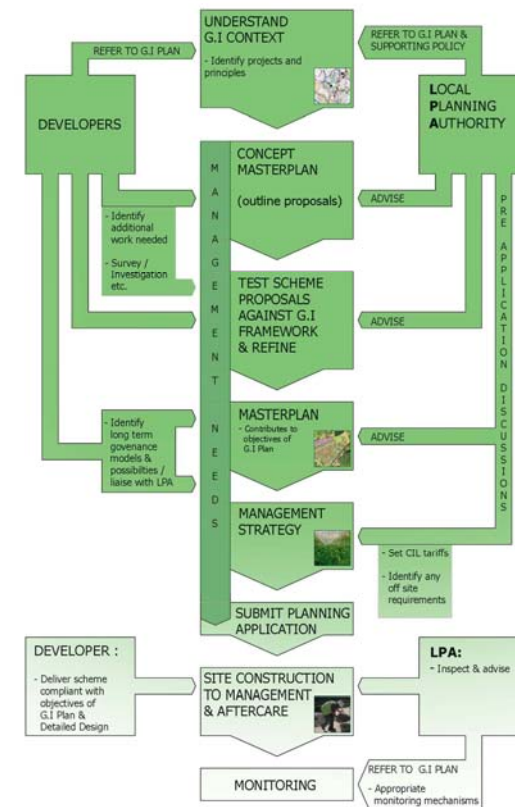


Figure 4.1: Embedding GI in Development Management

NEXT STEPS

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

- 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 District through existing mechanisms** (Hertfordshire Environmental Forum) and with assistance and advice from the Countryside Management Service;
- 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 Wildlife Trust, as well as the Parish Councils). 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 (St Albans District 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 District, 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 District 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 District, to raise public awareness of the concept. This should link to the interactive GI mapping/web/app based project described in **section 3** (Project 5: 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^{xviii};

- 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 St Albans District;
- **'Grass roots' delivery:** Continue to develop links with Parish councils and relevant community and volunteer groups such as the British Trust for Conservation Volunteers (BTCV), allotment societies, local schools (tree planting activities) and existing Friends Groups and formation of new Friends Groups, where appropriate. Also potential for formation of **local green groups** working with a Delivery Officer/panel (links to the Transition Towns movement in the adjacent Dacorum Borough and specifically Hemel Hempstead may be relevant here). As part of this grass roots approach,

ensure that reasons for changes to greenspace management etc 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 St Albans District;
- 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 Heartwood).

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 District (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 District, particularly as growth locations and areas of change become more fixed.

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 5) at **section 3** of this GI Plan. This project could also be linked to promotion through established greenspace events in the District, such as those held in Verulamium Park/on Harpenden Common. Another focus of the project could be to promote local suppliers and producers (local food).

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- ⁱ <http://www.hertsdirect.org/infobase/docs/pdfstore/gifframework.pdf>
- ⁱⁱ <http://naturalengland.etraderstores.com/NaturalEnglandShop/NE176>
- ⁱⁱⁱ NE176, **Op Cit**
- ^{iv} Natural England/The Landscape Partnership **Analysis of Accessible Natural Greenspace Provision in Hertfordshire**
- ^v Source: V4C Project. Study produced for Hertfordshire County Council
- ^{vi} <http://www.hertsdirect.org/libsl leisure/heritage/landscape/hlca/>
- ^{vii} Watling Chase Community Forest 1995 **Forest Plan**, and **Watling Chase Community Forest: Forest Plan Review 2001**
- ^{viii} Urban Practitioners 2009 **St Albans City Vision**
- ^{ix} Groundwork Hertfordshire 2004 **Trees Against Pollution: A Strategy for Tree Planting and Air Quality**
- ^x Colne River Park Management Plan
- ^{xi} Liz Lake Associates 2009 **Landscape and Visual Impact Assessment: Re Restoration Sites - Hertfordshire**
- ^{xii} http://www.coe.int/t/dg4/cultureheritage/heritage/landscape/default_en.asp
- ^{xiii} St Albans District Council 1994 **District Local Plan Review**
- ^{xiv} Chilterns AONB **Chilterns Chalk Streams Project Annual Report 2008-9**
- ^{xv} Herts and Middlesex Wildlife Consultancy, 2008 **The Colne River Park Draft Management Plan**
- ^{xvi} Planning Advisory Service 2008 **Local Development Frameworks: Evidence Base**
- ^{xvii} The Planning Inspectorate 2008 **Local Development Frameworks: Examining Development Plan Documents – Soundness Guidance**
- ^{xviii} http://www.sustainabilityeast.org.uk/index.php?option=com_content&view=article&id=17&Itemid=22



www.landuse.co.uk

