FINAL DRAFT

STRATEGIC GREEN INFRASTRUCTURE IN BROXBOURNE:

Some recommendations

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January 2014

GREEN INFRASTRUCTURE IN BROXBOURNE: EXISTING PROPOSALS

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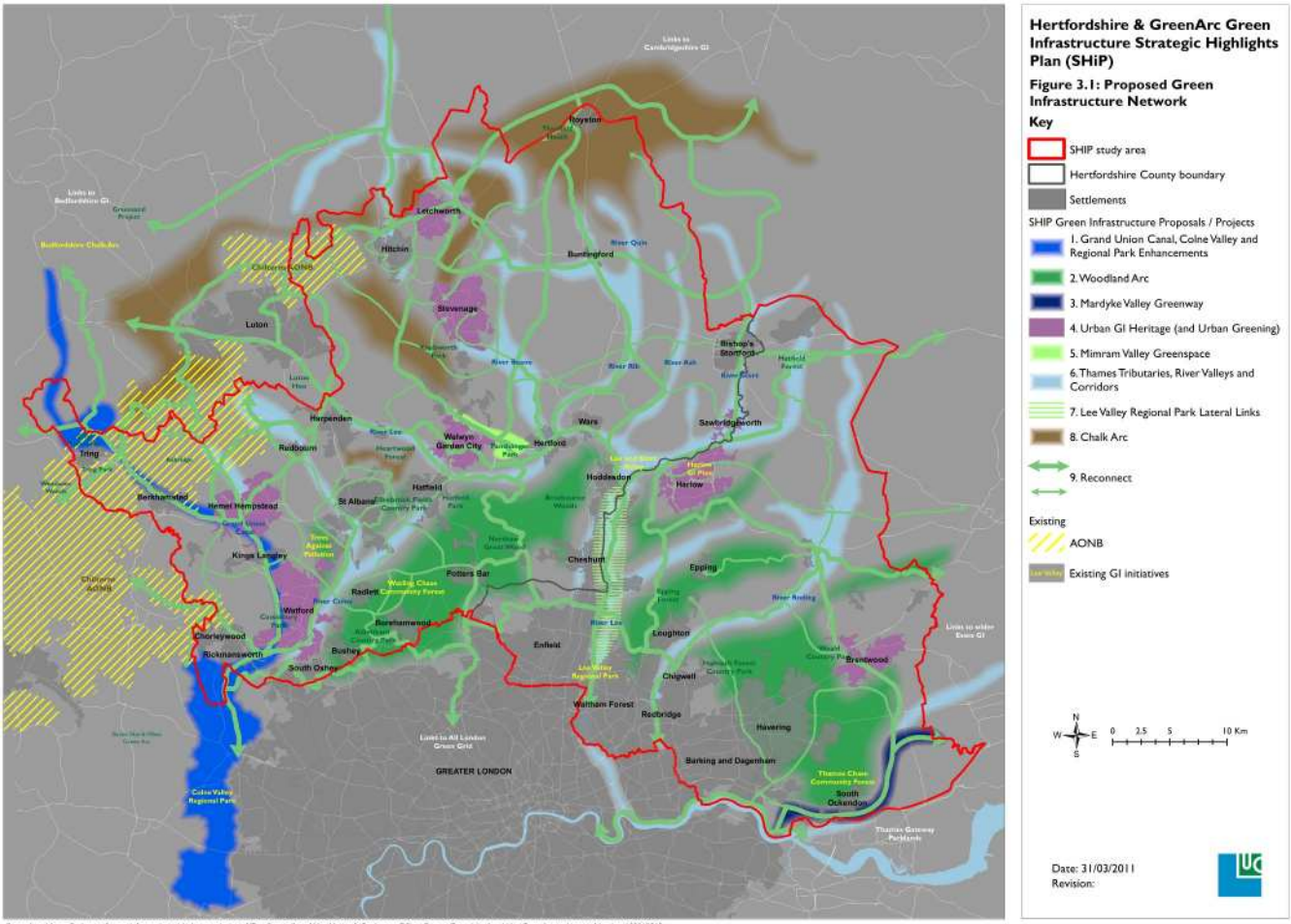
THE STRATEGIC GI PLAN FOR HERTFORDSHIRE & GREENARC 2011



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In March 2011 GreenArc, working with a consortium of partners, including Broxbourne Borough Council, secured from Land Use Consultants a Strategic Green Infrastructure (GI) plan for the GreenArc area and the rest of Hertfordshire. The plan identifies GI needed to deliver eleven functions sought by people and wildlife. An extract from the plan is shown above. The map shows the location of existing and well established initiatives benefitting GI, such as the *Lee Valley Regional Park*, and proposed further projects, such as a network of *Strategic Links*, *Woodland Arc*, *Lateral Links* to the Lee Valley Regional Park and the *Thames Tributaries River Valleys and Corridors*. The full plan can be downloaded from http://greenarc.org/downloads2014/GreenArc_SHIP.pdf.

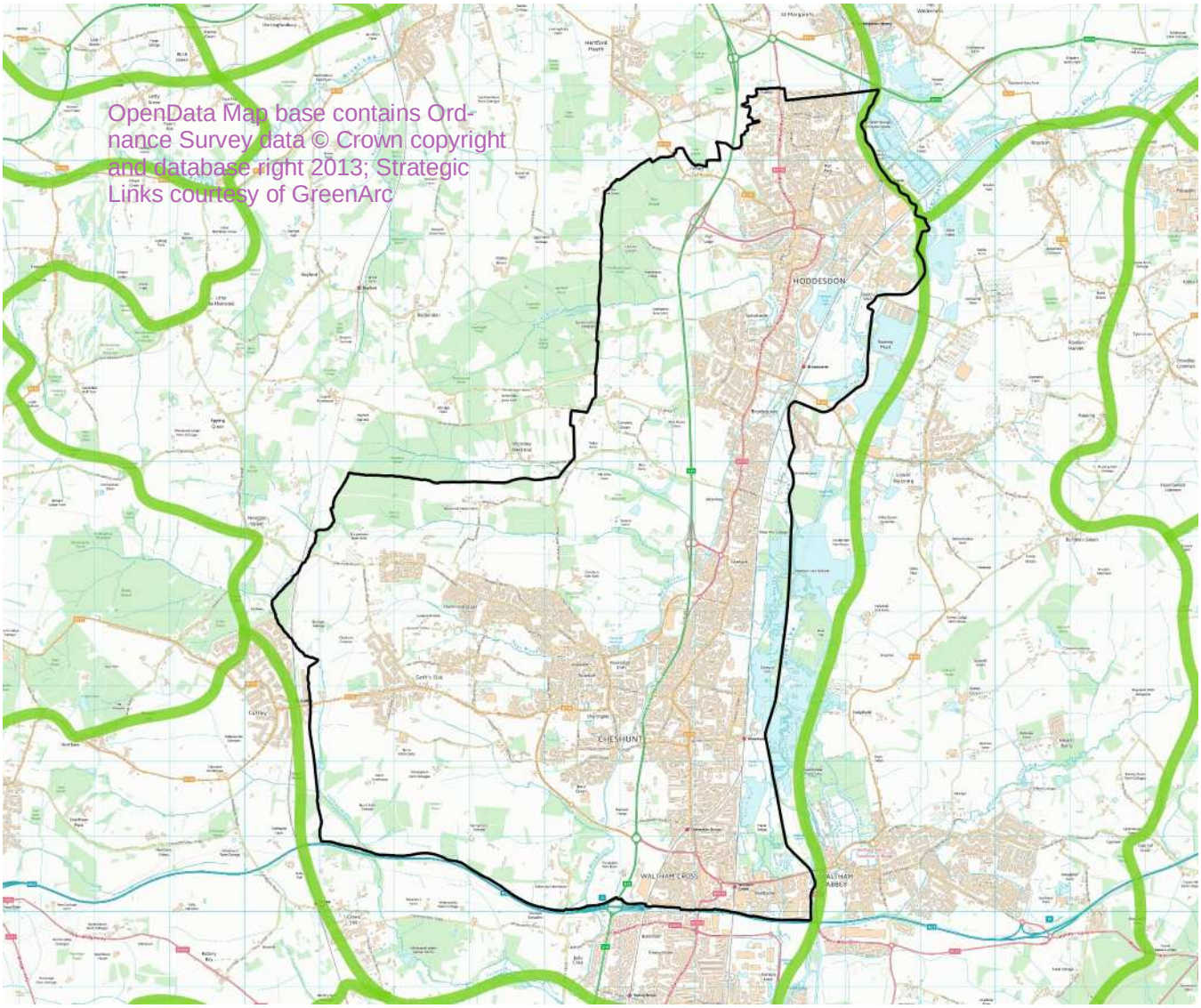
This document looks at some issues and opportunities for the Borough of Broxbourne in supporting this Strategic GI plan. It also reviews the implications of other recent developments related to GI Planning that were anticipated when the GI Plan was produced, but have since become clearer. These include the establishment of a *Nature Improvement Area* including much of the Borough, and further work by the Herts & Middlesex Wildlife Trust to better understand ecological potential through a new study, *Hertfordshire's Ecological Networks*.

The document does not take the place of a district scale GI Plan, which could be expected to address important local topics such as urban greening, town/country green links and the severance of networks caused by the construction of the A10. But it should be useful in helping the Borough secure some of the GI of sub-regional significance, support a joined-up approach with neighbouring authorities, and help brief the author of a borough scale GI Plan should one be commissioned.

GREEN INFRASTRUCTURE IN BROXBOURNE:

EXISTING PROPOSAL :

RECONNECTING STRATEGIC LINKS



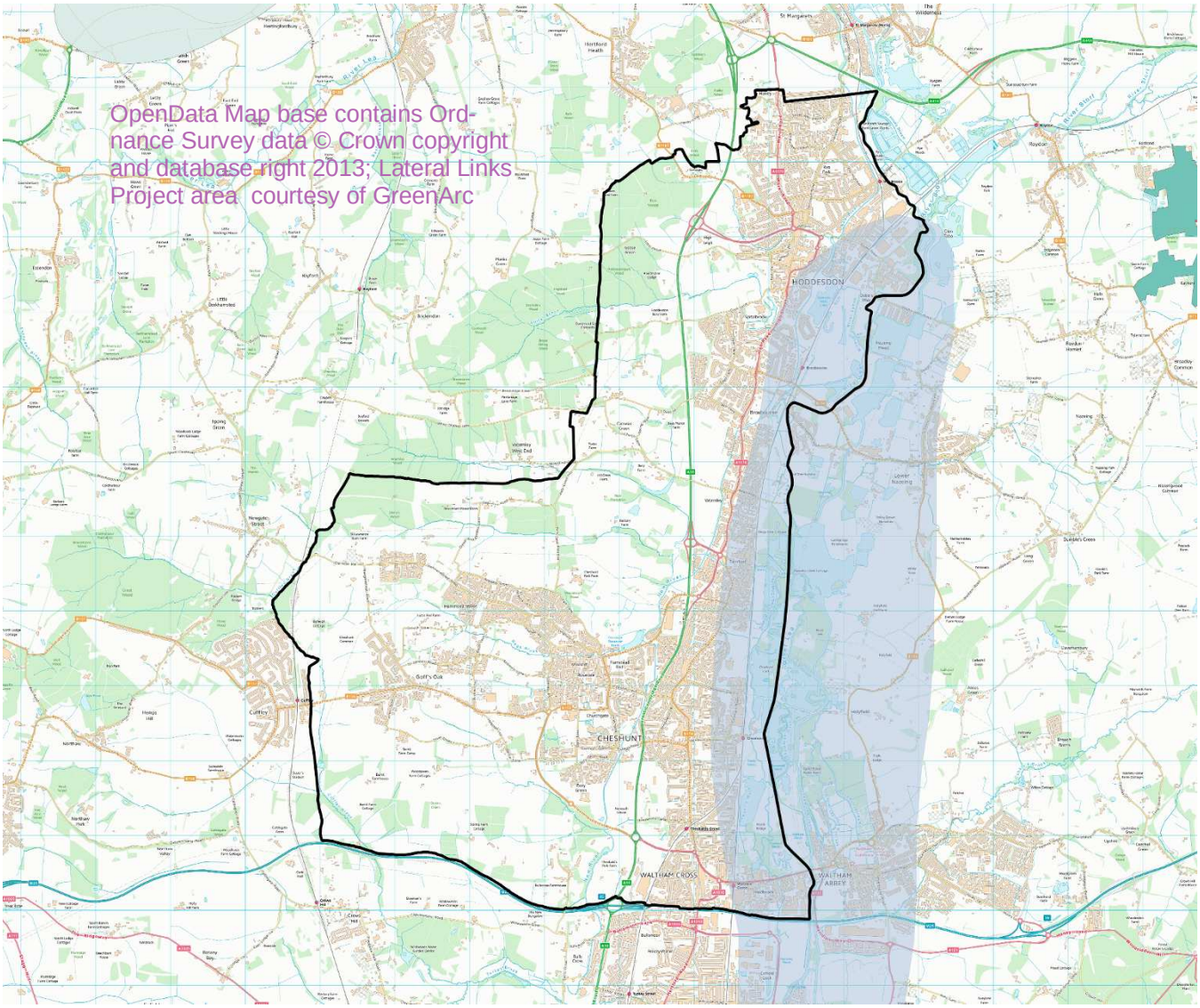
GreenArc's priorities for GI include the creation of a strategic network of green routes for the sub-region, associated with the Public Rights of Way (PROW) network and linking with the All London Green Grid (ALGG).

Two *Strategic Links* are particularly relevant to the Borough of Broxbourne and can be seen on the map above: one in the west running parallel to Cuffley Brook to nationally important woodlands, and another to the east and of regional significance, down the Lea valley. The former should be capable of protection by Green Belt policy and of enhancement through implementing landscape character guidelines. The latter benefits from the activity of the LVRP Authority within the LVRP boundary, but outside this there is a specific need for Broxbourne Borough Council to help protect and enhance parts of the section between the John Warner Sports Centre and Ratty's Lane in the northeast and the section adjacent to Lea Road in the southeast. Both sections need investment in landscape structure and management. South of Station Road is particularly degraded. Every future development management opportunity should be taken within these sections to pull development further away from the water and to restore a wider landscaped corridor. Similarly, insofar as Broxbourne Borough Council can influence the matter, any sport and recreational enhancements proposed to the Town Mead Sports Ground in the neighbouring authority should also not be allowed to compromise retaining a semi-natural green corridor.

GREEN INFRASTRUCTURE IN BROXBOURNE:

EXISTING PROPOSAL:

DEVELOPING LATERAL LINKS TO THE LEA VALLEY



The GreenArc Strategic GI Plan identified that one priority project should be to enhance accessibility to the Lea Valley Regional Park (LVRP) from the green transport network and at points on the park boundary. In part this is to help address needs for greenspace and health-promoting environments in the east of the Borough. The project is called *Lateral Links* and the approximate footprint is shown shaded on the map. The project includes a number of ideas, such as: creating green links from existing public transport nodes and the urban area of Hoddesdon; better signage from settlements within Broxbourne Borough; creation of habitat as well as people connectivity to link the LVRP to the wider landscape; better public transport network links, overcoming access barriers (e.g. to reservoirs); and enhanced connections to the strategic links and All London Green Grid (ALGG).

In response to the Strategic GI Plan it is suggested that development policy should ensure that the east-west corridors, linked to existing crossings of the railway line and Navigation, are retained, made 'greener', safer and better signposted. The Borough should also seek safe alternatives when Network Rail proposes closing crossings and indeed look for opportunities for additional crossings of the Navigation, with a target of crossings being no more than 1km apart. Some ideas for track crossings follow. More work is required to identify suggested locations of crossings over the Navigation and A10.

GREEN INFRASTRUCTURE IN BROXBOURNE:

EXISTING PROPOSAL EXEMPLIFIED:

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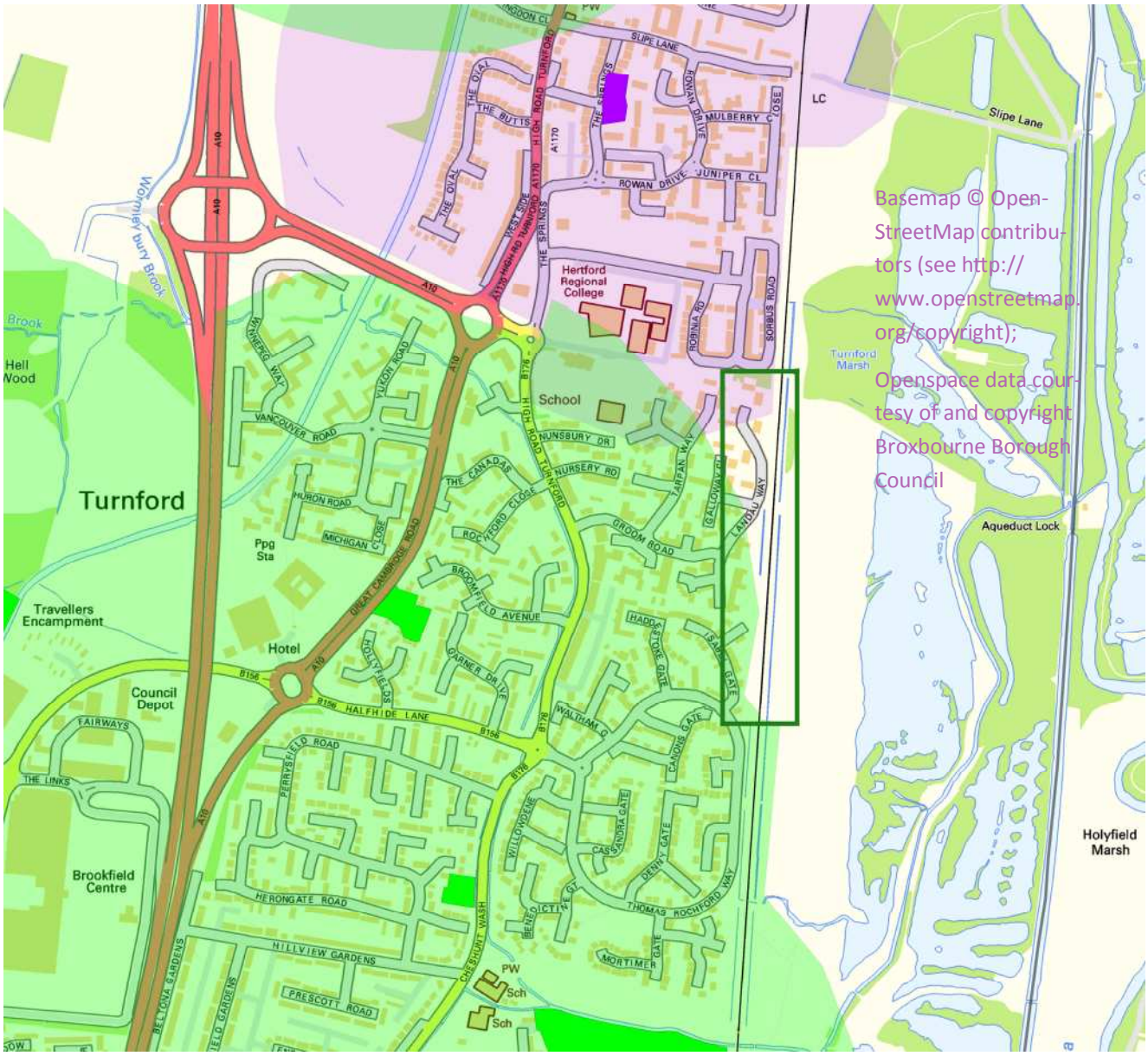
LATERAL LINKS: A POSSIBLE RAILWAY CROSSING NEAR LANDAU ROAD



A reasonable working target for *Lateral Links is* that crossings of the railway line and Navigation are no more than 1km apart. This standard is arbitrary but, where achieved, provides a larger catchment with walking or jogging circuits of 3-5km that include the LVRP and typically a different 'outward' and 'return' path for variety.

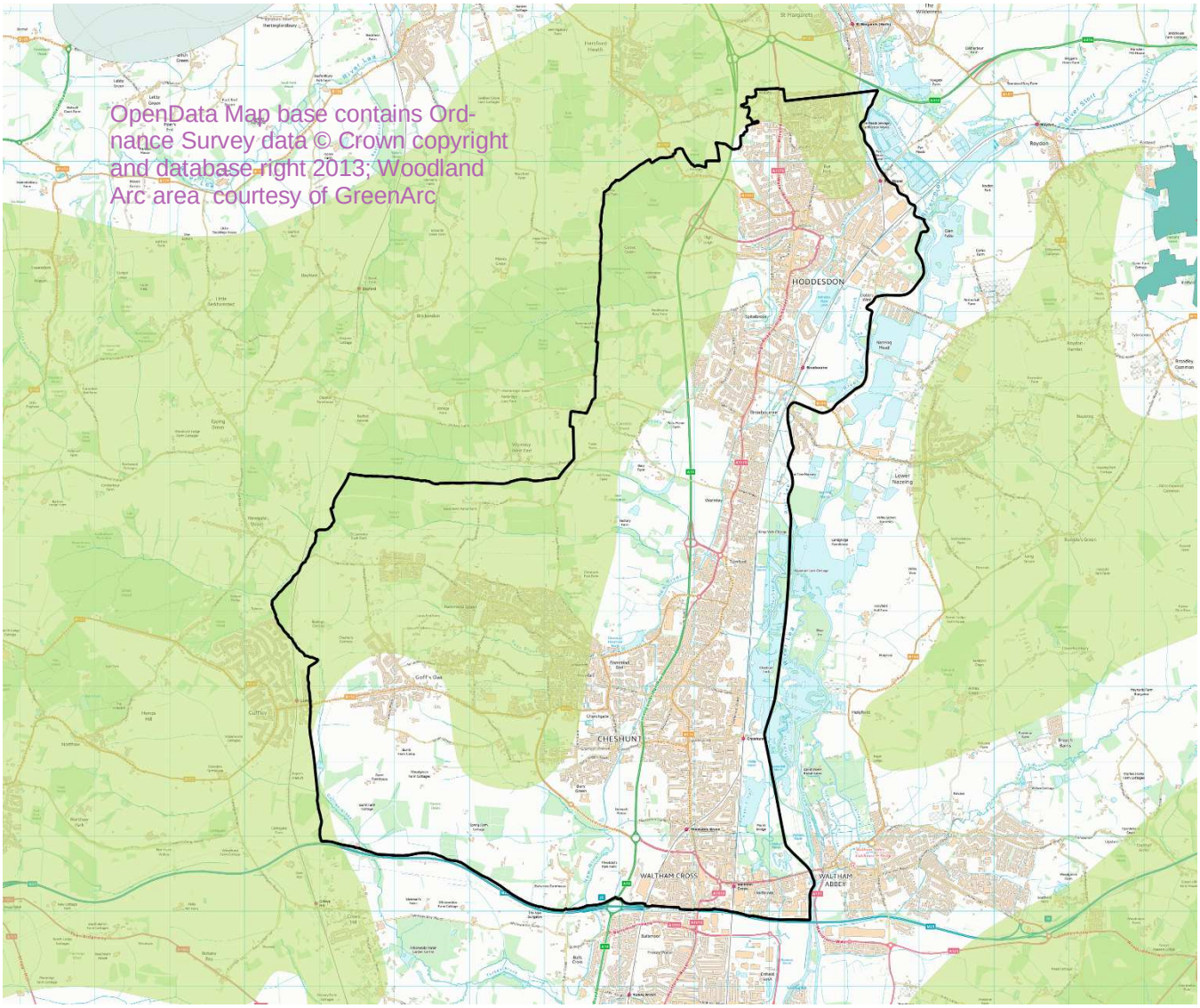
To illustrate, one of the longer stretches of track in the Borough without a crossing is between Slipe Lane and Turnford Brook . The central section of this stretch is shown on the map above bounded by a green box. Were a crossing to be provided here it would not only provide those who live due west with easier access to the LVRP and better circuits for health and recreational benefits, but would also provide better access to greenspace in the vicinity, especially for those dwellings on Landau Road which are not within 500m of an existing facility (i.e. not tinted in green or mauve). In addition it would also provide easier access to the LVRP for Hertford Regional College.

Another candidate location for a railway crossing would be Cozens Lane East /The Sidings. The temporary bridge from Cheshunt station into the LVRP should also be retained and upgraded when it comes up for reconsideration.

GREEN INFRASTRUCTURE IN BROXBOURNE:

EXISTING PROPOSAL:

WOODLAND ARC

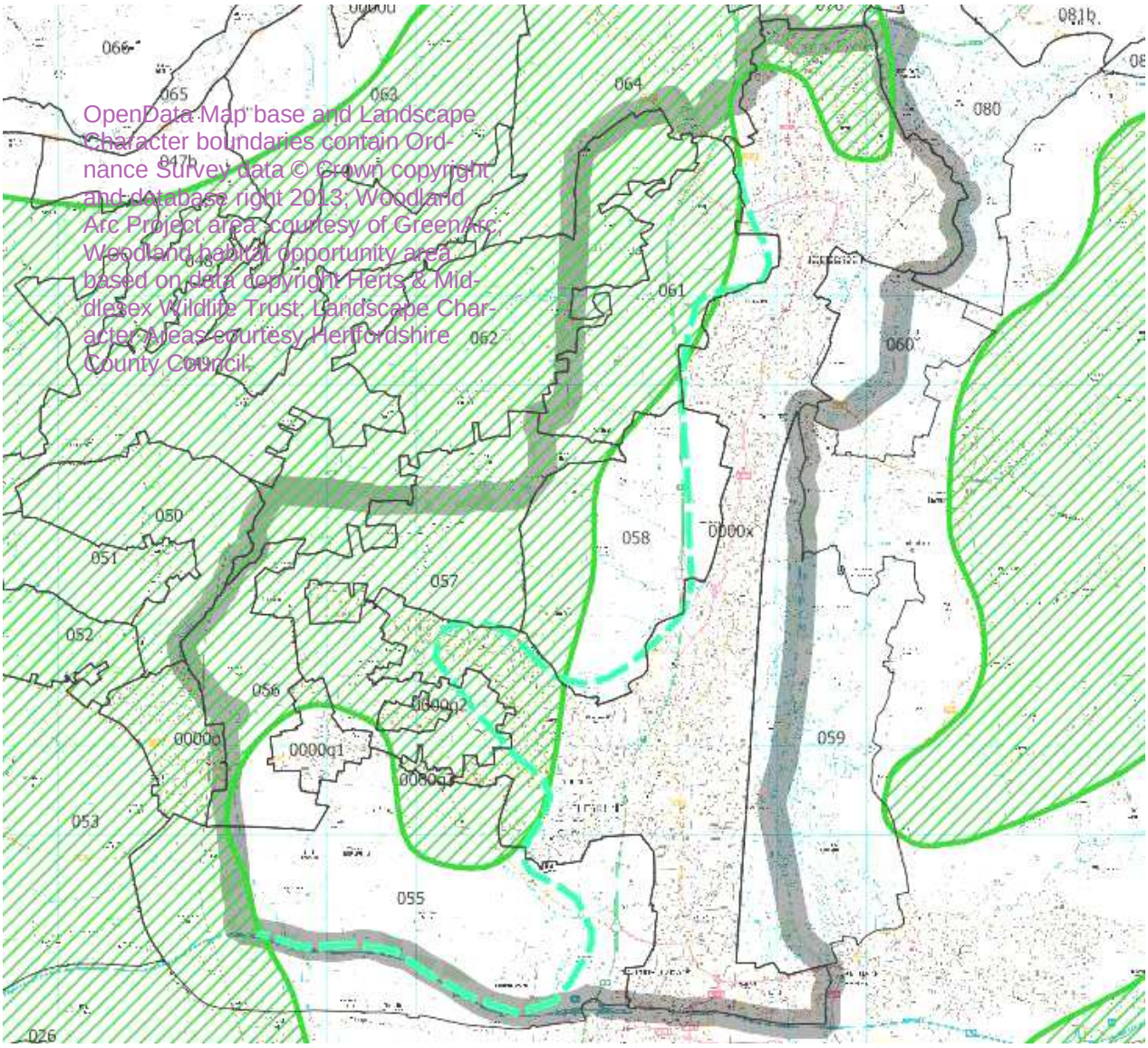


The GreenArc Strategic GI Plan 2011 identified *Woodland Arc*, a habitat enhancement project spanning between Watling Chase Community Forest and Thames Chase Community Forest, shown above in green. This has a number of suggested outcomes including: enhanced resilience to climate change; linked and buffered woodlands; alternative semi natural greenspace; better woodland links to the urban fringe; enhanced historic assets; re-restored mineral workings; sustainable woodlands; and is coupled with provision of appropriately designed and sited access links. It is perhaps the single most ambitious project agreed on in the plan, but recognises the collective regional (sometimes international) importance of the existing woodlands and associated acid grasslands. The Hertfordshire section of this project has previously had strong community support when it was proposed as an Nature Improvement Area '*Hertfordshire hornbeams and heaths*'. The main challenges for delivering *Woodland Arc* are: landowner agreement and finance for planting. Planning is also a consideration: Woodland from re-restoration of sites (such as those off Cock Lane) would require planning permission. Or If sought as a result of developer contributions would require adoption of a policy of offsetting or CIL mechanisms. Some detailed GI planning to help prioritise locations and engage partnerships is also desirable but significant expansion of Woodland Arc will only arise if hundreds of hectares of appropriate land is planted and better hedged.

GREEN INFRASTRUCTURE IN BROXBOURNE:

NEED FOR FURTHER STUDY:

THE WOODLAND ARC BOUNDARY AND LATEST HMWT ADVICE



In 2013 HMWT refined its thinking on ecological planning in *Hertfordshire's Ecological Networks,* based on new modelling of ecological potential in Hertfordshire (including for woodland and grasslands). This later study endorsed the potential for habitat creation but the possible need to expand the *Woodland Arc* project area boundary as a result needs to be considered.

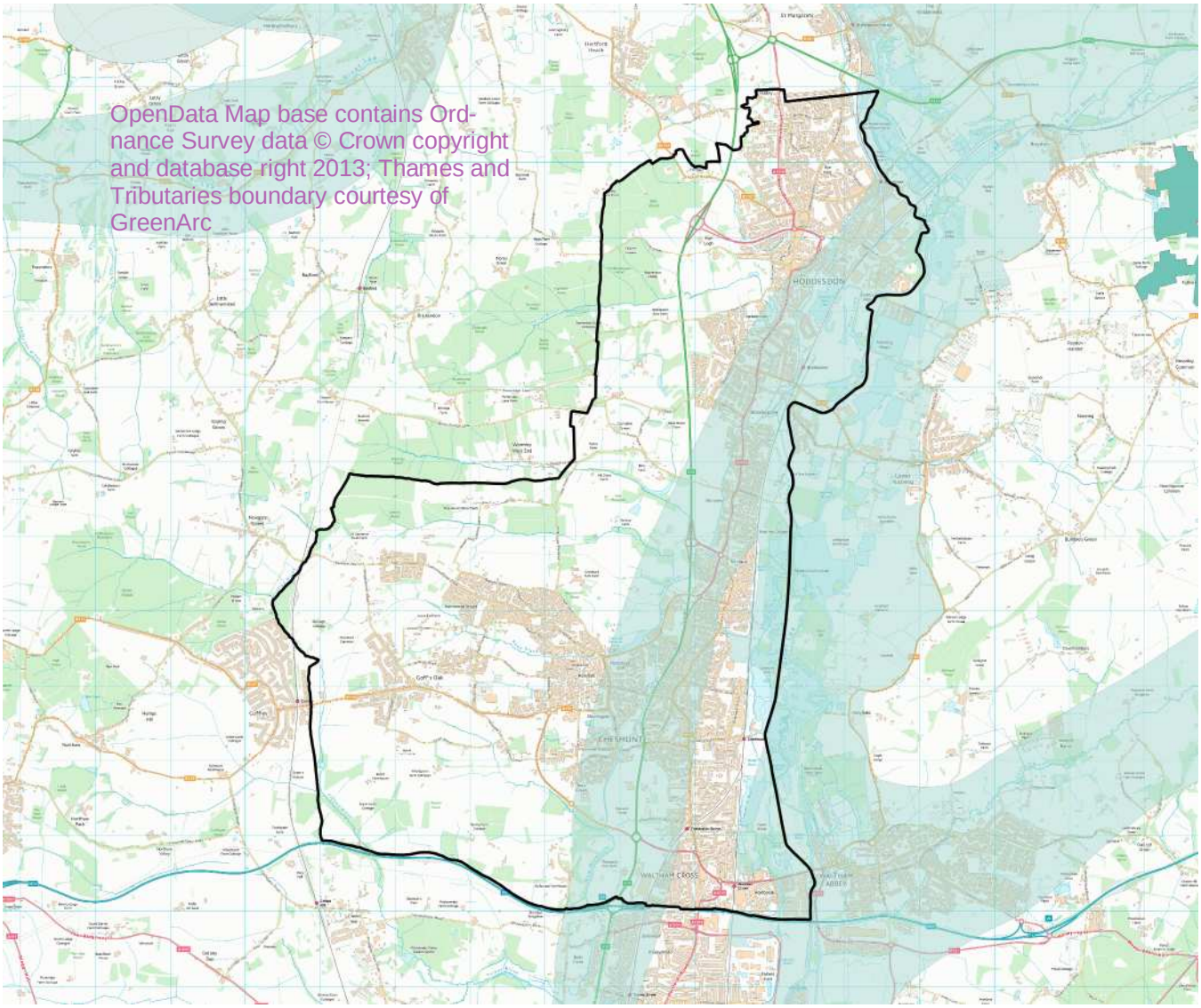
The local difference in the 2013 boundary (shown as a light green dotted line) and the 2011 one (shown in green cross-hatching) is significant. *Hertfordshire's Ecological Networks* seems to suggest most of the undeveloped western part of the Borough should now be targeted for woodland/grassland habitats.

Ecologically sound, expanding *Woodland Arc* (including greater reference to grasslands) in this way might also provide: enhanced resilience to climate change; alternative semi natural greenspace; and the better woodland links to the urban fringe sought in the GI Plan. Nor are there strong objections to expanding the project area on landscape grounds; the Hertfordshire landscape character assessment (Areas 055, 058 etc.) makes little case for retaining a open landscape and a revised boundary fits well with the regional landscape character type typically correlated with woodland, the "Wooded Hills & Ridges" (see www.landscape-east.org.uk for details).

GREEN INFRASTRUCTURE IN BROXBOURNE:

EXISTING PROPOSAL:

THAMES & TRIBUTARIES PROJECT



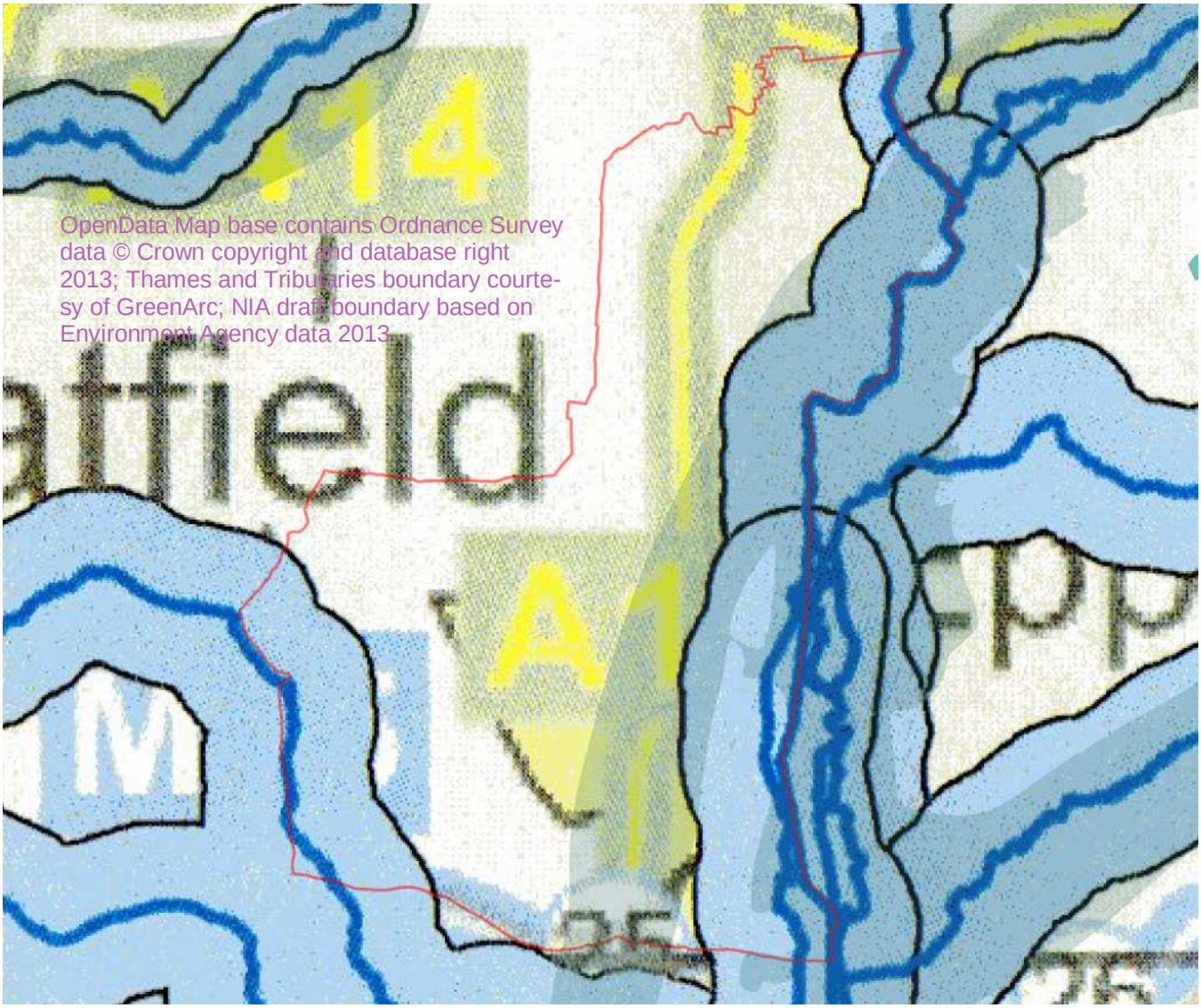
The GreenArc Strategic GI Plan 2011 proposed for Broxbourne some habitat enhancement centred on, and buffering, the main tributaries of the Thames and the New River. Called the *Thames Tributaries River Valleys and Corridors*, this is shown above in light blue. The project has a number of suggested outcomes, including: enhanced wetlands and riverine quality; a better balance between wildlife conservation and access provision; better land restoration; and flood risk management.

In 2013 HMWT refined its thinking on wetland habitat enhancement opportunities in *Hertfordshire's Ecological Networks* and the need to revise the boundary of the *Thames and Tributaries* project area as a result needs to be considered. But notwithstanding aspirations in either the Strategic GI Plan or *Hertfordshire's Ecological Networks*, in practice the main relevant activity that currently relates to this Strategic GI project is being been taken forward by a broad partnership working on another initiative, *The Lee Catchment Nature Improvement Area* (NIA). The NIA was in 2013 recognised as material to development planning by the Hertfordshire Local Nature Partnership using a facility afforded by the National Planning Policy Framework. Although not fully multifunctional the NIA is of strategic importance to GI delivery and needs to be acknowledged, e.g. in Borough plans. Some further though has been given to how this can be reconciled with the GreenArc and HMWT initiatives.

GREEN INFRASTRUCTURE IN BROXBOURNE:

NEED FOR FURTHER STUDY:

THE NIA AND THE THAMES & TRIBUTARIES GI PROJECT



Both GreenArc's Strategic GI Plan and the *Lee Catchment NIA* (boundary shown above in light blue) were based on buffering of the watercourses. This is because land adjacent to wetlands is important for other wildlife and needs to be managed to improve: water quality; water flows; flood management; and public access.

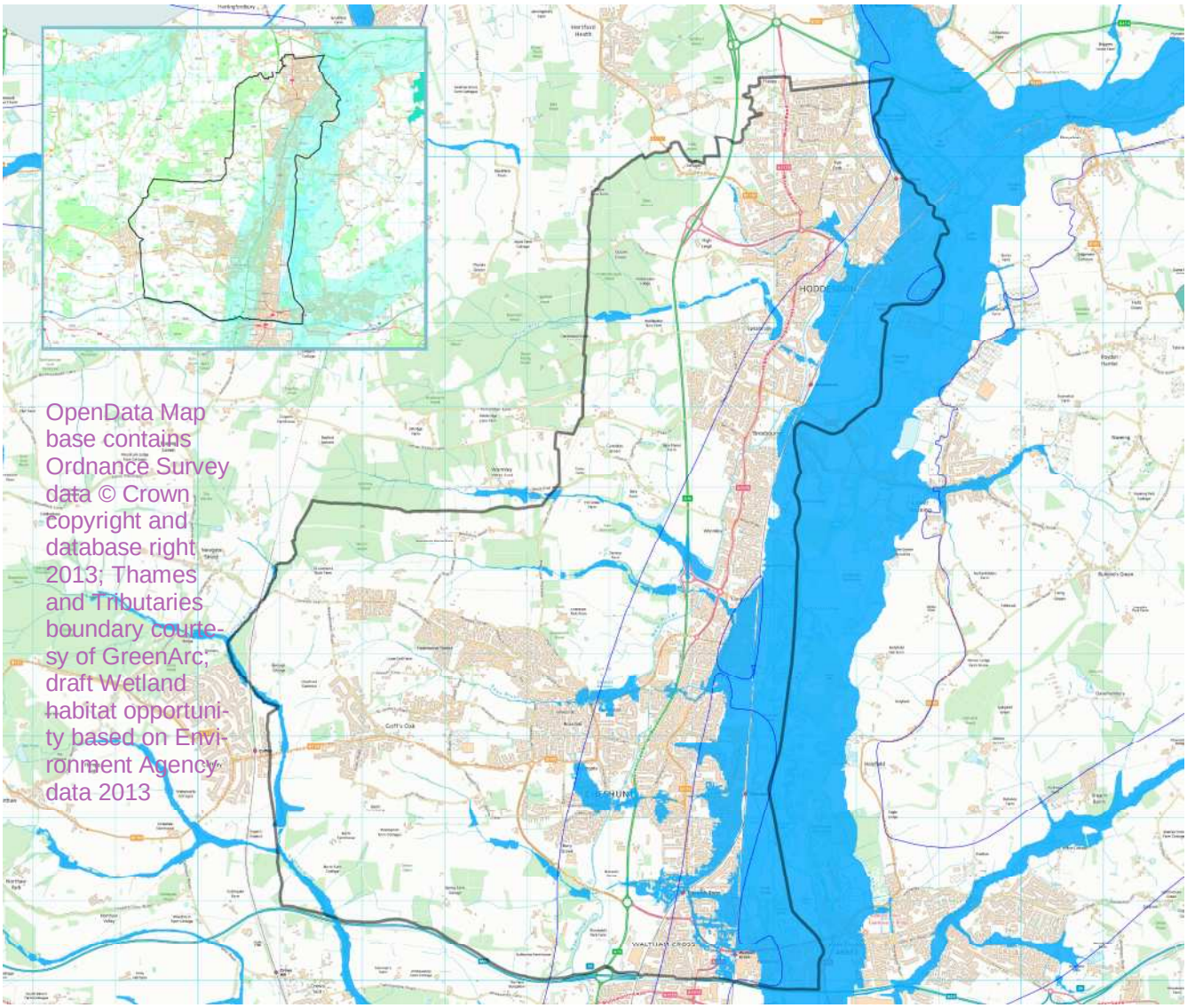
Apart from minor variations in the buffer width along the Lee Valley, one way the NIA boundary differs from the boundary of the GI Plan's *Thames & Tributaries project (*blue-grey overlay) is its apparent omission of the New River, which is an important multifunctional spine. Another is in including Cuffley brook. The addition of the latter is less of a problem: although not considered a strategic tributary in the GI Plan, a Cuffley Brook corridor fits with seeking a *Strategic Green Link* along the same course.

The NIA is a key habitat enhancement project to be shown in the Local Plan. It is also being implemented via an active partnership. But just relying on the NIA would exclude the New River and some sensible refinements of detail linked to HMWT's *Hertfordshire's Ecological Networks*. So, whilst the NIA is currently the primary ecological initiative with partnership and political support, some refinement of policy, e.g. as part of a local GI Plan, will need to be undertaken to ensure other GI objectives are not neglected.

GREEN INFRASTRUCTURE IN BROXBOURNE:

NEED FOR FURTHER STUDY:

THE THAMES & TRIBUTARIES GI PROJECT AND HMWT STUDY



In 2013 HMWT produced a report based on new modelling of ecological potential for wetland habitats in Hertfordshire, as part of *Hertfordshire's Ecological Networks*. This takes a view on linking them, which is needed for GI objectives. The map above approximately shows the wetland potential boundary proposed by HMWT (approximated here by the almost identical Environment Agency Floodzone 2 boundary in mid-blue for copyright reasons) and the boundary of the Thames and Tributaries project (in light blue in the inset map). They do not quite match as the GI plan includes the New River, an important aquatic corridor, but without wetlands.

While *Hertfordshire's Ecological Networks probably* more accurately identifies the area in the Borough providing the potential to deliver wetland habitat creation, this is only one of the wider objectives of the GI plan. Through the *Thames and Tributaries* project, the latter also includes: WFD-compliant catchment management for water quality (and a healthy river network); networks of habitats for species that live and forage near wetlands; and managed public access. For such purposes identifying a buffer area for each watercourse in the way both the GI plan and NIA have is appropriate. But the HMWT study does highlight the potential ecological importance of the smaller tributaries and this would be helpful for preparing a District GI plan to support local habitat creation and flood management.

GREEN INFRASTRUCTURE IN BROXBOURNE: SUMMARY OF RECOMMENDATIONS

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The following recommendations flow mainly from the foregoing limited analyses of current Strategic GI-related initiatives of concern to Broxbourne plus some local knowledge:

1) *Existing Strategic GI projects*: It is recommended that Broxbourne Borough and Hertfordshire County Council give support to the LVRP and LVRPA (e.g. in the Local Plan) since the LVRP can be expected to deliver Strategic GI for Broxbourne. The Councils' investments, however, could usefully be to complement those the LVRPA is making on its own landholdings.

2) *Strategic Links and Lateral Links*: It is suggested that the priority areas for strategic investment are the following sections: between the John Warner Sports Centre and Ratty's Lane in the northeast (including on adjacent public land); adjacent to Lea Road in the southeast; the Cuffley Brook corridor; and one or more additional E-W crossings of the railway line. In addition existing crossings need to be retained and made as 'green' and legible as possible through undertaking treeplanting and signage improvements. These initiatives will mostly require the support of development policies in the Local Plan. Further study also needs to be undertaken with regard to whether the 1km target should also apply to crossings of the Navigation and the A10, where the challenge is greater and the need is more variable. But from site visits in the case of Dobbs Weir a section of pavement needs to be constructed up to the bridge.

3) *Thames & Tributaries*: The Lee Catchment NIA needs to be recognised in Local Plans as material and the Borough Council should join neighbouring local authorities on the NIA steering group that directs funding to projects. But it is recommended that a more detailed borough-scale GIS-based study is undertaken, with further consultation, to ensure that other needs and opportunities expressed in both *Hertfordshire's Ecological Networks* and the *Thames and Tributaries* project are captured in associated planning policies and land and watercourse management projects.

4) *Woodland Arc*: It is suggested that all relevant Local Plans endorse the *Woodland Arc* initiative in principle, although make an adjustment to the project boundary when mapping it in the Local Plan to co-ordinate with the proposed woodland and associated grassland (i.e. forest) enhancement area in *Hertfordshire's Ecological Networks*. Mechanisms are then required to encourage woodland planting and good woodland management. The Community Forests are likely to be a source of practical ideas for linking forest creation to developer contributions. Locally, Hertsmere Borough Council, for instance, has a track record here. Another mechanism could be to support the promotion of an NIA based on Woodland Arc; there are other partners who would support this. The County Council should be encouraged to pursue re-restoration of the poorly-restored aggregate extraction sites off Cock Lane to woodland.

5) District scale GI: The GreenArc Strategic GI plan is strategic, and is not sufficiently detailed to form the basis for a District scale GI plan. GI is ultimately about meeting local needs. It would be helpful to develop a level of local intelligence about GI and a Borough scale GI plan as has been achieved in other districts. In the meantime, some considerations that have arisen from this GreenArc study which a Borough GI Plan should address are appended.

GREEN INFRASTRUCTURE IN BROXBOURNE: SOME POINTERS FOR BOROUGH GI

This study has been limited in scope, but early indications from examining the Borough's Strategic GI, datasets provided by the Borough, some site visits and lessons elsewhere are that:

- the New River and the minor tributaries of the Lee are likely to be important green corridors to conserve and enhance for both wildlife and people and they connect with the strategic corridors. In particular investment is required in securing access and improving path surfaces associated with these given the nature of soils and drainage. Better paths will help access for all levels of mobility for exercise, recreation and educational purposes.
- The Borough owns and controls land adjacent to if not part of potential green corridors which would benefit from investment to enhance corridor functionality for wildlife, green gyms, shelter, screening, appearance, shade, sitting, etc. This includes Castle Road, Wormley Playing Field, Nightleys Playing Fields, Longcroft Drive, and Old Highway.
- Many of the parks owned by the Borough are located close to dual carriageways and suffer from high levels of background noise. Noise reduces the functionality for health, recreation and wildlife (birdsong). A Borough GI plan could usefully consider the balance of noisy and tranquil sites that should be provided and this may influence future priorities for retention and investment at noisy sites where there are fewer compensatory attractions. Some minor improvement could be made at some sites through additional planting to disguise the source of noise.
- Cheshunt Park. Due to its size, this site appears to provide an opportunity to be developed and promoted as a major multifunctional asset. However its capacity to function as a major hub within the GI network is seriously diminished by the lack of radiating access and wildlife corridors as well as the general challenge of severance by the A10. Securing additional connectivity should be pursued as a priority for this site, reducing dependence on arriving by car and providing more options for walking circuits.
- Some sites in Borough ownership, such as: Lucy Warren; parts of Cheshunt Park (the non-wildlife site grasslands); Richardson Crescent; and Appleby Street could usefully contribute to local wildlife, shelter, screening, visual and recreational objectives through additional clumps of treeplanting. And depending on the future level and type of demand for Cock Lane Open Space, this might be a candidate woodland planting site.
- Given the unique history and prevalence of market gardening in the Lea Valley there should continue to be provision for allotments and starter market gardening/growing/horticultural facilities, with benefits for health, land productivity, education, and heritage conservation.
- The severance of non-vehicular routes caused by the A10 needs to be the subject of a detailed (mathematical) study that looks at existing and potential network topology and demand and demonstrates the cost-benefit of additional crossings in different locations.
- Broxbourne's leading role in securing Green Flag parks should be encouraged and the principles extended to other elements of Green Infrastructure
- Some urban areas are particularly in need of investment in greening the public realm more generally to deliver a GI framework that offers communities equitable provision of the 11 functions that GI can offer. The health component of the IMD can help guide priorities.