

## **WHBC Birchall Garden Suburb Green Corridor Draft Report**

### **by the Central Herts Green Corridor Group.**

This report specifies the Green Corridor needed in relation to the Northern section of Birchall Garden Suburb Green Corridor in line with the Inspector's direction to WHBC to seek the views of the relevant parties. It is based on Welwyn Hatfield Borough Council (WHBC)'s draft report (EX 169) plus the comments (in written submissions and in oral statements at the recent hearing) of the various parties on it supported by local evidence and a trawl of the literature. This literature shows that there is little clear hard guidance as to just precisely how wide this Green Corridor should be. The available guidance is only couched as minimum requirements to cover specific minimal requirements, which are not fit for purpose in our case here. The literature in fact shows that it is necessary to examine carefully the assets in the corridor in question in order to determine the scale, nature and width of corridor needed in any case to fit its circumstances.

#### **Objectives of the Green Corridor,**

There is general agreement on the definition and aim of the Green Corridor in paras 1.7 and 1.10 of the WHBC report - including the need to secure overall net gains to biodiversity – as the Inspector has reiterated. But concerns were raised that WHBC's report does not adequately deliver these aims and is therefore unsound. Specifically, it fails to set out the proper ecological baseline against which to determine any such net gains (see below). Therefore we here fill these gaps.

#### **Assets in the Green Corridor**

There is general agreement with para 1.8 of the WHBC report that the specification of the Green Corridor should be based on its assets and their services and that LUC's assessment of the assets in paras 1.13 – 1.25 and Appendix A is a start.

However, it has significant gaps and shortcomings and hence, it and WHBC's current proposals for the green corridor and the related land allocations are unsound – as we spell out below.

This report then sets out objectively and substantively the significance of specific assets to fill these significant errors, gaps and shortcomings. We also examine the appropriateness of the guidance on minimum widths that WHBC are using in order to derive a proper evidence based green corridor in this area. This specifies the Green Corridor constraints around which any land allocation for BGS has to be planned – as the Inspector rightly demanded.

Based on in-depth local knowledge and assessments, Figure 1 highlights the following key assets for each of which we provide supporting evidence regarding the significant ecosystems services they deliver and accordingly give the specification of the Green Corridor required.

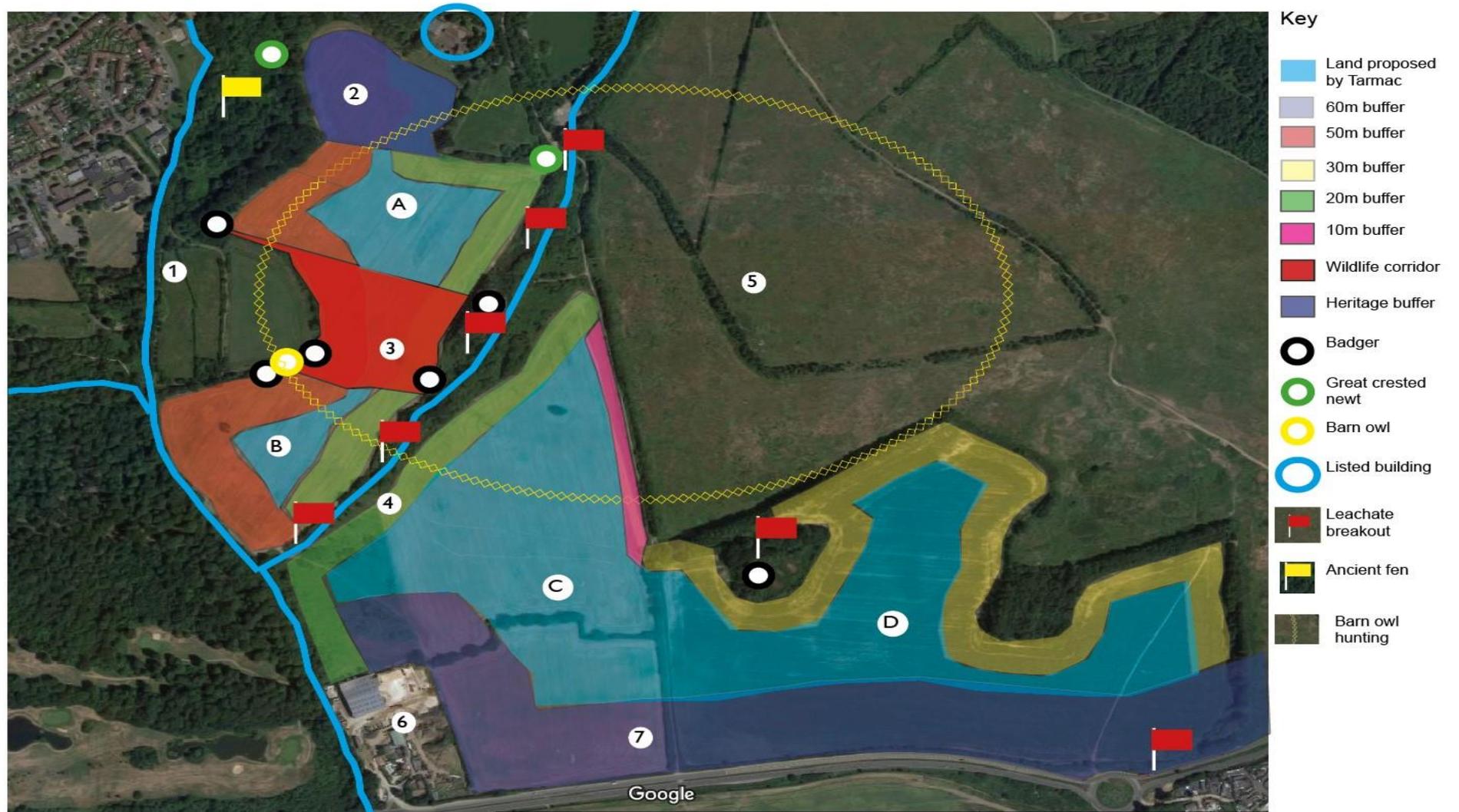
1. The Commons Local Nature Reserve (LNR) which is designated as a Local Nature Reserve since it contains important ecological assets that require at least a 50m buffer to maintain broad open links to the surrounding countryside,

2. A Heritage buffer to protect key heritage assets and views, which were not addressed at the recent BGS hearing.
3. A Wildlife corridor.
4. A buffer either side of the watercourse to protect it from pollution by the leachate of contaminants from the former waste tip - shown by the red flags
5. The former landfill site which contains naturalised grassland that provides valuable habitat and feeding ground for birds as well as mammals that support 10 species of raptors, including the barn owls that have bred successfully on the arable area of the Commons LNR for the past 3 years.
6. A 62m buffer around Burnside which the Inspector has rightly suggested is needed to mitigate the noise and dust problems that could arise for any houses built nearby.
7. Up to 80m buffer shielding from noise and pollution against the A414, which this Inspector has rightly demanded. This should comprise at least 10m of tree belt, 15m for the 5m heap mound and 30m for the SUDS, which would take it towards the upper limit of the 50 – 80m buffer suggested by the Inspector.
8. Recreation

We also highlight *in bold and italics* the outstanding questions regarding BGS that need to be answered in this planning process and which WHBC as yet have not addressed and answered for their assessment and conclusion to be considered sound.

This report presents evidence on the important assets in sections 1- 5 above and the ecosystems services they give to explain and substantiate the need for a green corridor covering them and why they must be essential buffers for any development on this site. The combined areas of these buffers 1-5 and buffers 6 – 8 as far as they affect the Northern section essentially depict our view on what the Green Corridor should look like as it affects the Northern part of BGS

Figure 1: Green Corridor Assets affecting Birchall Garden Suburb



## Ecology/biodiversity.

The Commons Local Nature Reserve (LNR) (point 1 our figure 1) is a most valuable area with over 150 species of principal importance (red listed and European protected species). Its annual winter conservation crop provides foraging habitat for endangered farmland bird species.

WHBC significantly fail to highlight that **BGS's proposed road across this area would create a barrier to the present movement of wildlife and prevent species dispersal**. At the hearing, Tarmac claimed that they could overcome this by sensitive road design. But it is not clear how this could be feasible and adequately overcome the adverse impacts of a road servicing such a large number of houses as the 1200 proposed. Moreover, it is not clear what such properly designed road cost nor its implications for the viability of the allocation.

***?insert photo highlighted the significant ecology assets which their proposed road would disrupt & highlight constraints to feasibility and effectiveness of Tarmac "sensitive" designs proposals?***

The **Wildlife corridor** shown in bright red as 3 in our Figure 1 contains natural and semi natural habitats interspersed across arable areas that are highly valuable for species such as barn owl, polecat, brown hare, harvest mouse, many species of bats and several declining bird species such as, yellowhammer, linnet and grey partridge. These species depend on the farmland, its hedgerows and field margins and would be adversely impacted by housing.

Herts Ecology (in para 10.23 of their letter to WHBC of 19/3/2015) raised concerns that the proposed development at BGS would entirely cut off the Commons LNR from the existing open land to the East and that consequently an open corridor is needed to retain this link. In par 9,15 of this letter, Herts Ecology also stress the important role of "habitats in providing vital ecosystems services such as pollination, water management and soil conservation"

The Herts and Middlesex Wildlife Trust and the CHGCG commented that the width of this corridor should be at least 250m – as in WHBC's original local plan consultation. LUC's and their evidence here shows that this corridor width should be increased - not arbitrarily reduced.

The current literature only includes:

- 15m buffers are recommended for Ancient woodland and veteran trees – see <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences> . This then gives the 15m buffer for the Commons Wood LNR – as shown in brown shading in Figure 1.

In addition account needs to be taken of:

- A further buffer and corridor is needed for the movement of amphibians- **see ref to USA paper.**
- Habitats for the species in this corridor. **Pete. Insert your estimate of land area needed for a pair of breeding barn owls and any supporting evidence and reference.**

- In particular the naturalised grasslands provides habitats for the prey which the species in the LNR depend on to survive and thrive – such as the barn owls above. Increased access via footpaths would not significantly disrupt these species and bats and their movement across the paths to their feeding grounds since this could be largely at night though the corridor would need to be significantly wider than the proposed paths. However, housing nearby or sports grounds or leisure facilities (especially with floodlights for evening sports when demand could for such facilities could be greatest) would cause significant negative impacts to the ecological assets highlighted above.
- A clear corridor over which these species can move to access these habitats and their prey – see above.

***To discuss with Matt and substantiate with references on the importance of the above points even if they do not go so far as to specify any min width.***

The Herts and Middlesex Wildlife Trust and the CHGCG both disagreed with WHBC's conclusion (in Para 1.35) that this corridor be restricted to 100m – nor Tarmac's suggestion for an even lower width of 50m. WHBC and Tarmac provide no sound justification for this arbitrary lower figure. There is none. They have not refuted the above considerations nor explained why the corridor should NOT be 250m as WHBC originally proposed.

**The former landfill site** (item 5 in our figure 1 ) contains important naturalised grassland that are valuable areas of habitat in its own right. They provide important breeding habitat for skylark, grey partridge and other ground nesting birds that rely heavily upon invertebrate prey upon which they rear their young. Significantly the grassland supports large populations of small mammals, field voles and shrews along with reptiles and amphibians which provide prey to support 10 species of foraging raptors. Our Figure 1 shows **in yellow circle** the nest for the Barn owls which have bred successfully on the Commons LNR arable area for the past 3 years. They predominantly hunt over the landfill grassland. But importantly they require a secure wildlife corridor (see above) over which to move to their feeding grounds to be able to survive and prosper.

***Pete Insert photos of barn owl box, chicks and if possible an owl hunting on the grassland and/or flying towards it.***

WHBC's options (as currently depicted) and their figure 6 in Appendix A fail to include adequately this important naturalised grassland as a key element in the Green Corridor.

In particular, we disagree with para 1.21 which incorrectly describes this as managed grassland. It has been left ungrazed to return to a semi-natural state. This semi-naturalised grassland of the landfill area is in fact an excellent example of rewilding by nature that has developed these rich ecosystem assets that yield these important services and benefits at little or zero opportunity costs since alternative productive uses are not feasible on this land. In many areas of the site, especially on the top, hedgerows are in poor state and trees have not fully established due to the significant contamination at this former landfill site – see photo of this site below.



It would therefore be inappropriate to dewild replace this grassland by woodland, landscape planting or an open recreation area . In fact this would not be feasible on this former landfill site because trees would be unable to become established and flourish there due to the contamination (see above). Moreover, it would be out of line with Guidance concerning former landfill sites and would adversely affect biodiversity – footnote official reference for this. It is needs to be protected as a key part of the green corridor.

### **Recreation**

*There is general agreement that enhanced paths need not only to be provided by also sustainably maintained for the future. This should include information panels highlighting the ecological and heritage assets along the routes.*

Increased access via footpaths would not significantly disturb this area’s wildlife and this key role of the wildlife corridor shown above tho it would need to be greater than the actual paths (as highlighted above). But housing nearby or sports grounds could cause significant negative impacts to the ecological assets highlighted above.

### **Heritage**

The Inspector rightly stated in Ex 163 that “*an assessment of the contribution that this area makes to the Green Belt Objectives of safeguarding the countryside from encroachment, preserving the setting and special character of historic towns and maintaining the settlement pattern, in the context of Phase 1 Parcel GB47, would be useful.*”

Historic England, The Gardens Trust (both statutory consultees) and CHGCG all reject all three options on heritage grounds and they and HCC Historic Environment criticise WHBC’s failure to take due account of impacts on heritage assets and views.

Specifically Item 8 in WHBC’s figure 1 is too small. Paras 1.14 – 1.19 are not a robust description of the many heritage assets in the area or the settings of heritage assets there and further afield. Many of these heritage assets contribute to the character of Welwyn Garden City, and are locally rare. Point 8 in our figure 1 above is more pronounced.

Para 1.16 is incorrect in referring to a “possible” prehistoric mound, of which there is definite archaeological evidence. This area coincides with the greatest density of ecological assets set out in the previous section.<sup>1</sup>

Moreover, WHBC fail to highlight the **important heritage views** shown in Figure 2 below and with more related views in Figure 3. The views across the interfluvium (between the rivers Mimram and Lea) were designed to enhance neighbouring estates from the 17th century onwards. <sup>2</sup>Today many of these remain, such as from Panshanger across the area of the proposed Birchall Garden Suburb to Hatfield House, Brookmans Park, Digswell House; illustrating the historical importance of the area. There are views across the landscape to the south as far as the Essendon ridge and Holwell Court parklands, and vice versa. These all contribute to the openness of the landscape of this area, as well as enhancing the setting of Hatfield parklands and the historic properties at Essendon<sup>3</sup>.

These heritage assets and services contribute importantly to the benefits for local people especially those using the expanded network of paths and LUC's proposals for information boards along these paths highlighting not only interesting environmental features but also these heritage matters.

Figure 2: Heritage Assets and views potentially affected



Figure 3: Heritage views across the valleys and interfluvium

<sup>1</sup> Wessex Archaeology: *Blackfan fen, Welwyn Garden City*. July 2012

<sup>2</sup> Historic England (GPA3.2) *the Setting of Heritage Assets*.

<sup>3</sup> see Sarah Spooner; 2009 *A prospect two field's distance: rural landscapes and urban mentality in the 18th*).



### Hydrology.

There was agreement about the need to highlight hydrology matters in para 1.25 of the WHBC report and to include a green corridor around the brook – shown as item 4 in our figure 1 which also depicts with red flags evidence of leachate of contaminants from the former landfill waste disposal site, where significant quantities of toxic industrial wastes were dumped in an uncontrolled manner prior to the enforcement of strict regulation of waste disposals. **Shaun. Please insert photo showing the toxic waste drums disposed of in the old landfill site and the extent of lagoons of effluents on the site.**

Therefore the buffer shown in WHBC's option 1 needs to include filter beds to attenuate any impacts of this toxic leachate from polluting this water course.

WHBC say that this buffer should just be 8m - based just on a simple application of the Environment Agency's stipulation of a 8m buffer. But this stipulation is just that they require their prior written consent for any proposed works or structures, in, under, over or within 8 metres of the top of the bank of a main river, which are usually larger streams and rivers but also include smaller watercourses of local significance<sup>4</sup>. This essentially concerns flood risk matters – Please **Check Ian**. The Environment Agency also stipulates that further controls are needed in respect of protecting species currently present in the corridor such as bats, great crested newts, water voles etc<sup>5</sup>

Moreover, the Environment Agency's stipulation for 8m buffer is only a minimum. It would not be sufficient in the particular circumstances at BGS especially regarding the need to attenuate the specific toxic pollutants of concern from the former landfill site at BGS. Moreover, the width of this buffer and the filter beds needed depend on **the type and significance of the pollutants in this leachate, about which there is considerable uncertainty and as yet unanswered questions, which GCE and WGCS have highlighted in their submission of comments regarding EX159 (WHBC Response to Royal Haskoning Report EX105).**

**Finally it is not clear how Tarmac's proposed barrier to collect (for treatment) the leachate from the former tip could relate to the green corridor buffer needed to protect**

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<sup>4</sup> Environment Agency,

file:///C:/Users/Jonathan/Downloads/DevelopmentnearWaterEnvironmentAgencyConsentGuidance.pdf

<sup>5</sup> Environment Agency, (2018), Construction near protected areas and wildlife,

<https://www.gov.uk/guidance/construction-near-protected-areas-and-wildlife#protected-species>

***the brook. It is also not clear how this barrier and the subsequent treatment of the toxic leachate would operate nor its effectiveness and costs nor any adverse impacts on the brook – the barrier seemed to be in front of the proposed housing but on the other side of the brook which could still be adversely affected by toxic leachate.***

WHBC's current treatment of hydrological matters in their draft report has the following additional gaps and shortcomings:

Fig 10 in Appendix continues WHBC's errors in the draft Local Plan by only considering existing flood zones. It fails to address impacts of the potential development of increasing flood risks **down stream** particularly in the areas identified in Appendix A as Flood zone 3 especially populations in Hertford, which the currently proposed BGS development could adversely affect by impairing the ability of the natural environment in the current green corridor from containing flood water and reducing such downstream flood risks. ***There is no evidence of any adequate assessment of such downstream flood risks and how they could be mitigated as necessary.***

***Can we insert any recent data on flood incidents downstream?***

***Should we refer to the recent publicity about the impacts of a housing developing on increased flood risks downstream threatening water voles there. See :***

[https://apple.news/An7IN6f3bQA2vJ2I\\_51tSgQ](https://apple.news/An7IN6f3bQA2vJ2I_51tSgQ)

Our Figure 4 below shows (in Black arrows) that there is currently a ridge to the East of the Commons LNR from which rainwater seeps to support the important fens and wetland habitats in the Commons LNR, where there are ancient layers of peat which provides an important carbon store. BGS Development there could interrupt this supply of water thus disrupting the formation of the organic material, effectively destroying the diverse and delicate ecosystems there. ***No work to assess these impacts has been has been carried out concerning this matter for the Local Plan.*** Trevor James, former head of Herts Biological Record Centre and Hertfordshire Natural History Society plant recorder stated; ***Pete Insert ref.*** "The Commons fen, in particular and the water source that supports it are a highly important site. It is one of the very few remaining fen communities in the county". The habitat is vulnerable, it depends on its continued water supply being unpolluted and on limited surface damage or disturbance."

Figure 4: Ridge leading to important water seepage (in black rows) to Commons LNR



This area faces serious problems of water resource scarcity and current drought problems. Our valuable and rare chalk streams have suffered badly and were dry this autumn<sup>6</sup> - Affinity have just said that in Spring 2020 they will impose controls on non-essential water uses unless there are sufficient rain in the water to recharge the aquifers. Therefore hose pipe bans are highly likely – even with the recent rains even with the recent rains the aquifers for the Upper Lea are at end November still notably low – close to Affinity’s most severe drought action trigger zone level 5– at some monitoring stations (eg Lilley Bottom)<sup>7</sup>. Similarly at the end of December 2019, two of the borehole sites are still “notably low” or below normal and there is still an average 7mm soil moisture deficit on the Lee Chalk at the end of De despite December seeing 246% of “long term average effective rainfall<sup>8</sup>. The valuable chalk streams in Hertfordshire still have some stretches with below normal flows or are still even dry and their ecology has been severely damaged and will take a long time to recover (eg Mimram above Welwyn, Ver, etc).

The Environment Agency predicts that this situation will get even worse in future with predicted climate change and increased abstraction from increased housing and other development in the county – see. Figure below which shows that the Environment Agency identify our area and water company (Affinity) as being seriously water stressed.

*Table 1 Water companies with water stressed catchments*

<sup>6</sup> See Rivers Trust (2019), Chalk Streams in Crisis: A call for drought action now, June 2019. Report by Salter, M, Singleon-White . [https://www.riverstrust.org/media/2019/06/Chalk-streams-dossier\\_June-2019\\_FINAL\\_FINAL-1.pdf](https://www.riverstrust.org/media/2019/06/Chalk-streams-dossier_June-2019_FINAL_FINAL-1.pdf)

<sup>7</sup> Environment Agency (2019), Monthly water situation report: Hertfordshire and North London: November summary [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/851312/Hertfordshire\\_and\\_North\\_London\\_Water\\_Situation\\_Report\\_November\\_2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/851312/Hertfordshire_and_North_London_Water_Situation_Report_November_2019.pdf)

<sup>8</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/857069/Hertfordshire\\_and\\_North\\_London\\_Water\\_Situation\\_Report\\_December\\_2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/857069/Hertfordshire_and_North_London_Water_Situation_Report_December_2019.pdf)

Water Company Area	2013 Classification					Final Stress
	Current Stress	Future Scenario 1	Future Scenario 2	Future Scenario 3	Future Scenario 4	
Affinity Water (formerly Veolia Water Central)	S	S	S	S	S	Serious
Affinity Water (formerly Veolia Water East)	S	S	S	S	S	Serious
Affinity Water (formerly Veolia Water South East)	S	S	S	S	S	Serious
Anglian Water	S	S	S	S	S	Serious
Bristol Water	M	M	M	M	M	Not Serious
Cambridge Water	M	M	M	M	M	Not Serious
Cholderton & District Water	M	M	M	M	M	Not Serious
Dee Valley Water	M	M	M	M	M	Not Serious
Dwr Cymru Welsh Water	M	M	M	M	M	Not Serious
Essex & Suffolk Water	S	S	S	S	S	Serious
Northumbrian Water	M	M	M	M	M	Not Serious
Portsmouth Water	M	S	M	S	M	Not Serious
Sembcorp Bournemouth Water	L	M	M	M	L	Not Serious
Severn Trent Water	M	M	M	M	M	Not Serious
South East Water	S	S	S	S	S	Serious
South Staffordshire Water	M	M	M	M	M	Not Serious
South West Water	M	M	M	M	M	Not Serious
Southern Water	S	S	S	S	S	Serious
Sutton & East Surrey Water	S	S	S	S	S	Serious
Thames Water	S	S	S	S	S	Serious
United Utilities	M	M	M	M	M	Not Serious
Veolia Water Projects	M	M	M	M	M	Not Serious
Wessex Water	M	M	M	M	M	Not Serious
Yorkshire Water	M	M	M	M	M	Not Serious

Environment Agency and Natural Resources Wales (2013). Water Stressed areas: Final Classification. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/244333/water-stressed-classification-2013.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/244333/water-stressed-classification-2013.pdf).

These problems have not been adequately assessed and addressed by either Affinity Water or WHBC with respect to the Local Plan and regarding how severely the housing development at BGS would exacerbate these rising problems. Therefore tight standards need to be imposed on any developments need to limit their water consumption.

### Process for specifying the Green Corridor

CHGCG and others disagree with WHBC's general approach of developing and presenting the options for the Green Corridor as "alternatives" with one to be "preferred". It is fundamentally unsound to depict the Corridor as a straight stretch or route of land based simply on just a single factor (eg recreation). Instead it should be based essentially on all the main assets present and their important ecosystems services – as presented above and presented summarily in Figure 5 with photos illustrating the assets and services and concerns at strategic points on the corridor

**Peter. As discussed, please produce as this new figure an amended version of figure 1 highlighting photos for each asset in the margins with arrows inset into the respective part of the figure.**

Hence the green corridor should be a composite of the important areas in which there are these assets and services.

### Resulting specification of the Green Corridor

All respondents to WHBC consultation rejected WHBC's Options 2& 3. Most considered option 1 to be most important, **but that** it must cover more fully the assets as explained above and shown in our Figure 5 in relation to the areas covered in WHBC's report in its area of the current BGS proposed allocation as well as looking beyond to the EHDC's area.

Option 2 covers important hedgerows which are NERC priority habitats and require at least a 15m buffer. **This option 2 needs to be combined with our expanded option 1** in Figure 5 as explained above). Failure to do this renders this option **unacceptable on its own** since it would fail to protect and enhance the important assets such as the Commons LNR - as WHBC partially acknowledge.

Option 3 is not a green corridor as such. It essentially includes buffers (to protect the houses from, for example, noise and air pollution from the A414 and the Burnside site) that the inspector has rightly demanded and with which most parties **agree**. It also **needs to be combined with option 1 (as expanded** for the assets affected as explained above). ***But the CHGCG and GCE have raised concerns which as yet WHBC have not addressed or answered about the feasibility and desirability of the proposed SUDS measures in option 3 due to concerns about impacts of leachate contamination from the former landfill site.***

We agree with para 1.34 of WHBC's report that the Green Corridor should be a combination of the options so it also need to include an expanded option 1 plus option 2 to provide a buffer for the important hedgerows there; plus buffers in option 3 that the Inspector has rightly already demanded. See Comments above setting out our reasons and evidence behind this.

## **Conclusion and recommendations**

Figure 6 sets out our proposed Green Corridor. This is an expanded version of WHBC's option 1 duly expanded based on the above analyses of the assets there that need to be protected and enhanced so that the Inspector can then determine the nature and breadth of the required Green Corridor and its buffers to any development and land use allocation.

This report has effectively set out fully the benefits of this green corridor, which raises the bar for the exceptional circumstances of the proposed BGS housing that WHBC then need to demonstrate clearly and prove that it would merit infringing on the green belt and damaging this green corridor. It has also highlighted the significant gaps in WHBC's current analysis and proposals for the Green Corridor and land use allocations affecting it which makes unsound their current proposed land allocation for BGS.

We focus on the Northern section of BGS in line with the Inspector's directions. But some of the points and concerns expressed are also relevant to the Southern section (eg regarding hydrology) and should input into the Sustainability Assessment that the Inspector has rightly demanded that WHBC must rigorously carry out and input into a new assessment in comparison with alternative sites coming forward from WHBC's recent call that the Inspector will examine in the Spring.

It would appear from our evidence and analyses that the Northern section should likewise be considered as part of this new assessment on a par with the alternative land allocations since Aurora properties rightly commented at the BGS hearing that it is evident that the problems associated with the BGS land allocation are much more severe than the alternative sites and that therefore the full BGS allocation should be viewed on a par with these alternatives.

## **Central Herts Green Corridor Group**

Draft V2

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Figure 6: Green Corridor Group Proposed Green Corridor

