

Warwick District Green Infrastructure Delivery Assessment

Prepared for Warwick District Council
by
Land Use Consultants

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1 Introduction

- 1.1 On behalf of Warwick District Council, Land Use Consultants (LUC) has undertaken an assessment of green infrastructure (GI) options as set out in the Green Infrastructure Study, and determined costs, funding, partners and timescales for the preferred options.
- 1.2 This report outlines:
- the approach used
 - findings of this assessment
 - approximate costs of delivery/maintenance
 - potential funding and timescales
 - recommendations on next steps.

AIM

- 1.3 The aim of the study, as defined in the WDC brief, is as follows:

The Council requires assistance in undertaking the following:

1. For the opportunities to address needs/deficiencies, and enhance and maintain existing GI assets, identified within the Warwick District GI Study, and options generated through a stakeholder engagement workshop held in December:

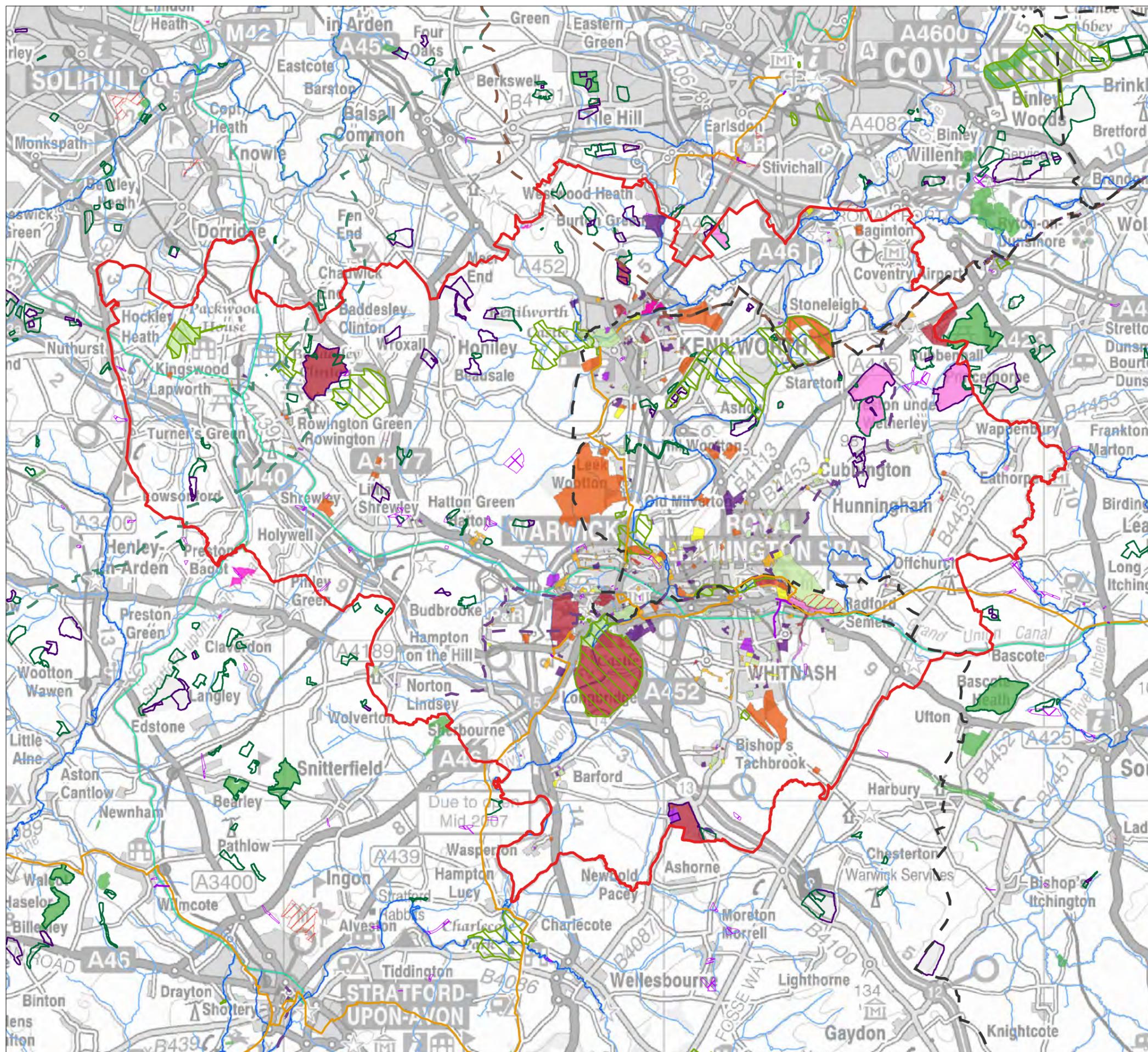
(a) Assess these opportunities for their suitability and multiple benefits, including potential use of public benefit recording system; feasibility and availability, including through dialogue with key landowners; and devise an appropriate methodology for undertaking this stage.

(b) Report findings and inform the work of Stage 2.

2. For the options agreed above in 1 (b), consider how much they would cost (including long term or ongoing maintenance regimes); where funding sources would come from; who would implement proposals; and indicative timescales for the delivery of projects.

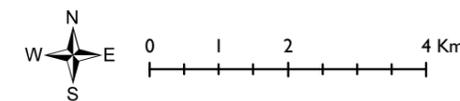
The output of this work will be used to inform policy options through the Local Development Framework process.

Figure I.1: Existing GI Assets



Key

- Warwick District Boundary
- Cycle Routes**
- NCNLink Sustrans
- National Sustrans Route
- Promoted Routes**
- Centenary Way
- Coventry Way
- Heart of England Way
- Shakespeare's Avon Way
- PRoW Warwick District Post 1998 Legal Changes
- Parks and Gardens
- Ancient Woodland**
- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland
- SSSI
- LNR
- Registered Common Land
- Open Space**
- Allotment
- Amenity Greenspace
- Burial Ground
- Childrens/Youth Area
- Civic Space
- Green Corridor
- Institutional land
- Natural area inc. urban woodland
- Outdoor Sports Facility
- Park or Garden
- Unclassified
- Hydrology**
- Main rivers
- Canals
- Minor rivers



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STRUCTURE OF THIS REPORT

- 1.4 This report is structured as follows:
- **Section 1 – Introduction:** includes the aim, context and approach to the study
 - **Section 2 - Review of GI Opportunities:** includes method used, findings of appraisal and consultation with project leads.
 - **Section 3 - Delivery Plan:** includes project costs, potential funding, lead partners and timescales.

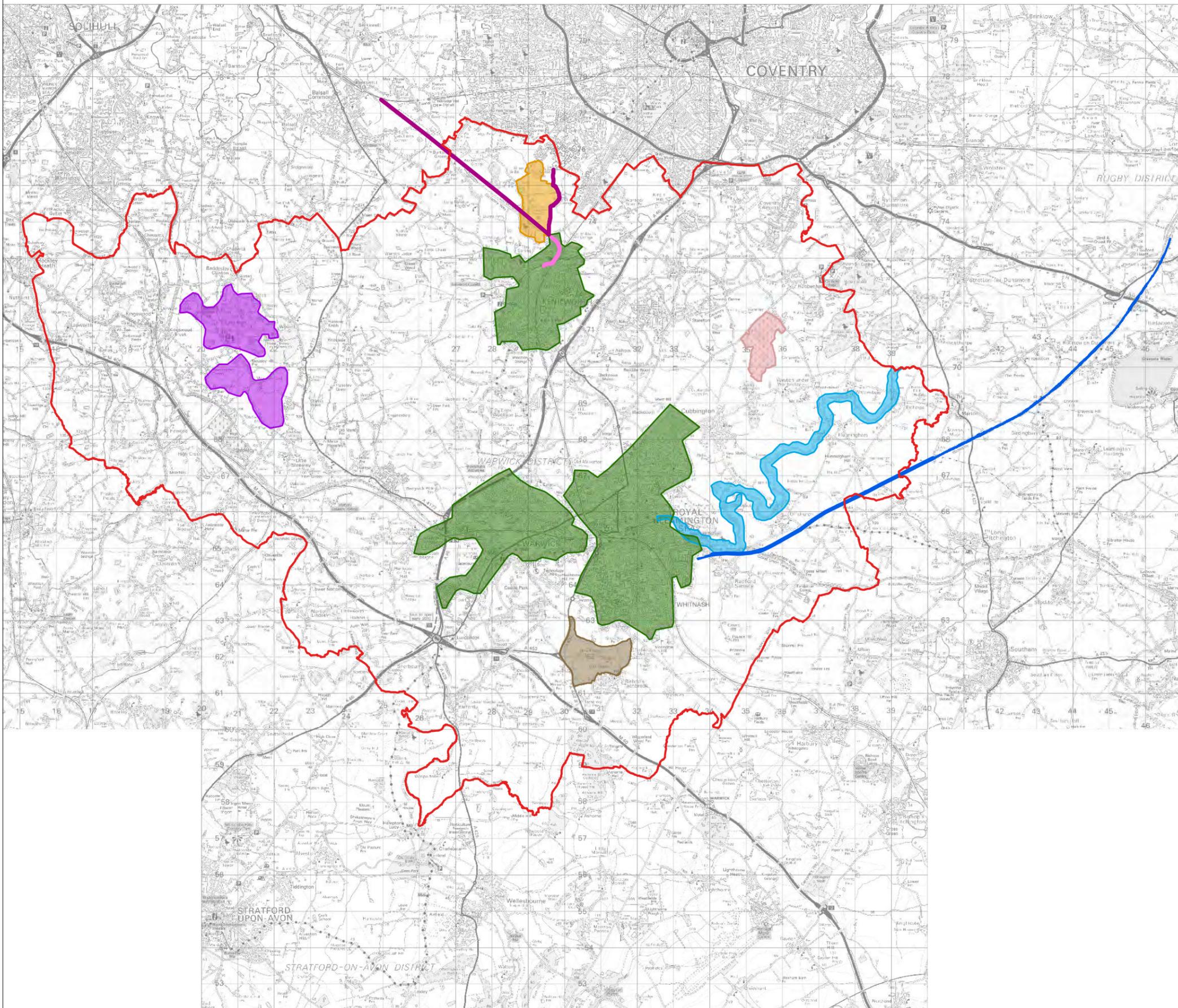
CONTEXT

- 1.5 DEFRA's Natural Environment White Paper (2011) supports the concept of green infrastructure to strengthen ecological networks and improve communities' health, quality of life and resilience to climate change. Designated networks of community green space are promoted through the Government's Draft National Planning Policy Framework, although funding cuts will inevitably affect local authorities' resource to maintain these networks. The Government's commitment to the Community Infrastructure Levy as a method for securing funding to deliver infrastructure requirements has recently been confirmed.
- 1.6 The Government has also confirmed a number of Local Enterprise Partnerships (LEPs), a mix of businesses and local authorities working together to promote economic growth. Warwick District Council forms part of the Coventry and Warwickshire LEP, announced in 2010, and this status places the District in a strong position in terms of taking advantage of new Government funding initiatives. LEPs can also receive support and funding through the Regional Growth Fund for appropriate development. In addition, the Coalition Government is clearly promoting increased independence and innovation in terms of local authority funding. One key initiative is the designation of Local Nature Partnerships, which will comprise a range of partner organisations who will work together to prioritise action to maintain and enhance the natural environment of the area. The Coventry, Solihull and Warwickshire sub-region recently submitted a successful bid to become an LNP.

Policy drivers

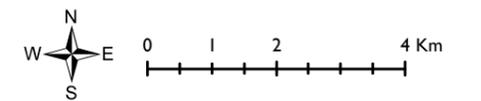
- 1.7 There is considerable legislation in place to support the delivery of green infrastructure, including:
- **The Climate Change Act (2008)**, which requires local authorities to have regard to climate change mitigation and adaptation in carrying out all of their functions, and to deliver climate change adaptation measures.
 - **The Flood and Water Management Act (2010)**, which is an important incentive for GI delivery – it removes the automatic right to connect new development to sewers, creating an incentive to integrate new sustainable drainage systems and flood management features into the

Fig 2.1: GI Opportunities in Warwick District, as identified by stakeholders



Key

- Warwick District Boundary
- Arden Landscape Enhancement
- Urban Tree Planting
- River Leam Tree Planting
- Area to North of Kenilworth South of Coventry
- Leamington to Rugby Cycleway
- South of Leamington
- Waverley Wood
- Connect2Kenilworth Cycleway Extension
- Cycle Route Disused Railway
- Proposed Shared Cycleway / Path



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urban environment. The Act also requires developers to demonstrate that new buildings are much more self-sufficient in rainwater management.

- **The Public Health White Paper (2010)**, which promotes the protection and community ownership of green spaces, and improved access to land so that people can grow their own food.
- **The Natural Environment White Paper** should also provide strong policy support for effective and functional green infrastructure, as well as enhancing potential to secure funding for GI through development.
- **The Localism Bill** intends to enable local communities to deliver the facilities they need.

I.8 GI is embedded in national sustainability policy, and its importance highlighted in several national planning policies, including PPS1 (Sustainable Development) PPS9 (Biodiversity and Geodiversity) PPS12 (Local Spatial Planning), PPS25 (Development and Flood Risk) as well as the Consultation Draft PPS 'A Natural and Healthy Environment'. The emerging National Planning Policy Framework also highlights the importance of planning for green infrastructure at a local level, requiring that local authorities should:

“Plan positively for the creation, enhancement and management of networks of biodiversity and green infrastructure”.

I.9 In particular, PPS12 requires local planning authorities to assess GI requirements. This policy and legislation may support the Council's ability to maintain high quality GI network.

I.10 Natural England's GI Guidance reflects this role, and describes GI as a 'life-support system' in terms of its role in adapting urban areas to climate change. It defines GI as:

“A strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability.”

Local planning

I.11 The revocation of the regional strategies prompted Warwick District Council to halt preparation of its draft Core Strategy and go back to the public to consult on levels of growth through a new Local Plan. Public consultation ran earlier this year on a revised key Issues and Options document, through 'Helping Shape the District'¹. The Local Plan consultation highlighted ten key issues for the District, of which green infrastructure could positively contribute to the following six:

- The size and condition of existing community facilities and services and whether they can meet current and future needs.

¹ Warwick District Council website, accessed June 2011: <http://warwickdc.jdi-consult.net/ldf/readdoc.php?docid=19>

- People’s general health and well-being, and the need for people (particularly teenagers and young people) to have access to sport and cultural experiences, such as cinemas and community events.
 - Road congestion and air pollution, particularly around the main junctions along the A46 and M40, the routes into the towns, and within the town centres.
 - The threat of flooding of homes and businesses in some areas, particularly where surface water may flood towns and villages, and the concern that the threat of flooding will increase because of climate change.
 - Areas of poverty in Warwick and Leamington Spa.
 - The pressure for new development threatening the high-quality built and natural environments in the district, particularly historic areas, and the cost of maintaining historic buildings and areas.
- I.12 The ‘Helping Shape the District’ consultation also highlights the following solutions to the issues listed above:
- more and better school buildings, health and community centres, and sports facilities and play areas;
 - safer and less congested roads, and better public transport;
 - more flood-defence schemes;
 - regeneration of run-down areas and buildings; and
 - more opportunities for improving the environment
- I.13 Green infrastructure will contribute significantly to these solutions, for example GI can help to alleviate flood risk by absorbing rainfall and containing fluvial flooding. GI can also help to regenerate areas by improving quality of life, and enhancing the environment. The Council’s consultation also notes that development will be integral to delivering new and improved services and facilities, and that it will be important to strike the right balance and ensure the right level of development is encouraged.
- I.14 This study will also inform an Infrastructure Delivery Plan, which will sit alongside the new Local Plan, as required by PPS12 which states that: “Infrastructure planning for the core strategy should also include the specific infrastructure requirements of any strategic sites which are allocated in it”. This approach will ensure that GI plans reflect planned growth, and planned growth incorporates appropriate GI networks which deliver the necessary functions.
- I.15 Whilst previous proposed allocations for 10,800 new homes in the District by 2026 have been discarded, the Council is still keen to ensure that adequate housing is provided in the District, particularly affordable housing, whilst also protecting green space and the natural environment². The priorities for the GI network will reflect the approach taken to housing growth, e.g. locating housing within the four towns, on the A46 corridor or

² Warwick District Council website, accessed June 2011: <http://warwickdc.jdi-consult.net/ldf/readdoc.php?docid=19>

across the wider district. The High Speed Rail 2 development is also an important consideration, with the proposed route running through the District north of Leamington Spa.

- I.16 As part of the evidence base for the LDF, a Strategic Housing Land Allocations Assessment (SHLAA) was undertaken in 2009³. The purpose of the SHLAA was to identify specific sites across the District which may be suitable for housing development. The SHLAA identifies a number of sites, which are located in the following broad locations:
- Sites in or on the edge of Leamington and Whitnash
 - Sites in or on the edge of Warwick
 - Sites in or on the edge of Kenilworth
 - Sites in or on the edge of Coventry
 - Sites in the rural area
- I.17 A review of the SHLAA is currently being undertaken and will be published in the first half of 2012.
- I.18 Green infrastructure will also support delivery of Warwick's Sustainable Community Strategy "A Shared Vision" (2009-2026), which includes the following Strategic Aims:
- Our community has actively minimised environmental impacts
 - There is a vibrant, viable and sustainable rural community
 - The built and natural environment has been protected and enhanced.

Warwickshire, Solihull and Coventry GI Sub-regional study

- I.19 The Government has announced that it intends to implement the Sustainable Communities Act (2007), which promotes local awareness of sustainability issues, with support to allow local authorities and communities to act on these issues. It endorsed recognition of ecosystem services, and the Warwickshire, Coventry and Solihull GI Study also promotes an 'ecosystem services' approach to GI planning. This term describes an approach which recognises the benefits and services that the natural environment provides to our society and economy. Examples of ecosystems services include clean air, water, food and materials. This approach should be reflected in planning an effective GI network in Warwick. Local Planning Authorities are taking forward the recommendations in the report in pursuing sub-regional GI planning.

Warwick District GI Study

- I.20 Research on green infrastructure in the District has been completed at a local and regional level. The Warwick District GI Study was prepared by the Council in 2010, and identifies the existing green infrastructure assets within the district. The District is considering a number of different options for growth, and these will need to be supported by a functional GI network

³ Warwick District Council (June 2009) Strategic Housing Land Availability Assessments – Part 2 Detailed Site Assessments.

which delivers a range of benefits. The Warwick District GI Study recognises these benefits, and highlights the importance of ecosystem services to support existing and future communities, as well as maintaining the attractive south Warwickshire countryside.

- 1.21 Even without growth, the District would benefit from some enhancements to the GI network to reflect existing issues identified in a recent GI stakeholder workshop. This includes flood management issues at Leamington, where the River Leam has flooded the town several times in recent years, and a need to improve access to nature, particularly in the south of the district. Some of the existing GI in the District is mapped in **Figure 1.1** (overleaf).

Approach to the study

- 1.22 The project comprises two stages: the initial scoping and feasibility assessment of the GI opportunities; followed by a delivery assessment and costing. The two stages comprise the following tasks:

STAGE 1: GI OPTIONS ASSESSMENT

- Task 1.1: Inception
- Task 1.2: Gather relevant background information and GIS data
- Task 1.2(a): Define and map GI opportunities
- Task 1.3: Consider GI options and opportunities
- Task 1.4: Develop review criteria and assessment process
- Task 1.5: Undertake assessment of options
- Task 1.6: Consultation with project leads and stakeholders
- Task 1.7: Progress meeting/telecon with steering group

STAGE 2: DELIVERY PLAN

- Task 2.1: Determine costs of each short-listed GI option
- Task 2.2: Identify potential funding sources and criteria
- Task 2.3: Identify delivery lead and partners
- Task 2.4: Outline timescales
- Task 2.5: Prepare draft report and circulate to steering group
- Task 2.6: Progress meeting with steering group
- Task 2.7: Revise and finalise report

2 Review of GI Opportunities

- 2.1 This section describes the GI opportunities identified by stakeholders and appraised in this study, the approach employed to appraise the GI opportunities, and the findings of initial consultation with project leads.
- 2.2 The GI opportunities appraised in this study were identified by stakeholders at a workshop held by Warwick District Council in December 2010. Warwick District Council and LUC have worked together to determine the approximate locations of these projects, and define the broad purpose of each. The seven opportunities are listed below and mapped in **Figure 2.1**.

Table 2.1: GI Opportunities identified by stakeholders

GI opportunity	Potential partners
1. Connect and enhance Arden landscape and fragmented woodland resource in west of district	<ul style="list-style-type: none"> Warwickshire County Council Forestry Commission Woodland Trust Warwickshire Wildlife Trust
2. Create peri-urban park to south of Leamington / Warwick / Whitnash to alleviate open space deficiency	<ul style="list-style-type: none"> Warwick District Council Warwickshire County Council Environment Agency
3. Tree planting across urban areas	<ul style="list-style-type: none"> Woodland Trust Forestry Commission Warwickshire County Council Warwick District Council Town Councils
4. Tree planting upstream on River Leam	<ul style="list-style-type: none"> Woodland Trust Forestry Commission Warwickshire County Council Warwick District Council
5. Create peri-urban park to north of Kenilworth to alleviate open space deficiency	<ul style="list-style-type: none"> University of Warwick Warwickshire Wildlife Trust Woodland Trust Warwickshire County Council Warwick District Council
6. Create strategic open space and destination at Waverley Wood	<ul style="list-style-type: none"> Forestry Commission (freeholder of Weston Wood – part of Waverley complex) Warwickshire County Council
7. Create strategic cycle route to east of Leamington along disused railway	<ul style="list-style-type: none"> Sustrans Warwick District Council Warwickshire County Council

APPROACH TO REVIEW

Stage 1: GI functions review

- 2.3 The initial review was designed to ensure that the GI opportunities responded to Warwick District Council's eight GI areas of focus as listed in the GI Study. These are as follows:
- Healthy wildlife/ ecosystems
 - Tackling climate change
 - Recreation and health
 - Community cohesion
 - Historic environment
 - Sustainable transport
 - Local/community food production
 - Potential future growth
- 2.4 The criteria employed to assess each GI opportunity against these GI visions are listed in **Appendix I**. Each criterion has potential scores of between 1 (low) to 5 (high). Where the criteria did not elicit a clear 5 point range, only 3 scores have been used: 1 (low) 3 (moderate) and 5 (high).
- 2.5 A mapping tool comprising data layers to represent each of the eight GI visions was utilised to inform the appraisal. The findings of the GI functions review are provided the following paragraph.

Findings of the GI functions review

- 2.6 The findings of the GI functions review are listed in **Table 2.3**, below.
- The GI opportunities which score highly against the functions criteria are the tree planting projects (3 and 4) and the connection and enhancement of the Arden landscape (1).
 - The peri-urban park at Leamington (2) scores poorly due to its distance from any wildlife corridors and public rights of way. Whilst this low score is valid from a GI functionality perspective, the lack of green space and rights of way is part of the reasoning behind plans to create green space to the south of Leamington, to address these deficiencies.
 - The Strategic Open Space at Waverley Wood (6) scores poorly due to its lack of potential to contribute to flood alleviation, conservation of cultural heritage, and alleviation of health deprivation.

Table 2.3: Findings of GI Functions review

GI Opportunities	Does the site adjoin a wildlife site or wildlife corridor?	Is the site located in an area at risk of flooding?	Is the site located in an area of open space deficiency?	Is the site located in proximity to a community centre (town centre or hub), community which experiences social deprivation?	Does the site incorporate or adjoin any scheduled monuments, listed buildings, registered parks and gardens or conservation areas?	Is the site located adjacent to any existing footpaths or cycle routes?	Is the site located in a community experiencing health deprivation	Is the site located in proximity to future growth proposals?	TOTAL SCORE	
1	Connect and enhance Arden landscape and fragmented woodland resource	5	4	3	2	5	3	1	3	26
2	Create peri-urban park to the south of Leamington / Warwick / Whitnash to alleviate open space deficiency	1	4	4	3	2	1	3	5	20
3	Tree planting across urban areas									
3a	Warwick	5	5	1	3	5	5	2	5	31
3b	Leamington Spa	5	5	3	2	5	5	2	5	30
3c	Kenilworth	5	5	1	1	5	5	1	5	28
4	Tree planting upstream on River Leam	5	4	2	1	5	5	1	5	28
5	Create peri-urban park to north of Kenilworth to alleviate open space deficiency	4	4	1	2	1	4	1	5	22
6	Create strategic open space and destination at Waverley Wood	4	1	2	2	1	2	1	3	16
7	Create strategic cycle route to east of Leamington along disused railway	3	4	2	1	2	3	1	5	21

Stage 2: Feasibility review

- 2.7 The second stage of the appraisal process involved consultation with the potential lead organisations which would take responsibility for delivery and/or maintenance of the projects. Consultation with representatives of each organisation was undertaken through conducting telephone interviews. These discussions sought to explore the scope and scale of each opportunity, and highlight any strengths, weaknesses, opportunities and threats associated with each one.
- 2.8 The lead organisations for each GI opportunity are listed in **Table 2.1**, The organisations who have been contacted are listed in **Table 2.4**, below.

Purpose of consultation

- 2.9 The purpose of consultation with the stakeholders was to explore the scope of each project, and progress to date. The following key issues were raised for discussion:
- Project aim
 - Land use and ownership
 - Project lead and partners
 - Funding potential
 - Risk assessment
- 2.10 The discussions revealed that most projects were at a conceptual stage, and no maps or plans of specific projects were made available. As such, feedback was provided on only some of the issues listed above.

Table 2.4: Organisations consulted

Organisation and individual consulted	Consulted and outcome	Projects advised on
Forestry Commission	Comments received	<ul style="list-style-type: none"> • Arden Landscape Enhancement • Tree planting in urban areas • Tree planting upstream on the River Leam • Peri-urban park north of Kenilworth • Improved access/ open space at Waverley Wood
Warwickshire Wildlife Trust	Comments received	<ul style="list-style-type: none"> • Arden Landscape Enhancement • Improved access and open space at Waverley Wood • Tree planting upstream on the River Leam
Warwickshire County Council (Rural Services)	Comments received	<ul style="list-style-type: none"> • Tree planting in urban areas • Cycleway east of Leamington • Peri-urban park north of Kenilworth
Woodland Trust	Comments received	<ul style="list-style-type: none"> • Arden Landscape Enhancement • Tree planting in urban areas • Tree planting upstream on the River Leam
Warwickshire County Council (Ecology and Landscape)	Comments received	<ul style="list-style-type: none"> • Arden Landscape Enhancement • Improved access and open space at Waverley Wood • Peri-urban park north of Kenilworth
Sustrans	Comments received	<ul style="list-style-type: none"> • Peri-urban park north of Kenilworth • Cycleway east of Leamington
Warwick District Council (Parks Team)	Comments received	<ul style="list-style-type: none"> • Peri-urban park south of Leamington / Warwick / Whitnash • Tree planting in urban areas • Peri-urban park north of Kenilworth

Findings of feasibility review

2.11 The discussions have been useful in highlighting those GI opportunities which have the support of WDC's partner organisations. The following paragraphs provide a summary of the consultation findings, and makes recommendations on next steps on green infrastructure in the District. The prospective organisations to lead and support delivery are listed in **Table 3.4** in **Section 3**.

2.12 Overall, most GI opportunities were well received by the individuals consulted. There was particularly strong support for the tree planting in urban areas, and for the Arden landscape enhancement proposals. There was less support for creating new public access at Waverley Woods, and for the peri-urban park to the south of Leamington / Warwick / Whitnash, although the latter is strongly supported by the Council in light of existing deficiency in

accessible natural greenspace and the possibility of development to the south of Leamington / Warwick / Whitnash.

- 2.13 In general, there was very limited information available on all projects, and no plans or scoping reports were available for any of the GI opportunities. This reflects the status of the GI opportunities, which are generally concepts only at this stage, with the exception of the cycleway east of Leamington, part of which has been delivered by Sustrans and the County Council. As a consequence this was addressed in a subsequent stage of the project through the preparation of concept plans. More encouraging was feedback on potential funding streams, with a number of potential funding streams or relevant initiatives that could help to secure funding being identified by consultees.
- 2.14 There was also enthusiasm to be involved in developing and delivering many of the GI opportunities, and this should be harnessed by Warwick District Council, through further consultation and engagement of the key partner organisations at the end of Stage 2. This will be essential to gain consensus on the scope of each GI opportunity, and support for project delivery

3 Delivery plan

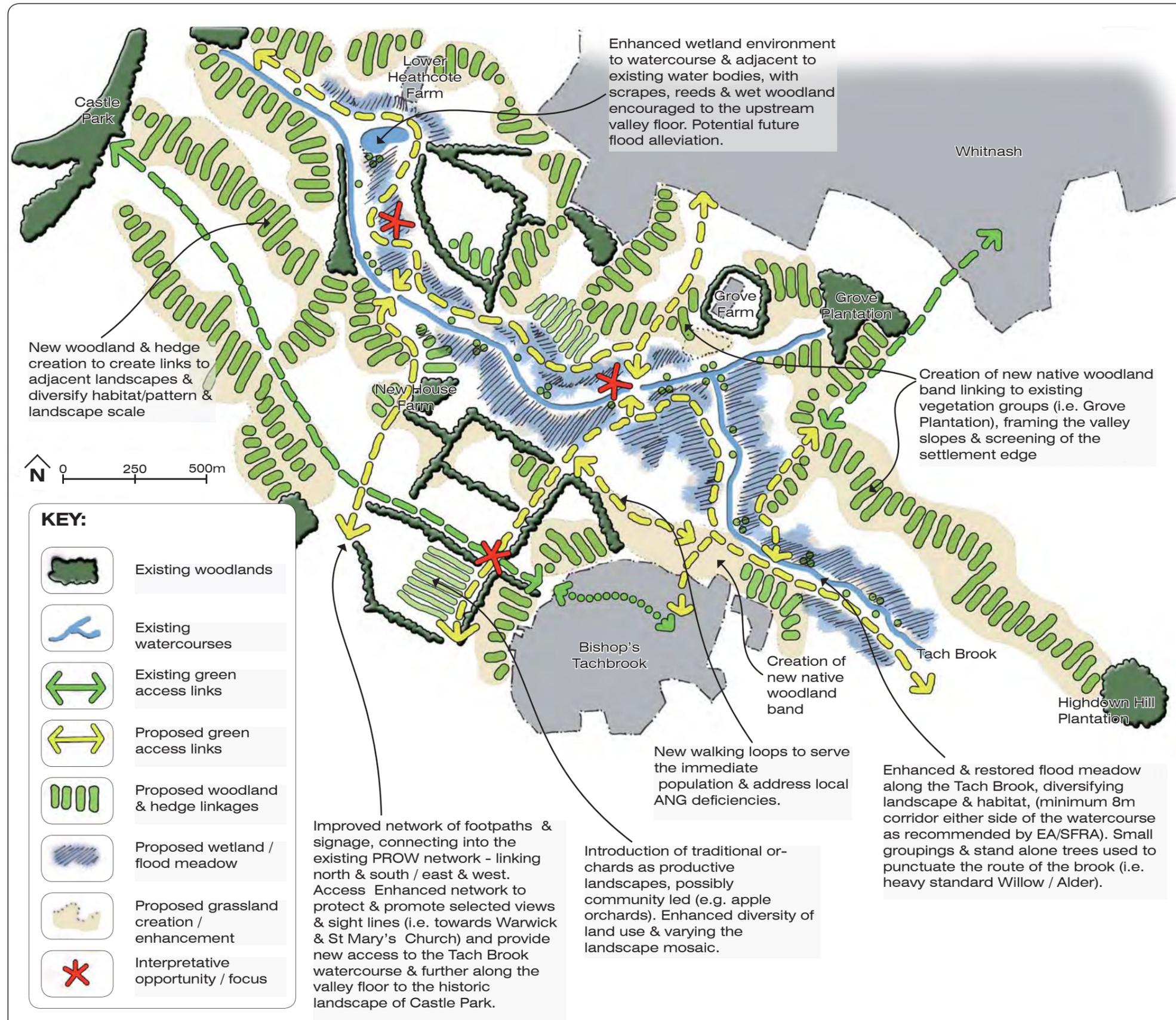
- 3.1 This final section outlines the key considerations for delivery of the seven GI opportunities. This has been informed by desk-based research into current funding streams, as well as consultation with the proposed lead organisations.

CONCEPT PLANS

- 3.2 To enable estimation of outline costs at a level which is useful to the Council, and to inform the Infrastructure Delivery Plan (IDP) and Community Infrastructure Levy (CIL), the GI opportunities have been developed spatially, through the creation of a concept design for each opportunity. This spatial development and concept design stage is recommended in the Natural England GI Guidance, and helps to determine the approximate size of the site, key infrastructure components, broad land uses and habitat types. This information has been used to inform outline costs for each opportunity.
- 3.3 The rationale and drivers for each GI opportunity are listed in the concept plans, overleaf. The concept plans also provide an outline description of each GI opportunity, and identify the project-specific delivery issues.
- 3.4 Concept design plans have been prepared for the following five GI opportunities, and are included overleaf.
- **Arden Landscape Enhancement:** We have developed an indicative 'bubble diagram' at 1:5000/1:2500 scale showing the main areas of enhancement potential and broad distribution of proposed landscape features to deliver objectives of Warwickshire Landscape Guidelines for a 1km square sample area of interest.
 - **Peri-urban park south of Leamington / Warwick / Whitnash:** We have developed indicative design principles and annotated bubble diagram/zoning plan for a 20ha community park, providing general information on broad spatial arrangement and character of potential spatial elements for outline/ball park cost estimates.
 - **Tree planting in urban areas:** The concept plan considers sample areas to outline indicative opportunities and constraints to tree planting and suggested principles, potential locations and size/grade of plant material for cost purposes.
 - **Tree planting and wetland habitats along the River Leam:** A 100m metre transect of an area of interest has been considered to indicate landscape restoration potential.
 - **Peri-urban park north of Kenilworth:** We have developed indicative design principles and an annotated bubble diagram/zoning plan for a 20ha community park, providing general information on broad spatial arrangement and character of potential spatial elements for outline/ball park cost estimates.
- 3.5 We have not developed concept plans for the following opportunities, for the reasons set out below:

- **Waverley Woods:** There was limited support for this project amongst the key stakeholders.
- **Cycleway east of Leamington:** Sustrans is already progressing this project, and it has been spatially defined.

WARWICK DISTRICT GREEN INFRASTRUCTURE PROJECT OPPORTUNITY : PERI-URBAN PARK, SOUTH OF LEAMINGTON / WARWICK / WHITNASH



Summary Description & Outline Project Specification

- Enhanced access & signage network to peri-urban park landscape setting of the Tach Brook, to the south of Whitnash, & the north of Bishop's Tachbrook.
- Low-key signage strategy (predominately directional) in keeping with rural setting & landscape ecological enhancements, (i.e. timber signs to routes & designated 'loops', & locally recognisable design - in accordance with the district guidelines). Interpretative signage included to identify areas of interest (e.g. the historic Windmill Hill).
- Existing footpath enhancement & creation - subject to "path hierarchy". Initial concept to upgrade existing PROW network to 1.8m wide, hoggin path, with new primary access routes (70%) as per PROW upgrades. Remaining proposed secondary paths (30%) to be 1.2m wide hoggin path.
- 2 No. new crossings to Tach Brook. 1 No. to be vehicular standard & the second for foot passengers only; design & style to be low key & in keeping with rural setting.
- Creation of native woodland bands, between existing plantations, including oak pollards plus broadleaf native woodland (oak-sweet chestnut transplants), at initial planting density of 1.5m centres, with pollards at 20m intervals.
- Creation/re-introduction of apple orchards.
- New hedge planting as per existing vernacular, Hawthorn & future potential re-introduction of Elm, (double staggered rows at 6m²). Hedges to be punctuated with native broad leaf specimens at average 60m centres.
- Creation of grassland & regeneration of field margins
- Creation of wet/flood meadows, wet woodland & wetland enhancement including scrapes along the Tach Brook.

Project Rationale & Drivers:

Delivery of grassland pasture, woodland & hedgerows providing greater diversity & sense of traditional enclosure links to the Feldon character area (Warwick Landscape Guidelines). Proposed buffer planting as woodland bands, orchards & hedging to reduce visual issues associated with adjacent existing / future development as part of the Landscape Character Assessment (LCA) for South of Warwick & Leamington; wetland creation along the Tach Brook will also address flood risk issues & help water quality in accordance with the LCA. Enhanced access & connections help address identified county scale ANG deficiency south of urban area. Extents of woodland creation to be determined through desktop/site survey work.

Issues Associated with Delivery:

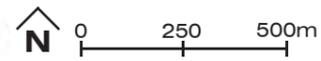
Issue of access within the park, especially flowing north to south across the Tach Brook, (DDA access will be difficult to achieve, if deemed appropriate). Need for landownership liaison & consultation with key stakeholders (e.g. EA), as project ideas develop into land uses & management requirements (e.g. proposals may need to be 'incentivised' through appropriate grant schemes such as Higher Level Stewardship - HLS). Need for a land survey to identify historic constraints, (refer to Historic Environment Records).

Possible Approaches to Delivery:

Project has potential to greater link the urban fringes of Leamington, Warwick & Whitnash to the wider Feldon landscape through improved access & sense of rural identity associated with the Warwickshire landscape. Delivery through potential development through CIL.

CONNECTED COUNTRYSIDE: CONCEPT FOR A COUNTRYSIDE PARK & SEMI NATURAL SPACE
SCALE: SEE SCALE BAR

WARWICK DISTRICT GREEN INFRASTRUCTURE PROJECT OPPORTUNITY : PERI-URBAN PARK, NORTH OF KENILWORTH



Creation of new/improved foot path link/loop from Coventry Way to relics of historic interest/interpretation potential (site of Bockendon Grange). 60% of route to use enhanced existing paths

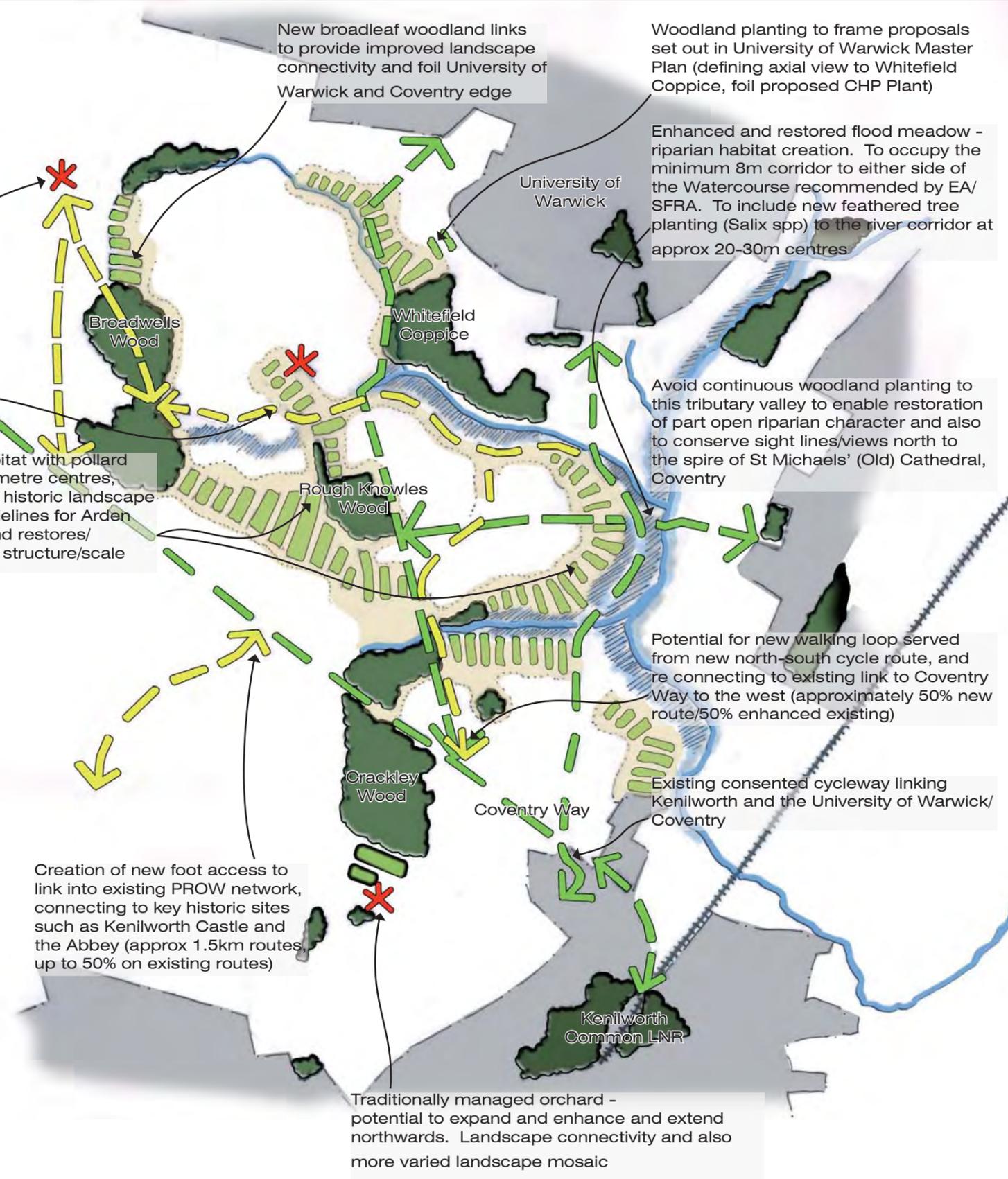
New foot access to track/path network at Broadwells Wood

New oak dominated wood-pasture habitat with pollard oaks planted at an initial density of 10 metre centres, plus acid grassland creation. Restores historic landscape character feature and responds to guidelines for Arden Parklands landscape character area and restores/re-connects historic 'assart' landscape structure/scale

KEY:

-  Existing woodlands
-  Existing watercourses
-  Existing green access links
-  Proposed green access links
-  Proposed woodland linkages
-  Proposed wetland / flood meadow
-  Proposed grassland enhancement
-  Interpretative opportunity / focus

CONNECTED COUNTRYSIDE: CONCEPT FOR A COUNTRYSIDE PARK & SEMI NATURAL SPACE
SCALE: SEE SCALE BAR



New broadleaf woodland links to provide improved landscape connectivity and foil University of Warwick and Coventry edge

Woodland planting to frame proposals set out in University of Warwick Master Plan (defining axial view to Whitefield Coppice, foil proposed CHP Plant)

Enhanced and restored flood meadow - riparian habitat creation. To occupy the minimum 8m corridor to either side of the Watercourse recommended by EA/SFRA. To include new feathered tree planting (Salix spp) to the river corridor at approx 20-30m centres

Avoid continuous woodland planting to this tributary valley to enable restoration of part open riparian character and also to conserve sight lines/views north to the spire of St Michaels' (Old) Cathedral, Coventry

Potential for new walking loop served from new north-south cycle route, and re connecting to existing link to Coventry Way to the west (approximately 50% new route/50% enhanced existing)

Existing consented cycleway linking Kenilworth and the University of Warwick/Coventry

Creation of new foot access to link into existing PROW network, connecting to key historic sites such as Kenilworth Castle and the Abbey (approx 1.5km routes, up to 50% on existing routes)

Traditionally managed orchard - potential to expand and enhance and extend northwards. Landscape connectivity and also more varied landscape mosaic

Summary Description & Outline Project Specification:

- Enhanced north-south links to & across the Coventry Way (pedestrians, cyclists & riders, linking in to Connect2 Kenilworth cycle route between Kenilworth & Berkswell, to create new cycle loop (hoggin cycle path at 2.4m width)
- Bridleway & footpath enhancement as shown on Sketch Plan on the left (1.6m width, in Hoggin)
- Creation of new areas of wood-pasture including new oak pollards plus broadleaf native woodland (oak-sweet chestnut) at initial planting density of 1.5m centres, with pollards at 20m intervals
- Creation of new acid heathland/grassland & regeneration of existing to field margins as shown on sketch plan on left
- Creation of wet meadows to woodland & wood - pasture fringes, including scrapes
- Creation of extensions to existing apple orchards as shown
- Low key signage strategy: Interpretation provision in relation to key sites & features of interest within the park boundary/accessible via links: Enhancement of signage to ancient woodlands, disused railway line, and parkland landscapes /park pale etc associated with Kenilworth Castle and lands to the south
- Wetland enhancement and restoration of riparian pasture to tributary brook of the Sowe to the east, including new scrapes and flood meadow creation

Project Rationale & Drivers:

Delivery of woodland creation & linkage objectives as set out in the landscape strategy for the Arden Parklands character area within the Warwickshire Landscape Guidelines - an integrated approach to future-proofing the landscape and re connect features in the face of climate change. Enhanced linkage to countryside & green transport connections to help address identified county scale ANG deficiency north of Kenilworth. Potential contribution to Woodland Strategy & Forestry Commission Quality of Place woodland creation target areas, as site lies in a priority area for woodland creation. Potential contribution to Warwickshire Wildlife Trust Living Landscapes objectives for Arden.

Issues Associated with Delivery:

Issue of access to and from the Coventry Way (equal/DDA compliant access difficult). Need for land ownership liaison and consultation as project ideas develop into resolved proposals (role for WWT and FWAG), particularly for management changes/economics associated with these (e.g. that potential creation of grazed wood-pasture and heathland needs to be 'incentivised' through grant scheme such as Higher Level Stewardship - HLS or English Woodland Grant Scheme - EWGS). Land and archaeology surveys will be needed to inform any design development, as will reference to the HER - identify archaeological constraints and mitigation. Need also for cross authority liaison re: growth and associated GI delivery (Coventry).

Possible Approaches to Delivery:

Project has potential to form part of a wider land management initiative to conserve, enhance & restore the historic landscape character of Arden, linked to possible branding project about discovering the heritage & character of the Forest of Arden (potentially with NE/FC/WWT). Project could in part be delivered through CIL in relation to future growth at Coventry (potential for Warwick District as project lead). University of Warwick potential delivery partner.

WARWICK DISTRICT GREEN INFRASTRUCTURE PROJECT OPPORTUNITY : ARDEN LANDSCAPE ENHANCEMENT

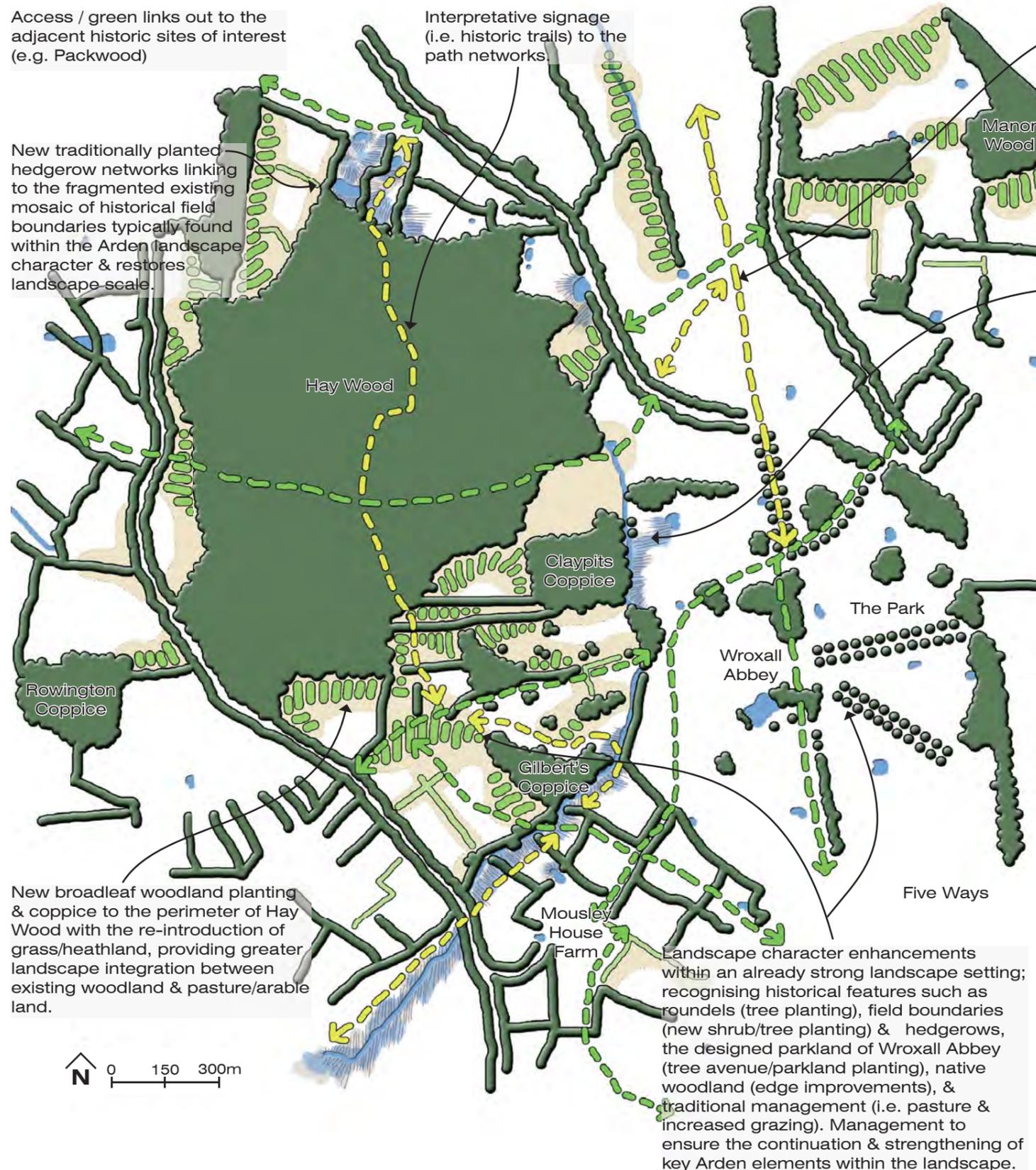
Access / green links out to the adjacent historic sites of interest (e.g. Packwood)

New traditionally planted hedgerow networks linking to the fragmented existing mosaic of historical field boundaries typically found within the Arden landscape character & restores landscape scale.

Interpretative signage (i.e. historic trails) to the path networks.

Improved footpath network, connecting into the existing PROW network & using existing landscape features & views to enhance the user experience (i.e. designed landscape at Wroxall Abbey).

Enhanced wetland environment within existing network of water bodies, ponds & streams. Enhanced & restored wet meadow, wet woodland - riparian habitat creation & landscape diversification. Potential future flood alleviation benefits.



New broadleaf woodland planting & coppice to the perimeter of Hay Wood with the re-introduction of grass/heathland, providing greater landscape integration between existing woodland & pasture/arable land.

Landscape character enhancements within an already strong landscape setting; recognising historical features such as roundels (tree planting), field boundaries (new shrub/tree planting) & hedgerows, the designed parkland of Wroxall Abbey (tree avenue/parkland planting), native woodland (edge improvements), & traditional management (i.e. pasture & increased grazing). Management to ensure the continuation & strengthening of key Arden elements within the landscape.

KEY:

	Existing woodlands
	Existing watercourses
	Existing green access links
	Proposed green access links
	Proposed woodland linkages
	Proposed wetland / flood meadow
	Proposed grassland enhancement
	Interpretative opportunity / focus

Summary Description & Outline Project Specification

- Enhanced woodland edge to Hay Wood & other pockets of woodland, creating an improved transition & greater integration within the landscape from arable/pasture to woodland, (including new oak pollards plus broadleaf native woodland (oak-sweet chestnut) at initial planting density of 1.5m centres, with pollards at 20m intervals).
- Field landscape scale improvements, with new hedgerows to reflect historical land ownership & the assarting of woodland (e.g. hedge rows to be Hawthorn, double staggered rows at 6/m², with intermediate Oak standards).
- Recognition & enhancement of the historic parkland / designed landscape of Wroxall Abbey.
- Existing footpath enhancement & creation - upgrade existing PROW network to 1.2m wide hoggin path (where appropriate), with new access routes to match upgrades, (feasibility/further consideration to scale & surface required to Wroxall Abbey). Historic interpretation signage package to path trails.
- Enhanced wetland environment as an extension of existing water bodies, ponds & wooded streams. Increased habitat creation & wet woodland restoration.
- Grassland/heathland creation & enhanced pasture.

Project Rationale & Drivers:

Delivery of new native woodland & character enhancements link to the objectives for a unified landscape set out in the landscape strategy for the Arden Parklands character area within the Warwickshire Landscape Guidelines - creating greater unification with enhanced woodland character. Woodland creation & enhancement to Hay Wood satisfies the aims of the Forestry Commission, Warwick Wildlife Trust (for habitat) & the Woodland Trust (More Woods Project). New woodland coppice management opportunities for production. Areas of heathland & grassland regeneration would enhance & restore habitats as set out in the Local Biodiversity Action Plan. Enhancing/restoring the existing parkland setting of Wroxall Abbey links to the objectives of the WLG. Potential contribution to WKWT Living Landscapes objectives for Arden through localised wetland habitat creation.

Issues Associated with Delivery:

Dependant on landownership negotiation to management changes & enhancement objectives for the Arden landscape - uptake of relevant schemes (i.e. HLS & WGS). Delivery likely to come through a range of mechanisms with regards to parkland restoration, woodland creation, coppice woodland, grassland/heathland creation & wetland habitat formation. Need for partnership working & designated project lead (the district) to oversee delivery of a cohesive vision/palette for the different aspects. Where access is provided, appropriate surfacing & widths within the landscape setting is likely to limit DDA compliance. Need for a land survey to identify historic constraints, (refer to Historic Environment Records).

Possible Approaches to Delivery:

Funding bodies (i.e. Forestry Commission & Natural England) to be identified through project lead to provide potential funds for native woodland/habitat creation through schemes such as the Woodland Grant Scheme & HLS. Historic Arden parkland restoration projects (e.g. Wroxall Abbey) to demonstrate potential for Heritage Lottery Funding (i.e. community participation, historic interpretation & access).

CONNECTED COUNTRYSIDE: CONCEPT FOR ENHANCEMENTS FOR THE ARDEN LANDSCAPE SCALE: SEE SCALE BAR

WARWICK DISTRICT GREEN INFRASTRUCTURE PROJECT OPPORTUNITY : RIVER LEAM TREE PLANTING AND WETLAND HABITAT CREATION

Key ridgeline - conserve open, elevated views over Leam Valley (e.g. that valley should not become a woodland landscape)

Opportunities for creation of (wet) woodland linkages in selected parts of the Leam Valley Floor to help intercept run off upstream of Leamington. Footprint should be of a minimum of 1ha to allow development of even age structure. Locations should target areas where linkage of existing woodland is beneficial for landscape character and habitat connectivity - a varied wetland landscape mosaic, rather than blanket woodland creation. Woodland planting should also be located to help maintain visual relationships with the parkland at Offchurch Bury.

Opportunities for broadleaf woodland to valley crests to provide definition and restore/re connect landscape character, as well as intercept run off. Minimum 1ha footprint allows development of even age structure to develop and optimise run off collection capability

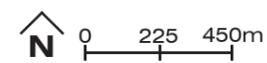
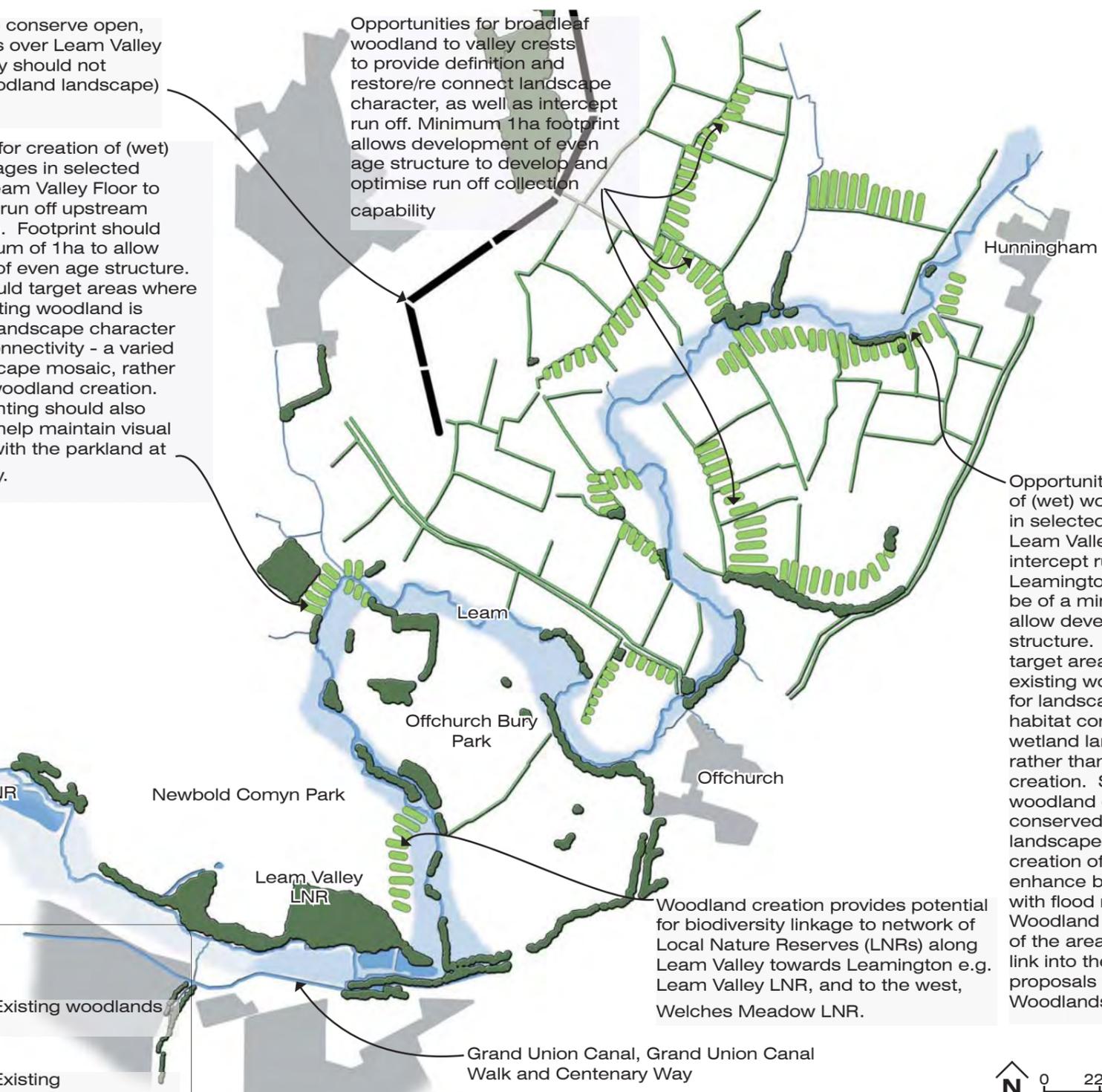
Opportunities for creation of (wet) woodland linkages in selected parts of the Leam Valley Floor to help intercept run off upstream of Leamington. Footprint should be of a minimum of 1ha to allow development of even age structure. Locations should target areas where linkage of existing woodland is beneficial for landscape character and habitat connectivity - a varied wetland landscape mosaic, rather than blanket woodland creation. Such localised woodland creation should be conserved as part of a whole landscape approach, with creation of wetland scrapes to enhance biodiversity and help with flood risk management. Woodland creation in the north of the area, as here, can also link into the Living Landscape proposals for Princethorpe Woodlands, to the north.

Woodland creation provides potential for biodiversity linkage to network of Local Nature Reserves (LNRs) along Leam Valley towards Leamington e.g. Leam Valley LNR, and to the west, Welches Meadow LNR.

Grand Union Canal, Grand Union Canal Walk and Centenary Way

KEY:

-  Existing woodlands
-  Existing watercourses
-  Proposed woodland linkages



Summary Description

- Identification of broad opportunities for new woodland planting for landscape connectivity and to aid flood risk management functions in Leam Valley
- Opportunities for new broadleaf and wet woodland (floodplain woodland) are identified in terms of landscape character and connectivity
- Where wet woodland is created this should form part of a linked set of wetland improvements e.g. creation of wet scrapes and enhanced flood meadows, to also contribute to landscape character and biodiversity
- Further investigations will be needed including with hydrologists and arboriculturists, to develop a more resolved scheme
- Enhanced access links could be considered as part of the development of the project

Project Rationale & Drivers:

Project can help contribute to upstream alleviation of flood risk in Leamington (as identified in Strategic Flood Risk Assessment and by stakeholders). Potentially complements objectives for riverine quality in the Water Framework Directive and River Severn Basin Management Plan. Landscape connectivity, enhancement and woodland linkage are complementary to strategy for the Dunsmore Plateau Fringe character area in the Warwickshire Landscape Guidelines. Project can also complement landscape scale restoration objectives of the Warwickshire Wildlife Trust's Living Landscapes Project (links to Princethorpe Woods Living Landscape Scheme). Is also cross complementary with Woodland Trust aspirations for new broadleaf woodland creation.

Issues Associated with Delivery:

Further survey and investigation such as local level flood modelling and calculations of viable woodland areas, needed, to determine final/optimum locations. Need to refer to Historic Environment Record and undertake land and archaeology surveys to identify any archaeological constraints/appropriate mitigation. Further local level/finer grain landscape character assessment, within the strategic framework set by the Warwickshire Landscape Guidelines would also be useful. Project would require liaison with Environment Agency in relation to any large scale planting in the catchment and the flood plain. Land ownership negotiation is the other key issue, as is the take up of relevant grant aid schemes such as Higher Level Stewardship (HLS)/English Woodland Grant Scheme (EWGS).

Possible Approaches to Delivery:

Project has potential to form part of a wider countryside management initiative to conserve, enhance & restore the Leam Valley landscape - a partnership approach involving Warwickshire Wildlife Trust, Woodland Trust, Warwick District, the Environment Agency and landowners. With inclusion of an enhanced access provision as part of the project, Warwickshire County Council Rights of Way Team could form part of the partnership. Otherwise aspects could be delivered on a phased basis, through promotion of uptake of HLS/EWGS grant schemes.

RIVER LEAM FLOOD ALLEVIATION TREE PLANTING : LANDSCAPE CONCEPT
SCALE: SEE SCALE BAR

Below are some guiding principles for tree planting in relation to townscape character/for retrofitting urban street trees, for new tree planting in development, and ideas about long term strategies to maintain tree cover in Warwick District's towns.

Box 1: Townscape character: Retrofitting and adaptation



Lower density traditional residential suburbs (street: building proportions of 1:4 or greater, as in the sketch sections above) present greatest **opportunities for retrofitting:**

A continuous tree line is desirable for character and urban biodiversity - aim to plant larger grade street trees aligned to plots/at **10-15 metres centres** to reinforce this established streetscape character/visual identity. This would also assist in **protecting amenity, and avoiding shadowing.**

Appropriate tree grades to provide visual continuity for gap filling/replacement: **Use of semi mature plant material of at least 14-16 cm girth** (typical clear stem height of such specimens would be 4.25 - 6.00m, to provide improved resistance to urban conditions e.g. vandalism, trafficking and parking

The above principles also apply to new build/public realm associated with commercial/retail sites.

Box 2: Possible long term strategies for maintaining urban tree cover/'green' roofscapes in the district

An approach to a possible tree strategy would need to be widely consulted upon at brief development stage - below are guidelines/initial points to consider:

Survey:
Tree surveys:
 To BS 5837:2005:
 -Tree quality
 -Condition
 -Life expectancy
 -Identify dead/dying/dangerous trees



Analysis: Assess trees' contribution to amenity:
Tools to use:
 -Townscape character assessment
 -Neighbourhood Plan
 -Map regression analysis
 -Stakeholder/community views and values
Consider also :
 -Designated/legal status of trees
 -Value of ecosystem services provided by trees



Plan: Opportunity assessment:
 -Identify areas for action, and phasing and whether part/full replanting



Develop and consult on Tree Strategy

New urban public realm trees:
 Replacement planting schemes should draw from **comparable/associated species**, or climate change adapted equivalents, using semi mature grade planting of minimum 14-16 cm girth, preferably 16-18/18-20, e.g. to withstand trafficking. Such trees should be double staked or cost allowing, preferably underground guyed, and fitted with proprietary tree grilles and irrigation tubes. **Factor in a minimum of 3 years' aftercare post planting.**

Summary Description

- Development of initial principles for urban tree planting, to provide shading and cooling, townscape character enhancement and urban biodiversity
- Consideration of outline specifications for appropriate grades of public realm tree planting
- Providing messages for developers on type and level of tree planting appropriate for GI/place led development masterplanning
- Guide level of investment for CIL charging schedule
- Project also sets out formative steps for planning to maintain long term tree cover, within initial pointers towards an approach for a Tree Strategy for the district

Project Rationale & Drivers:

An extensive level of very high quality tree cover characterises much of the district's urban environment, although this is over mature and there is currently no co ordinated programme for management or replacement. Therefore there is a need to sustain good levels of tree cover not only for GI benefits but also in terms of sense of place. This needs to be both through principles for new tree planting and through consideration of strategies for maintaining long term tree cover and this aspect of urban character.

Issues Associated with Delivery:

New urban tree planting requires liaison with county/highways authority and with service/utilities providers, particularly where retrofitting options are being considered. Need for a strong policy position, drawing from/building upon messages in these principles to set out tree planting requirements of developers. Also to set out requirement for appropriate grade of structural GI in CIL charging schedules. Consultation and brief development needed on a formal Tree Strategy to plan for long term tree cover in the district towns. Implementation of such a strategy dependent on perception/community support/good public relations.

Possible Approaches to Delivery:

Potential for the district to lead a district wide approach to delivery of urban trees in towns and smaller settlements, through co ordination of bid to National Tree Planting Fund, and liaison with parishes and local groups. Otherwise public realm tree funding will occur at district level, other than by developer/retailer led schemes. The Woodland Trust may be another potential partner re: fund brokering, particularly if tree planting schemes can help increase connectivity between broadleaf woodlands (e.g. considering landscape and townscape interface).

Box 3: Tree planting principles for development

Planting distances and sizes – amenity and shadowing, safety/permeability, sense of place, microclimate

Keep at least **3m depth between pedestrian paths and tree boles for standard width shared use paths of 2.4-2.6 metres** (to avoid over shadowing), with smaller distance of 1m and 700mm for larger specimen shrubs and clipped hedges respectively where these form part of the planting scheme.

Tree planting in urban parks: Seek to allow at least 8-10m clear/unshaded space between groups of tree canopies, to provide usable informal space for individuals/groups.

Building shadowing: To avoid unnecessary shadowing to dwellings seek to allow for a distance of half the mature tree’s height from buildings, to provide appropriate stand off in light of shadowing. This principle is recognised in BS 5837: 2005.

Suggested principles for tree planting in relation to development density and layouts are set out under Landscape Integration and Visual Foiling, below

The sketch sections below show key principles to plan for visual integration between new settlement edges and wider landscape, based on landscape pattern and scale in the wider landscape (for example in the Arden character area, connecting woodland belts of 20-30m in width provide a template for new landscape belts to settlement edges). A 20-30m band allows for creation of multi functional landscape corridors, e.g. incorporation of pedestrian/riding/cycle routes, series of different spaces and sequences, different planting types and management regimes – e.g. to provide foiling/dappling rather than blanket screening. In addition to application of BS 5837:2005 for protection of existing plant material, consideration should also be given to development layout and porosity to settlement edges in particular to allow for meaningful levels of new planting for character, setting and connectivity – landscape bleeding in to townscape, reducing edge density to below 30 dph, whilst potentially increasing elsewhere, to allow for greater level of tree planting/larger grade native material, emphasising ‘forested’ Arden landscape character. This approach would also allow a greater level of tree planting in new front gardens. If densities cannot be reduced, developers should make greater allowances for foundation depth in scheme design to enable this principle to be reflected in development schemes.

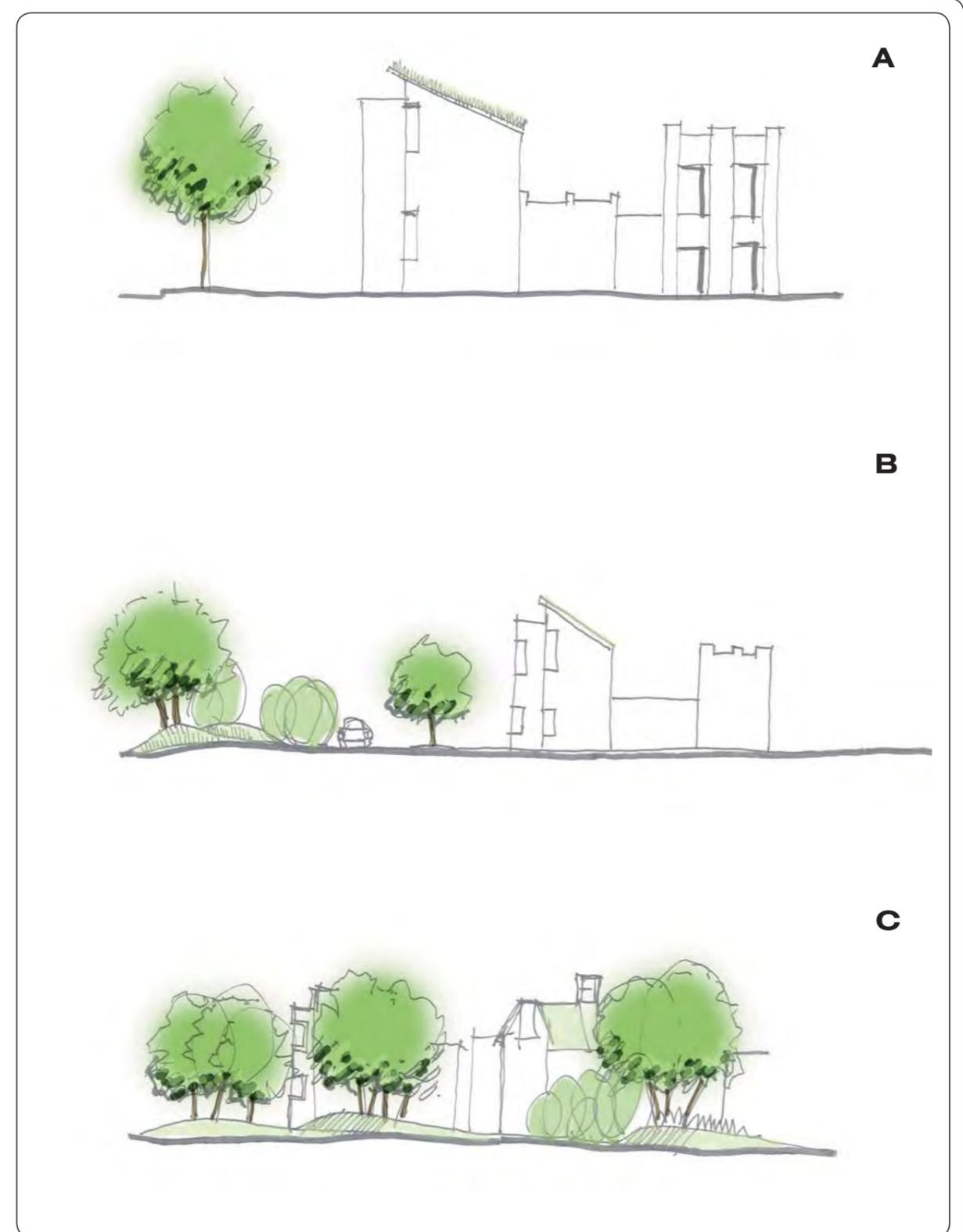
Potential specifications for new public realm tree planting

For robustness, use advanced nursery stock/semi mature grade planting of minimum 14-16 cm girth, preferably 16-18/18-20, e.g. to withstand trafficking. Such trees should be double staked or cost allowing, preferably underground guyed, and fitted with proprietary tree grilles and irrigation tubes. Tree planting schemes should factor in a minimum of 3 years aftercare (general maintenance and irrigation to establishment).

Landscape integration and visual foiling

As well as application of BS 5837:2005 for protection of existing plant material, scheme designers should consider development layout to settlement edges to allow for meaningful levels of new planting for character, setting and connectivity, considering edge density reductions to below 30dph (**Sketch Section A**), to allow for larger grade native tree planting. Alternatively, accommodate greater foundation depth in scheme design. Ideally the principle of a level of native planting of species that respects wider landscape context should be established at project feasibility/concept, and that other guidance used by developers (e.g. NHBC standards) should work within this principle, rather than be used to dictate level of planting delivered on site.

Sketch sections B and C show this principle in context, e.g development edge as a response to wider landscape pattern and scale (type, level and stature of planting). For example in the Arden landscape character area, connecting woodland belts of 20-30m in width can provide a template for new landscape belts to settlement edges (**Sketch Section B**). A 20-30m band allows for creation of multi functional landscape corridors, e.g. incorporation of pedestrian/riding/cycle routes, series of different spaces and sequences, different planting types and management regimes and land shaping – e.g. to provide foiling/dappling rather than blanket screening. (**Sketch Section C**).



PROJECT COSTS

- 3.6 We have used the concept plans shown above to identify approximate costs for each GI opportunity. Both the capital investment costs for delivering the GI opportunity, and the anticipated revenue costs for maintenance and management are provided. However, these costs are indicative only, and detailed cost assessment will be required prior to delivery, reflecting the project masterplan.
- 3.7 **Tables 3.1 and 3.2** below provide a summary of the indicative capital and maintenance costs for each of the five projects, with more detailed information provided in **Appendix 3**.

Table 3.1: Summary of capital costs

Main summary			
Project Title		Project scope	£
1	Peri-urban, south of Leamington / Warwick / Whitnash, Warwick, Whitnash	Path improvements, new paths and edgings, new native, woodland planting, directional signage and interpretation, sign boards, orchard planting, new hedgerows, grassland enhancement, wetland improvements.	£1,484,000
2	Peri-urban park, north of Kenilworth	Path improvements, new paths and edgings, new native woodland planting, directional signage and interpretation sign boards, orchard planting, grassland enhancement, wetland improvements.	£985,000
3	Arden Landscape enhancement	Path improvements, new paths and edgings, new native woodland planting, directional signage and interpretation sign boards, new hedgerows, grassland enhancement, wetland improvements.	£886,000
4	River Leam tree planting and wetland habitat creation	New broadleaf and wet woodland tree planting, wetland improvements, scrapes, enhanced flood meadows.	£385,000
5	Urban tree planting	Provision of unit costs for new tree planting, staking, underground guying, tree grilles, irrigation tubes, etc. The Council may wish to prepare a tree strategy to ensure that planting targets the most suitable locations, and delivers appropriate species.	N/A (per unit approach)

Table 3.2: Summary of outline annual maintenance costs

Main summary			
Project Title		Project scope	£
1	Peri-urban, south of Leamington / Warwick / Whitnash, Warwick, Whitnash	Management and maintenance of paths, native woodland planting, directional signage and interpretation boards, orchard planting, hedgerows grassland and wetlands.	£293,222
2	Peri-urban park, north of Kenilworth	Management and maintenance of paths, native woodland planting, directional and interpretation sign boards, orchard planting, grassland and wetlands.	£139,676
3	Arden Landscape enhancement	Management and maintenance of footpaths, native woodland planting, directional signage and interpretation sign boards, hedgerows, grassland and wetlands.	£137,030
4	River Leam tree planting and wetland habitat creation	Management of broadleaved and wet woodland tree planting, wetlands, scrapes, flood meadows.	£326,421
5	Urban tree planting	Provision of unit costs for maintenance of establishment of urban trees.	£140 (cost per tree)

POTENTIAL FUNDING

- 3.8 Desk-based research and consultation with stakeholders/lead partners has identified a number of funding approaches and specific funding streams which may be suitable to support delivery of the GI opportunities across Warwick District. We have reviewed these funding streams to highlight whether they might be suitable for each of the seven projects, and listed the details in **Table 3.3** below. A wider range of funding streams and options are detailed in **Appendix 2**. This information should support the project leads in their delivery of each GI opportunity.
- 3.9 Much of the proposed GI initiatives will be dependent on growth and regeneration in the District, and the new CIL approach should enable the Council to allocate funds secured through development to GI initiatives across the District, if it is shown that there is a need. External funding streams should not be viewed as a source of funding in the long term however, and in general should only be relied upon to contribute to delivery rather than maintenance. The Council should aim to secure funding from a range of sources and external funding streams should be used to supplement funding secured by the District through developer contributions/CIL. In addition, the District should work with partners to identify commercial opportunities associated with each GI proposal, in order to ensure that GI projects are as self-sufficient as possible.

Table 3.3: GI opportunities and suitable funding

GI Opportunity	Suitable funding approaches	Potential funding streams	Deliverability?
1. Enhance Arden landscape and fragmented woodland resource	<ul style="list-style-type: none"> Partnership working Landscape enhancement funding streams Woodland and agriculture funding streams 	<ul style="list-style-type: none"> English Woodland Grant Scheme Environmental Stewardship Heritage Lottery Fund Jubilee Woods Project More Woods Project 	<ul style="list-style-type: none"> Partners supportive, but will need to negotiate and agree approach with numerous landowners. Negotiation and partnership with major landowners will be key. Land has multiple owners and may need to be incentivised through schemes such as HLS or EWGS.
2. Create peri-urban park to south of Leamington / Warwick / Whitnash to alleviate open space deficiency	<ul style="list-style-type: none"> National funding streams DEFRA Biodiversity Offset Pilot Regional Growth Fund S106 Developer contributions CIL 	<ul style="list-style-type: none"> English Woodland Grant Scheme Environmental Stewardship Heritage Lottery Fund 	<ul style="list-style-type: none"> Land has multiple owners and may need to be incentivised through schemes such as HLS. The Environment Agency should be consulted in regard to the Tach Brook.

GI Opportunity	Suitable funding approaches	Potential funding streams	Deliverability?
3. Tree planting across urban areas	<ul style="list-style-type: none"> • WDC funding • Local community fund-raising • National initiatives, particularly Woodland Trust. 	<ul style="list-style-type: none"> • Defra Big Tree Fund • Tree Packs for Communities 	<ul style="list-style-type: none"> • Public and town councils would need to be consulted. • Local community groups have already expressed enthusiasm to fund-raise and help deliver this project. • The WCC Highways Team WCC would need to be engaged on this project. • The benefits of planting trees in towns should be promoted. • This aspiration should be delivered in part through a requirement to incorporate trees in new development and in part through tree planting incentives such as those listed.
4. Habitat creation upstream on River Leam	<ul style="list-style-type: none"> • Partnership working • Landscape enhancement funding streams • Woodland and agriculture funding streams • Higher Level Stewardship • DEFRA Biodiversity Offset Pilot 	<ul style="list-style-type: none"> • English Woodland Grant Scheme • Environmental Stewardship • Heritage Lottery Fund • Jubilee Woods Project • More Woods Project 	<ul style="list-style-type: none"> • Consultation with the Environment Agency is required to agree appropriate locations for creation of different habitats. • Further investigation on specific local flooding patterns and modelling is required. • The Warwickshire Landscape Guidelines and the Forestry Commissions' Woodland Opportunity Map' should be used to inform specific locations. • Land has multiple owners and may need to be incentivised through schemes such as HLS or EWGS.
5. Create peri-urban park to north of Kenilworth to alleviate open space deficiency	<ul style="list-style-type: none"> • National funding streams • DEFRA Biodiversity Offset Pilot • Regional Growth Fund • S106 Developer contributions • CIL 	<ul style="list-style-type: none"> • English Woodland Grant Scheme 	<ul style="list-style-type: none"> • Access should be a key consideration due to proximity to urban areas and location as key link between residential areas and university. • Negotiation and partnership with major landowners will be key. • Land has multiple owners and may need to be incentivised through schemes such as HLS or EWGS. • Cross-boundary partnership with Coventry should be considered.

LEAD PARTNERS

- 3.10 Following consultation with the steering group and project stakeholders, a number of prospective delivery organisations for the seven projects have been identified. The organisations listed have expressed an interest in involvement in the project delivery, or support for the concept. The proposed lead organisations are listed in **Table 3.4**, overleaf.
- 3.11 It should be emphasised that these projects are still at the outline/draft stage, and the organisations listed have not committed to delivery at this stage. This report should form the basis of further consultation and partnership with the listed organisations, in light of available funding opportunities, initiatives and proposed growth in the District.

Table 3.4: Delivery partners

GI Opportunity	Project outline	Lead organisation(s)	Supporting organisations
1. Enhance Arden landscape and fragmented woodland resource	This is a landscape scale project which reflects a whole landscape character area. There are several organisations interested in involvement, due to either land ownership (Forestry Commission) or inclusion of the area within other initiatives (Wildlife Trust). It should be delivered through a range of different mechanisms, including securing funding and improvements through planning conditions.	<ul style="list-style-type: none"> • Warwickshire County Council (Ecology) • Forestry Commission 	<ul style="list-style-type: none"> • Warwick District Council • Woodland Trust • Warwickshire Wildlife Trust
2. Create peri-urban park to south of Leamington / Warwick / Whitnash to alleviate open space deficiency	The aim is to relieve open space deficiency and improve quality of life in the area of south Leamington, Warwick and Whitnash, although delivery is likely to be reliant on housing delivery. The pressure for growth is significant here, and WDC feel that this project could be funded by development. This project could form part of the sub-regional aspiration to enhance access across the District from north to south.	<ul style="list-style-type: none"> • Warwick District Council 	<ul style="list-style-type: none"> • Woodland Trust • Natural England
3. Tree planting across urban areas	The project would increase tree cover in the main conurbations, enhancing the townscape and the key functions that street trees provide. Great potential to deliver benefits to people and environment, and relevant funding streams are available.	<ul style="list-style-type: none"> • Warwick District Council • Warwickshire County Council (Rural services) 	<ul style="list-style-type: none"> • Forestry Commission • Woodland Trust • Warwickshire Wildlife Trust
4. Habitat creation upstream on River Leam	The project would aim to alleviate flood risk, increase natural resources, enhance landscape and create new areas for recreation. The Environment Agency is already considering tree planting in this part of the district, and would be a key partner in this project.	<ul style="list-style-type: none"> • Warwickshire Wildlife Trust • Environment Agency • Warwick District Council 	<ul style="list-style-type: none"> • Woodland Trust • Warwickshire County Council • Forestry Commission

GI Opportunity	Project outline	Lead organisation(s)	Supporting organisations
5. Create peri-urban park to north of Kenilworth to alleviate open space deficiency	The creation of a peri-urban park here would help to link and consolidate existing green infrastructure assets in the area such as the rights of way and woodlands, and utilise this thin green buffer between Kenilworth and Coventry. This area already has good provision of green space, although there are deficiencies in Accessible Natural Greenspace, as shown in the GI Study. However, the need for new green space is more acute to the South of Leamington / Warwick / Whitnash.	<ul style="list-style-type: none"> • Warwickshire Wildlife Trust • FWAG 	<ul style="list-style-type: none"> • Forestry Commission • Woodland Trust • Natural England
6. Create open space at/near Waverley Wood	The Forestry Commission would support extension of the Weston Wood, which they have freehold rights to, through creating new woodland with public access, or the creation of permissive paths to link to Weston Wood. The freeholder of other parts of Waverley Woods does not wish to increase public access. This could link up with the Princethorpe Woodland Complex initiative led by the Wildlife Trust.	<ul style="list-style-type: none"> • Forestry Commission • Warwickshire Wildlife Trust 	<ul style="list-style-type: none"> • Hanson Aggregates (operate nearby) • Warwick District Council
7. Strategic cycle route east of Leamington along disused railway	There is potential to enhance this route by bridging a road at Fosseway which currently acts as a barrier to completion. Sustrans manages this route and due to budget constraints currently plans to divert the route along quiet lanes (past Draycott Water) in the short/medium term.	<ul style="list-style-type: none"> • Sustrans • Warwickshire County Council 	<ul style="list-style-type: none"> • Warwick District Council

TIMESCALES

3.12 The timescales for the delivery of each of these GI opportunities will be dependent on the funding secured, and also related to planned urban development in the District. We have categorised the seven GI opportunities as short, medium or long term aspirations below. These categories reflect the following timescales:

- **Short term:** 0-5 years
- **Medium term:** 5-10 years
- **Long term:** 10+ years

Table 3.5: Project timescales

GI Opportunity	Timescale	Comments
1. Enhance Arden landscape and fragmented woodland resource	Medium term	As mentioned above, this opportunity is likely to be delivered through a wide range of mechanisms, and will therefore be delivered incrementally over a period of time. However, there is considerable stakeholder support for this initiative, and it is expected that this support will enable delivery in the medium term.
2. Create peri-urban park to south of Leamington / Warwick / Whitnash to alleviate open space deficiency	Medium term	Implementation of this opportunity will be very much dependent on the timing and extent of residential development to the south of Leamington / Warwick / Whitnash and within the District once the level of growth has been decided.
3. Tree planting across urban areas	Medium term	There is a recognised need to replace the mature street trees in Leamington and Warwick, and as such this project should be prioritised and implemented in the short term. In addition, several stakeholder organisations have expressed support for this initiative, and there are some funding streams available.
4. Habitat creation upstream on River Leam	Medium term	Research into this initiative is already underway by the Environment Agency. This is likely to be a pilot project, but the Environment Agency has not confirmed timescales for delivery.
5. Create peri-urban park to north of Kenilworth to alleviate open space deficiency	Medium term	Whilst there are recognised benefits to enhancing access at this location, there is already fairly good open space provision in this part of the District. As such, the funding and impetus to deliver this opportunity is likely to come if residential growth is planned for this part of the District.

GI Opportunity	Timescale	Comments
6. Create open space at/near Waverley Wood	Long term	This opportunity received less support from stakeholder organisations, and for that reason is probably not a priority for the District in the short term. It is also a strategic project for which significant funding would need to be secured.
7. Strategic cycle route east of Leamington along disused railway	Short term	Sustrans is already in the process of delivering this opportunity. The western part of the route will be delivered in the short term. There is a barrier to a continual route at Fosseyway, due to a road which needs to be bridged. Due to budget constraints Sustrans intend to divert the route along quiet lanes (past Draycott Water) in the short/medium term.

DELIVERY PRINCIPLES

Delivering GI benefits

- 3.13 The 2010 Warwick District Green Infrastructure Study identifies a number of benefits of green infrastructure, as listed below. The delivery of these opportunities should maximise delivery of these benefits, and reflect the Natural England GI Guidance (2009).
- Provide opportunities for a **healthy and diverse wildlife and ecosystems**, and shifting species populations due to climate change driven migration
 - **Help mitigate the effects of, and adapt to, a changing climate**, through measures such as flood alleviation and drainage schemes; provision of outdoor shady space; opportunities for production of biomass crops and species for soaking up carbon dioxide
 - Enable opportunities for **informal recreation and access to nature**, which can lead to improvements in health and quality of life
 - Create places for **community activity, social interaction, education and rehabilitation**
 - Provide opportunities for understanding, promoting and managing the **historic environment**
 - Provide **sustainable alternatives to motorised transportation** through green transport corridors, where cycling and walking can take place
 - Provide areas for local and **community based food production**.

Key delivery principles

3.14 In addition to delivering the benefits as highlighted in the Warwick District GI Study, the delivery of green infrastructure in the District should reflect the following key principles:

- **Sustainable:** Green infrastructure should be designed and delivered sustainably, with minimal use of natural resources, designed to be low maintenance wherever possible, and incorporate renewable energy use where possible. Delivery should be cost effective, and should be designed to deliver social benefits appropriate to the surrounding community.
- **Multifunctional:** Most GI contributes more than one function. The desired functions of each green space should be considered and management should be designed to ensure a balance between the sites key functions.
- **Integrated:** Warwick's District's green infrastructure network should be integrated, with adjoining green spaces and links, and with nearby community centres and focal points such as town centres, schools and residential areas.
- **Climate change adapted:** Where possible, green infrastructure should be designed and managed both to help alleviate the effects of climate change on Warwick District, and to withstand the effects of climate change on the green infrastructure network itself.
- **Quality:** All green infrastructure should be designed to be high quality, in terms of appearance, access provision and/or wildlife habitat provision as appropriate. Best practice standards should be referred to in design and enhancement of sites, including the Green Flag Standard (for public access), TCPA Biodiversity by Design Guidance and local biodiversity guidance (for wildlife habitats), and the Natural England Green Infrastructure Guidance (for general GI best practice).
- **Reflect local character and sense of place:** Green infrastructure should be managed to reflect local character and sense of place wherever possible, through planting appropriate species, sensitive design of built infrastructure, and appropriate interpretation of natural and cultural heritage features.
- **Engage communities:** Communities should be engaged in the enhancement and creation of green infrastructure in Warwick, particularly to inform the detailed design of new green spaces and links, and when changing the management of existing green spaces. Warwick District Council should develop good communication channels with local community groups and representatives, including schools.
- **Partnership working to support GI management:** Warwick District Council should continue to partner relevant local delivery organisations and promote a partnership approach to GI delivery and management. This could involve the creation of a green infrastructure forum or partnership for the District, responsible for overseeing the effective management of green infrastructure in perpetuity.

- **Environmental impact:** In all cases, for capital projects, land, ecology and archaeological surveys will be required to inform the development of site specific proposals. For large scale land management changes, e.g. woodland creation projects, such surveys will be key. In addition more detailed ecological advice is likely to be required in relation to site specific habitat creation, to ensure that high level nature conservation objectives are met. All new woodland management schemes proposed should be managed to the UK Forestry Standard^[1]. The Forestry Commission should be consulted on all woodland creation schemes.

NEXT STEPS

3.15 The following issues should be explored by Warwick District Council when coordinating delivery of the GI opportunities.

- **Local Plan and timescales:** Timescale and priorities for GI delivery should be informed by the Local Plan and other development plans for the District. The delivery of the various GI opportunities should be considered in the context of other infrastructure in the District, both in terms of securing funding for delivery, but also in terms of prioritising GI opportunities dependent on whether growth is planned nearby.
- **Developer contributions and the Community Infrastructure Levy:** The Council should explore the potential to secure funding through the Community Infrastructure Levy by developing a tariff for developers to contribute to GI. This could contribute to both delivery of GI opportunities, and also to maintenance. The broad approach would involve the following tasks:
 - Identify future GI and open space needs (in terms of enhancement and creation) based on the preferred option for development;
 - Broadly cost the necessary GI and open space investment needed;
 - Identify funding likely to be available for GI and open space;
 - Identify the potential funding gap (difference between the funding required and the funding available);
 - Quantify the approximate GI and open space tariff per household, based on the total funding gap divided by the planned number of new dwellings.
- **Land ownership:** Ownership of the land required to deliver the proposed GI opportunities should be determined by the Council. Where an opportunity is prioritised for delivery, existing land ownership and options for leasing and/or ownership transfer should be determined.
- **Partner stakeholder organisations:** Further consultation with stakeholder organisations will be required to agree the delivery plan, prioritise projects and explore exact timescales. WDC is trying to engender a partnership approach to which all relevant organisations will need to be engaged to enable delivery of GI in the district. **Governance:**

^[1] [http://www.forestry.gov.uk/pdf/fcfc001.pdf/\\$FILE/fcfc001.pdf](http://www.forestry.gov.uk/pdf/fcfc001.pdf/$FILE/fcfc001.pdf)

Warwick District Council should consider future governance approaches for the expanded GI network. For example, is it still feasible for the Council to manage the majority of the District's open spaces, or is there potential to transfer more sites to be managed by delivery partners. An alternative approach would be to set up bespoke District-wide or County-wide GI Trust, an approach which has worked well in other growth locations such as Milton Keynes and the Thames Gateway.

- **Local Nature Partnership:** The Coventry, Solihull and Warwickshire sub-region has recently formed a Local Nature Partnership. This Partnership should be integral to delivering future GI opportunities in Warwick District, and should be engaged to agree which of the opportunities help to deliver the sub-regional priorities. The sub-region has recently prepared a GI Study, and there is potential for the District level priorities to complement and connect to the planned sub-regional GI network. These opportunities should be reviewed when planning delivery of the District's aspirations.
- **Biodiversity offsetting:** Defra has recently launched a pilot study for biodiversity offsetting. The Coventry, Solihull and Warwickshire sub-region, of which Warwick District Council is a part, has been identified as one of the six pilot areas for this concept. This initiative could provide a useful mechanism for delivery of some of the more naturalistic GI opportunities, including those along the River Leam and the Arden Landscape.

Land Use Consultants, February 2012

Appendix I

Criteria and scoring approach for funding opportunities

Table A1: Criteria and scoring for Stage I review

Theme	Criteria	Scoring
Healthy wildlife/ ecosystems	Does the site adjoin a wildlife site or wildlife corridor?	5: Links existing wildlife sites 4: Directly adjoins a wildlife site or corridor 3: Within 200m of a wildlife site or corridor 2: Within 500m of a wildlife site or corridor 1: More than 500m from a wildlife site or corridor
Climate change	Could the site contribute to a reduced risk of flooding?	5: Flood zone 3 in urban area 4: Flood zone 3 in rural area 3: Flood zone 2 in urban area 2: Flood zone 2 in rural area 1: Flood zone 1
Informal recreation	Is the site located in an area of open space deficiency?	5: In an urban area, more than 1km from open space and deficient in ANG 4: In an urban area, more than 500m from open space, and deficient in ANG 3: In an urban area, more than 250m from an open space and deficient in ANG 2: In a rural area and deficient in open space or ANG 1: Good open space provision
Community activity and education	Is the site located in proximity to a community centre (town centre or hub), community which experiences social deprivation?	5: The site is near a community centre in an a town or ward which experiences significant social deprivation 4: The site is near a community centre in a town which experiences moderate social deprivation 3: The site is near a community centre in a rural area which experiences significant or moderate social deprivation 2: The site is near a community centre in an area which does not experience social deprivation 1: The site is not near a community centre
Historic environment	Does the site incorporate or adjoin any scheduled monuments, listed buildings, registered parks and gardens or conservation areas?	5: The site incorporates several heritage features and will contribute to their enhancement 4: The site incorporates one or two heritage features, and will contribute to their enhancement 3: The site adjoins several heritage features. 2: The site adjoins one or two heritage features 1: There are no heritage features within or adjoining the site

Theme	Criteria	Scoring
Sustainable transport	Is the site located adjacent to any existing footpaths or cycle routes?	<p>5: There are ROW and cycle access which pass through the site, and link major settlements</p> <p>4: There are ROW or cycle access which pass through the site, and link major settlements</p> <p>3: There are ROW and cycle access which pass through the site, and link minor settlements</p> <p>2: There are ROW or cycle access which pass through the site, and link minor settlements</p> <p>1: There are no ROW or cycle routes which pass through the site</p>
Local/community food production	Is the site located in a community experiencing health deprivation, with potential to deliver community food provision?	<p>5: The site is located in an area of significant health deprivation, and could deliver community food opportunities.</p> <p>4: The site is located in an area of moderate health deprivation, and could deliver community food opportunities.</p> <p>3: The site is located in an area of minor health deprivation, and could deliver community food opportunities.</p> <p>2: The site has the potential to deliver community food opportunities, but is not located in an area of health deprivation.</p> <p>1: The site does not have potential to deliver community food production.</p>
Potential future growth	Is the site located in proximity to future growth proposals? (SHLAA sites)	<p>5: The site adjoins a future growth proposal</p> <p>3: The site is within 1km (but does not adjoin) a future growth proposal</p> <p>1: The site is more than 1km from a future growth proposal</p>

Appendix 2

Funding options

Table A2: Potential funding initiatives

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
Big Lottery	BIG Lottery provides funding for a range of community projects including improving access to nature and the development of facilities within open spaces.	Funding available for the public, private sectors and the third sector.		Yes	No		Parks Play Historic places Natural environment
Heritage Lottery Fund	<p>HLF aims to support:</p> <ul style="list-style-type: none"> • Conservation of the UK's heritage • Help people to take an active part in making decisions about their heritage • Help people to learn about their own and other peoples' heritage. <p>Funding streams include:</p> <ul style="list-style-type: none"> • Landscape partnerships • Parks for People • Townscape Heritage initiative • Your Heritage • Heritage Grants 	Applications must be made by a not-for-profit organisation.	£3,000 +	Yes	For a set period (e.g. five years)	<p>Up to £50,000 = as much as applicant can;</p> <p>Less than £1 million = 5%;</p> <p>£1 million + = 10%</p>	Parks Historic places Archaeology Natural environment

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
Sport England - Protecting Playing Fields	Funding capital projects that create, develop and improve playing fields for sporting and community use and offer long term protection of the site for sport.	<p>Funding available for an organisation entitled to receive public funding such as voluntary or community organisations, local authorities, sports clubs, playing field associations and education establishments such as schools</p> <ul style="list-style-type: none"> • Only involve eligible sports of football, cricket, rugby league, rugby union, softball/baseball, American football, Gaelic football, Australian rules football, hockey, hurling, lacrosse, polo and rounders 	£20,000 - £50,000	Yes	For existing pitches yes but only through initial improvement works	Preferable but not absolutely necessary especially in case of community and voluntary sector applications	Playing pitches

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
Entry Level Stewardship	Administered by Natural England funding is provided to land managers to increase landscape quality, biodiversity and accessibility of land.	Land in private ownership. Land owned by local authorities can also be eligible provided the work is not already as part of their conservation responsibilities. Land must be registered with the Rural Payments Agency before applying.	Dependant on the payment options applied for.	No	Yes	Additional funding may be required to supplement payments.	Natural environment
Higher Level Stewardship	HLS provides funding for the management of land to promote and conserve wildlife, landscape, historic environment and resource protection. Funding is available for a number of HLS management options and capital items and the level of payments depends on the number of options the land owner/ manager is able to deliver.	Land must be registered in the Entry Level Stewardship scheme. Land must be registered with the Rural Payments Agency before applying.	Dependant on the payment options applied for.	Yes	Yes	Additional funding may be required to supplement payments.	Natural environment Historic environment Resource protection

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
English Woodland Grant Scheme	<p>Administered by the Forestry Commission, the funding is available to create new woodland and to promote sustainable woodland management. Consists of six main grants:</p> <ul style="list-style-type: none"> • Woodland Planning Grant: production of woodland management plan. • Woodland Assessment Grant: to collect information that assists management decision. • Woodland Improvement Grant : to carry out capital projects in woodlands such as access tracks, uneconomic thinning, coppicing, rhododendron clearance and public access facilities. • Woodland Regeneration Grant: to re-establish trees after felling. • Woodland Management Grant: to carry out regular work such as ride management and pest control. • Woodland Creation Grant: to create new woodland. 	Land must be registered with the Rural Payments Agency before applying.	Dependant on size and type of woodland.	Yes	Yes	Additional funding may be required.	Creation and management of woodlands

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
Single Payment Scheme	Part of the Common Agricultural Policy, Single Payment Scheme is not usually eligible for new woodland except in occasional circumstances such as grazed woodland.	Land must be registered with the Rural Payments Agency before applying.		No	Yes	Additional funding will be required to supplement the maintenance costs.	Established grazed woodland

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
<p>Natural England Nature Improvement Areas (NIAs) pilot programme</p> <p>Land Use Consultants</p>	<p>'Nature Improvement Areas are large, discrete areas that will deliver a step change in nature conservation, where a local partnership has a shared vision for their natural environment. The partnership will plan and deliver significant improvements for wildlife and people through the sustainable use of natural resources, connecting local sites and joining up local action' NE</p> <p>Provides funding to 'help address ecological restoration as part of series of actions at a landscape scale to improve biodiversity, ecosystems and our connections with the natural environment' NE</p>	<p>Partnerships made up of two or more of the following can apply for funding (no individual or lone organisations):</p> <ul style="list-style-type: none"> Local Government/planning authorities (including National Parks and (AONBs) Significant private landowners Environmental Non-Government Organisations (with land holdings (The Wildlife Trust Royal Society for the Protection of Birds Woodland Trust etc.), other NGOs or environmental bodies Community and social enterprises, town and parish councils, private sector with the involvement of the Environment Agency, Forestry Commission and Natural England. <p>Minimum Land</p>	<p>The amount per project is dependent on the proposed project and outcomes.</p> <p>£7.5million available for a maximum of 12 NIAs over a three year period April 2012 – March 2015.</p>	<p>Yes</p>	<p>For 3 years after establishment</p> <p>(It is expected that the NIAs will be able to become operational by 1 April 2012 and a share of the £7.5 million will be available to each NIA over the next three years.)</p>	<p>The NIA grant can be used to match fund other sources of financial support subject to funding criteria and discussion with NE, but must support NIA activities</p>	<p>Natural Environment, Urban Greenspace.</p> <p>http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/funding/nia/aimsandobjectives.aspx</p>

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
Biodiversity Offsetting PILOT	Testing to develop a body of information and evidence to inform a future decision about whether to use biodiversity offsetting across England.	Offset Users: Local authorities, developers and other organisations / partnerships Offset Providers: include local conservation organisations and individual land owners. EOI required for consideration for inclusion in the Offsetting Pilot.	Voluntary basis p.15 http://archive.defra.gov.uk/environment/biodiversity/offsetting/documents/110714offsetting-testing.pdf	Yes	Yes	No	Natural Environment
Landfill Community Fund	The Landfill Community Fund is formed of the monies gained through the Landfill Tax. Funds are available for carrying out environmental work and to improve the lives of communities living near landfill sites.	Not-for-profit organisations. Organisation cannot be controlled by a local authority.	Dependant on funding organisation with maximum funding ranging from £15,000 up to £1 million.	Yes	No	Dependant on funding organisation	Range of GI assets with nature or community benefits

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
Waste Recycling Environmental Limited (WREN)	<p>WREN can fund a wide range of community, conservation and heritage projects under Objects D of the Landfill Communities Fund.</p> <p>All WREN projects must be:</p> <ul style="list-style-type: none"> • Be located within WREN operating areas • Be available to the general public 	<p>SMALL GRANT SCHEME: Be situated within 10 miles of a Waste Recycling Group landfill site. Only considers the following types of projects: Village Halls, Community Centres, Public Parks, Skate Parks, Multi-Use Games Areas, Country Parks, Cycleways, Bridleways, Museums, Recreation Grounds, Nature Reserves, Village Greens, Public Footpaths/Towpaths, Multi-Purpose Sports Clubs (not members only), Playgrounds (not on school grounds).</p> <p>MAIN GRANTS SCHEME: supports the provision, maintenance or improvement of a public park or other public amenity in the vicinity of a landfill</p>	<p>Small Grant Scheme £2,000 - £15,000 (project cost under £50,000)</p> <p>Main Grant Scheme £15,001 - £50,000</p> <p>WREN Biodiversity Action Fund £75,000 - £250,000</p>	Yes	Yes	No	<p>SMALL GRANT Scheme : Village Halls, Community Centres, Public Parks, Skate Parks, Multi-Use Games Areas, Country Parks, Cycleways, Bridleways, Museums, Recreation Grounds, Nature Reserves, Village Greens, Public Footpaths/Towpaths, Multi-Purpose Sports Clubs (not members only), Playgrounds (not on school grounds).</p> <p>MAIN GRANT maintenance or improvement of a public park or other public amenity in the vicinity of a landfill site.</p> <p>BIODIVERSITY ACTION FUND: BAP priority habitats.</p>
Land Use Consultants							

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
INTERREG	Financed under the European Regional Development Fund, INTERREG is a community initiative and provides funding for urban regeneration.	Requires international or interregional cooperation on projects.					<p>Improvements to access to open spaces (particularly pedestrian links)</p> <p>New community facilities</p> <p>Involvement of local residents and other stakeholders in the place-making process and future place-keeping.</p>

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
EU Life+	The EU's Life programme provides funding for enhancing the environment.	Funding open to public & private bodies, or institutions. Project proposals can either be submitted by a single beneficiary or by a partnership. Projects can be either national or transnational.	Dependant on project size but could be £1 million plus	Yes	Yes	50% of total project costs although 75% may be available for Life + Nature projects for priority species or habitat types of the Birds and Habitats Directives	GI assets with significant nature conservation benefits
Regional Growth Fund	The Regional Growth Fund is a £1.4 billion fund supporting projects and programmes to encourage private sector investment to create economic growth and sustainable employment. It is focused on areas and communities reliant on the public sector. The fund is available from 2011 – 2014.	Private sector and public private partnerships.	Minimum threshold of £1 million.	Yes	No		GI assets in association with wider development works to improve the quality of life of surrounding communities.

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
Section 106 Agreements	<p>Planning agreements can fund the provision of green space in new residential and commercial developments. Section 106 agreements require the developers to contribute towards the infrastructure and services that the new development or local community will need.</p> <p>The Section 106 contribution could also be invested as an annuity by the local authority but ongoing payments can only apply within the development site.</p>	Local authorities	Dependent on the value of proposed development.	Yes	Yes if invested	No	Most types of GI but needs to be within development area.
Community Infrastructure Levy	<p>The CIL is a local levy which local authorities can choose to levy on most new development in order to secure funding for vital local and sub-regional infrastructure.</p> <p>Funds generated from the CIL can be used on infrastructure outside of project area (as long as there is some benefits to the community) and can be pooled by surrounding local authorities for regional/ sub-regional infrastructure projects.</p>	Local authorities	Local authorities determine the rates of CIL that will operate in their area.	Yes	Yes if invested	No	Most types of GI assets which provide community benefits.

Funding streams	Focus/ criteria	Eligibility	Grant size	Supports creation/ enhancement of GI asset?	Supports management/ maintenance of GI ?	Match funding required?	Types of GI funded
The Big Tree Plant Grant Scheme	<p>The Big Tree Plant funding scheme is to encourage and support community groups to plant trees in neighbourhoods where people live and work. The scheme can fund work such as community involvement, site surveys and expert advice as well as trees, planting materials, labour, and tree care and maintenance.</p> <p>http://thebigtreeplant.direct.gov.uk/funding.html</p>	Community and civic groups, or other non-profit organisations	Dependent on application - £4 million in grants during the campaign (2011 to 2015).	Yes	Yes	Required although in special circumstances, grants of 100% can be funded	Tree Planting

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Appendix 3

Capital and maintenance budget assessment for shortlisted green infrastructure opportunities

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CAPITAL BUDGET ESTIMATES

FOR

**VARIOUS LOCATIONS FOR
THE WARWICK DISTRICT
GREEN INFRASTRUCTURE PROJECT**

FOR

WARWICK DISTRICT COUNCIL

DECEMBER 2011

INTRODUCTION

These budget estimates have been prepared at the request of Land Use Consultants on behalf of Warwick District Council.

The Main Summary provides an outline budget cost for each of the proposed projects and is followed by a more detailed build-up of cost for each project.

The outline schedules of works on pages 3 to 7 have been developed from the sketch proposals prepared by Land Use Consultants.

The estimates have been prepared to establish outline budget figures only. Each project will require to be developed to provide details of the scope and design to enable more accurate estimates to be produced.

Attention is drawn to the Notes and Qualifications on page 8. These notes provide details of the information used to prepare the costings, any assumptions made, and, of particular importance, a list of specific exclusions.

The costings at this stage should be treated with some caution as they are based principally on discussions regarding scope of work. They have been assessed without the benefit of detailed site investigations, detailed specification information, arboriculturist's advice, or structural, services, hydrology, and highways engineers' advice. To date there has also been no consultation with statutory authorities in relation to any mains services works, or diversions which may be required.

MAIN SUMMARY

			£
	Project Title	Project Scope	
1	Peri-urban park, south of Leamington, Warwick, Whitnash	Path improvements, new paths and edgings, new native woodland planting, directional signage and interpretation sign boards, orchard planting, new hedgerows, grassland enhancement, wetland improvements.	1,484,000
2	Peri-urban park, north of Kenilworth	Path improvements, new paths and edgings, new native woodland planting, directional signage and interpretation sign boards, orchard planting, grassland enhancement, wetland improvements.	985,000
3	Arden Landscape enhancement	Path improvements, new paths and edgings, new native woodland planting, directional signage and interpretation sign boards, new hedgerows, grassland enhancement, wetland improvements.	886,000
4	River Leam tree planting and wetland habitat creation	New broadleaf and wet woodland tree planting, wetland improvements, scrapes, enhanced flood meadows.	385,000
5	Urban tree planting	Provision of unit costs for new tree planting, staking, underground guying, tree grilles, irrigation tubes, etc.	—

1 PERI-URBAN PARK SOUTH OF LEAMINGTON/ WARWICK/WHITNASH	Qty	Unit	Rate £	£	£
.1 Existing footpath enhancement; overlaying existing with 50mm additional hoggin, well rolled-in; widening existing path by 1.20m with new 150mm sub-base and 25mm surfacing; including excavation, setting aside excavated material adjacent to path, and laying geotextile membrane	3,700	m	23	85,100	
.2 New timber edge to last	7,400	m	7	51,800	
.3 New hoggin path construction of 150mm sub-base and 25mm surfacing, 1.20m wide; including excavation, setting aside excavated material adjacent to path, and laying geotextile membrane	3,092	m2	15	46,380	
.4 As last but 1.80m wide; including excavation, setting aside excavated material adjacent to path, and laying geotextile membrane	10,823	m2	15	162,345	
.5 New timber edge to last (items .3 and .4)	17,180	m	7	120,260	
.6 Timber pedestrian footbridge	1	Nr	8,000	8,000	
.7 Timber vehicular bridge	1	Nr	10,000	10,000	
.8 Timber finger post signs	9	Nr	1,000	9,000	
.9 Timber interpretation sign/notice board	3	Nr	3,000	9,000	
.10 Enhancement of existing/creation of new native woodland bands	94	ha	6,000	564,000	
.11 Creation of traditional orchards (trees @ 6m centres)	7	ha	17,500	122,500	
.12 Creation of new grassland and general regeneration/renovation of field margins	23	ha	500	11,500	
.13 Creation of wet/flood meadows, wet woodland, and woodland enhancement including scrapes adjacent to the Tach Brook	11	ha	5,500	60,500	
.14 Willow/alder planting to route of brook		Prov Sum		15,000	
.15 Creation of new hedges as existing vernacular precedent	3,000	m	16	48,000	
.16 Native broadleaf trees within hedges @ 60m centres	50	Nr	200	10,000	
.17 Specialist feature/sculpture (assumed 3 Nr @ £5,000 each)		Prov Sum		15,000	
					1,348,385
Add: contingency sum @ 10%					<u>134,839</u>
					1,483,224
Total to Main Summary				say:	<u>£1,484,000</u>

2 PERI-URBAN PARK NORTH OF KENILWORTH		Qty	Unit	Rate £	£	£
.1	Existing footpath enhancement; overlaying existing with 50mm additional hoggin, well rolled-in; widening existing path by 1.20m with new 150mm sub-base and 25mm surfacing; including excavation, setting aside excavated material adjacent to path, and laying geotextile membrane	9,200	m	23	211,600	
.2	New timber edge to last	18,400	m	7	128,800	
.3	New hoggin path construction of 150mm sub-base and 25mm surfacing, 1.20m wide; including excavation, setting aside excavated material adjacent to path, and laying geotextile membrane	2,088	m2	15	31,320	
.4	As last but 1.80m wide; including excavation, setting aside excavated material adjacent to path, and laying geotextile membrane	7,308	m2	15	109,620	
.5	New timber edge to last	10,300	m	7	72,100	
.6	Timber pedestrian footbridge	1	Nr	8,000	8,000	
.7	Timber finger post signs	14	Nr	1,000	14,000	
.8	Timber interpretation sign/notice board	3	Nr	3,000	9,000	
.9	Enhancement of existing/creation of new native woodland bands	38	ha	6,000	228,000	
.10	Creation of traditional orchards (trees @ 6m centres)	2	ha	17,500	35,000	
.11	Creation of new heath/grassland and general regeneration/renovation of field margins	10	ha	500	5,000	
.12	Creation of wet/flood meadows, wet woodland, and woodland enhancement including scrapes	5	ha	5,500	27,500	
.13	Specialist feature/sculpture (assumed 3 Nr @ £5,000 each)	Prov Sum			<u>15,000</u>	
Add: contingency sum @ 10%						894,940
						<u>89,494</u>
						984,434
Total to Main Summary					say:	<u>£985,000</u>

3 ARDEN LANDSCAPE ENHANCEMENT		Qty	Unit	Rate £	£	£
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WARWICK DISTRICT GREEN INFRASTRUCTURE PROJECT
VARIOUS LOCATIONS FOR WARWICK DISTRICT COUNCIL
BUDGET ESTIMATES

Heritage Cost Consultants
15 October 2011

- Acer platanoides (bare root)	Nr	75.00
- Carpinus betulus (root balled)	Nr	130.00
- Carpinus betulus (bare root)	Nr	70.00
- Quercus robur (root balled)	Nr	140.00
- Quercus robur (bare root)	Nr	90.00
.2 Excavation of tree pit 1.00 x 1.00 x 1.00m	Nr	25.00
.3 Mulching of pit	Nr	5.00
.4 Disposal of surplus material	m3	25.00
.5 Tree staking	1 Nr	6.00
.6 Tree staking	2 Nr	8.50
.7 Tree anchor/guying	Nr	50 to 100
.8 Tree grille	Nr	120 to 450
.9 Tree irrigation system (per tree)	Nr	15 to 20
.10 Tree maintenance (2-3 years)	Nr	50 to 100

Note:

Unit costs will vary depending on quantity, type and size of tree, location for planting, etc. The above unit costs are indicative only.

NOTES AND QUALIFICATIONS

Information Used in the Preparation of These Estimates

- 1 Pricing source: *Spon's Landscape and External Works Price Book, 2011*, together with rates and prices from tenders recently received where appropriate.
- 2 Pricing basis: costs current at fourth quarter of 2011 (4Q11), and are exclusive of future inflation.
- 3 Drawings used: various unnumbered sketches provided by Land Use Consultants.

Assumptions

- 1 It has been assumed for the purposes of pricing that each project would be procured by competitive tender on the basis of a consultant team's full design.
- 2 In various instances detailed information is as yet unavailable; costings are therefore based on either provisional sum allowances or appropriate rates/m².
- 3 No allowance has been made for the fact that some of the works could or may be undertaken by local community volunteers.

Notes

- 1 As the procurement method has not yet been confirmed, allowances for main contractor's preliminaries have not been included.
- 2 The percentage allowance for contingencies reflects the risk relative to the status of design, i.e. RIBA/LI work Stage B/C - Outline Proposals. Percentages adopted at this stage may range from 8 to 15%; in this case a figure of 10% has been allowed.
- 3 As no programme dates have been confirmed for carrying out the works, no allowances for inflation have been made.

Exclusions

- 1 Main contractor's management costs (Preliminaries)
- 2 Cost of land/purchase of any site or part of site
- 3 Future inflation costs/changes in tendering climate
- 4 Interest/finance charges
- 5 Professional fees
- 6 Prescribed fees to the local authority
- 7 Legal fees
- 8 Loose fittings and equipment (unless noted otherwise)
- 9 Value Added Tax

Report status:	First Draft	Author:	A D Kirk
Issued by:	Heritage Cost Consultants	Signature:	
Date of issue:	15 October 2011		

MAINTENANCE BUDGET ESTIMATES

FOR

**VARIOUS LOCATIONS FOR
THE WARWICK DISTRICT
GREEN INFRASTRUCTURE PROJECT**

FOR

WARWICK DISTRICT COUNCIL

DECEMBER 2011

1 PERI-URBAN PARK TO SOUTH OF LEAMINGTON/WARWICK/WHITNASH TO ALLEVIATE OPEN SPACE DEFICIENCY	Qty	Unit	Rate £	Frequency	£
.1 Maintenance of existing footpath: hoggin (2.4 wide x 3700)	8,880	100m2	3.13	16	£4,447.10
.2 Maintenance of new path 1.2m wide: hoggin	3,092	100m2	3.13	16	£1,548.47
.3 Maintenance of new path 1.8m wide: hoggin	10,823	100m2	3.13	16	£5,420.16
.3 Inspection and maintenance of timber pedestrian footbridge	1	Nr	2.58	52	£134.16
.4 Inspection and maintenance of timber vehicular bridge	1	Nr	7.74	52	£402.48
.5 Inspection and maintenance of timber finger post signs	9	Nr	2.58	2	£46.44
.6 Inspection and maintenance of timber interpretation sign/notice board	3	Nr	2.58	12	£92.88
.7 Management of woodland bands	94,000	m2	0.11	1	£10,340.00
.8 Grassland and field margins	230,000	100m2	3.71	2	£17,043.00
.9 Management of wet/ flood meadows	55,000	100m2	3.71	2	£4,081.00
.10 Management of wet woodland	22,000	100m2	0.11	1	£24.20
.11 Management of wetland scrapes	33,000	m2	4.20	1	£138,600.00
.12 Maintenance of grassland within orchard	70,000	100m2	3.71	2	£5,187.00
.13 Maintenance of orchard to establishment	4,900	Per tree	7.74	2	£75,852.00
.14 Management of willow/ alder planting to route of brook	Provisional sum				£500.00
.15 Management of new hedges	3,000	m2	0.32	1	£960.00
.16 Management of broadleaf trees within hedges	50	Nr	7.74	1	£387.00
.17 Maintenance of specialist feature/ sculpture (assumed 3 Nr @ £500 per annum)	Provisional sum				£1,500.00
Annual costs of maintaining GI proposals as detailed above					£266,565.90
Add contingencies @ 10%					£26,656.59
Total annual cost of maintaining GI proposals					£293,222.49

2 PERI-URBAN PARK NORTH OF KENILWORTH	Qty	Unit	Rate £	Frequency	£
.1 Maintenance of existing footpath: hoggin (2.4 wide x 3700)	22,080	100m2	3.13	16	£11,057.66
.2 Maintenance of new path 1.2m wide: hoggin	1,854	100m2	3.13	16	£928.48
.4 Maintenance of new path 1.8m wide: hoggin	6,489	100m2	3.13	16	£3,249.69
.5 Inspection and maintenance of timber pedestrian footbridge	1	Nr	2.58	52	£134.16
.6 Inspection and maintenance of timber vehicular bridge	1	Nr	7.74	52	£402.48
.7 Inspection and maintenance of timber finger post signs	9	Nr	2.58	2	£46.44
.8 Inspection and maintenance of timber interpretation sign/notice board	3	Nr	2.58	12	£92.88
.9 Management of woodland bands	380,000	m2	0.11	1	£41,800.00
.10 Maintenance of grassland and field margins	10,000	100m2	3.71	2	£741.00
.11 Management of wet/ flood meadows	25,000	100m2	3.71	2	£1,855.00
.12 Management of wetland scrapes	10,000	m2	4.20	1	£42,000.00
.13 Management of wet woodland	15,000	100m2	0.11	1	£16.50
.14 Maintenance of grassland within orchard	20,000	100m2	3.71	2	£1,482.00
.15 Maintenance of orchard to establishment	1,400	Per tree	7.74	2	£21,672.00
.16 Maintenance of specialist feature/ sculpture (assumed 3 Nr @ £500 per annum)	Provisional sum				£1,500.00
Annual costs of maintaining GI proposals as detailed above					£126,978.30
Add contingencies @ 10%					£12,697.83
Total annual cost of maintaining GI proposals					£139,676.13

3 ARDEN LANDSCAPE ENHANCEMENT	Qty	Unit	Rate £	Frequency	£
.1 Maintenance of existing footpath: hoggin (2.4 wide x 3700)	19,776	100m2	3.13	16	£9,903.82
.2 Maintenance of new path 1.2m wide: hoggin	5,892	100m2	3.13	16	£2,950.71
.3 Inspection and maintenance of timber pedestrian footbridge	2	Nr	2.58	52	£268.32
.4 Inspection and maintenance of timber finger post signs	9	Nr	2.58	2	£46.44
.5 Inspection and maintenance of timber interpretation	3	Nr	2.58	12	£92.88
.6 Management of woodland bands	260,000	m2	0.11	1	£28,600.00
.7 Maintenance of grassland and field margins	110,000	100m2	3.71	2	£8,151.00
.8 Management of wet/ flood meadows	40,000	100m2	3.71	2	£2,968.00
.9 Management of wetland scrapes	16,000	m2	4.20	1	£67,200.00
.10 Management of wet woodland	24,000	100m2	0.11	1	£26.40
.11 Management of new hedges	1,930	m2	0.32	1	£617.60
.12 Management of broadleaf trees within hedges	32	Nr	7.74	1	£247.68
.13 Maintenance of specialist feature/ sculpture (assumed 3 Nr @ £500 per annum)	Provisional sum				£1,500.00
.14 Allowance for the management of historic parkland/ designed landscape of Wroxhall Abbey	Provisional sum				£2,000.00
Annual costs of maintaining GI proposals as detailed above					£124,572.85
Add contingencies @ 10%					£12,457.29
Total annual cost of maintaining GI proposals					£137,030.14

4 RIVER LEAM TREE PLANTING AND WETLAND HABITAT CREATION	Qty	Unit	Rate £	Frequency	£
.1 Management of woodland bands	400,000	100m2	0.11	1	£44,000.00
.2 Management of wet woodland	190,000	100m2	0.11	1	£209.00
.3 Management of wetland scrapes	56,000	m2	4.20	1	£235,200.00
.4 Management of wet/ flood meadows	84,000	100m2	10.32	2	£17,337.60
Annual costs of maintaining GI proposals as detailed above					£296,746.60
Add contingencies @ 10%					£29,674.66
Total annual cost of maintaining GI proposals					£326,421.26

5. URBAN TREE PLANTING	Qty	Unit	Rate £	Frequency	£
Maintenance to establishment:					
Mulching around tree base	1	m2	1.00	1	£1.00
Inspection and adjustment of tree stakes and ties.	1	Nr	0.52	1	£0.52
Watering as required	Provisional sum				£30.00
Annual detailed inspection	1	Nr	51.75	1	£51.75
Formative pruning	1	Nr	45.00	1	£45.00
Annual costs of managing urban trees					£127.27
Add contingencies @ 10%					£12.73
Total annual cost of managing urban trees					£140.00