

GreenArc Strategic Green Infrastructure Plan (with Hertfordshire) - Appendices

Prepared for the GreenArc Partnership
by
Land Use Consultants
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LUC SERVICES

Environmental Planning

Landscape Design

Landscape Management

Masterplanning

Landscape Planning

Ecology

Environmental Assessment

Rural Futures

Digital Design

Urban Regeneration

Urban Design

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1 Stakeholder consultation record

Record of stakeholder event, Gilwell Park, 15th February 2011

HERTFORDSHIRE AND GREEN ARC STRATEGIC HIGHLIGHTS GREEN INFRASTRUCTURE PLANS (SHIPS): STAKEHOLDER CONSULTATION EVENT, 15TH FEBRUARY 2011

- I.1 The table overleaf sets out the summary of the stakeholder sessions held at Gilwell Park on the afternoon of 15th February 2011, to validate the approach taken by the SHIPs. The afternoon took the format of short presentations by Natural England/HCC and LUC explaining the work done to date and introducing the draft proposals. This was followed by two breakout sessions: 1. 'Are we on the right track?' (broad validation of the network as a whole and 2. Projects – consideration of the appropriateness of specific projects within the SHIPs and thoughts on delivery. Attendees were split into eight groups (colour coded) for the first exercise, and considered two projects of interest for the second exercise.
- I.2 The table overleaf also identifies LUC's responses (where appropriate) in **bold** type.

SESSION I – ‘ARE WE ON THE RIGHT TRACK?’

Yellow group

Existing GI assets not id'd

- Building blocks missing from map:
 - Broxbourne Wood
 - Tring Reservoirs
 - Tring PK
 - Knebworth
 - Amwell - – **these are all shown on the map.**
 - Balls Wood – **LUC to check, as appropriate.**
- What is GI asset? Needs to be explained. **Will be explained in report.**
- No transparency – not sure of process of selection. **Strategic assets are those of multiple district significance.**

Other General Points

- Mimram project maybe less strategic than some others, but point is taken.
- More ref to Herts Highways. **Ok.**
- Broxbourne Woods to Epping a strong project. Lots of support for lateral links
- Wooded arc – strength of Green Belt
- Woods from Chilterns towns to Watling Chase to Broxbourne – Epping Forest. Motorways as barriers.
- *Urban Greening* – Project Supported

Mapping Issues

- Need for clearer depiction of rivers outside area incl. Thames. **Ok, can show context.**
- Confusion over Project 6 corridor. **Unclear as to why.**

Strategic GI projects

- Lafarge own Panshanger – major asset (existing form).
- Lafarge not happy that site is identified will have public access. **Project is a long term aspiration, taking account of landscape future of Panshanger after cessation of all workings and restoration. We have responded to Lafarge separately.**
 1. GU canal – yes
 2. New: should not to supersede what's already going on. **Agree, the two should be complementary.**
 3. Don't know
 4. Depends on right of greenspaces – what people want in envt.

What about strategic GI links? – missing text how link with others to 8. **LUC to check.**

6. Why use the caveat of IBDA? Will deliver lot more than biodiversity. River Valleys – deliver much more than biodiversity. Missing rivers in text: Ver, Stort. **Agree, IBDA is one of the hooks – project can deliver much more.**
7. Lee Valley Regional Park – text needs work. **LUC to check.**

8. Chalk – ok

Are the strategic projects the correct priorities?

Concerns (e.g. data / map)

- East Herts Council – river corridors important asset. Are they being developed in EI plans to maximum? **They have also been referenced as key assets in East Herts GI Plan.**
- Clarification on data sets used, i.e. GIS layers (e.g. Nature Conservation map – what data used?). **This will be explained in the report and appendix.**
- Restoration sites – how have they decided which ones to include? **We have used ‘Re Restoration site info provided by HCC’.**
- Local Access Forum – is River Ver included? Should be through the IBDA. **Yes – included in river valley project, although rivers are not named specifically.**

Priorities?

- Are there opportunities coming up to help deliver these?
 - Connections between LVRPA + Epping Forest & promoting links to woodland (Strategic Project 2)
 - Watling Chase (help draw on previous project)

Anything missing?

- Has mapping picked up on everything? **As far as possible within the scope of this strategic project.**

Pink Group:

- Ellenbrook Fields CP. **Ok, use new name.**
- Assets not mutually exclusive (of wetland / wet woodland)
- Woodland assets look correct
- Refer to Hitchin River Valleys (Oughton / Purwell). **Agree in principle but are tributaries rather than main rivers, which have been focus for study.**
- Graphic representation of wetland zone
- Delivery: woodland creation schemes difference between managing woodland & crop yield therefore landownership liaison key (FWAG)
- Land ownership negotiation key next step
- How to rejuvenate WCCF? Should it be a project? **To consider.**
- Localism the way forward
- Links to agri envt schemes
- Localism – harness info from GAF work through local people/groups (cf. Harlow)
- Identify strategic plans: feed into local / neighbourhood plans – influence / use neighbourhood plans positively to link SHiP to LDFs.
- Could be support for initiatives at local level cf. Mimram
- Lottery bids
- Key to express functions in report. **Agree.**
- Identify opportunities to extend links / ensure all properly joined – for extending / improving (cf Lee + Stort) (Priorities) – show these on plan
- Show links to District GIPs better. **In hand.**

Green group

- Profile of existing programmes (WCCF) needs to be kept high as part of this process. **Agree with principle**
- Economics is key in conversations with landowners
- Strategic woodland area NE of Stevenage across The Beane Valley / Weston

- Majority of Strategic links appear N/S. More E/W to be considered. Link to/between settlements (SBC) (learning from the WCCF Greenways Programme).
- Not to overlook significance of all woodlands (Regional Woodland economy)
- Project 8 – Question of Focus. Farmland rather than grassland?
- Landownership is key. **Yes, agree.**

Purple Group

- Existing & proposed projects ok,
 - but some clarification needed about green links – some valleys should have them?
 - East of Buntingford - ??
 - Are promoted routes included in green links? **Yes.**
- Missing:
 - Circular / urban fringe routes around towns. **Check where appropriate.**
 - Strategic project for local food / growing / contribution of gardens + fruit trees. **Urban GI heritage project could encompass this.**
 - Connection with Queen Elizabeth Olympic Park legacy
 - Recognition/labelling of existing major assets. **As part of wider SHiP report and baseline mapping.**
 - ROW severance e.g. M1, M25 Hemel Hempstead, St Albans (Also HS2)
 - Accessibility
 - Extend AONB to link together – current boundary looks artificial. **A wider point than the SHiP can address.**
 - Connect White Paper – locally valued areas – status below AONB – that is recognised in planning
 - More obvious connection with Green Grid initiatives e.g. IBDA
 - Arable / uptake of HLS
 - Support for farming
 - Travelling horsiculture

Orange group

Omissions

- Missing link from Bishops Stortford to north to link with route, along river.
- Watling Chase Community Forest – like to see identified as woodland enhancement zone (key proposal: St Albans Plan). **LUC to check.**
 - More should be happening. Developer contributions. Hospital development.

General

- Plan difficult to follow – distinct boundaries, label Epping Forest. **LUC to consider.**
- Habitat enhancement zones – not exclusive e.g. woodlands – small areas of grassland within = key
- Woodland enhancement – not clear within colouring / different greens
- Plans need to allow for a balance / not prohibit house building. **Agree, GI sets positive framework and does not seek to prevent this.**
- What link to core strategies + LDFs? Planner answered that linking to core strategies. SHiP forms evidence document
- Need a shift in mindset. Judging by quantity. Should be more of a focus on quality. Score projects on the 11 functions for example.
- Trees Against Pollution – little known
- Would be good to see ANGSt deficiencies info and how it has been used. **Part of SHiP report.**
- See stronger link – how info can support sustainable urban extension. Concern than Panshanger designation could hamper other plans. Balance.
- Is the plan still deliverable with less housing + less developer contributions?

Judy Adams' group

- Welcome the rivers focus!! North Herts – arable farming too close to rivers
- + what do we do about North Herts? Large area, only river corridors featured?
- + GI Strategy needs to inform LDF? Agree with principle.
- + Harrow – needs to link with HCC – to link access. Agree.

- 1 Some are well known (Lea Valley, Colne, Stort Valley) and Broxbourne Woods. Others are less well known; e.g. the rivers. Also value of woodland in Herts is not well appreciated, even if Broxbourne Woods is well known.
- Promotion needed for other river corridors – and perhaps the lesser known woodlands and chalk.
- 2 The priority strategic projects are sound. But note that the strategic woodland should include ash/maple woods, as well as the Broxbourne Woods etc complex. **Ok.**
- There was also a query that Mimram/Panshanger should be singled out? Why is it not part of 'rivers' project? **It forms a strategic project to address cross boundary multi functional GI deficit.**
- 3 *Functional issues captured?* Yes
- 4 *Broad support for proposals?* Yes.
- 5 **Priorities** – not easy to answer, as choice of priority relates to opportunity as well as strategic importance.
- Important to first preserve what we have; expansion comes next. **Agree with principle, although should be complementary.**
Woodland is rather special to Hertfordshire and includes wood fuel initiatives, recreation and biodiversity. It ought to be high up the list.
- Note – Harrow keen to ensure links with HCC. **HCC are following up.**

SESSION I SUMMARY

There is broad support for the scope/emphasis of the strategic GI plan, with queries relating mainly to points of detail/baseline info which will be referenced in the accompanying report.

SESSION 2: PROJECTS

Project 1: Colne Valley

General point

Clarification that it is the Colne Valley, not just Colne Valley Regional Park. **Agree in principle, although Regional Park is clearly a focus.**

Colne Valley Partnership/Park Project

- Rational approach
- Other initiatives
- Constraints to achievement?
- How could you be involved in delivery?
- Other things needed

Approach

- To engage people, need clearer wording. **Check.**
Grand Union Canal, towpath – good linear links. Lateral are poorer.
Colne, access variable. Links upwards towards St Albans poorer
- Include rail networks in addition to tube. Include access to nature reserves/parks. Opportunity in future when developments take place, to secure better access.
- Approach and work with landowners early.
- Prioritise tackling of barriers i.e. identify and prioritise barriers.
- Element of increased education needed through?? e.g. Forum
- Identify opportunities for wetland creation coupled with public access
- Connections to NW London – cycle as well as pedestrian
- Note – need to add words
- Identify and address barriers
- Providing a continuous and viable transport link. **LUC to check.**

2 Complementary initiatives include

- Fisheries action plan

- Wetland study
- City Bridge Trust Wildlife Trust funded People engagement three year post
- Water Framework Directive
- River Basin Plan
- Gade project in Watford
- Colne Valley Action Plan

Reference as appropriate

3 Constraints? Nothing additional

4 WT's , Groundworks, Fishery clubs, Councils, Local Access Forums, ROW, Landowners e.g. access, cycleways, Environment Agency

5 HMWT – Nature reserves

- GW – access projects, cycleways. Both grounds
- Fishery clubs – biodiversity gain
- Lafarge – land for people, Broadwater
- ROWs – access ways
- Develop delivery projects, Perhaps using EA model for River Basin, include biodiversity, access and other as per the Rivers Project in London EA

Project 2: Strategic Woodland Creation and Linkages

- Need to bring benefit to small woods outside the key areas – urban fringe woods
- Needs to be a balance between new planting as links and buffers and the management of existing woodland for conservation. **Project is about enhanced management and linkage.**
- The economy of managing woodland: needs to incentivise management + creation of woodlands.
- Consider how trees function as links through the landscape between woods.

Links

- Tree strategies

- Street tree initiative – FC
- Epping Forest Transport Strategy

Constraints

- Historic environment
- EIA-considerations
- Deer + pest / disease / climate change
- Land availability and value

Agree – can be referenced as appropriate.

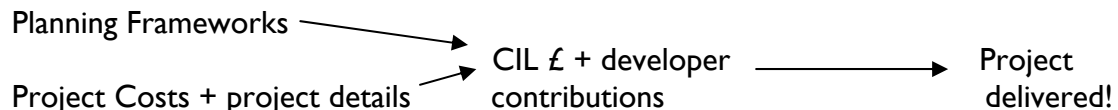
Delivery

- HMWT – HLF in South Herts Woods Area
- HCC, CMS and WT in Broxbourne Woods
- DC officers with CMS and others advice across Herts.
- SHiP
 - Planning Policy support
 - Planners DBC
- Social network communication
 - Community volunteers
 - Groundwork / CMS
 - Advice on planting + PAWS
 - WT
 - Advice – W sites
 - HMWT
 - Expertise in Ancient Forest - City of London
- *Clustering of projects to enable funding streams to support existing agents to deliver an economically viable market for woodland products. **Agree with principle.**

- Consider woodland as a mosaic of habitats – open land, scrub, wood pasture, wet ground
- Planting: respect local woodland types with an eye to climate change /pest threat
- Consider appropriate access
- Woodland links south from Hertfordshire into London Boroughs
- Include Hainault (in Epping Forest / Hatfield Forest list)

Delivery

- Market stream for local woodland products essential. Sustainable, i.e. Developers fitting (not retrofitting) woodburning stoves to new dwellings
- Communication between DC + strategic delivery agents required. **Agree.**
- Land prices a key issue / impediment to tree planting.
- Planners: ensure project is recognised in CIL / Developer Contributions



Above is articulation of the need for a means to bringing advice + action together in a way that enables immediately without endless meetings. **Agree.**

Project 3: Mardyke Valley Greenway Extension

No stakeholders discussed this project. However, we feel it should stay as it is strategically significant. It contributes to Thames Chase Community Forest objectives, provides a key cross authority link and helps address deprivation.

Project 4: Urban GI Heritage Conservation and Enhancement

What

- Very generic – some reference to make more ‘real’ locally. **This is covered in the Herts District GIPS where relevant.**
- First bullet – ‘management + new tree planting’ – not all there is. **Check.**
- Improve connectivity between urban, urban fringe + countryside, e.g.

Letchworth Greenway. **Ok.**

- Also increasing biodiversity, movement – multifunctionality. **Agree.**
- Definitions – last bullet – why small scale, high value in Watford. Other towns. Is it trying to explain quality. Specify. **The point made in relation to Watford refers to addressing historic 'green' deficit due to high density of urban development. Consequently small scale interventions here will be of high value.**
- Visual value of trees, open space etc missing. **Make general reference.**
- Refer to value of allotments. **Make reference.**

Delivery

- Mention more deliveries. Local community – neighbourhood plans. Parish councils where relevant
- Schools, volunteers
- Health authorities, County – highways, own land. Community housing associations. Effect of selling off assets

How take forward

- Local delivery will happen. Different projects take place + need to learn from each other.
- List the projects people doing + aspirations
- List of people here, contact details + area of work + interest
- What to add:
 - Need to recognise role of veteran trees. Trees generally – climate change / shading. **Agree with principle.**
 - New planting – keen on link to local food. Heritage varieties existing
 - Value of bees – extension of community gardening / food link
 - Deficit – remember it is quality of green space not just existence
 - Reword final bullet to remove 'historic' use longstanding? May help prioritise?
 - Refer to positive influence
 - Title = remove word 'planned'? Split reference to garden cities and others?

Check above points

- Function
 - Remediation – cover vacant land that could be used temporarily
 - Also remediation of town tips etc (not just extraction) derelict
- Complementary Plan
 - Needs to be delivered in partnership with communities, amenity groups. Volunteers missing – donated labour.
 - Role of businesses – CSR, visual, environmental & contribution (missing)
- How
 - Work detail at local level consultation
 - Info sharing useful – knowing what's working, what being discussed – can the inspiration be shared centrally? Project 10?
 - Funding – possibly work together to fundraise together on a theme
- Others to involve
 - Herts Highways / Highways Agency (motoring corridors) – control much land
 - Network Rail
 - Important to continue the cross boundary work / discussions. Ensure that links between the local authorities continue / promoted.
 - Young people element – work with, get ideas, involve, engage - offenders, apprenticeships, training scheme – delivery.
- **LUC to check above, as appropriate.**

Project 5: Mimram

Approach / Rationale?

- Lafarge
 - Panshanger Park will be restored following extraction based on phased basis.
 - High quality site based on consultation with key advisors
 - Example of best practice to follow elsewhere. **Agree, which is why Panshanger has been referenced as part of a strategic project.**

- **Constraints**
 - Busy road B1000 + A414
 - Access along river isn't possible. **But should state long term aspiration.**
 - Access poor due to private land
 - Reliant on goodwill / support pf owners
- Herts Rights of Way – could improve access for pedestrians / cycles
- B1000 – establish adjacent cycleway
- Resourcing – S106?
- Plotland @ Poplar's green – multiple ownership
- SG
 - Local residents
 - Local access forum (Ramblers, BHS, Cyclists)
 - Tewin Flyfarmers
 - Use it to highlight best practice to other travel companies
 - HMWT
 - East Herts DC
 - Williams Family
 - Lafarge
 - WHC
 - HCC
- Ok for strategic policy

Mimram - Rationale / Approach

- Lafarge
 - not a distinct project – why Mimram as opposed other river? **Mimram is cross district link which also encompasses Panshanger and is therefore strategic.**
 - Surprise to landowner
- Change title to Mimram Valley (drop Panshanger). **Ok.**
- Question future growth of WGC? This is unknown. **Yes, but GI should**

account for all eventualities.

- Access within Panshanger needs to be opened. Yes, is longer term aspiration.
- “Contribute to enhancements including delivery of the BDA” (London + Tribs/integrated biodiversity delivery area). **Agree.**
- Remove references specifically to Panshanger
- Issue – water abstraction – Veolia Water. **Need for future liaison with Veolia.**

Constraints to delivery

- HLS – application for Panshanger if target area
- Reliance on co-operation of landowners
- Access to river – popular but leads to littering

Project 6: River corridor and valley enhancement- delivering the IBDA

- Make wider than just IBDA. Also river basin plan. **Ok, will ensure referenced on project.**
- Ver & Stort missing. **They are shown on the map. Rivers now not named specifically in project due to number.**
- Need more emphasis on chalk rivers as well. **Ok.**
- Also more ref to water quality and structures
- Thames River Basin Plan ACTION Sarah Jane Scott **Ok**
- Also deliver Living Landscapes river valley working. Add to plans list and include importance of rivers for GI connectivity, for access & visibility particularly into London. **Agree, Living Landscapes info already referenced.**

Actions

- Map ROWs + green access links against river corridor. **This has been done. There is a limit to what we can show on strategic map.**
- Importance of bringing people together
- London Rivers Action Plan a good model to follow with targets for each river. **Ok.**

- Good policies in LDFs. **Agree, this is needed – future consideration.**
- Link to water demand management with water companies. **Agree, useful future step.**
- Water cycle studies. **Yes, referenced already.**
- Chilterns Chalk Streams Project. **Yes, account taken.**
- Gade, Bulbourne + Ver restoration strategy. **Ok, make reference.**
- Will need to prioritise
- Concern over loss of revenue payments for access under HLS *Chilterns Society, and to Wetland Group.
- Mimram project perhaps a model for future river action groups
- Floodplain land valleys will be lower – helps delivery
- Don't forget Upper Lee towards Harpenden. **This is already shown and forms part of the river valley project.**
- Don't reinvent the wheel.
- Maybe need to consider zoning for some v few areas with sensitive biodiversity
- Mention of recreational value of rivers in intro of project sheet. **Ok.**
- Importance of local community involvement, e.g. Ver Valley Society. **Ok.**
- Water recreation on Lee Valley (canoe), R. Colne + G. Union + non-powered craft

Links to mineral workings – Opps

Project 7: Lee Valley Regional Park

- Is rationale acceptable?
 - Broxbourne – signage + awareness
 - Enfield – different because LVF land ownership but tow park
- Strengthen opportunities for links west – Epping Forest. (already there in Harlow Delivery Plan)
 - links from Waltham Forest in + out (London Green Grid)
- Places where E-W links need to be physically strengthened (see above)
- Conceptual challenge to encourage people to visit – all the way down Lee Valley

(Apps) – **potential link to interactive mapping project.**

- Epping Forest transport strategy – expand to link to other areas
- Olympic Canoe Centre - Link water activities – marketing
- Signage problem
- Lots of physical barriers
- Links to Woodland areas of Valley (green wooded area around Hub in Lea Valley)
- Olympic legacy
 - Access for All in place
 - Project: place led by various partners
 - Economic development exercise (ECC, LVRP Boroughs, etc) to identify economic regeneration; LV – improve area as day out destination.
 - Linked to natural play in Cheshunt – landscape driven + arts finished after Games
- Olympic north route NCN 1 – deliv – Harlow (reinforce N/S links) + Lee Valley path
- London Loop (needs upgrading / renovation)
- Capital Ring
- Roydon Loop missing – Nazeing (**LUC to check**) – Harlow (see Harlow GI Delivery Plan recommendations)

Constraints

- £!
- Physical barriers – parallel in Lee Valley
- Land values / hope value
- Enthusiasm – this is good process to capture
- Deliver strategy through CIL etc
- Neighbourhood plans – link strategic – micro level
- Lee Valley – edge effect – constraint to get strategic projects included (except for Harlow).

- Some from Epping Forest Conservators

Involved:

- LVRPA already – making links through strategic framework – leverage of funds
- Show all strategic landscape initiatives in SHiPs doc. Acknowledge all various initiatives + links between. Ok – **LUC to check as appropriate.**
- Harlow strategy access subgroup:
 - Sustrans rep sent lots of info – sent rest to input to projects
- Also Epping Forest GI subgroup under Harlow GI Partnership – Stort missing – need to add to LV (existing v.g. Stort WGP)
- *Data missing for Essex*. **We have only been able to work with what we have been given/been able to obtain from partners.**

Rationale

- Should be existing Lee Valley as whole, not just lateral connections. **Note that the existing Regional Park is endorsed as a project. There's a strategic need for better lateral connections, hence this project.**
- Regional park is 10,000 acres. LVRP own 4000 acres, so focus on rest (6000 acres)
- Routes into park – North-south as well as east-west better served Lee Valley walk + NCNI
- Functions – more emphasised, not faded out – should all be in
- Specific link south to Olympic Park + to river (already in) + is used
- Should include woodland + habitat creating not just access links. Scope to link.
- Missing:
 - M25, through Waltham Cross, across Holmswood tunnel – London Borough?
 - Dependent on severance + linkage
 - Potential for multi user status
- Complementary plans – mention development issues. **Ok.**
- Headline – deprivation – key driver is health + wellbeing – important focus to LAs

- Missing:
 - Green Grid
 - IBDA – **account has been taken of these.**
 - Links from Broxbourne – Epping. **LUC to check.**
 - Links to Olympic events
- National review of level crossings – potential increased severance. Level crossings in Lee Valley will be targeted.
- List of crossing points from Broxbourne to LVRP: info available from Janet Groom
- Missing:
 - Connections Olympic Park to Waltham Forest to Epping (northern Olympic Fringe boroughs)
 - Broxbourne BC v keen on linking Barclay Pk, etc
 - Route there but not well used
 - Needs promotion

Check above as appropriate.

Constraints:

- £
- Land ownership
- Permission from EA, etc
- Inter-authority liaison
- Economy (national context)
- Staffing cuts
- Big society overkill / scepticism
- Time to engage local people via neighbourhood plans
- Physical severance
- Complementary. Plans (add in):
 - NE – leadership – driving it forward
 - Develop an integrated LV project

- GI linked to Olympic Park as springboard to GI delivery

Delivery

- All partners to need to agree priorities. **Agree.**
- Need to set up working group to progress. **Useful idea.**
- HCC RoW
- Lee Valley Regional Park Authority feed into existing gaps
- LB Waltham Forest
- Broxbourne – various colleagues in different departments

Missing Project Surgery (Session 2)

ROWS

- Severance Issues
- East Herts – could there be more strategic links? **LUC to check.**
- Issue of just ‘on foot’ access or shared multi-user. **Point taken but is a ‘detailed’ consideration.**
- Tie in with Watling Chase Community Forest / Greenway Network. **Yes.**
- Wrotham Park – links to London Loop – strategic inter-urban links.
- Consider path links to Olympic Legacy?
- Not just link Lee but also Broxbourne canoe site (Holdbrook)
(dual benefit – public access + River Restoration Scheme)
- Radial Town loops may be a theme for project? **Could be part of urban greening project, e.g. Letchworth Greenway. Also shown on GI network map as revised.**
- HLS – no access payments from now on. What now is incentive for farmers to ensure HLS referenced?
- GI assets also act as severance (Rivers). **Agree.**
- Closure of level crossings (what does this now mean for access network)
- HS2 an issue but only 1 clips 1 path link.
- ROWIP (Statutory duty but no funding for implementation). Rely on S.106 / CIL
- Will proportion of CIL for GI be enough for more ‘engineered’ projects (e.g.

Nicky Line - reinstating lost bridge?)

- Could lost rail line at Quin Valley be opportunity? Also dual use (SUDS?). **We have looked at this as an opportunity.**
- (Flexible use – slow does this work?)
- Links to stations (Enhanced cycle provision on trains + stations / limitation at commuter times + should be more acceptance of provision for cycles.
- Groundwork NE leading Holbrook?
- Potential access conflicts with bird interests and key biodiversity areas.
- Friends of Icknield Way KBA have National trail aspirations

All useful points for consideration.

Harrow Council

- Secure connections to Herts (see draft Harrow Green Grid). **Agree with principle – HCC to follow up with Harrow as Herts GIPS are finalised.**
- Woodfuel
- What of WCCF?
- Aspiration for WCCF to be revived? (possible recommendation?) **To consider**
- Other strategic ROWS (non-designated e.g. permissive)

Project 8: Chalk Scarps & Grasslands / farmland

Is the rationale / approach for the project acceptable?

- Grazing livestock essential – few graziers in that area. Otherwise not realistic. Arable farming doing better than pastoral / livestock so who would want to switch? Skills base has gone. Need to be a reasonable size of enterprise for viability?
- Thick corridors / hay strips Stewardship driven. Or long-term management agreement with farmers using developer contributions e.g. s.106 for west of Stevenage to compensate loss of farmland.
- Theoretically Wildlife Trust would consider operating a flying-flock
- **THE GRASSLAND VISION IS UNVIABLE** Corridors may be more viable. **The vision is flexible and about establishing over-arching principles. Corridors can contribute to this. Project is not about ‘blanket’ grassland creation.**
- Explore potential of horse-grazing?
- Explore mowing / silage
- Find farms with balers who are prepared to make hay / haylage
- FWAG has background information
- Volunteers trained up to check animals – might enable smaller sites to be viable
- Explore possibility of demonstration farm like Hope Farm / Leaf Farm or Regional Research Centre
- HLS – Identify key landowners, look for opportunities & that they are willing to participate. Will need someone / organisation to pursue this, e.g. CMS / FWAG
- Link to local food, e.g. Pilkingtons Estates / Offley
- Farmland birds
- Archaeology & PPSS
- Link projects to neighbours farms

Chalk Grassland

- Icknield Way should follow Ridgeway & Peddars Way in being promoted

nationally – and receiving Govt. funding. Spin-offs: tourism, archaeological sites – Icknield Way to be the focus. **A wider issue, beyond the scope of the strategic GI plan.**

- Don't vision for wholesale de-conversion / arable-isation but look at linking local sites and using steeper slopes for grass, e.g. places Therfield / Sandon where soil is so, thin how economic is arable – or will it be?
- Find sympathetic landowners (as it happens most are already in HLS)
- May the pressure to reduce N. inputs drive a low input approach affecting crop yields and thus economics of grazing?
- (Project heading needs to be tweaked) **LUC to check.**
- If any farmer puts land into grass they need an EIA if they want to plough it up again.

Chalk grassland or Icknield Way Corridor?

- If chalk need to stick to chalk
- S.Beds – several hundred hectares achieved – learn lessons / link
- Cartography misleading – spots rather than tone? **Consider that cartography shows principle of broad zone clearly as it is.**
- Missing link = local food economy like Offley = a driver that may encourage some farmers to go with sheep
- Chilterns Lamb – too complicated. But Herts needs a formal food strategy e.g. brand with Icknield Way Corridor
- Progress with this project may be slow – but still try. **Worth signposting e.g. project is part of a long term vision.**
- NHDC may be prepared to give developer contributions to these projects. Stevenage not sure.
- Hitchin gap – check: misleading?
- Constraints: No local markets / abattoirs.
- More permissive access needs to be negotiated
- St Albans – disconnected? But horse grazing possibilities

- Add lamb grazing to deter dogs

SESSION 2 SUMMARY

There is broad support for the strategic suite of projects. Project 5 will be renamed; wording of project 8 will be considered. Although no stakeholders signed up to project 3 – Mardyke Valley Greenway Extension - on the day, it is still considered a strategically important part of the plan, for the reasons set out in the entry for this project above.

Notes of stakeholder steering group meeting, LUC London, 7th March 2011

Decisions of SHiP Steering Group 7 Mar 2011

Present:

Rachel Penny (Natural England/GreenArc) - Chair
Claire Martin (Lee Valley Regional Park Authority/GA)
Jim Smith (Forestry Commission/GA)
Tom Day (Herts & Middlesex Wildlife Trust/GA)
Richard Cuthbert (Hertfordshire County Council)
Simon Odell (HCC / Hertfordshire Biological Records Centre) – Secretary and Contract Manager

Apologies:

Rob Rees (HCC)
Bryan Thomsett (Hertfordshire Technical Chief Officers Association)
Sarah Jane Scott (Environment Agency)
Helen Leitch (HTCOA)

with

Andrew Tempany (Contractor - Land Use Consultants)
Kate Ahern (LUC) part meeting only via telephone link

The Stakeholder event had raised a number of points. Some of these have been answered in draft by LUC and the Steering Group meeting formally agreed to adopt those responses as its own but with the following additions and amendments.

1) In response to concerns raised about the profile of “existing” Projects/Initiatives it was agreed that lead partners for existing Projects/Initiatives would be invited to draft similar sheets as for the Proposals.

2/3) As regards the suggestions that had been made that the Watling Chase Community Forest was in need of rejuvenating, and that the focus and profile of the Strategic woodland work should be widened to include all woodlands, the Group decided that the focus of woodland work should be an arc/zone

linking and including the two Community Forests. The WCCF could be reinvigorated as a project within that. It was agreed that other woodlands were important but these would be addressed through the GIPs.

4) With a similar rationale it was confirmed that the focus of work on watercourses would be linked with the principal Thames catchment area rather than all watercourses. The Anglian catchment watercourses in the north of the county were important and should be picked up in local GI plans, and if considered to be strategic to the remainder of the catchment, as part of a catchment-wide initiative. This approach would also align with current Environment Agency and Natural England strategic priorities.

5) In response to the concerns about the undeliverability of the North Herts grassland proposal and that either the Icknield Way Corridor should be targeted or that this proposal should extend to the better management of farmland more generally, it was recognised that the rendering of the proposal on the map and the reference to grassland had possibly misled some stakeholders to the focus of this proposal, which was more inclusive than grasslands and not as naïve in believing that extensive arable reversion could be achieved. The existing proposal was confirmed but it was considered that using the underlying chalk as its identity might help as might different rendering on the map.

6) HCC presented a proposal concerning the reconnection of severed rights of way. It was agreed that where multifunctionality was being offered (e.g. through a wider green access corridor or associated green works) that repairing severance, as promoted in the ROWIP should become a strategic proposal. Some further suggestions were agreed concerning strategic links and HCC was invited to revise its proposal for inclusion.

7) LUC presented revised mapping at the meeting and improvements were noted, further suggestions to the consultants were made.

8) It was agreed that the ££... symbols should be converted into actual ranges. Some consolidation of proposal sheets could be effected if appropriate.

9) The group confirmed that the ten proposals (as tabled at present) formed an appropriate strategic GI ask for Hertfordshire and the GreenArc area (and if anything were conservative). It did not think it appropriate to prioritise these.

10) It was agreed that the final outputs would be presented to HTCOA and GreenArc with the suggestion that they should be sent out for affirmation, endorsement and sign-up, and with a request for HTCOA and GreenArc to propose the extent of that mail-out.

11) It was also agreed that the secretary would contact facilitators for a final time to check that no points raised had been misinterpreted, and that LUC should check that all comments had been attributed to the correct groups.

Simon Odell 9 Mar 2011

2 Summary findings from the document review

This section also includes messages useful for future, strategic level GI planning, and which go beyond the scope of this high level strategic GI Plan. Where relevant; appropriate projects and proposals in the Strategic GI Plan (**section 3** and **Figure 3.1** in the main report) are also identified.

KEY MESSAGES FROM THE LITERATURE REVIEW, BY THEME

Access and recreation (open space)

- 2.1 *This was informed by a review of the following documents: Bringing the Big Outdoors Closer to People: Improving the Countryside in and Around London – The GreenArc Approach, GreenArc Partnership/Land Use Consultants: Analysis of Accessible Natural Greenspace Provision for Essex; Natural England/Essex Wildlife Trust, 2009; Essex Rights of Way Improvement Plan (ROWIP), 2000 and Open Space Strategies where available.*
- 2.2 Provision of accessible open space varies considerably across the GreenArc. Only 7% of all Essex households have all their ANGSt requirements met, whilst 14% have none of their ANGSt requirements met. The biggest issue is at the local level, less than a 1/3 of households being within 300m of an open space of at least 2 ha in size. The

quantity of provision varies considerably across the County, from Epping Forest, which has more than 4,700 ha of green space, to Harlow, which has 366 ha.

- 2.3 A number of London Boroughs within the GreenArc: Barking and Dagenham, Havering, Redbridge and Waltham Forest, have relatively low levels of open space provision. Proposals for improvements of the provision of access to recreation has been set out in **section 3, Figure 3.1**.
- 2.4 There are several strategic, long distance routes which run through the GreenArc area, including National Cycle Routes 1 and 16 and a number of promoted routes, such as the Stort Valley Path, Three Forests Way, The London Loop, Essex Way and St Peters Way. There is an extensive network of public rights of way in the GreenArc, which appears to be more comprehensive in the northern parts, with few off road rights of way in the London Boroughs. The Essex ROWIP highlighted a number of constraints on use, including barriers to access and lack of appropriate information.
- 2.5 The Essex ROWIP aims to improve accessibility to the rights of way network, whilst also promoting sustainability. It identifies a number of challenges which aim to improve the level of information (advice, education) available and also for a need for more partnership working (such as health professionals and school initiatives). This has potential links to the 'Reconnect' 'Greening the GreenArc' project proposals at **section 3** of the GI Plan.

2.6 Essex Council is supporting and funding the Essex authorities to promote district level play strategies. There is also a County-wide initiative which promotes the involvement of children and young people in designing play space and green spaces. The Play4Play initiative is running workshops at 70 schools across the county to highlight the priorities of children and young people in relation to recreational space.

Landscape character, experience, settlement setting

2.7 This was informed by a review of the following documents: *Landscape East/Natural England, 2009: East of England Regional Landscape Framework: Landscape Typology Final Report*, Chris Blandford Associates, 2003: *Essex Landscape Character Assessment*, CPRE, 2007, *Intrusion Mapping*, CPRE, 2000, *Night Skies Mapping*; *Thames Chase Community Forest Plan*.

2.8 The landscape of the GreenArc is one of low hills and undulating valleys and is often described as an ancient countryside. It falls from the Chilterns in the west towards the lower flat coastal landscape which is interrupted in parts by low hills and ridges. This area of Essex has a diversity of river valleys, namely the Lee, Stort and Roding Valleys, which are recognised for their landscape, conservation and heritage value and their recreational interest. Due to the quality of the clay soils, the County has been very successful in agricultural terms where the majority of the highest quality soils are found along the

river valleys, which has allowed the valleys to develop a rich biodiversity.

2.9 Historically the landscape has a rich legacy of ancient woodlands, hedgerows, tracks and archaeological sites, due to early enclosure in Essex with many of the ancient royal forests still dominant in parts (e.g. Epping and Hatfield Forests). Scattered farmsteads, parishes with small settlements around commons and isolated hamlets are common features of the landscape in this area. Prominent human influences in the landscape can be traced back to at least the Roman period where their primary transport routes ran through the area. The proximity of Essex to London helped develop the area in terms of trade, goods and economic benefits. Today trunk roads such as the M11, M25 and A12 and railway lines cross the landscape and have led to some erosion of landscape character in places.

2.10 Over time and particularly in the 20th century the landscape has been further eroded by man made influences such as power lines, industrial complexes and infrastructure corridors. Many initiatives to restore and enhance the character of the landscape have recently been developed, for example the Thames Chase Community Forest Plan and the South Essex Greengrid Strategy which have also fed into strategic proposals in **Figure 3.1** at **section 3** of the GI Plan. The Thames Chase Community Forest Plan aims to provide extensive opportunities for farming and forestry activities, recreation, education, new habitats for wildlife and to provide further visual

enhancement to the area. The South Essex Greengrid Strategy aims to place landscape at the heart of the development process and proposes the protection, enhancement and creation of new areas of protected landscape. This will encompass protecting areas of riverscape and townscape character, increasing biodiversity, archaeological, cultural and built heritage, promoting sustainable energy production, managing flood risk and ameliorating the effects of climate change.

- 2.11 Protection of ancient woodland should be seen as a priority (in particular Epping and Hatfield Forests). The importance of the ancient woodland asset is recognised in the Woodland Arc project at GI Plan **Figure 3.1**. To alleviate potential severance issues in the future, development should be designed sympathetically with the landscape to avoid severance of ancient woodland by features such as transport links.
- 2.12 In addition to this review, the CPRE Tranquillity Mapping and more recent Intrusion Mapping show low levels of tranquillity in relation to the settlements throughout the GreenArc (densely built up ring of settlements around London, the M25 and the Lee Valley). Similarly low levels of tranquillity are shown in relation to the arterial transport corridors such as the M11, and M25. This picture is reinforced by the CPRE Night skies mapping.

The historic environment

- 2.13 *This was informed by a review of the following documents: Essex County Council: Historic Landscape characterisation (HLC), Chris Blandford Associates County Council: Essex Landscape Character Assessment, The Essex Historic Environment Record.*
- 2.14 Significant parts of the historic landscape fabric of the GreenArc are mostly intact and historic landscape features are well defined. Essex is noted for its ancient hunting forests such as Epping and Hatfield Forests, as well as distributions of native black poplar.
- 2.15 Many of the settlements within the GreenArc have a distinctive character where rich historic detail and vernacular can be found in market towns and in many of the smaller settlements (i.e. half timber, colour wash plaster, thatch and pegtile roofs, some decorative pargetting). The main settlements of Epping, Loughton and Theydon Bois have a historically linear form of development, including associated large commons. Many of the main settlements have expanded due to 20th century development however this is less evident due to dense tree cover in the surrounding landscape.
- 2.16 With reference to the HLC, in the eastern part of Epping Forest and Brentwood, the landscape was subject to early enclosure and then evolved gradually, however significant change occurred in the 20th century with rationalisation of field pattern and loss of hedgerows associated with agricultural intensification. Hatfield Forest is a large and

important area of ancient coppice and wood pasture, although the enclosed landscape pattern is broken by major infrastructure corridors such as the A120, A130, A12, M11 and also by Stansted Airport in Uttlesford District.

- 2.17 Aspects of historic landscape character in the GreenArc have informed project proposals such as the Woodland Arc project, shown on **Figure 3.1** in the GI Plan.

Health and deprivation

- 2.18 *This has been analysed in the 'Health' functional analysis in section 2 of the main report, as it has been based mainly on GIS analysis for the GreenArc.*

Functional ecosystems and flood risk

- 2.19 *This was informed by a review of the following documents: Strategic Floodrisk Assessments, EA Thames Catchment Flood Management Plan and Thames River Basin Management Plan.*
- 2.20 The GreenArc offers an important environmental resource for London and the southern parts of Essex and Hertfordshire. Its varied landscape, mainly designated as Green Belt, includes important ancient woodlands and a series of broad river valleys (Lee, Roding and Ingrebourne, Colne, Stort and Thames) which provide various opportunities for recreation and also includes a wide range of ecologically important sites. The areas agricultural land and mineral workings have played a significant role in

shaping the landscape, and provide an economic resource for the area.

- 2.21 The Northern Thames River Basin covers much of the central and southern bands of the GreenArc Area. London's GreenArc is influenced by two sub-character areas on the London urban fringe: *Hertfordshire Plateaux and River Valleys* (covering the western part of the GreenArc to the Lee Valley), and *Essex Wooded Hills and Ridges* (stretching from the Lee Valley to the eastern edge of the GreenArc). In terms of rivers and catchment areas, the GreenArc area divides into two clear sections: to the west and east of the River Lee. On the east side most sub-catchments relate to the River Lee, or include rivers that flow directly into the River Thames and to the west of the River Lee lies the catchment of the River Colne.
- 2.22 River valleys are important features within the GreenArc area. Many have been extensively modified by reservoirs, current and reclaimed gravel pits, landfill sites, artificial wetlands, river realignments and canals. Smaller intimate tree-lined valleys provide a contrast to the more heavily developed major river valley floodplains. Like the Thames, many of London's other rivers, and those rivers in the southern part of GreenArc, have been hemmed in by built development on their floodplains and have had their channels deepened to accommodate flood flows. It is now widely appreciated that such approaches are not sustainable, and the Environment Agency encourages the restoration of wetland habitats alongside the rivers, not only to assist with flood alleviation but also to provide

valuable wildlife habitat. The Mayor of London has identified the 'Blue Ribbon Network' for the River Thames and London's other waterways in the London Plan. This establishes principles for the use and management of water and land beside it.

- 2.23 Much of the GreenArc is designated green belt and as a result development is restricted to concentrated zones which occur along or in close proximity to river valleys. Flood risk management provides a significant challenge to current and future development but also offers opportunities for urban regeneration and biodiversity. Increasing pressure has been put on the water resources in the Thames River Basin area and as a result further growth will need to be carefully managed against potential water shortages in this region. Climate change and increased future demands due to higher abstraction levels will inevitably place further stress on rivers such as the Thames, Chelmer; Wid, Colne and the Lee as they pass through urban centres. Creation of more informal spaces along the River courses where they pass through settlements will perform the function of flood mitigation while also providing additional recreation open space.

Productive landscapes

- 2.24 *This was informed by a review of the following documents: Natural England mapped data on traditional orchards, HLS Target Area mapping (www.natureonthemap.org.uk) and statements, Woodland For Life: The Regional Woodland Strategy For The East Of England, November 2003.*

- 2.25 The GreenArc is formed of high quality farmland and woodlands. There are opportunities to promote local food growing through increasing provision of allotments and strengthening links with local food producers. This could also target communities which currently experience high levels of health deprivation. In addition the GreenArc area could promote of opportunities to develop an organic farm network similar to the Field-to-Fork project to support a range of community food enterprises including farmers' markets, community-owned shops, community supported agriculture, country markets, food co-operatives and many others. At present that project does not cover the GreenArc study area.
- 2.26 In peri urban and urban areas, opportunities for green infrastructure include incorporating allotments/community gardens into new publicly accessible open space and develop links with interested community groups at local level.
- 2.27 The Regional Woodland Strategy states that biomass is seen as the second most significant resource for the country behind wind power. The strategy estimates that if 14% renewable energy target by 2010 was adopted, the region would have to produce 700GWhr/ year from biomass. This would require 92,000 hectares of woodland, either existing or specially planted short rotation coppice. The East of England has about 140,000 hectares of existing woodland; although about 50,000 hectares are not currently manage to produce much, if any timber.

Sustainable woodland management forms part of the focus for the Woodland Arc project on GI Plan **Figure 3.1**.

Land remediation

- 2.28 *This was informed by a review of the following documents: Strategic Housing Land Availability Assessment (SHLAA), Minerals and Waste Development Framework for Essex – Waste Core Strategy, Indices of Multiple Deprivation (IMD), National Land Use Data (NLUD).*
- 2.29 Much of the land outside areas of settlement is used for agricultural practices; however areas in the west along the Lee Valley, in the London Boroughs within GreenArc experience deprivation, with reference to the IMD (2007).
- 2.30 Existing road and rail infrastructure corridors across the GreenArc are often linked to quality of land and poorer quality of life due to severance issues. The M25 runs through the study area and there are a number of additional main roads across the GreenArc (A120, A12, A130) which act as barriers and reduce permeability for both people and habitats.
- 2.31 There has been a long history of mineral workings in the GreenArc which has led to previously restored land becoming degraded over time. The main types of damaged land which require further actions are former mineral workings, especially where infilling with waste material has occurred and certain areas affected by former industrial processes. A large number of these sites which have formerly been used as mineral extraction sites and have

since been restored, provide interesting landscapes with an enormous GI resource potential in landscape, recreational and biodiversity terms. These sites exist across the GreenArc but primarily are located along the Lee Valley which has a history of mineral workings, and at South Ockendon. Many of these sites have since been restored and provide a rich and diverse wetland habitat network, which could form key parts of a strategic GI network.

- 2.32 Several examples of successful improvements of damaged and derelict land have taken place in the Lee Valley Regional Park, using various funding sources. For example, a former Royal Ordnance site at Waltham Abbey, which had been derelict and closed for many years, has recently been redeveloped as a public open space.

Nature conservation

- 2.33 *This was informed by a review of the following documents: East of England Biodiversity Mapping Project 2005, Essex Biodiversity Action Plan 2005, Essex Living Landscapes Areas and Plan (Essex Wildlife Trust), Statutorily designated sites (Natura 2000, SSSI, NNR, LNR), County Wildlife Sites.*
- 2.34 The GreenArc encompasses Broxbourne, the south eastern quarter of Welwyn Hatfield and the south belt of East Herts District. It also includes ten Essex districts. The principal urban foci are associated with Greater London, close to and within the M25, but also occur at Harlow, Hoddesdon/Cheshunt, and extending east, Romford, Ilford, Barking, Dagenham and Hornchurch.

Environmental Stewardship occurs throughout the GreenArc. Whilst such land management is focused in the more rural areas, examples extend in toward the London Boroughs, for example, along the river valleys.

- 2.35 BAP habitats identified in the Hertfordshire BAP differ to those of the Essex BAP. The Hertfordshire BAP focuses on woodland, wetland, heathland and acid grassland, neutral grassland, chalk grassland, farmland and urban areas (see Hertfordshire Strategic GI Plan). In contrast, the Essex BAP focuses on old orchards, old hedgerows, reedbeds, ancient woodland, heathland, coastal grazing marsh, roadside verges and species-rich grassland. Note that the functional analysis for the GreenArc follows the Hertfordshire BAP habitats for consistency between district and strategic GI Plans, however, additional cross reference is given to the Essex BAP habitats.
- 2.36 Ancient woodland habitats within the GreenArc are principally focused at Epping Forest, Broxbourne / Hoddesdon Woodlands complex and Hatfield. The western most sites (in Hertfordshire) include Millwards Park and Great Broombarns Woods in Welwyn Hatfield Borough. Clusters of ancient woodland habitats also occur in and around Harlow, in north east Brentwood and north west Enfield.
- 2.37 In common with Hertfordshire, the rivers of the GreenArc continue to form a valued habitat type. Significant wetland habitats occur along the Lee and Mimram within Hertfordshire but also, through the Roding Valley and

along the north bank of the Thames, which borders the southern boundary of Barking and Dagenham and Havering.

- 2.38 Opportunities for improvement of habitat links and expansion have been identified in the BAPs. Core areas identified for expansion in the Herts BAP include the Broxbourne-Northaw-Hatfield Park complex. Heathland habitat expansion targets in the Essex BAP seek restoration of 50ha and creation of 50ha (examples include Epping Forest, Galleywood Common, Mill Green and Thundersley Great Common). There are no specific areas identified for proposed restoration or creation of Reedbeds or Coastal Grazing Marsh habitats within the Essex BAP.
- 2.39 Other opportunities are expansion of existing wetland features to a varied wetland mosaic, for example, including wet grassland, carr and open water. Key foci identified in the Herts BAP include the Lee valley and Stort valley. In respect of reedbed habitats, the Essex BAP also provides specific recommendation for the Lee Valley, including Fishers Green/Cheshunt Gravel Pits in particular.
- 2.40 In addition, neutral grassland restoration and creation identified within the Herts BAP include areas in North and East Herts. This reflects the aspirations for environmentally sensitive management identified in the Herts BAP. Key locations for Environmentally Sensitive Areas identified in the Herts BAP and which are also relevant to the GreenArc include the East Hertfordshire

river valleys, River Stort flood plains, Lee Valley, Mimram Valley and Bramfield plateau, and Broxbourne Woods.

3 Functional analyses: methodology

- 3.1 For each of the functional analyses at **section 2** of the GI Plan, the methodology behind the GIS spatial analysis is summarised below.

Access to recreation

- 3.2 Accessible open space was mapped using strategic open space datasets in the Essex ANGSt Assessment, together with other datasets such as Local Nature Reserves. Access links (paths and rights of way, promoted routes and cycleways) were mapped, as was point data for ROWIP priority projects, where available. A number of open space provision standards were also applied, mainly in the form of Natural England Accessible Natural Greenspace (ANG) and Woodland Trust Accessible Woodland Standards. GIS spatial and visual map analysis was then used to identify gaps in provision and barriers to access, to identify potential foci for proposals.

Prestige on Settlement Approach Corridors

- 3.3 Consideration was given to the 500m buffer of main road and rail corridors on settlement gateways, to understand where experience of GI assets may be impaired currently and to inform the spatial direction of proposals. The analysis also used aerial photograph imagery and information in the Essex Landscape Character Assessment, to understand where landscape enhancement could contribute to GI proposals development.

Health

- 3.4 In addition to paths and rights of way and other access routes such as cycle routes, the Indices of Multiple Deprivation (IMD) were mapped, considering the 40% most deprived wards in the settlements within the GreenArc. Taking this with mapped information on barriers such as arterial transport corridors enabled the analysis to target areas where green infrastructure could potentially address deprivation issues through enhanced linkages.

Sound ecosystems

- 3.5 Environment Agency Water Framework Directive (WFD) GIS data was used for the main rivers and their catchments, to understand issues of ecological quality, low flows and abstraction pressures. High intensity traffic flows and main roads were also mapped to provide a broad picture of air quality issues. These two datasets enabled targeting of strategic GI proposals and zones in terms of wetland enhancement and large scale tree and woodland planting.

Productive green environments

- 3.6 This analysis mapped provision of traditionally managed orchards and farmlands covered by Higher Level Stewardship agreements, as well as land in organic stewardship. Patterns were noted in terms of distribution and opportunities for new provision noted.

Conserving historic landscape character

- 3.7 Designated historic assets such as registered parks and gardens and Conservation Areas were mapped and the qualifying features of designation relevant to green infrastructure noted. Consideration was also given to non designated assets important to urban green infrastructure heritage in general (e.g. in New Towns such as Harlow). Ancient woodlands were mapped, and the proportion of both these and registered parks and gardens actively protected through schemes such as environmental stewardship identified. As much of this function is about understanding and conserving historic legacy, the Historic Landscape Character types identified as regionally rare were mapped where information was available. The aim was to understand distribution of historic landscape elements and boundary networks which could contribute to the green infrastructure network.

Sustainability and responding to Climate Change

- 3.8 Woodlands and accessible woodlands were mapped using National Woodland Inventory data. Visual analysis of aerial photography was also undertaken, to understand distribution of, and opportunities for, urban greening. Gaps were noted as possible opportunity areas for green infrastructure.

Land remediation

- 3.9 Existing and former minerals sites were mapped, as were areas of deprivation (using the Indices of Multiple Deprivation or

IMD), to help focus opportunities for positive green infrastructure planning.

Nature conservation

- 3.10 This analysis noted distribution of internationally, nationally and locally designated assets. Cross referring to the earlier document review, main issues and vulnerabilities were noted. Essex Biodiversity Action Plan Key Biodiversity Areas and Living Landscape areas were mapped, to understand where there may be potential for enhanced landscape and habitat linkages through green infrastructure.

Experience

- 3.11 Using the Regional Landscape Typology as a starting point, the 27 rural landscape types of the region were assigned rarity based on percentage distribution. The three rarest landscape types were considered for analysis as these often form a potential focus for place and conservation orientated green infrastructure proposals (e.g. chalk landscapes). Their distribution was noted as was the percentage distribution as a proportion of the total regional distribution of the landscape type. Tranquillity, intrusion and night skies mapping were also used to build a broader picture of landscape experience and quality.

Flood attenuation and water management

- 3.12 *This considered the flood zones throughout the GreenArc, where GIS data was available, mapping their proximity to designated nature conservation sites, to understand vulnerabilities in the context of water level fluctuation.*

ⁱ Groundwork Hertfordshire 2004 **Trees Against Pollution: A Strategy for Tree Planting and Air Quality**



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