London Assembly Housing Committee

Rapporteurship of Leonie Cooper AM

Encouraging biodiversity in new housing developments

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London Assembly Housing Committee Investigation

Froglife is a national wildlife conservation charity with a specific focus on the conservation of amphibians and reptiles and their habitats. Central to our ethos is to involve as many people as possible in wildlife conservation actions, particularly encouraging those who for socio-economic reason are often excluded. Our work is on-the-ground and urban focused, working on creating and restoring urban green spaces for the benefit of wildlife and local communities.

1. **Why is it important to encourage biodiversity in new housing developments?**

1.1 Intensive farming and other practices in the countryside is increasingly making this landscape unsuitable for wildlife, this is particularly the case for amphibians and reptiles. These species are progressively reliant on the provision of suitable and sufficient habitats in urban areas. Research carried out by Froglife provides evidence that the pressure of housing developments and associated infrastructure such as new roads is having a devastating impact on our amphibian species, particularly the common toad, which are threatened.

1.2 There are fewer opportunities for people to enjoy wildlife today than there has been in the past, this is particularly relevant for children and young people. We find that many of the young people that we work with have never seen frogspawn or witnessed a full life-cycle. We are in danger of generations missing out on the benefits of exploring wild places and appreciating wildlife.

1.3 The evidence of the impact that interaction with nature has on mental and physical well-being is well documented. In 2013 the mental health charity MIND launched their Ecotherapy Works Campaign, this resulted in the setting up of the Ecominds grant

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scheme. Mind captured some of the learning and good practice from the scheme in a series of briefings http://www.mind.org.uk/ecothreapyinpractice. These show that ecotherapy is a cost-effective way to improve both physical and mental wellbeing, which is accessible and inclusive. The scheme showed that ecotherapy has a real impact on people's mental wellbeing, provides access to education, training and increases social connectivity and community enjoyment of green spaces. Further research conducted by Defra, the Sustainable Research Centre, England and Scottish Natural Heritage and Ofsted have all highlighted the benefits of outdoor activity on wellbeing. The provision of biodiverse green spaces within housing developments is central in providing these opportunities.

2. **How rigorously is biodiversity considered in planning applications and agreements?**

2.1 In our opinion biodiversity is not given the priority it should be given by planning authorities and others. There appears to be a general consensus within these departments and by developers that provided a mitigation strategy is in place for protected species it is fine for the development to go ahead. Often the mitigation strategy is to relocate the protected species to a new habitat. Froglife's research on great crested newt and reptile translocations highlights that translocated populations do not fare well. This is particularly the case for reptiles with the population often going extinct. We believe that this is partly due to the populations not reproducing to same extent once relocated.

2.2 We also know that moving wildlife around causes the spread of wildlife diseases. Amphibian diseases such as ranivirus and chytrid and reptile fungus diseases are a major concern and are having a devastating impact on these species.

2.3 Once sites have been cleared of protected wildlife for housing developments it can take a long time for wildlife to recolonize these areas. We often receive enquiries from residents in newer housing developments who have created wildlife friendly gardens but are finding it difficult to attract wildlife.

2.4 When biodiversity is considered within planning applications it focuses only on protected species and no consideration is given to unprotected species. Although these species may be unprotected they are by no means faring well, as already stated the common toad is under particular threat, however due to it not being a protected species it is not given any consideration during the planning stages.

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3. **To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?**

3.1 Most mitigation measures will include a monitoring programme, however we believe that the monitoring period, usually three years, is far too short to establish whether the mitigation measures have been successful. A far longer period of monitoring is required to establish any long-term impact on the species. We would recommend a minimum of five years.

3.2 Although monitoring reports are submitted to the relevant authorities these are rarely scrutinised, therefore even if the reports are showing a negative impact on the species no action is taken to rectify the situation.

3.3 Often mitigation infrastructure is put in place, however there is no requirement placed on the developer or other responsible bodies for the maintenance of the infrastructure, resulting in it becoming devoid for the purpose that it has been put in place. Such as wildlife tunnels entrances becoming blocked with debris.

4. **What are the strengths and weaknesses of the London Plan**...

No comment

5. **How could the existing Mayoral policy and guidance protect and enhance biodiversity more effectively?**

No comment

6. **What would be the advantages and disadvantages of creating a single piece of planning guidance to cover biodiversity and implementation of ecological mitigation in new housing developments?**

6.1 Advantages include all working to the same guidance and clarity of guidance.

6.2 Disadvantages are that not all housing developments are the same and there needs to be some flexibility to take into account any special conditions that may apply. Developers will work within the guidance provided but not beyond hence making it difficult to include any added benefits outside of the scope of the guidance.

7. **What are the features and benefits of biodiversity offsetting schemes and green space 'factor schemes?**

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Froglife commented on the Defra Biodiversity Offsetting Consultation in 2013, our opinion remains the same.

8. **What are the benefits of biodiversity planning, designing and managing green infrastructure as a holistic network?**
   Wildlife needs a mosaic of habitats and also needs to be able to move between habitats, a holistic network of varied green spaces with wildlife corridors linking these will be enormously beneficial to our native wildlife.

9. **What social benefits could be gained by developing a more comprehensive strategy for protecting and enhancing biodiversity near housing developments?**
   Addressed in previous questions.

Kathy Wormald
Chief Executive Officer
16th August 2016

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From:
To: Biodiversity in new housing developments
Subject: 14 August 2016 12:01:29
Date:

The London Assembly

Dear Ms Wells,
I have been alerted by the London Forum of Amenity Societies to your investigation.

I wish to make the following points:

1. Modern buildings are built for ease of construction and of maintenance thereafter. They are of materials generally inimical to wildlife. One thinks of thatched roofs providing habitats for birds.

   Without advocating thatch, more could be done to encourage green roofs; even when solar panels are fitted on the same roof, or a metre or so above and provide areas of shade.

2. Amenity space. In modern developments this is often too small, with a lack of distinction as to whether it is for public or private use.

   Either way it is likely to have considerable human (and pet dog) usage, leaving little scope for insufficiently rugged plant life, or for wild animal life.
   There is a need for park space where full size trees can grow. This would tie in with the suggestion that was made a few years ago to declare London a National Park - which was based on its already extensive green space.

3. Benefits. Biodiversity brings a greater awareness of nature, and with minimal educational nudges, calmness to society. It also helps bees, and other pollinators, to thrive – useful in an expanding world of allotment gardening.

Yours sincerely,

R J Buchanan,
Woolwich and District Antiquarian Society

From:
To: biodiversity consultation
Subject: 09 September 2016 12:25:05
Date:

Hi Georgina,

Paving on streets and estates is laid with a 5° fall for rain to flow towards the gutter. Often this is the opposite direction to the flower beds or trees. Paving should be laid to cause rain to flow into flowerbeds to water the vegetation and also to contribute to the water table, rather than being washed out to the sea.

Dan McCurry

Lead contact	Species
	hedgehog (*Erinaceus europaeus*)
	stag beetle
	traditional orchard
	water vole

What's the problem in a sentence	Negative impacts of new developments
Hedgehogs cannot climb or fly and need access to huge networks (90ha+) of land, but newbuild developments currently exclude hedgehogs from gardens and greenspace due to impermeable walls and fences.	Infill development with nhousing and associated infrastructure can remove nesting and foraging habitat e.g. grassland, scrub, hedgerows. Poorly planned developments fragment the large networks (min. 90ha) of green space hedgehog populations need. Increased road traffic can cause more road casualties. Impermeable fences, walls, motorway barriers all act as barriers to movement.
Stage beetles spend most of their lives (between 2 and 7 years) underground as a larvae feeding on dead wood so any activities that remove tree stumps or rotting wood from the environment threaten these animals.	Loss of veteran trees, tree stumps and hedgerows and the creation of developments with little or no dead wood habitat will impact on these beetles. Domestic cats can also predate them.
Traditional orchards continue to be lost due to neglect and development. They are often close to dwellings and not considered 'green belt' in the planning system.	Orchards are destroyed. There is somethimes an effort to replace the orchard but the habitat takes c.40-50 years to develop its full biodiversity potential so is not immediatley replaceable.
Habitat loss and predation by non-native american mink are the main issues facing water voles, new developments can result habitat loss.	Developments can cause disturbance to local populations. However, if a development is thought to negatively impact on the habitat of water voles then a licence is required from Natural England and there is usually the requirement to either avoid disturbance or mitigate for any impact that will occur.

Opportunities in new developments

Hedgehog can thrive in developments, and settlements can harbour ten times the density of hedgehogs as agricultural landscapes in the UK (e.g. Hubert et al. 2011, Young et al. 2006, Dowding unpublished), often acting as a refuge. Gardens must be connected at ground level so hedgehogs can roam. Hedges are preferable to fences. Areas of hard standing and paving should be kept to a minimum. The specific shrubby habitat needed for hibernation nesting is a precious resource that needs to be aknowledged and protected. As Britian's most popular wild animal (http://www.discoverwildlife.com/british-wildlife/britains-national-species-revealed), the are significant PR gains to be had. Hedgehog mitigation is low tech and affordable but we still have few examples of it being implemented, partly because of a lack of legislative levers.

Stage beetles in the UK are an urban-adapted species, so habitat can be created for them with relative ease. Log piles can be created cheaply and easily. They are also very charismatic, as our largest terrestrial beetle, and do not bite so are excellent for engaging children with nature.

Where an existing orchard is on a development site, the trees, at least in part, should be incorporated into the design from the outset. This will form a public greenspace or community orchard and increase the value of the housing.
Where no orchard exists, a community orchard or park should be planted with long-lived standard fruit trees.

Planning conditions can be implemented to protect and where possible, improve water vole habitat when a proposed development is granted and a licence issued.

Case studies of best practice	**Further info.**
Barratt Kingsbrook, Aylesbury (+ RSPB); Russell Armer Homes, Cumbria/Lancashire; Cambourne, Cambridgeshire (for green infrastructure)	Ten year conservation strategy for the hedgehog: www.ptes.org/hedgehogstrategy Threats a, d, e; Objectives 9, 13. State of Britian's Hedgehogs 2015: www.ptes.org/hedgehogtrends. Robust way to detect presence/absence: www.ptes.org/hedgehogfootprintguide
Kew Garden stag beetle loggery.	http://ptes.org/wp-content/uploads/2014/06/GSH-final-report.pdf
www.ptes.org/communityorchards	www.ptes.org/orchardmaps
Higher Level Stewardship/Countryside Stewardship.	www.ptes.org/orchards
	Natural England's https://www.gov.uk/guidance/water-voles-protection-surveys-and-licences. The Water Vole Mitigation Handbook http://www.nhbs.com/title/209634/the-water-vole-mitigation-handbook
Unknown - theoretically all developments that have worked under a licence.	

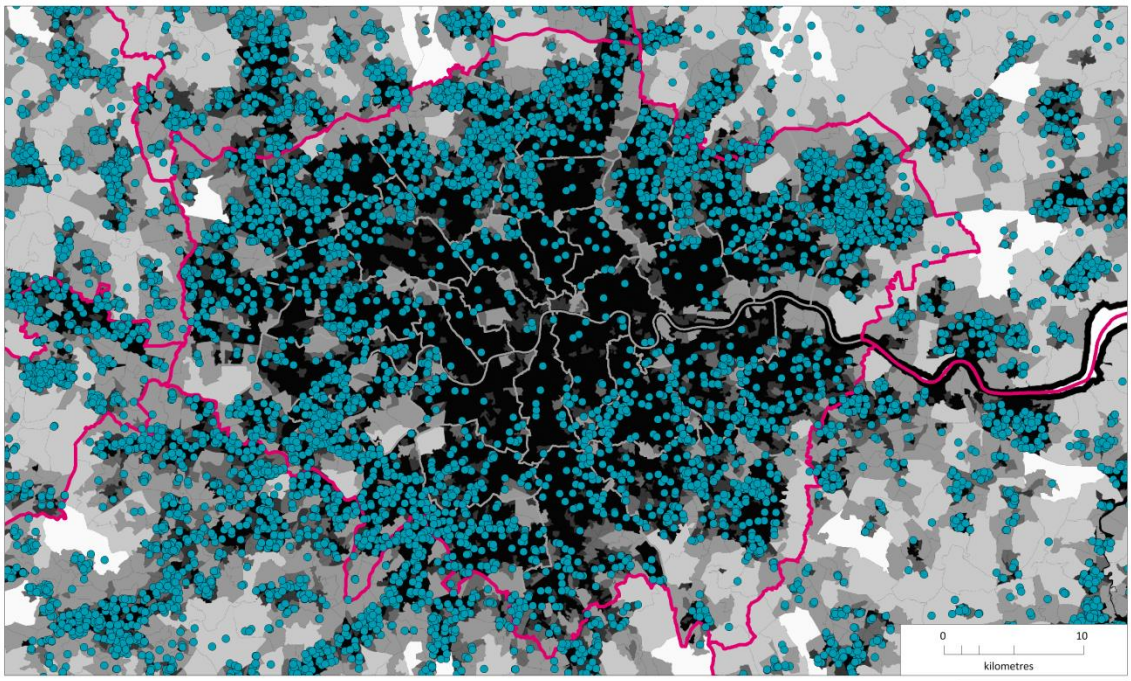
Note for Leonie Cooper AM: raising the profile of hedgehog conservation with the Mayor and GLA

Summary of the problem

Hedgehogs are in decline: we've lost a third of Britain's urban hedgehogs and half of our rural ones since 2000.[1] The reasons for this are complex and incompletely understood[2], but availability of macroinvertebrate prey and fragmentation are two key issues. In urban areas, hedgehogs need access to lots of different gardens (and greenspace in between) within a home range of 10-30 hectares (100,000-300,000m^2 vs. average UK garden size of 190m^2). Hibernation habitat is also frequently lost in development, and conversion of gardens into hard standing directly reduces foraging area. Hedgehogs are generalists and live right across the UK, from the most rural areas to within zone 1 in London. They are also extremely popular, having twice been voted Britain's favourite wild animal.

[1] State of Britain's Hedgehogs 2015: www.ptes.org/hedgehogtrends
[2] For a summary, see www.ptes.org/hedgehogstrategy (have provided a copy)

London specifics



Hedgehog sightings (2011-2015) and population density, Greater London

Hedgehog data from Hedgehog Street Hibernation Survey and Big Hedgehog Map, RSPB Big Garden Birdwatch and Make Your Nature Count. Population density data from 2011 census. Source: Office for National Statistics.

Hedgehogs are still very widespread in London, and can be found in most of the boroughs (see map: recent hedgehog sightings in blue, human population density in grey/black), although scarce within zone 1. Declines have been more dramatic than other cities. In 45% of the grid-cells where hedgehogs were present in the period 1960-1980, hedgehogs were not found in the 2000s.[3] Hedgehogs we're found in eight central Royal Parks in the 1970s, now they are only in two (Bushy and Regent's Park).[4] Regent's Park population is currently threatened by HS2. There are huge opportunities for hedgehogs with new development, providing it is planned properly. Mitigation for hedgehogs can be cheap and easy and they are very popular and thus represent a PR opportunity for developers everywhere.

Hedgehogs and newbuild developments

Hedgehogs are very tolerant of human activities and can thrive in even the most urban of environments, providing areas of green space are connected. Newbuild developments are currently damaging to hedgehogs because gardens are fragmented with larch lap/gravel board fencing

[3] Hof PhD Thesis (2009), Royal Holloway, University of London
[4] *Wildlife in the Royal Parks* by Eric Simms (1974), HMSO.

systems. There are a few examples of developers taking the initiative: Barrett/RSPB 'Kingsbrook' development, Russel Armer, Thakeham. **We are looking for an easy, cost effective way of ensuring *all* newbuild developments have connected gardens as a standard feature by 2018.** This will also benefit many other declining species, such as frogs and slow worms. Any way you can help us achieve this will be greatly appreciated.

Who are working on hedgehog conservation currently?

People's Trust for Endangered Species (PTES) have been working on hedgehogs for over 15 years. They have been formally collaborating with the British Hedgehog Preservation Society (BHPS) since 2011. Hedgehog Street the main vehicle for engagement by PTES/BHPS, with over 37,000 registered volunteer 'Hedgehog Champions' (including ~1500 in Greater London). We try to engage them in hedgehog-friendly gardening, and importantly in encouraging their neighbours to get involved too: neighbourliness is key for hedgehogs! Beyond this we also fund research into hedgehog ecology, run training courses on hedgehog-friendly greenspace management, work with developers and fencing companies, do talks and run events etc. Lots of our work involves collaboration: Warwickshire Wildlife Trust, Suffolk Wildlife Trust, Avon Wildlife Trust and Dorset Mammal Group are regional leaders.

Petition

Launched by Oliver Colvile MP (Plymouth Sutton and Devonport) two weeks ago, it calls for greater protection for hedgehogs within existing legislation, by adding them to schedule 5 of the Wildlife and Countryside Act. It has 18k signatures so far, and need 100k by 11st August to ensure it is discussed in the commons. PTES/BHPS advised on the wording and are supportive.

https://petition.parliament.uk/petitions/121264

Training for land managers

Hedgehog Ecology and Management for Practitioners has been running for three years. 15 courses to over 200 participants from around fifty organisations have been delivered so far in Bedfordshire, Oxfordshire, Surrey, Staffordshire, Nottinghamshire, Suffolk, Kent and London. 64% rated course “excellent”, 34% “good”. There is scope to expand this in London.

THE LAND TRUST'S RESPONSE TO THE LONDON ASSEMBLY'S INQUIRY INTO ENCOURAGING BIODIVERSITY IN NEW HOUSING DEVELOPMENTS

Introduction to the Land Trust and reasons for responding

The Land Trust welcomes the opportunity to respond to the London Assembly's inquiry into encouraging biodiversity in new housing developments.

In the first instance, to put our response into context, the Land Trust is the national land management charity that secures long term investment for managing green spaces in perpetuity, enabling us to provide high quality and sustainably managed green spaces that deliver environmental, economic and social benefits. We have ownership and/or long term management responsibility for over 2,000 hectares of land covering more than 60 sites across England, and continue to grow.

A number of the green spaces we manage are in partnership with residential and commercial developers, where we have provided the long term financial solutions to managing the green infrastructure and spaces in and around their new developments, to improve the quality of the place for people and for biodiversity, running programs of activities to ensure biodiversity and habitats are created, improved and enhanced whilst connecting people with nature and creating community cohesion.

Our vision is to improve the quality of people's lives by creating sustainable, high quality green spaces that deliver economic, environmental, educational, health and social benefits in local communities.

We also have a number of green spaces within Greater London, as such, we have experience of working with developers and the public sector within region. Therefore, we feel that we are in a strong position to be able to put forward our views in response to this inquiry.

Further details can be found at www.thelandtrust.org.uk

Consultation Questions

1. Why is it important to encourage biodiversity in new housing developments?

There are multiple reasons why it is important to encourage biodiversity into new housing developments.

Firstly, biodiversity (and the habitats and natural environment they need to survive) perform a number of functions when they are healthy:

1. Provide goods and services that we need to exist (such as helping produce food through pollination)
2. Maintain ecological functions (have resilient systems to help fight diseases and combat the impacts of climate change, such as improved air quality and reduced flooding)
3. Offer intrinsic values, cultural values and moral values to people

Secondly, biodiversity and natural environments help contribute towards the health and wellbeing of communities. Nature provides focal points for people to come together; helping people improve their physical and mental health, providing educational opportunities and boosts local economies, making areas more attractive and desirable. Significant research now exists, demonstrating the benefits and values of nature on society and the economy, such as our recent Social value study of our own green spaces[1]. Some key statistics are included here:

- More than a third use our green spaces to engage with wildlife and nature
- 30% use our spaces for peace and quiet
- 25% of respondents use our green spaces to relieve stress
- 90% feel that our green spaces play a positive part in their happiness and wellbeing

Furthermore, our research demonstrates that people using our green spaces have higher levels of satisfaction and wellbeing and lower levels of anxiety compared to the national averages.[2]

Other research also demonstrates the health benefits of green space (including biodiversity):

- Those who live within 500m of accessible green space are 24% more likely to meet recommended levels of physical exercise (Defra 2015)[3]
- Just five minutes of exercise in a "green space" such as a park can boost mental health (University of Essex)[4]

Thirdly, just as people need infrastructure to move from one point to the next, biodiversity also

[1] http://thelandtrust.org.uk/wp-content/uploads/2016/01/The-Value-of-our-Green-Spaces-January-2016.pdf

[2] http://thelandtrust.org.uk/wp-content/uploads/2016/01/The-Value-of-our-Green-Spaces-January-2016.pdf

[3] www.gov.uk/government/uploads/system/uploads/attachment_data/file/396840/pb13897-nature-do-for-you.pdf

[4] www.news.bbc.co.uk/1/hi/health/8654350.stm

needs robust infrastructure in the form of natural corridors in order to travel and connect. It is now established through research that once sites become isolated from each other, biodiversity (or natural capital) is reduced significantly over time. A single factor, such as a road subdividing an area can cause a reduction in biodiversity, even where greenspace exists on both sides of the highway.

As a result of increased urban development and expanding built environments, wildlife has suffered; habitats have been lost or severely reduced, resulting in detrimental impacts on biodiversity. The latest State of Nature report published September 2016 shows just how much our biodiversity is in trouble, with 1 in 10 species at risk of disappearing[5].

If developers embedded green infrastructure into their new housing plans (along with the strategies in place for long term investment of their maintenance) natural corridors could be created and sustained, enabling wildlife to travel fluidly from one habitat to the next, helping biodiversity to become more resilient.

There are also significant financial benefits for embedding more nature into our developments.

Biodiversity and nature can alleviate financial pressure on multiple public services. For example, green Infrastructure helps combat mild and moderate depression and can be more cost-effective than traditional treatments. This could help Wales save the £16m it spends on the 3.8m anti-depressant prescriptions issued per year (Wildlife Trust Wales 2016)[6]

As our study demonstrates, 90% of survey respondents said that our green spaces help make the local area more desirable, which leads to economic uplift.[7]

Property prices can increase as well – Greenwich Peninsula Ecology Park is bordered by new apartment blocks overlooking this new habitat and there has been significant uplift in values. However even less prosperous regions can benefit - a recent UK study shows that green infrastructure can contribute up to 34% uplift in property values (Wildlife Trusts Wales 2016)[8].

2. How rigorously is biodiversity considered in planning applications and agreements?

In our view, it is not considered.

There are some guidelines in the National Planning Policy Framework on green infrastructure and embedding it into developments, however, this is not high up on the priorities and unfortunately, is often an afterthought.

[5] https://ww2.rspb.org.uk/whatwedo/stateofnature2016
[6] www.wtwales.org/sites/default/files/green_infrastructure.pdf
[7] http://thelandtrust.org.uk/wp-content/uploads/2016/01/The-Value-of-our-Green-Spaces-January-2016.pdf
[8] www.wtwales.org/sites/default/files/green_infrastructure.pdf

It is often only when local planning authorities have environment strategies or land use strategies in place that green infrastructure is seen as a part of new developments, but overall, green infrastructure is not placed high on the priority list.

As a result, biodiversity is even lower down the priority list.

In some cases, planning permission for new developments is granted with planning conditions attached, requiring the developer to contribute to a local improvement, such as through Section 106. However, this is not always nature / natural environment related.

Unless a developer has a particular interest in biodiversity, sees the value of incorporating nature into the designs and sees the CSR benefits and chooses to do this, it is often not considered, or seen as a costly addition, rather than a valuable inclusion.

For example, developer, Countryside, who are working with the Land Trust in Essex, recognises the benefits of embedding nature into its developments.[9] Those developers working with the Land Trust now see the positive impact on their brand by association and so appreciate that embedding nature at the start can actually lead to better profile of sustainability and in turn uptake of completed schemes.

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

Some of the only ecological mitigation measures implemented into housing developments seem to be Sustainable Urban Drainage Systems (SUDS), which help with water storage and reduce flood risk. However, other aspects are minimal.

The pressure to increase housebuilding is at its greatest since the 1950s and even the major private sector providers cannot deliver the numbers required. The trend is for smaller builders to be encouraged to take up the opportunities to become engaged, such as with public sector land development, yet these are the organisations that are vulnerable to slight changes in risk from cost uplift, for example, so they will be less incentivised to embed sustainability principles, such as biodiversity into smaller schemes.

There are so many opportunities and benefits arising from maximising the amount of green infrastructure and biodiversity within new housing developments, but since there is not much requirement, this is often not considered and then only as an afterthought or as an add-on.

Furthermore, since it is much easier to incorporate into new developments than existing ones, it is a considerable missed opportunity to not do this.

[9] http://www.countryside-properties.com/media-centre/news-archive/2016/march/creating-outdoor-spaces-for-better-health-by-andrew-carrington/

As explained above, the advantages of incorporating nature into developments are endless, and have multiple positive economic and social outcomes as well.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?

The London Plan Policy 7.19 Biodiversity and Access to Nature references biodiversity as a key factor to be applied across a range of policies in the plan, including for large housing schemes. Yet in these individual policies, the references to biodiversity are missing, which means that nature is always seen as an optional extra unless it is forced upon development as a mitigation requirement .

Supporting text to this policy notes: "Development proposals should begin by understanding their wider context and viewing promotion of nature conservation as integral to the scheme not as an 'add-on'".

It refers to the direct and indirect impacts on nature arising from development and states access to nature can be an important contributor to people's health. It adds "the Mayor wants to see better access to both existing and new wildlife habitats and has identified priorities to redress areas of deficiency". Again these words do not specify targets or what success looks like and priorities tend to focus on the strategic levels of planning.

Green Infrastructure which includes biodiversity considerations is referenced in policy 2.18 but here again policy tends to move rapidly to the strategic level and does not address specific matters concerning biodiversity, within new housing areas for example.

In the Mayor's new Housing Zones, the focus is on delivering larger numbers of homes rather than greenspace and place making and there is no direction given on how biodiversity elements are to be enhanced. It is known that brownfield land is often rich in biodiversity and so there will be a real risk to biodiversity in the new Housing Zones unless specific measures are incorporated, and their positive effects monitored. Emphasising impacts and mitigation tell only part of the story. Nature should not be an add-on in the Housing Zones.

Invertebrate experts, Buglife put forward examples and useful information in a report about understanding the value of brownfield.[10] Further to this, jointly, with Buglife, we have expressed our views protecting biodiversity-rich brownfield land, using our site, Canvey Wick in Essex as an example.[11]

The current push for new housing does not reflect the growth of London's population by 3 million over the next couple of decades. This needs more greenspace not less (see the Mayor's Green Infrastructure Task Force Report[12]) in association often with densification of housing and if not embedded in thinking and planning for new or extended settlements, the downside could

[10] https://www.buglife.org.uk/sites/default/files/When%20is%20Brownfield%20land%20of%20high%20environmental%20value%20June%2015.pdf

[11] http://thelandtrust.org.uk/news/brownfield-or-greenfield-it-is-not-a-black-and-white-issue/?doing_wp_cron=1474478190.2595210075378417968750

[12] https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/green-infrastructure-task-force-report

be large scale rapid urbanisation without the quality places being created that we need.

Greenspace can easily become sterile, unused and unloved and, as it is at the heart of place making, the new urban areas may become run down and neglected leading to further intensification and anti-social behaviour incidents.

However, well managed green spaces within the built environment can reduce criminal activity.[13]

Delivery mechanisms and infrastructure payments must place biodiversity within the context of social and natural capital.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

By having the mechanisms in place to enable developers to easily embed green infrastructure/green space / biodiversity into their developments.

For example, ensuring the policy clearly includes references to biodiversity within the built environment, the value that biodiversity and green spaces bring to the City, including a clear message that green space is an important factor in any urban environment.

There needs to be clear and simple guidance for developers, explaining how they can create wildlife corridors, create habitats within developments, with advice on what types of habitats are most suitable for the area.

There also needs to be guidance on how to ensure the long term investment for managing the green spaces.

The Land Trust is one example of an organisation set up to provide long term management of green spaces in and around housing developments, undertaking more than just grass cutting regimes. The Land Trust has developed a unique financial model to provide funding solutions for developers to ensure the green space is well maintained in perpetuity through a service charge model, where residents within all new houses contribute to the annual costs of maintaining the green spaces. This funding also contributes towards the cost of a community ranger who generates community involvement, volunteering opportunities, organised events and activities, helping improve the health and wellbeing of residents whilst providing educational opportunities and involvement them in maintaining the habitats, which also support biodiversity.

This model enables the developer to incorporate green spaces within a development without the worry of dealing with these spaces, and without added costs. This solution is cost effective and enables developers to create sustainable places and homes building communities where

[13] http://www.citylab.com/cityfixer/2016/04/vacant-lots-green-space-crime-research-statistics/476040/

people want to live, work and play, rather than simply building houses.

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

Advantages

At the London wide scale there are significant areas of open space – their value is well understood in terms of biodiversity and they have a degree of protection. Brownfield land offers the scope for large new housing developments, such as at Old Oak Common, and if close to the large established greenspaces, there is a tendency to rely on these areas rather than create new greenspace within the new communities. This will leave us with the worst of both worlds, poor greenspace within developments due to the "island effect" reducing biodiversity but extra numbers using and impacting biodiversity in the established parks or open spaces beyond the development.

If an SPG is developed that addresses this question, it will ensure that development briefs or masterplans embed principles into practice- connectivity meaning links between gardens to larger spaces (fence holes etc.), informal spaces rather than managed, log piles and other habitats to be protected within open spaces, wetland areas maintained and function as protective barriers where possible, and even vertical gardens on public buildings and commercial or retail.

These schemes must retain brownfield habitat as a reservoir for species to expand and designs should enable this to happen. Thus ecological planning at the heart of the new zones or communities will set new benchmarks, add to the portfolio of biodiversity hotspots, link up main parks and open spaces, river valleys and other specific opportunities.

Having a single piece of planning guidance, embedded in policy but translated into masterplans and design guidance will provide developers with a clear steer and encourage them to see the key sites as part of their brand for building communities rather than just high density developments.

It would also demonstrate that there was Government will and leadership, and that biodiversity and the natural environment is valued. The approaches could then be linked into Local Plans in the Boroughs. It will promote the notion of what makes open space valuable not just large parks but down to the smallest areas of space, within new housing areas.

By having a single document, it would make it clearer and more transparent to planners and developers that these elements were important parts of a new development.

Disadvantages

If it is only in the strategic level of planning, this guidance may be too vague or broad to influence schemes. It needs to be part of a family of greenspace and biodiversity policies that

go from strategy down through to implementation.

It must be integrated, for example, if it was a single piece of planning guidance separate to the NPPF or London Plan, it could be taken as a less 'important' part of planning, since the information is not embedded wholly into the core planning guidance. Therefore, it could be seen as less valuable.

Ultimately, guidance on biodiversity and ecological mitigation measures needs to be taken seriously, and embedded into main policy guidance.

If the decision is to have one policy guidance document at the more strategic level, then it must have the criteria detailed at the delivery level to enable developers to see how this works in practice.

Ultimately, the focus should be on the pre-application stage where any developer must demonstrate how the masterplan will approach the development in terms of biodiversity and green infrastructure, clearly showing how the development will be built in and around the ecology, and ecological inclusions be designed from the outset, and not just be add-ons afterwards.

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes?
    a. Are there disadvantages to such schemes?
    b. We are particularly interested in evidence on how they could be introduced in London and what effects they might have

In the South East, major infrastructure is underway that will enable London to continue to grow and part of this involves development of large housing areas. Notwithstanding there is insufficient space to cope with the anticipated rise in London's population by over 3 million. Areas surrounding Greater London will come under pressure to provide a considerable amount of new housing and related infrastructure to allow some movement out of London. Whilst London itself may retain a high proportion of greenspace and biodiversity, the problem may be *exported in effect* to surrounding areas.

In areas where there are key sensitive habitats, such as the Thames Basin Heaths, proposed schemes within a certain distance of these designations are required to provide compensatory land, not for offsetting biodiversity but to diverting recreational pressures to these new areas known as SANG sites. So even where new schemes are only close to important designations there has to be compensation. In most areas compensation only arises where biodiversity is directly impacted and it is important that where additional mitigation is required, it should be close to the existing development, i.e. local.

So local compensation should be sought and where green infrastructure or replacement land is needed there should be biodiversity elements embedded rather than simply using new greenspace as compensation for lost habitat, the two are different.

So it is important to note that specific developments need to mitigate within or adjacent to their own sites, rather than further afield. The solutions must be local.

If ecological principles can be built into new developments to enhance air quality, water, food growing, energy as well as biodiversity, human health will also be managed better in and around the new schemes. Densification should not mean that biodiversity is sacrificed but that urban development fits in with these principles rather than the other way round.

By embedding green spaces/infrastructure also increases our resilience to the effects of climate change, reducing our vulnerability through their ecosystem services, some of which are mentioned above, such as providing shade and shelter, reducing the urban heat island effect, improving air quality by reducing pollution, helping to alleviate flooding, storing water, reducing noise and reducing contamination.

- Grass surfaces exposed to sun may be 24°C cooler than concrete
- Tree shade may lower air temperatures by 5 – 7 'C
- Urban parks are on average 1'C cooler than built-up areas (University of Cardiff, 2016)[14]
- Planting trees can slow the flow of water and reduce surface water runoff by up to 62% compared to asphalt.
- Trees also increase the interception of water as it falls, increasing the infiltration of water into the soil and lowering the risk of surface water flooding.
- Planting trees could reduce the height of flooding in towns by up to 20% (Woodland Trust 2015)[15]

This also has economic impacts, such as reduced costs from flood damage but also the preventative measures:

- Green infrastructure provides flood alleviation and water storage, which costs less to construct and maintain than built flood defences (Natural England 2012)[16]

And as mentioned above, green spaces support vital biodiversity, such as threatened pollinators, which are key to our food supply, and as such supporting our food economy.

The current hierarchy of "avoid, mitigate and compensate" development impacts is very site related and should perhaps be considered across a wider area to see how cumulatively an area can cope with the possible biodiversity losses and downgraded ecosystem services.

In fact, new developments could be the catalyst for enhancement if done on the basis of more of an area approach. Plans and policies should consider these wider areas when considering effects and try to assess the contribution each site or area can make to offsetting effects.

[14] www.tandfonline.com/doi/pdf/10.1080/14649357.2016.1158907
[15] www.woodlandtrust.org.uk/mediafile/100631140/pg-wt-300615-residential-developments.pdf?cb=093f261286fd4fdc8befda998e4b7c11
[16] http://publications.naturalengland.org.uk/publication/6692039286587392

If implemented effectively, this should mean that developers will not actually lose any important biodiversity from their sites but could perhaps enter into negotiations to buy biodiversity credits similar to SANG mechanisms. The problem is that many sites which may be bio-diverse may not have the same level of protection but can offer enhancement and should gain from such payments, such as brownfield sites which offer scope for enhancement of nature if managed well.

The Land Trust is experienced in developing and working on such innovative models and developers may be able to take forward sites in this context more easily.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

Wildlife needs to be able to move between habitats in order to survive, so creating infrastructure for biodiversity by connecting different habitats via corridors is vital.

This should be holistic and be part of the planning process, design and long term management strategy. Biodiversity and the natural environment (including green infrastructure) will be more resilient if habitats are well maintained and embedded into the build environment.

With so much stress on rural land, as a result of intensive farming practices, there is real opportunity to 'green our cities' and support biodiversity in all areas.

Research undertaken as part of the Biophillic Cities project has demonstrated how developments that have incorporated significant green infrastructure have in fact had a positive net gain on biodiversity. The website provides examples of other cities committing to becoming greener.[17]

Furthermore, as mentioned above, the State of Nature report recently published highlights that more than one in 10 UK species is now threatened with extinction and 56% of UK species is in decline. This is extremely worrying and it will require all aspects of society to contribute to supporting biodiversity, otherwise, there will be a real crisis, with major negative impacts on everyone.[18]

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

There are major social benefits to having a more comprehensive strategy of incorporating biodiversity, green spaces and green infrastructure into and adjacent to housing developments.

These include improved:

[17] http://biophiliccities.org/what-are-biophilic-cities/birmingham/
[18] https://ww2.rspb.org.uk/whatwedo/stateofnature2016

- Bringing people together, breaking down social barriers, creating social cohesion and reducing anti-social behaviour
- For education and learning
- Improving physical and mental health
- Improving the local environment, making places more attractive, strengthening our natural assets to be more resilient to climate change as well as support biodiversity
- Contributing to economic uplift, supporting other businesses, making the wider area more attractive, leading to inward investment, alleviating pressures on other public sector budgets, such as health and social services.

Improving people's health and wellbeing

There is a growing body of research linking the benefits of green space/green infrastructure and nature on improved mental and physical health as well as mounting evidence demonstrating the increasing costs to society and the health sector from physical inactivity.

Our research demonstrates that people using our green spaces have higher levels of satisfaction and wellbeing and lower levels of anxiety compared to the national averages.[19]

We know from our own experience that by providing well maintained easily accessible green spaces, with access to nature, networks of paths and trails, people are given opportunities to lead healthier lives and feel happier. People then feel less inclined to visit the doctor or have higher chances of not developing lifestyle related illnesses. More and more research is demonstrating that the natural environment helps combat depression, diabetes, obesity, cardiovascular disease and some cancers. Even the Department of Health recognises that a poor physical environment can be detrimental to the public's physical and mental health[20].

In turn, this helps reduce the burden on the NHS and other local services, which are becoming more and more under pressure.

As previously mentioned:

- 90% feel that our green spaces play a positive part in their happiness and wellbeing
- 90% feel that our green spaces encourage them or others to keep fit and healthy
- 25% use our green spaces to relieve stress.[21]

Also mentioned earlier, other research demonstrates the health benefits of green space:

- Those who live within 500m of accessible green space are 24% more likely to meet

[19] http://thelandtrust.org.uk/wp-content/uploads/2016/01/The-Value-of-our-Green-Spaces-January-2016.pdf

[20] www.gov.uk/government/uploads/system/uploads/attachment_data/file/216096/dh_127424.pdf

[21] http://thelandtrust.org.uk/charitable-aims/thebenefits

recommended levels of physical exercise (Defra 2015)[22]

- Just five minutes of exercise in a "green space" such as a park can boost mental health (University of Essex)[23]

The Local Government Association also recognises the benefits of exercising outdoors, which involves connecting with nature and biodiversity, and is calling on NHS Clinical Commissioning Groups to drive forward a strategy for GPs to prescribe "green prescriptions"[24].

Hospitals are starting to see the benefits of nature, not only to aid patient recovery, but for staff to use for their own health and wellbeing.

Our work with the Countess of Chester Hospital NHS Foundation Trust is a great example of where Senior NHS leaders see the multiple benefits our adjacent park brings.[25] Kevin Eccles at the Countess of Chester Hospital said "In particular, staff use it for 'walk and talk' meetings, clinicians use it to have breaks and feel refreshed and patients use it to help them with their recovery".

Contributing to local economic uplift and the wider economy

Having green spaces and natural environments contribute to economic uplift in a local community, such as local contractors undertaking maintenance and construction works, green spaces can create jobs and they also help people find employment through volunteering and attending training sessions.

Our Big Lottery funded educational programme – Green Angels – delivered at one of our green spaces adjacent to a number of housing developments in a deprived community, aimed to boost community cohesion and create training opportunities. Nearly 70 people participated, and of those seeking work, 44% found employment.[26]

Our social return on investment study calculated that our own 2,000 hectares of well managed green space contributes the equivalent of £53.2m per year of benefits to the health and welfare sector and £40.9m per year towards the social sector.[27]

This alleviates financial pressure on multiple public services. External research also demonstrates this:

- Increasing access to parks and open spaces could reduce NHS costs of treating obesity by more than £2 billion (The King's Fund ,2013)[28]

[22] www.gov.uk/government/uploads/system/uploads/attachment_data/file/396840/pb13897-nature-do-for-you.pdf
[23] www.news.bbc.co.uk/1/hi/health/8654350.stm
[24] www.local.gov.uk/web/guest/media-releases/-/journal_content/56/10180/7944615/NEWS
[25] http://thelandtrust.org.uk/wp-content/uploads/2016/08/Countess-of-Chester-Country-Park-Health-for-Life-Sept-2016.pdf
[26] http://thelandtrust.org.uk/charitable-aims/education-and-learning/green-angels-2/
[27] http://thelandtrust.org.uk/charitable-aims/thebenefits

- The health benefits of living near green space are worth up to £300 per person per year. (National Ecosystem Assessment 2011)[29]
- Green Infrastructure helps combat mild and moderate depression and can be more cost-effective than traditional treatments. This could help Wales saved the £16m it spends on the 3.8m anti-depressant prescriptions issued per year Wildlife Trust Wales 2016)[30]

As mentioned above, but to reinforce the point, our study demonstrates that 90% of survey respondents said that our green spaces help make the local area more desirable, which leads to economic uplift.[31] Property prices can increase as well – a study in the UK showed that green infrastructure can contribute up to 34% uplift in property values (Wildlife Trusts Wales 2016)[32].

Having more attractive areas contributes to inward investment, attracting businesses to because businesses like locations that provide well managed public places. In turn, this creates jobs, improves a business' CSR and also attracts and retains customers, generating further opportunities for local communities.

To conclude, there are significant economic, social and environmental benefits for protecting and enhancing biodiversity near housing developments, as has been outlined above.

It just needs the right policies and guidance in place and the leadership to encourage and implement it.

[28] www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/improving-the-publics-health-kingsfund-dec13.pdf
[29] www.gov.uk/government/news/hidden-value-of-nature-revealed-in-groundbreaking-study
[30] www.wtwales.org/sites/default/files/green_infrastructure.pdf
[31] http://thelandtrust.org.uk/wp-content/uploads/2016/01/The-Value-of-our-Green-Spaces-January-2016.pdf
[32] www.wtwales.org/sites/default/files/green_infrastructure.pdf

From:
To:
Cc:

Subject:
Date:
Attachments:

Dear Georgina,

Please find below response to the London Assembly's Housing Committee call for evidence in relation to Biodiversity in New Housing Developments.

1. **Why is it important to encourage biodiversity in new housing developments?**
   It is important to meet the requirements of the National Planning Policy Framework (NPPF), and the legal requirements set out in Section 40 of the Natural Environment and Rural Communities Act (NERC) 2006, which places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. New development puts biodiversity under even more pressure. New housing development has a significant potential to contribute to biodiversity.

2. **How rigorously is biodiversity considered in planning applications and agreements?**
   Biodiversity elements of the NPPF, London Plan and Bexley Local Plan policies are actively considered during the planning application process.

3. **To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?**
   The Council is in the process of updating its Sites of Importance for Nature Conservation (SINC) review http://www.bexley.gov.uk/index.aspx?articleid=12495 . The implications of development within proximity to these sites are given careful consideration. The requirements set out in the document Protected Species and Planning in Bexley http://www.bexley.gov.uk/12496 are also given due consideration. Measures are secured by condition or legal agreement as appropriate and discharged accordingly.

4. **What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?**
   The borough would rely on the London Plan and associated guidance for up to date biodiversity information, especially in relation to SINC. Also, it depends on Council and GLA staff having sufficient biodiversity expertise. The number of biodiversity officers in the GLA and London boroughs seems to have declined.

5. **How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?**
   If all boroughs had up to date SINC assessment.

6. **What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?**
   This would be useful, if linked to specific policy. It should also be strategic so as

to enable local interpretation in accordance with each boroughs particular circumstances.

7. **What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes2?**

- Are there disadvantages to such schemes?

Offsetting schemes are a challenge within London, because of the lack of available land and habitats. Extended Phase 1 habitat surveys would be needed prior to any offsetting. In each scheme, you would have to decide which habitats you could afford to replace. In general, offsetting schemes should be discouraged and only used as a last resort, as the loss of existing protected SINC cannot easily be replaced.

- We are particularly interested in evidence on how they could be introduced in London and what effects they might have.

8. **What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?**

   There would be interlinking benefits, allowing species to use green corridors if green infrastructure was managed as a holistic network. If managed as a holistic network, then the extent of green corridors in London would increase. This would enhance the biodiversity value of the sites that they are linking.

9. **What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?**

   Improved access to nature is a benefit to education, recreation, health and well being.

Should you require any further information, please let me know.

Kind Regards

John Luckhurst

Dear all

London Assembly Housing Committee – Biodiversity in New Housing Developments – Call for Evidence

Last Friday the Housing Committee launched an investigation to explore the issues around incorporating provisions for biodiversity in new housing developments.

On behalf of Leonie Cooper AM we invite you to submit your views and experiences to this investigation. You can find out more about it on our website, or view the call for evidence document (which I also attach). Alternatively feel free to contact me directly to discuss.

Overview

Leonie Cooper AM will be undertaking a rapporteurship on behalf of the Housing Committee: examining how to encourage a more strategic and longer-term approach to green infrastructure delivery and investment in London developments.

The London Plan – alongside other Mayoral guidance – offers strategies for protecting natural biodiversity and enhancing green infrastructure. This guidance is currently under review, and our investigation will look at how new guidance could be adapted to further promote biodiversity in London.

The investigation will assess how the London Plan promotes and enhances biodiversity in new housing developments, aiming to establish whether providing a single Supplementary Planning Guidance (SPG) addendum would do this more effectively. The rapporteur will also review best practice from other UK and foreign cities; examining the environmental and social gains of offsetting and green space factor schemes.

How you can contribute

If you would like to contribute to the investigation please download the call for evidence from our website (or see attached) and return your written submission by **30 September 2016** to me at:

Please feel free to distribute this invitation to your networks and pass on my details to anyone you think may be interested in contributing. We have targeted this outreach to specific individuals and organisations who we feel will contribute invaluable evidence but we're always keen to collect as wide a pool of evidence as possible.

If you have any questions let me know.

Georgie Wells | Assistant Scrutiny Manager | Scrutiny & Investigation

LONDONASSEMBLY | Greater London Authority | City Hall | The Queen's Walk | London | SE1 2AA

London River Restoration Group

London Assembly: Housing Committee Call for Evidence

Housing Development Contribution to Biodiversity

Key Points:

- Development can result in significant improvements.
- Delivery is restricted to mainly large scale developments.
- Wider benefits not readily understood so strategic opportunities may be missed.
- Opportunities for partnership and collaboration can be expanded.

Introduction

The London River Restoration Group (LRRG) is a sub-group of Catchment Partnerships in London, with the task of promoting river restoration and collating data about the delivery of river restoration projects across London. Examples of London river restoration projects through development are attached.

How Development Contributes to River Restoration

Housing developments contribute to river restoration as a direct consequence of a project, or by providing funding to projects through mechanisms such as Section 106/Community Infrastructure Levy funding. The inventory of projects held by the LRRG indicate that river restoration through development is primarily achieved through large scale Regeneration.

River restoration not only provides direct biodiversity improvements through each individual restored section but can also realise much wider catchment and landscape level biodiversity improvement, connectivity and benefit.

To What Extent do Housing Developments Deliver River Restoration?

Due to mainly large schemes delivering restoration, delivery is infrequent. For instance, data collated by the LRRG indicates that since 2013 development only contributed 300 metres of restoration via Section 106 to a total of 5.8 kilometres achieved through other mechanisms. However when large schemes do deliver restoration the impact can be significant, including deculverting and the creation of new green space in high density development zones.

Blockages to Delivery

Perceptions are that river restoration within a development is land ‘set aside’ for the river, and is not seen as being integrated into the development. This results in developments failing to maximise the benefits that result from a catchment approach. LRRG believe that the potential restored river can be fully integrated into the development to realise the full potential benefits for people and wildlife (as well as the developer).

It is important to consider any river which is adjacent to or within a development at the initial visioning stage for the development. Too often rivers and their potential are considered as an after-thought. At this stage it can be difficult to 'retrofit' the river into a plan or vision which has already been developed. Instead an integrated approach is needed, with the river and its potential enhancement seen as a major landscape feature of value.

Improving the Contribution

To maximise the contribution of developments to river restoration in the future there should be improved links to Catchment Plans, Local Authority Biodiversity Action Plans, the All London Green Grid and early identification of opportunities for partnership working. Lewisham Council's supplementary planning guidance is an example of good practice:
https://www.lewisham.gov.uk/myservices/planning/policy/LDF/SPDs/Pages/River-corridor-improvement-plan.aspx

The wider benefits of river restoration need to be better understood, and there could be a greater contribution from beneficiaries. Strategic opportunities must be flagged early with restoration forming part of an integrated masterplan and not treated as a "bolt-on".

Encouraging biodiversity in new housing developments

A response by the Wildfowl & Wetlands Trust, September 2016

Introduction

With increasing pressure to build more homes it is important that these new homes are built sustainably offering resilience to the changing climate, protection and enhancement of our environment and safe, attractive, cohesive places to live. Designing biodiverse green and blue spaces within developments can be key not only to providing habitat connectivity for wildlife, but assisting with surface water runoff and water quality, and improving health and well-being.

Our native biodiversity is in decline and this includes our urban wildlife, this is due to a number of reasons including habitat loss and urbanisation. Nearly 50% of urban species populations in the UK have declined between 1970 and 2013 and 7% of our urban species are threatened with extinction from Great Britain[1]. Yet it is predicted that around 60% of the urban land expected to exist in 2030 will be built between 2000 and 2030[2]. In order to prevent further decline and create a high-quality urban environment, we need to be better at preventing environmental degradation from development and indeed, look at ways that development can enhance the environment and biodiversity.

Key points

- Greater Local Planning Authority ecological expertise and resource is needed
- Development projects should consider how to enhance biodiversity from the outset, not just as a tag on and valuable remnant natural habitats should be retained and incorporated into development design.
- Local plans and advice around green space and sustainable drainage need to be specific about biodiversity and designing for multiple benefits – they are not an automatic result of these developments, but require specific design and planning
- Communication and engagement with the local community is often key to long term sustainability and management of biodiverse green and blue spaces

Ecological expertise and resource

Nationally there is a lack of ecological expertise in local government planning – A survey by the Association of Local Government Ecologists (ALGE)[3] reported that the majority (90%) of local authority planners lack ecological qualifications, have had very little training and consequently recognise that they have only basic levels of the ecological expertise required to discharge duties and national policy. Given this lack of ecological knowledge it is therefore concerning that nationally

[1] State of Nature 2016

[2] Elmqvist, T. *et al*. (2015) Benefits of restoring ecosystem services in urban areas, Current Opinion in Environmental Sustainability, 14: 101-108

[3] Oxford, M. (2013) **E**cological capacity and competence in English planning authorities - what is needed to deliver statutory obligations for biodiversity? Final report, ALGE http://www.cieem.net/data/files/Resource_Library/News/ALGE_Report_on_Ecological_Competence_and_Capacity.pdf

only one third of planning authorities in England have access to their own 'in-house' ecologist. ALGE list only 6 London Boroughs with ecologists on their membership list.

Together with a current lack of ecological knowledge there also seems to be very little follow up on the delivery of planning conditions. Therefore even if planning authorities have put in conditions around biodiversity enhancement or green infrastructure there is a lack of resources to ensure that these planning conditions are adequately carried out. The survey carried out by ALGE found that in most of the planning applications reviewed, the final document logged on the system was the decision notice; with very few applications storing additional information/links to the discharge of planning conditions or related development/building control databases.

In order to achieve good environmental outcomes local planning authorities should have adequate 'technical resilience' – they need the professional 'competence' to undertake technical ecological assessments and to make informed and sound recommendations and decisions, and the capacity to cope with the work load and ensure compliance.

Whilst biodiversity is an acknowledged material consideration in the planning system, its importance to many local authorities in relation to their obligations for statutory-base decision making appears not to be given sufficient priority. As a result, with current budget restrictions the use of specialist input seems to be considered optional.

Consider biodiversity from the outset

To achieve the greatest benefits for biodiversity, opportunities for biodiversity (and other benefits) need to be considered from the outset of any development, preferably at the masterplan stage. For example, biodiversity benefits from sustainable drainage and green infrastructure are not guaranteed unless designed into the development from the design right through to the long term management. WWT in partnership with RSPB have published guidance on designing SuDS for multiple benefits which can be downloaded here.

Incorporating biodiversity could be helped by greater clarity and guidance around biodiversity enhancement, multiple benefit delivery, green/blue infrastructure and sustainable drainage systems within local policies and plans. These local policies and plans provide a framework for delivery and helps to set out what is required of developers. Advice to planning authorities should also include delivery of multiple benefits including biodiversity at the masterplan stage.

It is not enough to assume biodiversity benefits from green infrastructure. Taking sustainable drainage in particular, the London Plan should be more specific about designing SuDS to optimise multiple benefits, including biodiversity. If more focus is given to biodiversity in the plan, and other London strategies, planning officers will be more able to put in place biodiversity improvements through planning conditions. If SuDS aren't required to consider multiple benefits the developer may choose to put in permeable paving, tanks and concrete rills which provide far less biodiversity opportunities compared with more vegetated options such as grassy swales, ponds and rain gardens. It is not only the type of system used but how that system is designed, for example designing shallow instead of deep water habitats. A simple sedum green roof offers far less biodiversity benefit compared with those with more diverse vegetation. Green roofs can be designed and developed to incorporate microhabitats customized for particular species and/or more

closely mimic natural habitats, with varied microtopography (including hollows and "clifflets"), scattered rocks, rubble, dead wood[4], and roofs can even be designed and planted up as wetlands[5].

The Climate Change Adaptation Sub Committee surveyed 111 planning applications of which only 50 (45%) of the plans reviewed made a detailed reference to the inclusion of SuDS within the overall management of surface water for the development. This included only 12 applications with firm proposals for attenuation ponds/swales[6]. This highlights how infrequently those measures which are considered more biodiverse are considered by developers.

Ponds are very important urban habitats for aquatic biodiversity and can support similar numbers of invertebrate species and families compared to non-urban ponds. Interestingly the biological communities within urban ponds can be substantially different to non-urban ponds and can contain greater variability in community composition. In urban environments ponds support high taxonomic richness and contribute significantly to regional faunal diversity. Ponds provide an opportunity to conserve and enhance freshwater biodiversity in urbanized landscapes whilst also facilitating key ecosystem services including surface water storage and water treatment[7]. Yet without a strong policy direction to consider biodiversity in plans, designing ponds into a development may be missed out.

Biodiversity of green space is affected by the quality of that space, the management of that space and the pollution. For example if a management scenario keeps a green space as short mown grass this will have very little biodiversity benefit. Guidance should consider not only the design of a green space but how it fits in with its surroundings and the need to manage for biodiversity. For example keeping grass mown short and use of herbicides and pesticides will be result in limited biodiversity benefit. One important aspect of this is the need for all policies and strategies to require preference for native species and to ensure that invasive non-native species are not planted and removed (according to best practice) if found on site prior to development.

Considering how to optimise biodiversity from the outset re-affirms the need for local planning authority capacity and ecological competence, particularly when considering the mitigation hierarchy for a development proposal. This should not be assumed and should be reiterated within the London Plan, considering dedicated guidance. For example, remnant natural habitat is usually more diverse than newly created habitat. There are two important factors to this: understanding where important areas for biodiversity are which shouldn't have housing developments built on them and retaining pre-development habitat within a development site where possible. The former should be incorporated into local plans whereas the latter needs to be a London-wide general policy for development.

[4] http://www.urbanhabitats.org/v04n01/habitat_full.html
[5] Song, U. *et al*. (2013) Wetlands are an effective green roof system, Building and Environment, 66: 141-147
[6] AMEC, (2014) Survey of a sample of development applications within flood risk areas – final report, Committee on Climate Change https://documents.theccc.org.uk/wp-content/uploads/2014/07/AMEC-Final-Report-for-ASC.pdf
[7] Hill, M.J. *et al*. (2016) Urban ponds as an aquatic biodiversity resource in modified landscapes, Global Change Biology (in press)

Community engagement

In order to maintain the quality of a green space and fully realise its benefits, it is very important to engage the local community, preferably from the outset. If they have been part of the process in designing their local green space, they are much more likely to look after it and understand its multifunctional benefits. In such cases the local community can often take an important role in the long term management of an area. Empowering local communities to co-deliver projects can increase the chances of successful and sustainable biodiverse green spaces whilst also enhancing community cohesion, mental and physical health and well-being. In fact, the psychological benefits of green space increase with the biodiversity of that space[8] and a 'green view' from a window can increase job satisfaction, reduce stress[9] and increase concentration levels of children at school[10].

London is known for retaining a substantial amount of green space and parks, let's keep it that way and use development to improve it. Enhancing biodiversity in new developments will help shape London as a place where people want to live and work and lead the way in developing resilient and truly sustainable places that work with nature, not against it.

Hannah Freeman
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[8] Fuller, R. A. *et al*. (2007) Psychological benefits of greenspace increase with biodiversity, Biology Letters: 3(4)
[9] Won Sop Shin (2007) Influence of forest view through a window on job satisfaction and job stress, Scandinavian Journal of Forest Research , 22(3)
[10] Dongying, L. & Sullivan, W.C. (2016) Impact of views to school landscapes on recovery from stress and mental fatigue, Landscape and Urban Planning, 148:149-158

Response to the London Assembly's consultation on: Encouraging biodiversity in new housing developments

Submitted by the Campaign to Protect Rural England: LONDON branch

CPRE London *is keenly interested in supporting issues to improve biodiversity in the Greater London area. The quality of the capital's built and natural environment- its green, blue and open spaces- is internationally renowned but it is under pressure from the government's drive to build new homes. New developments risk poor environmental and social outcomes from the threat of developer profit trumping community benefits, as viability assessments give profit margins top priority. It is unclear whether these developments are consistently including green infrastructure as part of their plans.*

London is home to 8.6 million people as well as more than 8.3 million trees and 13,000 species of wildlife, and is one of the greenest cities in the world for its size. London is growing at the rate of more than 200,000 people a year, according to new data from the Office of National Statistics. The capital's population is expected to grow from a current 8.6 million people to 11 million by 2039. This level of population growth implies a 20% increase in population density from a current density of 5,619 people per $km^2$to 6,982 people per per km^2 by 2039.

In Mayor Sadiq Khan's first month in office alone, London's population is estimated to have grown by more than 11,000. With an average household size in London of 2.47 persons, 4,500 new homes are needed every month. During the election campaign, Sadiq Khan called for greater transparency for viability assessments. He talked of 'appropriate design principles' and pledged to improve public spaces and create more liveable streets. He promised to make 'effective use' of his call-in powers.

The London Infrastructure Plan 2050 recognises that green infrastructure must be considered an integral part of the city's vital systems: as essential as the city's transport, energy, water, waste and digital infrastructure. The London Assembly Green Infrastructure Task Force Report (2015) demonstrates that London's existing green spaces and features such as green roofs, street trees and rain gardens, can provide benefits including: healthy living, more space for walking and cycling, flood mitigation, improved air and water quality, enhanced biodiversity and a cooler urban environment.

A short paper from MIT (Massachusetts Institute of Technology) on biodiversity succinctly describes the benefits of biodiversity to humans:

About 1.75 million species of plants, animals, and microorganisms have been identified out of the 13 million total species estimated by scientists (Sustaining, 2000). The services these species provide contribute to the delicately-running natural cycles that help make earth habitable to humans and contribute to our way of life in many ways, from providing us food and pharmaceuticals to helping reduce the impact of natural disasters such as floods. Biodiversity is positively correlated with ecosystem productivity by a mechanism known as functional complementarity, which states that the more species there are, the more niches are occupied, and thus the greater productivity of the ecosystem (Wilby & Hector, 2008). Thus, if humans want to continue benefiting from the abundance of these natural goods and services, the biodiversity that establishes them must be preserved. The United Nations Convention on Biological Diversity, notes that, "at least 40 per cent of the world's economy and 80 per cent of the needs of the poor are derived from biological resources" ("Convention", 2011). Saving this biodiversity is in the self-interest of the human race. (www.web.mit.edu Mission 2015, Biodiversity)

CPRE-London supports this idea of incorporating green infrastructure in our urban development and would support that it be mandatory. "Greener cities" should encourage people to stay in cities and limit urban sprawl. More importantly, green infrastructure and the ecosystem services it provides is the very bedrock of improving resilience for the future.

Our views have been framed by work we have done as an organisation, including:

1. "All London Green Grid: Review of Implementation" April 2014
2. "Towards a Liveable London" June 2014
3. "Safe Under Us" Sept 2016

Work by the Urban Design Group and the Academy of Urbanism encourage and support the importance of green spaces and ecosystems in urban living. Works published by Tony Juniper also clearly articulate what nature does for Britain—notably "What Nature Does for Britain" and "What Has Nature Ever Done for Us?".

Finally, we would encourage the Green Infrastructure Task Force to watch this documentary. It is a superb visual piece that documents why and how nature should be incorporated into our urban development plans. It has been very inspiring to us as an urban branch in a larger national organisation as we reframe some of our messages.
http://topdocumentaryfilms.com/nature-cities/

1. **Why is it important to encourage biodiversity in new housing developments?**
   CPRE London firmly believes that biodiversity must be encouraged as we, as a species, require robust ecosystems to support habitats and wildlife to ensure our very own (human) survival. Additionally, promoting biodiversity in green spaces provides the necessary ecosystem services that will improve our resilience to climate change effects, e.g. cooling the urban environment. In addition, if we are looking after biodiversity, this implies we are ensuring that we have green spaces.

   Numerous studies have shown the value of green spaces for health and wellbeing:
   - UCL, "Valuing Urban Green Paces: Challenges and Opportunities" Oct2104;
   - The Land Trust "The Value of our Green Spaces" January 2016;
   - J Maas, R A Verhiej, P Groenewegen, S de Vries and P Spreeuwenberg, "Evidence Based Public Health Policy and Practice: Green space, urbanity, and health: how strong is the relation?" Netherlands Institute for Health Services Research. 16 Jan 2006);
   - The Landscape Institute, "Public Health and Landscape: Creating healthy places" 2013

   Therefore, as London and England become more crowded, encouraging and REQUIRING green spaces and biodiversity to be incorporated into new developments is not optional—it is NECESSARY.

2. **How rigorously is biodiversity considered in planning applications and agreements?**
   It is unclear how much biodiversity and green infrastructure is being incorporated in current development plans. Given that more than 120,000 new homes are proposed in Local Plans to be built in Metropolitan Green Belt it is difficult to see how government policy is prioritising biodiversity.

   However, there have been notable exceptions:
   - Nine Elms: We understand that there is a large effort at the Nine Elms brownfield site for urban drainage. This is great green infrastructure but it is unclear whether the landscaping will be done to encourage pollinators, and biodiversity and ecosystems etc. This is a particularly interesting site-- being situated along the Thames River-- to improve biodiversity.

   - Queen Elizabeth Olympic Park: The green infrastructure stands out as a superb example of supporting biodiversity with its wild flowers The landscaping at the new developments around the Olympic sites encouraged a lot of planting that was wild.

   - Kensington Gardens/Hyde Park: There has been a noticeable difference in letting more of the landscape grow wild in these royal parks. This is intuitively better for improving habitats and biodiversity.

   - The City of London's Green Roof policy.

- Woodbury Down: Woodbury Wetlands Reserve was created in 2016 alongside the regeneration of the Woodbury Down Estate in Stoke Newington, Hackney.

This is all good news.

However, it is not clear that rigorous is a word we would use to describe the incorporation of green infrastructure in Greater London. It is unclear is whether smaller scale developments are including any kind of green spaces that encourage biodiversity and the support ecosystems. For example, a new housing development called London Dock E1 is shown to have lots of beautiful stone paving with no areas for ecosystems, habitat or green spaces, except for a few trees. The plaza has provided community space but without green space. This lack of green space is particularly acute in the East End of London.

We could also question what is being done to encourage biodiversity at the new Crossrail spaces at both Farringdon and Tottenham Court Rd. Both places will have areas that could support lots of green space, biodiversity, and/or other green infrastructure. These are examples that highlight the lack of consistency of green infrastructure that is being incorporated in housing and transportation/commercial development across Greater London.

Our recent work on both green belt land in Greater London and the Metropolitan Green Belt suggests that there are a great number of threats to developing Green Belt land. We identified that over 120,000 new homes are proposed to be developed on Metropolitan Green Belt land in our recent "Safe Under Us" Report (Sept 2016). This implies potentially losing ecosystems and biodiversity. "Safe Under Us" clearly demonstrates how contradictory and ambiguous the current NPPF is, allowing for too much wiggle room to allow developments on precious Green Belt Land. These threats are real and could demolish large tracts of areas that could host ecosystems and biodiversity, again necessary to support our very existence. This green belt land could also be used to support vital ecosystem services such as flood protection and good soils for farming, etc.

3. To what extent and how effectively are ecological measures implemented in completed housing developments?

CPRE London responded to the recent SUDS consultation. We were appalled that the goal of the government was to have a 1% improvement in the addition/retrofit of sustainable drainage per year. A 1% improvement is merely a rounding error and is impossible to measure. Based on this particular example we would classify that ecological measures are not being implemented with much rigor.

There needs to be clear, meaningful, and measurable targets for implementing change. And if deadlines are not met, then financial penalties should be levied. If new housing developments do not incorporate green infrastructure and specific biodiversity improvements, then we all suffer. This lack of green infrastructure, specifically opportunities to enhance biodiversity effects the health and welfare of the population at large and the resilience of Greater London to support higher population growth and climate change mitigation.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for more biodiversity?

Our research in "Towards a Liveable London" 2014 suggested that the provision of both internal housing space and outdoor private gardens is decreasing with negative implications for quality of life. We concluded that this would necessitate a better quality of communal outdoor space to compensate. Our 12 case studies showed weakest scores on the provision of outdoor and indoor space. However, the report showed that there were a few developments, notably Woodbury Down, where much consideration was given to landscaping with biodiversity in mind.

We have also done work on the All London Green Grid and the London and Metropolitan Green Belts(e.g. "Safe Under Us" Sept 2016). All our work here shows that these green spaces, that could support biodiversity, are under threat. Therefore, there is inconsistency between policy and practice, to the detriment of health and well-being and overall resilience in face of climate change.

We are concerned that without specific dates for implementation of 'green strategies" housing developers will not heed any 'suggestion' but continue to deliver what has always been delivered—without incorporating green infrastructure, unless required.

Our research on the All London Green Grid (ALLGG) showed that only half of all boroughs had complied with implementing the SPG of the requirements of the ALGG. There were three boroughs without policies on implementing the ALGG and there was variation amongst the boroughs on what was committed and implemented.

We understand the GLA is reviewing green infrastructure uptake in the boroughs and we are keenly interested in their findings.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

- **Make policy clear with financial incentives to meet deadlines:** Mayoral policy should be very clear and reward developments that implement strong green spaces that encourage biodiversity or green infrastructure. If we want to maintain the necessary ecosystems and biodiversity that is required for our very own survival, then we need to provide habitat.

- **Maintain current tree/capita ratio:** At our Mayoral Hustings event in March 2015 a suggestion was made to ensure the current ratio of number of trees/capita should remain stable. This would encourage more tree planting, which is good for both habitat, carbon capture and cleaner air.

- **Keep old trees in new construction.** We should demand that trees not be cut down with new developments. They are important for both habitat and for carbon capture. Trees take 50 years to grow. We need to build around such important habitats and anti-pollution infrastructure.

- **Preserve hedgerows.**

- **Re-wild the Parks.**

- **Require regeneration of derelict parks and green belt land for increasing and improving biodiversity**.

- **REQUIRE green infrastructure and biodiversity plans in new residential and commercial developments—** not just cut grass lawn or golf courses which may be green but provide no ecosystem value.

- **Centralise green infrastructure and biodiversity requirements** to benefit from a multiplier effect if strategies are coordinated and linked. This is the notion behind the All London Green Grid. It will also ensure that we get the appropriate mix of green infrastructure—for example on roofs-→ roof gardens, solar panels , or sustainable drainage projects.

- **Provide financial incentives when green belt or MOL land is regenerated or saved for biodiversity reasons.**

- **NO MORE CONCRETE PLAZAS**—only those with habitat and ecosystem possibilities.

NO PLAN FOR DEVELOPMENT SHOULD BE APPORVED WITHOUT A BIODIVERSITY/GREEN INFRASTRUCTURE PLAN

6. What would be the advantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

The advantage of single planning guidance would mean that it would be clear and all councils would be required to prioritise and require green infrastructure and specifically a biodiversity plan in developments.

Any planning guidance should consist of establishing real targets with an ambitious timeline with which to comply. There should be rules and enforcement of the timeline/deadlines to incorporate appropriate mix of biodiversity and green infrastructure throughout all developments in Greater London, regardless of their size. This will improve Greater London's resilience to climate change and for it to remain liveable despite its growing population. We would encourage that advice is taken from scientists and environmentalists whose profession it is to understand how ecosystems work.

7. What are the features and benefits of biodiversity offsetting schemes and green space factor schemes?

We do not have enough information to comment on offsetting schemes this knowledgably. It is an issue we should become more informed about. Intuitively this could be a means forward to encourage well-thought out compromise and

develop the outcomes required for a Liveable London. However, we would be wary where too much offset doesn't really yield the overall result that Greater London needs to improve its biodiversity and ecosystems.

We were encouraged to see Southampton's sustainability checklist. The fact that this exists is encouraging.

We also see numerous examples where other cities have encouraged green infrastructure in their development. Singapore is at the forefront here and London could take note on what has been done to increase habitats in both commercial and residential developments, especially taller structures. Singapore is an example of implementing large green infrastructure development, and succeeding!

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

A more centralised approach would mean that environmentalists, scientists, and other specialists could have a meaningful impact to ensure that the infrastructure that was being put in place works together. And if this happens then we could get a large 'multiplier' effect with what is being put in place. Also, there would be a central location where whatever is in place is 'known' from the start and could be recognised as a contribution to the 'greater greener good'. We believe we could have a stronger outcome if there was a general plan with good guidance about the outcomes that we want to achieve.

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

Social benefits would include some quiet spaces for people to leave the hustle and bustle of the city. Work has been done to highlight the importance of green spaces and biodiversity to educate children, to provide clean air and the develop a sense of community (see listing in section 1). This is what makes a city liveable.

An EU-commissioned report in 2011 investigated the social values of biodiversity conservation, particularly in terms of its links to unemployment. They showed how jobs and employment are linked to various biodiversity-related sectors—such as water, agriculture and fishing--though this impact related to only 7% of the jobs in the EU.

A further report by the Europark Federation in 2016 identifies many well-known themes of the benefits of nature. They specify how "nature has been proved to be beneficial both in the recovery from certain diseases and improving the overall health status of city inhabitants. Green infrastructures reduce the exposure to air pollutants and reduce noise propagation, and natural areas provide citizens with place to reduce their obesity, improve their mental health and develop social inclusion opportunities through jobs, volunteering" or partaking in team sport. (http://www.europarc.org/news/2016/09/health-and-social-benefits-of-nature/

The evidence is overwhelmingly in support of encouraging biodiversity. Numerous studies show how important it is to general health and well-being. CPRE-London believes that these social and health and well-being aspects should be prioritised. If we 'green' our cities, then we should all be better off. And we would have a Liveable City that could rival any in the world.

We are greatly encouraged that there is a special focus on Green Infrastructure on the part of the GLA, which includes biodiversity and ecosystems. The fact that this consultation is taking place demonstrates to us that the government understands the value of biodiversity and green infrastructure. We applaud this.

CPRE London welcomes the opportunity to contribute to this discussion. We firmly believe that any changes should support regenerating and encouraging biodiversity and ecosystem services alongside and within housing development and urban regeneration. In this way we will ensure a truly sustainable development model that will put London at the top of the "Liveable Cities" league tables.

Thank you for encouraging feedback on your plans.

We look forward to working with you in the future on such a vital development concern.

Carol Hamcke-Onstwedder, Vice Chairman, CPRE-London
September 27, 2016

Encouraging biodiversity in new housing developments

1. Why is it important to encourage biodiversity in new housing developments?

We live in an increasingly urbanised world where more than half the population already live in urban areas (United Nations 2014), and in England over 80% of people now live in towns and cities (UK National Ecosystems Assessment 2012). Built upon old models of high-density living and economic development, towns and cities suffer numerous environmental impacts associated with the loss of biodiversity (White 2002; Grimm et al. 2008; Pickett et al. 2011; Cook-Patton & Bauerle 2012):

The incorporation of green infrastructure into cities can help alleviate these problems by restoring biodiversity and the associated ecosystem services that nature provides for free. An ever-increasing number of studies have researched the environmental and associated economic benefits that urban green infrastructure can provide, including stormwater amelioration and pollution uptake, urban heat island mitigation and energy conservation, a resource for urban biodiversity and associated human health & well-being benefits. These functions form an essential component of delivering sustainable development and their value is likely to become even more pertinent with the predicted future challenges posed by climate change. Targeting the incorporation of biodiversity into new housing developments is an effective way of ensuring that these sustainable development aims are embedded at the heart of local communities.

Moreover, from a more fundamental viewpoint that recognises the intrinsic value of biodiversity, beyond health & well-being benefits and beyond quantifiable ecosystem service benefits, if we are to reverse the national and international declines in global biodiversity (State of Nature 2016; European Red List) then cities represent a key area where efforts should be targeted. As recognised in the CBD's Cities Biodiversity Outlook, cities hold enormous potential for achieving biodiversity conservation targets as:

- Cities represent foci for human habituation and the interface between humans and the natural environment. If urban populations become disconnected from biodiversity they lose the sense of awe achieved through direct contact with nature and the benefits of such interactions.
- Cities represent foci for education and thus opportunities to incorporate the natural environment directly into the curriculum, raising the profile of the importance of biodiversity from a young age.
- Cities can represent refugia that can provide shelter for biodiversity that are susceptible to the widespread habitat fragmentation and pesticide/chemical use that is increasingly being shown to impact biodiversity in the broader intensive-agriculture dominated landscapes that comprise the modern rural environment.

- Cities can act as key stepping stones and sources of populations for connecting landscapes and metapopulations within the broader increasingly fragmented rural landscapes.

These foci comprise a mosaic of communities that dwell in our cities and it is the placemaking involved in the delivery of new housing developments that underpins how these communities engage with their environment. No new housing development has zero impact on biodiversity and it is important that this is recognised in the design of mitigation and, more importantly, that new developments are viewed as key opportunities for financing and embedding biodiversity in the heart of our cities, rather than merely aiming for 'no-net-loss' targets. By doing so it is possible to support the delivery of national and international commitments to biodiversity and sustainable development goals such as Biodiversity 2020, the Convention on Biological Diversity and ICLEI's Local Action for Biodiversity.

2. How rigorously is biodiversity considered in planning applications and agreements?

During the planning process biodiversity tends to be considered principally in terms of strict adherence to protected species legislation, i.e. avoidance of killing/injury of species, but beyond these duties, there is often limited knowledge/understanding of the wider value of incorporating biodiversity and green infrastructure (see above) into developments, particularly amongst developers, but also Local Authorities. This is even more the case when considering an ecosystem services approach and natural capital accounting in planning decisions. Consequently, the rigour with which biodiversity is considered in planning applications/agreements remains very variable, for instance where Local Authorities still employ an in-house ecologist (an increasingly rare but valuable resource) planning applications are often scrutinised in greater detail and planning conditions implemented which go beyond simply ensuring compliance with protected species legislation and include requirements to minimise impacts/enhance development proposals for local biodiversity i.e. stipulating mitigation such as planting a proportion of native species, installing a *biodiverse* green roof, avoidance of lighting habitats used by foraging/commuting bats etc. These types of measures should be mainstream and are often included as recommendations within ecological assessments for developments, but more robust mechanisms are needed to ensure appropriate mitigation is consistently implemented. For instance, whilst the NERC Act 2006 requires every public authority to have ‘regard’ to conserving biodiversity, the large number of invertebrates listed under Section 41 that do not have strict protection under legislation generally receive inadequate consideration during the planning process. A recent example of this includes the presence of the last known UK population of the streaked bombardier beetle (*Brachinus sclopeta*) failing to stop, or even warrant on-site mitigation, for a Docklands development (for which the company taking over the site went bankrupt shortly after clearing the site and opening for business).

Data on the implementation of mitigation measures such as appropriate soft landscaping/green infrastructure for conservation concern invertebrate species is lacking, but estimates of actual implementation are currently as low as 5% (Hopkins & Thacker, 2016). From experience of working in the ecological consultancy sector,

the principle of 'no net loss' is infrequently pursued by public authorities, particularly for small-scale developments, although clearly the cumulative impacts of these developments will result in further habitat loss/fragmentation and biodiversity losses.

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

From past experience ecological mitigation in completed housing developments can comprise anything from exemplars of interweaving biodiversity within community developments in order to achieve multifunctional benefits for nature and communities (e.g. Barking Riverside), to industrially standardised generic token green infrastructure with singular/narrow functionality which soon becomes neglected due to a lack of legacy planning and community engagement (e.g. the original streaked bombardier mitigation at Silvertown Keys). The difference between these opposing ends of the spectrum appears to be the stakeholder involvement and legacy planning. Unfortunately, all too often, what begins as promising implementation during the planning application process gets diluted and blunted by spiralling project costs, a lack of recognition of the value of providing multifunctional liveable spaces built on ecosystem service provision, and a lack of capacity within Local Authorities to monitor (both in the short and long term) and enforce agreements made within planning processes.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for more biodiversity?

The London Plan and guidance form an excellent first step in the recognition of the value of biodiversity in urban areas and a guide for conservation and implementation. However, there is a real need to ensure that these guidelines are translated appropriately into a local context and that delivery goes beyond recognition of value to include effective implementation, novel financing mechanisms, and community ownership to secure long-term legacy. Until this is embedded in the planning policy cycle, the effectiveness of such policies will inevitably struggle to be actualised.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

In order to ensure a more comprehensive approach to biodiversity protection, incorporation, and enhancement, Mayoral policy needs to promote a more holistic approach to green infrastructure planning processes. This includes:

- a much stronger strategic focus on locally contextualised solutions rather than generic off-the-shelf options. This can be achieved either through the incorporation of ecologists with local ecological understanding as part of the landscape planning (see this good practice example from Barking Riverside developed as one of the urban sustainability and resilience tools within the EU

FP7 project TURAS) or more strategic locally contextualised planning guidance provided by Local Authority/GLA ecologists.

- a stronger focus on metapopulation dynamics and fragmentation effects to ensure that the cumulative effects of lots of smaller developments are taken into account.
- Local authority/GLA assigned independent ecological assessment of predicted project ecological impact rather than direct developer contracted site assessments.
  OR
- an ecological and ecosystems service evaluation focus on the potential value of a site (or the historical pre-industrial landscape context value) rather than a current pre-development state assessment.
- stronger emphasis on the whole life process beyond implementation, to include design, implementation, legacy management and monitoring.
- Promotion of a community interest company approach to legacy management of green space (e.g. Barking Riverside CIC) including a requirement for a CIC transition phase from Public Authority and Developer managed to community managed to include specific guidance and training on the values of biodiversity within developments, local training on managing greenspace for biodiversity, and requirements for legacy conservation.
- a focus on the promotion of the use of habitat assessment tools such as Natural England's ISIS invertebrate assemblage tool during the ecological survey process to inform landscape design for biodiversity within the new development masterplanning.
- Promotion of the involvement of partner companies to secure/support legacy (e.g. the innovative financing models developed by the Land Trust).

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

An advantage would be the creation of a singular clear message on what is to be expected on a London-wide scale. The disadvantage would be the tendency of such an approach to promote generic solutions with no local context in terms of habitat features and multifunctional needs assessment. There would need to be a clear focus on the need for local authorities to provide their own local context and interpretation.

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes2? Are there disadvantages to such schemes? We are particularly interested in evidence on how they could be introduced in London and what effects they might have

Biodiversity offsetting schemes:
Pros:

- They can provide a mechanism for combining credits to maximise the economic value of several development schemes into large scale implementation for biodiversity.

- By providing funding/credits to established organisations to deliver habitat creation you can secure investment in organisations with a track record in delivery and secure futures for legacy management.

Cons:

- There can be a tendency towards delivering off-site solutions rather than innovative mechanisms that embed biodiversity within developments. In so doing, they move away from the ideal of re-connecting communities with nature to a 'nature-is-something-that-happens-elsewhere' approach, where reserves are biodiversity-rich, but ring-fenced and fragmented within unconnected landscapes impermeable to most species.
- Much of the most biodiverse habitat in urban areas is found on post-industrial sites and much of the biodiversity associated is that with an affinity towards early-successional habitat such as Open Mosaic Habitat. Thus far it has proved very difficult to calculate exact metrics for habitats such as Open Mosaic Habitat on previously developed land, and it can be very difficult to secure appropriate sites for such habitat creation.
- There can also be a tendency to use credits to improve pre-existing sites through quick wins within funding timescales (which should be improved by other mechanisms) rather than creation/restoration of new habitat as should be required under a Biodiversity Offsetting model.

Greenspace 'factor' schemes:

Pros:

- An exceptionally clear way to communicate to developers what is expected within developments and potential options for how this can be achieved;
- Encourages strategic thinking on how greenspace factors can be linked to contribute to an overall score;
- Can be fed directly into BREEAM assessments of overall sustainability excellence;
- Promotes incorporation of green infrastructure on site rather than at satellite sites away from concentrations of human habituation, as such it promotes the reconnecting of communities with nature;
- Provides a clear baseline for evaluating delivery post-construction. This ensures a strong focus on delivery is maintained after the planning application stage. It also creates a platform for long-term monitoring of the green infrastructure legacy to ensure that habitat/biodiversity is conserved.

Cons:

- Similar to BREEAM, there is a tendency to aspire to generic biodiversity tick-box targets rather than incorporating local context into green infrastructure planning both in terms of designing for locally important species and local ecosystems service needs analysis.
- Unless long-term follow-up monitoring is included there can be a tendency to implement high scoring solutions for short-term gains that are either not suitable to persist over the long-term, or do not have a management legacy secured to ensure they are maintained.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

Biodiversity operates over landscape-scales, across borders and regional boundaries. As such, from a purely conservation point of view, it is vital that a holistic view is taken in terms of landscape management and the provision of connected and viable networks for the conservation of metapopulation dynamics.

From an ecosystem service provision point of view, a holistic assessment of ecosystem service needs and benefits is the only way to break open the silo-thinking that acts as a barrier to green infrastructure implementation. By removing such barriers it is possible to secure the strategic planning processes and funding mechanisms that enable the delivery of the often diffuse multifunctional benefits that green infrastructure can provide. By doing so, it is possible to scale-up and scale-out implementation to such a threshold that it no longer represents islands of good practice amongst a sea of grey infrastructure, but the interweaving of our natural capital amongst all neighbourhoods for the benefit of all our communities and improving the health and well-being of urban residents. Only by taking a holistic approach is it possible to assess the ecosystems service needs of communities and secure truly multifunctional green infrastructure solutions (Connop et al 2016) that create ecologically effective urban spaces capable of providing biodiversity, environmental, social and economic benefits, on a scale large enough to provide city-wide benefits to communities and landscape-scale benefits to biodiversity. In so do, the approach will help move the planning and policy focus away from housing numbers and towards building better communities by recognising, conserving and enhancing the natural and cultural value of landscapes.

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

Social and local economic benefits gained from a more comprehensive approach could be significant if strategies were incorporated to promote a greater emphasis on ecosystem service needs analysis, locally contextualised design for biodiversity and legacy management and maintenance. This would include:

- Increased opportunities for community interaction with nature and the associated health & well-being benefits;
- Improved quality of life for residents through increased resilience (in the form of stormwater management, thermal stress, risk management resilience, etc) in the face of predicted climate change impacts;
- Increased opportunities for social cohesion through social space creation, grow-your-own projects (e.g. Poplar HARCA), and community wildlife gardens;
- Education benefits through engagement with growing and wildlife initiatives (e.g. healthy diets, pollination, etc).
- Increased opportunity for green job creation around construction and legacy management as demonstrated in Groundwork's Social Housing Retrofit project.

- Opportunities for the development of new social enterprises for local employment and up-skilling such as Community Interest Companies to take over management of green infrastructure (e.g. Barking Riverside).
- Economic benefits in terms of property prices, tourism, attractiveness for local businesses and commercial occupancy.
- Reduction in inequality by enhancing common property resources.

Submission to GLA 'Encouraging biodiversity in new housing developments' Call for Evidence

StART Haringey

StART is a group of Haringey residents and workers. StART was established in response to the sale of two-thirds of St Ann's Hospital site for private housing development. The current proposal for the hospital site takes no account of the needs of the local people at a time of severe housing need, with only 14% of the homes classed as "affordable". StART wants to see the site used for the good of the community and has begun a community-led development with the full participation of local people, to provide genuinely affordable homes and other facilities that respond to local needs.

Within StART we have a dedicated Environment sub-group dedicated to protecting, enhancing, creating and managing green spaces and biodiversity.StART is committed to creating new areas of biodiversity. We believe biodiversity should be integral to any housing development as it creates a truly sustainable environment to live and thrive in. Usually housing developers see biodiversity as a negative; time consuming and a strain on profit – we see it as a positive. We are incorporating existing features of biodiversity into our plans and enhancing them. We are a beacon project focusing on affordable homes, sustainable environment and enhancing biodiversity.StART is a real living example – forward-looking and concrete.

StART Haringey recognises the importance of biodiversity in new housing developments for the following reasons:

1. **Enhancing mental and physical health of residents and the wider community**

2. **Educational opportunities and mental health for young people**

3. **Service user wellbeing**

4. **Managing projects to engage the local community**

5. **Protection of rare species**

6. **Linking green spaces in the local area as a holistic network**

Why is it important to encourage biodiversity in new housing developments?

What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

[1] Enhance mental and physical health of residents and wider community

Depression and anxiety can be linked to a lack of open and green spaces. StART's housing development aims to protect the current biodiversity of the hospital site and encourage greater diversity of fauna and flora in order to enhance the mental and physical health of future residents and the wider community.

There is sufficient evidence[1] to suggest contact with nature may be an effective component of:

- Treatment for children with poor self-discipline, hyperactivity and Attention Deficit Hyperactivity Disorder (ADHD)
- Coping with anxiety and stress
- Strategies to reduce crime and aggression
- Benefiting elderly care and treatment for dementia
- Concentration levels in children and office workers
- Healthy cognitive development of children
- Improving hospital environments
- Strengthened Communities
- Increased sense of wellbeing and mental health

The Three Main Theories Linking Health with the Natural Environment
Biophilia[2]

- Biophilia is an evolutionary theory defined as "the innately emotional affiliation of human beings to other living organisms". It is proposed to be a genetic sequence that has been programmed over one million years of evolution to respond positively to natural environments to help us survive and thrive. The theory proposes that even now we are attracted to these environments where we feel more content and function more effectively. The next two theories show how this genetic "watermark" may affect our mental health and wellbeing.

Attention Restoration Theory[3]

- The Attention Restoration Theory is based on two areas of attention in our lives. Direct attention requires concentration and is tiring as the brain works to block out distractions. Indirect attention or fascination holds our concentration with little to no effort. This allows our brain to be restored so that we can return to direct attention. The natural environment provides the most effective restorative environment. There are now over 100 studies that have supported this theory.

Psycho-physiological Stress Recovery Theory[4]

[1]Dr Bird, William (2007), Natural Thinking: Investigating the Links between the Natural Environment, Biodiversity and Mental Health
[2] Wilson EO (1984) Biophilia: The Human Bond with Other Species. Cambridge: Harvard University Press.
[3] Kaplan R and Kaplan S (1995) The experience of nature: A psychological perspective. Ann Arbor, MI: Ulrich's. in Kaplan S. The restorative effects of nature: Toward an integrative framework. Journal of Environmental Psychology,15,169-182. Natural Thinking 1st edition Report for the RSPB Dr William Bird
[4]Ulrich RS (1983) Aesthetic and affective response to natural environment in Altman I and Wohlwill JF (Eds) Behaviour and the Natural Environment. New York:Plenum, pp85-125.

- The Psycho-physiological stress recovery theory is based on empirical findings of an immediate positive response to views of nature. This response causes a rapid reduction in stress (blood pressure, muscle tension pulse rate) usually within minutes of exposure of nature and is most obvious when the body is already stressed[5].

[2] Educational opportunities and mental health for young people

1 in 10 boys and 1 in 18 girls aged 5-10yrs have a diagnosed mental health disorder. Those children aged 11-17yrs have higher levels with 1 in 8 boys and 1 in 10 girls.[6]Studies point to 50% less crime and domestic violence in families with views of increased vegetation in a poor housing estate compared to identical blocks with no vegetation. If this is true then the presence of nature in the inner city residential areas should be an essential part of design rather than seen as just aesthetically pleasing.[7]

Protecting and enhancing natural areas also provides educational opportunities for children and young people to learn about and engage with the natural world. Studies[8] have shown that increased access to nature improves behaviour, concentration and imagination.

[3] Service user wellbeing

StART is proposing to set up and manage: activities for hospital service users including apple pressing and tree care; therapeutic sessions in gardens; new green spaces beneficial for mental health; and ecotherapy approaches.Ecotherapy is the name given to a wide range of treatment programmes which aim to improve mental and physical wellbeing through doing outdoor activities in nature.

As the StART development will be located on St Ann's Hospital site, with a third of the site still providing NHS services, the health benefits of biodiversity and access to nature for service user recovery will be extremely important and is central to the planning process.

Service users universally agree that being in contact with nature improves their recovery from illness, operations or mental ill health.[9]There is good evidence that service users recovering from illness benefit from contact with nature. Stress is reduced and there is greater satisfaction, a reduction in need for strong painkillers and greater ability to cope with the demands of treatment and understanding of the diagnosis.[10]

For example, it has been proven[11] that hospital gardens:

- Facilitate stress reduction which helps the body reach a more balanced state
- Help a service user summon up their own inner healing resources
- Help a service user come to terms with an incurable medical condition
- Provide a setting where staff can conduct physical therapy, horticultural therapy, with service users
- Provide staff with a needed retreat from the stress of work

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[5]Ulrich R, Simons RF, Losito E, Fiorito E, Miles MA and Zelson M (1991) Stress Recovery during Exposure to Natural and Urban Environments. J Env Psychology 11, pp201-230.

[6] William Bird, Natural Thinking 1st edition, page 12

[7]Kuo FE and Sullivan WC (2001) Environment and Crime in the inner City. Does vegetation reduce crime

[8]Dr Bird, William (2007), Natural Thinking: Investigating the Links between the Natural Environment, Biodiversity and Mental Health

[9] Cooper, Marcus and Barnes (1995) Gardens in Healthcare Facilities: Uses, Therapeutic Benefits, and design considerations. Martinez, CA: The Centre for Health Design.

[10] Ulrich RS (1984) View through window may influence recovery from surgery. Science 224, 420- 421.

[11]Cooper, M. C., 2005: *Healing Gardens in Hospitals,* The Interdisciplinary Design and Research e- Publication, 1(1), 1-27. cabeurl.com/6w.

- Provide a relaxed setting for service user/visitor interaction away from the hospital interior

[4] Managing projects to engage the local community

StART environment subgroup would be working with N15 Eco Arts to set up and manage projects that encourage biodiversity and engage the local community,alongside other local green organisations with a track record of working with mental health such as Trust for Conservation Volunteers (TCV) and London Wildlife Trust.

Studies[12]show a positive effect on social cohesion with up 83% more people socialising where there are green spaces in the local community. "Social Relations and networks are life-enhancing and contribute to longevity"[13]. The natural environment contributes to social cohesion by providing inclusive places to meet.

For the elderly any improvement in access to green space would be very significant, as social integration is most beneficial to them.Garden initiatives and allotments will also be set up to establish inter-generational projects and to promote resident well-being and community cohesion.

[5] Protection of rare species

It is important to protect and encourage biodiversity in new housing developments as it means rare species can survive and thrive. StART is proposing to protect some of the most rare species of trees in Britain, which have remarkable fruits. St Ann's has specimens of outstanding attributes,arboricultural quality, visual/landscape importance, and cultural, historical and ecological value.

What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

[6] Linking green spaces in the local area as a holistic network

St Ann's Hospital site is part of a green corridor, linking and integrating green spaces in the Haringey area to enhance biodiversity on a wider scale. Nearby areas of wildlife and biodiversity include Woodberry Wetlands, Chestnuts Park and Railway Fields. Linking green spaces as a holistic network increases our understanding of how available, diverse and accessible green spaces are throughout the borough and London-wide. A greater understanding will in turn allow identification of areas that lack sufficient green space or diverse green spaces, allowing an appropriate governmental or other body to address this shortcoming and promote green spaces in the correct locations.

[12] Sullivan WC, Kuo F and Depooter SE (2004) The Fruit of Urban Nature: Vital Neighbourhood Spaces. Environment and Behaviour 36(5) 678-700.
[13]Berardo FM (1985) Social networks and life preservation. Death studies, 9(1), 37-50

Contact Us

We would be delighted to provide further information on StART and our plans to protect, enhance, create and manage new areas of biodiversity on the St Ann's Hospital site.

Please contact:

Name: Richard Bagnall-Oakeley

Environment Agency

London Assembly: Housing Committee Call for Evidence

Housing Development Contribution to Biodiversity

1. New developments present an opportunity to enhance and conserve existing habitat, both in and adjacent to the development site. This includes opportunities for habitat creation and restoration.

2. In general existing biodiversity is reasonably well considered in planning applications and protection provided where necessary. However the opportunities to improve biodiversity and create habitat through development are frequently not maximised.

3. Small-scale biodiversity improvements can often be secured through planning applications and agreements, whilst wildlife-friendly buffer zones and river restoration proposals are less widely delivered. As a result the enhancements provided through development can lack connectivity to the wider landscape and ecological network beyond the redline boundary. Wildlife-friendly buffer zones and river restoration requires what would otherwise be developable land to be set aside for wider benefits.

4. To what extent and how effectively ecological mitigation measures are implemented in completed developments is difficult to determine as there is no requirement for developers to undertake post-project appraisals or monitoring. As a result the data that would be required to answer these kinds of questions is not currently reported. There is a need for habitat management plans that are funded into the long-term.

5. Securing significant improvements relies on early identification of opportunities for enhancement, detailed pre-application discussion, and resource availability to meet with developers and provide advice. In order for development to deliver wider benefits for biodiversity it should be incorporated into site masterplans at the earliest stages rather than as bolt-on measures. Consideration should be given to connectivity to other new and existing sites, integration into any emerging strategies (such as those on large-scale sites for public realm) and incorporation into building design (brown and/or green roofs).

6. A useful example of a large area of development is the emerging Local Plan and supporting strategies for Old Oak Park Royal Opportunity Area. There is likely to be a Green Infrastructure Strategy (which will include biodiversity too) but interventions have already been included in the draft Integrated Water Management Strategy (includes flood mitigation, water quality, SuDS and resource management).

7. Biodiversity should not be considered as a stand-alone issue but instead the wider benefits should be emphasised, such as access to well-connected green space and river corridors for health and wellbeing, adaptation and mitigation to climate change, flood management and mitigation of air pollutants.

8. The economic value of London's natural capital and the ecosystem services provided by biodiversity needs to be established. This will inform and influence new development in a way that recognises the economic and social value of biodiversity, rather than considering it a potential barrier to growth. The cost of invasive non-native species to the London economy, not just biodiversity, and the impact on ecosystem services should also be established. This will help raise the profile of invasive non-native species management beyond the biodiversity conservation arena and encourage developer and landowner action.

9. Mayoral policy and guidance should seek to include wider opportunities and delivery vehicles for enhancing biodiversity. This should not be isolated to new development through the London Plan, but retrofit to existing developments and transport infrastructure – the Mayoral Transport Strategy should form an important vehicle for delivery. Development sites and associated infrastructure should adopt a Net Positive gain for biodiversity policy, as done by Network Rail.

10. There is a need to establish a baseline of the current situation in relation to large development sites to inform strategic planning. The Environment Agency and Natural England are currently working with Greenspace Information for Greater London (GiGL) to establish environmental issues and opportunities for the Opportunity Areas. This could allow for early and informed conversations with planning authorities in regard to Opportunity Area's.

11. To maximise the opportunities for biodiversity that development presents there needs to be better links to partnership organisations (such as Transport for London, Crossrail 2, the All London Green Grid group) and better links to Catchment Plans and Catchment Partnerships. Partnership working has a key role in delivering efficiencies.

London Assembly Investigation – Encouraging biodiversity in new housing developments

HILSON MORAN

1. Why is it important to encourage biodiversity in new housing developments?

Urbanisation at increasing rates and putting pressure on land availability and habitat availability/connectivity, and as highlighted in the State of Nature 2016 report this is having a detrimental on a number of species with significant short-term declines. Invertebrate species see the most significant decreases both in the short-term and long-term with birds also noticeably impacted. The declines in urban species are significantly quicker in the short-term (2002 – 2016) than the long-term (1970 – 2002) highlighting the need to encourage biodiversity provision in new developments as a whole, and not just housing.

Development of the urban environment is important, reducing the loss of greenfield habitat, and developers are generally receptive to the inclusion of enhancement opportunities.

2. How rigorously is biodiversity considered in planning applications and agreements?

Our experience is that the detail of consideration of biodiversity in planning applications varies between London boroughs, which is reflected in the advisory letter to the previous Mayor dated the 26th March 2015 which reflects on the lack of regular in-house or any other ecological expertise in a significant proportion of the London boroughs. As a result, some London boroughs will rigorously assess planning applications whilst others appear cursory.

3. To what extent and how effective are ecological mitigation measures implemented in completed housing developments?

The incorporation of mitigation measures relating to the protection of biodiversity are generally well implemented by developers. With regards to enhancement opportunities, environmental certification schemes for buildings, such as those provided by the BRE, are effective at ensuring developers incorporate biodiversity enhancements as proposed as the schemes provide an incentive to their appropriate completion.

However, it is recognised that opportunities to monitor the effectiveness of enhancement measures are generally missed, which is a concern across all developments and not isolated to housing developments.

London Assembly Investigation – Encouraging biodiversity in new housing developments

HILSON MORAN

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?

The London Plan and supporting guidance information is important for setting out the strategic goals and development requirements for London, and clearly set out the appropriate requirements for the protection and enhancement of biodiversity. However, at present the information is spread out across a number of different documents including the Sustainable Design and Construction Supplementary Planning Guidance (SPG), All London Green Grid SPG and Living Roofs and Walls Technical Report.

The All London Green Grid SPG is very effective at identifying the regional opportunities that will help enhance biodiversity at the London scale, however there is little that will help most developers to relate to that guidance and understand how smaller projects, of say individual or a small number of buildings, can contribute towards the regional vision.

The Sustainable Design and Construction SPG provides a very useful summary of the 'Mayor's Priorities', which provides a useful and concise summary of the London Plan, the remainder does little to encourage developers to incorporate biodiversity enhancements.

The Living Roofs and Walls Technical Report provides a lot of useful information regarding the technologies, but is very wordy and requires time to fully understand the detail and get to grips with the benefits. Furthermore, there has been significant development since 2008 with advances in the technologies involved in the systems and coverage in London.

Overall, the opportunities provide important information, however the detail is commonly used by ecological and sustainability professionals to encourage developers to incorporate biodiversity opportunities. In some cases, this misses opportunities where ecological expertise are not brought into the team until development of the concept phase.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

Our experience suggests that developers, generally, currently have a good understanding of the requirements for the protection of biodiversity and readily engage with consultants on developments with potential for adverse effects. However, biodiversity enhancements are typically less well understood, in particular for sites with little biodiversity interest pre-development.

In order to be more effective in encouraging the inclusion of biodiversity enhancements into developments, developers would benefit from guidance that they can relate their projects to. Using an image based or infographic approach that succinctly identifies the range of generic opportunities and benefits they will provide would benefit developers understanding of both what could be designed into their developments. It will also be important to demonstrate to developers the benefits they bring, both in terms of biodiversity and, as many of our clients are developing residential flats, building longevity/costs – (*i.e.* extension of the 'life' of a roof system and influence on heating/cooling). If the developer can quickly see the benefits of enhancements to them, or their building, then uptake will benefit.

London Assembly Investigation – Encouraging biodiversity in new housing developments

HILSON MORAN

With 8 years since the publication of the Living Roofs and Walls Technical Report and 4 years since the All London Green Greed SPG were published and numerous developments completed, developers would be interested in seeing evidence of the benefits that have resulted from the delivery of projects that incorporate the various opportunities identified and how they have developed.

A major contributing factor to the inclusion of green roofs in other countries is the presence of incentive schemes for developers to include green roofs in their development, recognising the wider community benefits of such features to local air quality[1]. A number of municipalities in Germany offer grants for developers wishing to include a green roof as either a retrofit or in new buildings, whilst States in America offer tax incentives to developers that include green roofs. For example in Philadelphia tax credits are granted for the year of installation that amount to 25% of the installation costs up to a maximum of US$100,000[2] (Philadelphia Industrial Development Corporation 2013) and New York City allows a property owner to earn a one-year credit of up to US$200,000 for the inclusion of a green roof on 50% of a building[3]. The potential for an incentive scheme has been proposed in a London Climate Change Partnership report commissioned by the Greater London Authority[4], which concluded that it would be reasonable for the GLA to coordinate and at least part fund green roof grants based on its remit.

In addition to installation grants, economic incentives associated with the sustainable management surface water drainage would make green roof implementation attractive to property owners and developers. However, at present Thames Water only offer an abatement on wastewater charges where it can be demonstrated that no discharge of surface water is undertaken to the sewer network. Stormwater charges in other countries, however, recognise the benefits that green roofs provide to managing stormwater in a way that mimics natural hydrological processes as part of a watershed management approach to drainage[5]. The recommendation of an incentive scheme as part of the GLA report acknowledges this potential, identifying that utility companies could be involved in funding a green roof programme given the benefits of stormwater management, and would contribute towards the achievement of the Target identified in the Draft London Sustainable Drainage Action Plan to '*achieve a 1% reduction in surface water flows in the sewer network each year for 25 years, resulting in a 25% reduction in flows by 2040*'. A study of the performance of green roofs under UK climatic conditions demonstrated that green roofs can make a significant contribution to the mitigation of storm run-off for high frequency rainfall events[6].

The provision of an economic incentive, along the lines of the above, would go a long way to engaging developers and encouraging the incorporation of green infrastructure and biodiversity improvements.

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1 A study in the City of Chicago identified that greening of just 10% of the roofs in the city would give rise to benefits associated with nitrogen dioxide, a major pollutant in London, in the region of between £17 million and £65 million annually (Clark, C., Adriaens, P. and Talbot, F. B. (2008) Green Roof Valuation: A Probablistic Economic Analysis of Environmental Benefits. Environmental Science & Technology 42 pp 2155 – 2161).

2 Philadelphia Industrial Development Corporation (2013) Green Roof Tax Credit. Available at http://philadelphiaretail.com/pdf/GreenRoofTaxCredit.pdf. Accessed on 20/09/2016.

3 New York State Legislature 2013. Senate Bill No. S4802 and Assembly Bill A7058. Accessed through www.nysenate.gov.

4 Greater London Authority (2009) Economic Incentive Schemes for retrofitting London's existing homes for climate change impacts. GLA, London.

5 United States General Services Administration (2011) The Benefits and Challenges of Green Roofs on Public and Commercial Buildings.

6 Stovin, V., Vesuviano, G. and Kasmin, H. (2012) The hydrological performance of a green roof test bed under UK climatic conditions. Journal of Hydrology 414-415, pp 148-161.

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

Developers and environmental professionals would benefit from having all of the guidance in one document, and as a result will know where to go to get hold of relevant information to the protection and enhancement of biodiversity. However, it would be important to strike an appropriate balance in the content between technical information that is suitable for consultants and advisory information/ideas that is suitable for developers. Managing the length of the document would also be important in ensuring the right people read it with the aim of encouraging more enhancement opportunities, with our experience suggesting that developers are put off reading large technical documents with lots of technical detail and wording (with the view that such documents are for the specialists to understand and interpret to them). Perhaps two documents, one aimed at developers and architects that is slimmed down and provides factual and concise information on opportunities and their benefits combined with a larger technical document for environmental professionals would be beneficial.

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes? Are there disadvantages to such schemes?

Schemes that quantify changes in biodiversity can be a useful tool in helping developers understand both the impact of a proposed development and the benefits of incorporating different types of mitigation and enhancement measures. However, it is important that schemes that quantify change are relatively simple, ensuring developers understand the process by which the final answer is reached. Further to this, it will be important to developers that any proposed method is co-ordinated with other similar schemes such as that utilised by the Building Research Establishment (BRE), which is especially important where mixed-use developments are taken forward (e.g. office/commercial and residential within a single building).

The Southampton City Council Green Space Factor is a relatively simple tool, although the guidance notes supporting this do not provide sufficient understanding of how the process works or what is required for a pass (even more confusing is that the tool classes the example provided as a Fail!). However, of greater concern is the limits of the tool with regards to valuing habitats (for example brownfield habitat would be undervalued in this example) and the biodiversity benefits between examples is underplayed (0.1 between extensive and intensive roofs provides little incentive to the developer to provide the biodiverse type).

The Biotope Area Factor (BAF), proposed by the Senate Department for Urban Development and the Environment in Berlin, utilises a similar tool to that of the Southampton City Council Green Space Factor, however the approach incorporates target values based on the scale of development. However, similarly to the other approach, the focus is more on green infrastructure than biodiversity with little incentive to provide biodiverse opportunities (as above).

The biodiversity offsetting scheme provides a useful tool for ensuring no net loss of biodiversity, however the use of any such scheme should be carefully considered. Our experience is that developers will come around to the idea where it is beneficial to them, but generally requires a lot of understanding and time to go through the options, find suitable opportunities and strike a balance between what the developer wants to provide and what the LPA considers acceptable. The principal concern, however, would be related to the loss of localised effects of providing biodiversity enhancements in pockets of the urban environment associated with green roof and other landscaping provision.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

Planning, designing and managing green infrastructure as a holistic network would ensure the biodiversity benefits of such schemes are continued in the long-term, instead of starting out with the greatest of intentions and ending up with an unmanaged area that generates more problems than it solved. Furthermore, taking the green infrastructure as a holistic network would enable biodiversity benefits to be far-reaching as a result of a co-ordinated approach instead of piecemeal development.

However, establishing a scheme that delivers green infrastructure planning, design and management as a holistic network that developers are able to contribute to and engage with could be problematic. It would be important that opportunities within the green infrastructure network are flexible enough that they do not restrict what can be built on a site.

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

Interaction with the local environment is quickly being recognised as an important social aspect of developments, often providing the main interaction with the natural environment for many families within urban areas. Studies have shown that first-hand experience with biodiversity is important for the next generation to become passionate about its protection[7]. Biodiversity, in its contribution to green infrastructure, is also an important component in the creation of areas in which people would like to live and work. Further to this, the Building Research Establishment's Home Quality Mark Certification Scheme[8] for residential developments highlights that there is evidence in support of the health and wellbeing benefits of having access to the natural environment, demonstrating a reduced risk of heart disease, improvements in self-esteem and reduced depression[9].

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7 Chalwa, I. (1999) Life paths into effective environmental action. Journal of Environmental Education 31 pp 15-26.

8 BRE (2015) Home Quality Mark Technical Manual. BRE, Watford.

9 Natural England (2009) Our National Health Service. 2009.

Written evidence submitted on behalf of the Woodland Trust for:

The London Assembly's Housing Committee investigation: *Encouraging biodiversity in new housing developments*.

September 2016

by

Richard Barnes MCIEEM, CBiol, MRSB

Senior Conservation Adviser

About the Woodland Trust

1. The Woodland Trust ("the Trust") is the UK's leading woodland conservation charity, and wants to see a UK rich in native woods and trees, for people and wildlife. We aim to achieve this by restoring and improving woodland biodiversity and increasing people's understanding and enjoyment of woods and trees. We own over 1,275 sites across UK (including 4 within greater London) covering over 23,580ha (from 0.06 to 4,875 ha), including 200 SSSIs, and we have around 500,000 members and supporters.
2. The Trust is recognised as a national authority on ancient woods and trees and a protector of the benefits and values that they deliver for society. We are pleased to have the opportunity to submit evidence to this investigation, and have answered the questions posed by the Committee with a particular reference to trees and woods.
3. The Trust has recently published guidance on *Residential Development and Trees* that is very pertinent to the Committee's investigation, and hence appended.
4. I am employed by the Trust as a Senior Conservation Adviser. I have worked in the nature conservation sector for over 25 years, including as Environment Team Manager in the planning department of a London Borough, and as a Senior Biodiversity Adviser at the Greater London Authority for 6 years. At the Trust, I provide conservation policy and planning advice, and have given evidence to the Environmental Audit Committee and HS2 Bill Committee in relation to HS2, and to the Communities and Local Government Committee in relation to the National Planning Policy Framework (NPPF).

Why is it important to encourage biodiversity in new housing developments?

5. Biodiversity is important in new housing both for its intrinsic value, and for the benefits to people.
6. The State of Nature report[i] published this month found that nationally more than one in 10 of the UK's wildlife species are threatened with extinction and the numbers of the nation's most endangered creatures have plummeted by two-thirds since 1970. The abundance of all wildlife has also fallen, with one in six animals, birds, fish and plants having been lost, and overall these trends have left the UK "among the most nature-depleted countries in the world".
7. The Government's own report on *England Natural Environment Indicators*[ii] published in August, found that much of England's best-loved wildlife remains in serious decline, with 75% of over 200 "priority" species across the country falling in number.
8. Urban areas are increasingly acting as refuges for species affected by agricultural and silvicultural intensification – London is now a hotspot for stag beetles.
9. There is a growing body of evidence on the benefits to people that access to nature provides, and I have provided further detail on this in the final "social benefits" section of this submission.

How rigorously is biodiversity considered in planning applications and agreements?

10. The Trust has just completed a national survey of planning professionals in England on their use of ancient woodland planning advice. The objective of the data gathering was to gain a better understanding of how decisions made in the planning system affect ancient woodland and

ancient trees and how different planning representatives use Natural England's Standing Advice on Ancient Woodland and Veteran Trees[iii].

11. The survey has only just closed, and the report yet to be published, but early analysis indicates that 64% of respondents stated they are unaware of the Ancient Woodland Inventory (AWI) and 75% were unaware of the Ancient Tree Inventory (ATI). Only 27% were aware of "Plantations on Ancient Woodland Sites" (PAWS) even though the National Planning Policy Guidance has confirmed PAWS should be treated as ancient woodland.
12. I am aware of one major development approved on a Site of Metropolitan Importance to nature conservation, for an incinerator at Beddington Farmlands in Sutton, despite the detrimental impact on biodiversity.

To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

13. No comment.

What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for more biodiversity?

14. The London Plan has good policy on biodiversity (Policy 7.19), a respected Local Wildlife Sites hierarchy, and addresses the issue of areas deficient in accessible wildlife sites. The London Plan also has targets for habitat creation, but refers to a Biodiversity Action Plan that is out of date.
15. The Policy 7.21 *Trees and Woodlands* is strong and paragraph 7.65 has a flexible reference to the TDAG publications. However, the suggestion in Section C of the policy "*Boroughs should follow the advice of paragraph 118 of the NPPF to protect 'veteran' trees and ancient woodland where these are not already part of a protected site*" is both inaccurate and out of date. The policy also fails to reference Natural England's Standing Advice that has applied to London planning authorities since 2014.
16. The *All London Green Grid* SPG has further detail on mapping and addressing areas of deficiency, but there is less detail on how to enhance biodiversity outside of the local wildlife sites system.
17. This detail was in *Design for Biodiversity; A guidance document for development in London* [iv] (London Development Agency, year unknown, c. 2005), but this is no longer referenced by the London Plan.

How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

18. The wording of the London Plan could be more emphatic in protecting biodiversity, and particularly ancient woodland and veteran trees.
19. Policy 7.21 should be amended to reflect the wording of NPPF para 118 as updated by the Communities and Local Government Select Committee's recommendations[1] , with a new separate bullet point specifically for ancient woodland and veteran trees: 'Boroughs should not

[1] Communities and Local Government Committee - Fourth Report, *Operation of the National Planning Policy Framework*, Paragraph 25, http://www.publications.parliament.uk/pa/cm201415/cmselect/cmcomloc/190/19005.htm#a8

permit any development proposal which would result in the loss or deterioration of ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefit of, the development in that location is wholly exceptional'.

20. Policy 7.21 should also include appropriate excerpts from, and refer to, Natural England's Standing Advice.
21. The Mayor should have the power to call in any planning application that affects Sites of Metropolitan Importance to Nature Conservation and ancient woodland (including PAWS).
22. The mention on Access to Nature in Policy 7.19 (section F) directs borough LDFs to "*identify areas deficient in accessible wildlife sites and seek opportunities to address them*". This should be strengthened to say that borough LDFs should have a policy to ensure that "any development within areas deficient in accessible wildlife sites must demonstrate how it will address that deficiency" – this would be consistent with the wording in Section C(b).
23. The *All London Green Grid* SPG has further detail on mapping and addressing areas of deficiency, but the London Plan Implementation Report *Improving Londoners' Access to Nature* (GLA, February 2008)[v] is the definitive document on how areas of deficiency could be addresses – this report should be reviewed and updated.
24. The Trust has produced the Woodland Access Standard[2], now adopted by the Forestry Commission, and has information at a London borough level of where deficiencies in access to woodland lie, which should help inform the creation of new wooded open spaces and parks as part of the above review.
25. The *Design for Biodiversity; A guidance document for development in London* report should also be updated and consulted upon, and considered as potential SPG (see below). The issues in the Trust's guidance on *Residential Development and Trees* should inform that update, and any review of the *All London Green Grid* SPG.
26. The Trust's *Trees or Turf?* report[3] shows that is often cheaper to create and manage new woodland than manage amenity grassland; with proper consultation, this can be a very positive option.

What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

27. The main disadvantage would be the temptation to remove strong policies and associated wording from a new London Plan into an SPG. This would give those policies and amplification/justification less weight than if they were full London Plan policies.
28. However, if the main policies are updated but remain in the London Plan, new planning guidance could provide useful technical guidance with more detail than could be justified for inclusion in main plan policy. This would clarify what is being asked of new development.
29. The suggested update of the *Design for Biodiversity; A guidance document for development in London* report could be a useful starting point, but shouldn't constrain what could be a more detailed and wider SPG.

[2] *Space for People* (Woodland Trust, 2015): http://www.woodlandtrust.org.uk/publications/2015/02/space-for-people/
[3] http://www.woodlandtrust.org.uk/publications/2011/05/trees-or-turf/

What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes?

- Are there disadvantages to such schemes?

- We are particularly interested in evidence on how they could be introduced in London and what effects they might have.

30. Some habitats, including ancient woodland and veteran or aged trees found outside ancient woodland, are acknowledged as irreplaceable in the National Planning Policy Framework (Paragraph 118). Natural England's Standing Advice has confirmed that it is not possible to fully "compensate" for loss of such irreplaceable habitat, and furthermore that "*As ancient woodland and veteran trees are irreplaceable, discussions on compensation should not form part of the assessment of the merits of the development proposal.*"
31. Defra guidance on biodiversity offsetting and associated metrics also excludes ancient woodland from such calculations, because they are irreplaceable.

What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

32. Biodiversity doesn't recognise or follow administrative boundaries, nor typologies that may be used to simplify planning. Therefore adopting a holistic approach, that looks at connectivity and permeability (for wildlife) in London, and integration of management across boundaries and habitats, will surely be beneficial to wildlife.
33. In addition to *Residential Development and Trees*, the Trust has several research reports on the many benefits that trees confer as part of Green Infrastructure that should inform any future SPG.[4],[5],[6],[7]

What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments??

34. Recent spatial analysis by Natural England's Monitoring Engagement with the Natural Environment (MENE) survey of visits to greenspace suggested that level of visiting correlated with nearby provision of accessible greenspace (most visits are taken within five miles of home). Therefore the encouragement of biodiversity within and near developments is vital.
35. The Government's Public Health White Paper (*Healthy Lives, Healthy People*; Nov 2010 states that: "*Access to green spaces is associated with better mental and physical health across*

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[4] *Trees in Our Towns – the role of trees and woods in managing urban water quality and quantity* (https://www.woodlandtrust.org.uk/mediafile/100083915/Trees-in-our-towns.pdf)

[5] *Stemming the flow – the role of trees and woods in flood protection* - https://www.woodlandtrust.org.uk/publications/2014/05/stemming-the-flow/

[6] *Woodland actions for biodiversity and their role in water management* - https://www.woodlandtrust.org.uk/mediafile/100263208/rr-wt-71014-woodland-actions-for-biodiversity-and-their-role-in-water-management.pdf?cb=001108c3a78944299140a996b2cd7ee8

[7] *Urban Air Quality* - www.woodlandtrust.org.uk/mediafile/100083924/Urban-air-quality-report-v4-single-pages.pdf

socioeconomic groups." The Trust has compiled evidence to support this with particular reference to woods and trees, given below.

Air quality and urban heat islands

36. Trees and woodland improve air quality by adsorbing pollutants such as sulphur dioxide and ozone, intercepting harmful particulates and of course release oxygen through photosynthesis. This helps to reduce the occurrence of the problems caused by chronic respiratory disease; research suggests that one in every five people in the UK is affected by lung disease[vi].
37. Trees help improve health inside the home, too. Research[vii] on the impact of installing a kerbside line of young birch trees demonstrated more than 50% reductions in measured Particulate Matter (PM) levels inside those houses screened by the temporary tree line. The researchers concluded that "the efficacy of roadside trees for mitigation of PM health hazard might be seriously underestimated in some current atmospheric models."
38. Trees have a proportionately greater effect in urban areas, where parks are often located, where they are close to sources of pollution and nearer to people who might be affected. Furthermore increasing tree cover in urban areas can help mitigate the 'urban heat island effect', where buildings, concrete and other hard surfaces such as roads act as giant storage heaters in towns and cities, absorbing heat during the day and releasing it at night. The resultant effects can be dramatic; on some days there is a difference of as much as 10^{o}C between London and its surrounding areas[viii]. Projections for our changing climate suggest this problem will get markedly worse.
39. The impact on health of urban heat islands is two-fold; firstly higher temperatures increase ground level ozone production exacerbating the symptoms of chronic respiratory conditions. Secondly prolonged high temperature can precipitate cardiovascular or respiratory failure or dehydration, particularly amongst the elderly, very young or chronically ill[ix]. In the 2003 summer heat wave more than 2,000 people died in Britain alone.
40. The problem is exacerbated by a lack of green space. Natural green space, and trees in particular, provide both direct cooling from shade (protection from radiant heat and UV radiation) and reduce the ambient temperature through the cooling effect of evaporation and transpiration from the soil and plant leaves. Computer modelling by the University of Manchester[x] has shown how increasing urban green space can mitigate urban heat island effect.

Healthy lifestyles, and mental well being

41. Accessibility to parks, open spaces and woodland can help improve levels of physical activity, with associated health benefits. There are links between the proximity of green space to people's homes and the increased likelihood of residents walking[xi]. With nearly a quarter of the UK population now classified as obese, the role that trees, woods and parks can play in encouraging physical activity is even more important.
42. If just 1% of the 2.5 million people on incapacity benefit in Britain adopted healthier lifestyles it would have significant cost savings[xii]. The current cost to the Exchequer is around £13 billion and to industry £11 billion a year. Over a third of people are on benefits because of mental health problems, or muscular or skeletal disorders – both of which can respond to tailored physical activity programmes. The Government's chief medical officer recommends that every adult should do 30 minutes of exercise, five days a week.
43. There is also evidence that both physical activity in greenspace, and passive engagement with natural surroundings, can have benefits for mental health and wellbeing. For example, a

woodland-based health project at the Forestry Commission's Chopwell Wood, in partnership with primary care trusts, included a GP referral scheme for cycling, walking, Tai Chi or conservation work in the wood: completion rates were very high at 91%. The majority of individuals continued to participate in Chopwell Wood activities post programme, and evaluation showed individuals experienced improvements in physical health, particularly due to weight loss, and development of social networks[xiii].

44. Dementia Adventure, a social enterprise set up to connect people with dementia with nature, has worked in partnership with the Woodland Trust to enable people with dementia living in care settings to access woodland, which would otherwise be very difficult or impossible for them. The pilot project[xiv] reported physical, emotional and social benefits including improved sleep, dietary intake, activity and exercise levels, improved memory and increased verbal expression, mood enhancement and stronger sense of self, and a sense of belonging and friendship/kinship (see the video[xv]).
45. Trees and woods can have a restorative and therapeutic effect on the mind[xvi]. Studies have found that hospital patients recovered more quickly with a view of trees and nature from their windows[xvii]. Trees have been found to enhance mood, improve self-esteem and lower blood pressure. Research indicates that people were more likely to walk or cycle to work if the streets were lined with trees, and live longer and feel better as a result[xviii]. Recent research[xix] has also shown that cortisol levels, associated with stress, were lower in areas with a higher percentage of green space.
46. In terms of mental health benefits, "attention restoration theory" suggests that we get tired directing attention to specific tasks and recover through involuntary attention that requires no effort. Nature is endowed with inherently fascinating objects and effects which hold our attention without requiring any effort. Arguably, woodland, with its complex structure, diverse range of microhabitats, and wealth of wildlife, is better than most.

Economic wellbeing

47. Trees and woods can also have indirect effects on wellbeing through improving living conditions and even economic prosperity of an area. Broadleaved trees have been shown to have a positive impact on property values ranging from 5-18 per cent[xx], with larger trees having a greater proportional value. Yet we are losing many of our larger urban trees, and they are not being replaced[xxi]. Industrial areas and employment sites with access to natural green space can have more productive employees[xxii], with greater job satisfaction too[xxiii]. As a consequence of all of these contributions, commercial and urban areas with good tree cover tend to attract higher levels of inward investment[xxiv].

Selected comments received on the Woodland Trust website from our supporters in response to the Communities and Local Government Committee inquiry into public parks:

48. *"The trees filter the impact of the traffic, cool the city, provide habitat for wildlife and delight the eye. Beyond price!"*
49. *"Many of us live in large treeless landscapes in big housing estates. To see families using public parks in these areas you don't need to have much sense to see the benefits"*
50. *"I have recently had extensive treatment for skin cancer. My mood has been very low but I can still enjoy a sunny day in my local parks if I sit in the shade of the trees. NO TREES NO SHADE."*

51. *"Trees lining the streets, trees in the town centre, trees in the parks and green spaces are the lungs and sanity for all people. Without, there is stress, bad health, an even more overloaded NHS. The importance of green spaces and a green canopy above cannot be over stated."*
52. *My experience is that walking in London the level of pollution makes me feel uncomfortable and I can find it difficult to breath, especially on a hot day. The moment I step into a park and experience the trees and the clear cool air they create.*
53. *Trees enable us to appreciate the changing seasons, and lift our spirits as we connect with nature.*
54. *Trees are an essential part of the environment, both for the wildlife and people generally but also for the psychological benefit they bring. A park with no trees would be very dull!*
55. *too many cars - too much noise - life too fast - coming into a park with beautiful trees all around - just give you that time to switch off - see nature - relax for a while - really important for physical and emotional health*
56. *Parks are essential for mental health. I feel much better if I can go and watch and listen to and stretch out with trees in the park. Not everyone has a tree where they live so they depend on parks. Trees help make sense of time, of the seasons.*

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[i] RSPB, 2016 https://ww2.rspb.org.uk/whatwedo/stateofnature2016

[ii] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/547759/ENEI_16_final.pdf

[iii] *Ancient woodland and veteran trees: protecting them from development* (2015, Natural England and Forestry Commission): https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences

[iv] http://downloads.gigl.org.uk/website/design4Biodiversity.pdf

[v] https://www.london.gov.uk/sites/default/files/uploads-access-to-nature.pdf

[vi] http://www.blf.org.uk/Page/Report-on-inquiry-into-respiratory-deaths

[vii] Barbara A. Maher , Imad A. M. Ahmed , Brian Davison , Vassil Karloukovski , and Robert Clarke Centre for Environmental Magnetism & Palaeomagnetism, Lancaster Environment Centre, Lancaster University; *Impact of Roadside Tree Lines on Indoor Concentrations of Traffic-Derived Particulate Matter*; http://pubs.acs.org/doi/pdf/10.1021/es404363m

[viii] http://www.bbc.co.uk/weather/features/understanding/urban_heat_islands.shtml

[ix] **Shaoni Bhattacharya** (2003) European heatwave caused 35,000 deaths, *New Scientist online*, 10th October 2003, downloaded at: **http://www.newscientist.com/article/dn4259-european-heatwave-caused-35000-deaths.html**

[x] 'Handley, J and Carter, J (2006) *Adaptation strategies for climate change in the urban environment*, Draft final report to the National Steering Group, Centre for urban and regional ecology, University of Manchester, downloaded at:
http://www.sed.manchester.ac.uk/research/cure/downloads/asccue_final_report_national_steering_group.pdf

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Giles-Corti, Billie, Melissa H. Broomhall, Matthew Knuiman, Catherine Collins, Kate Douglas, Kevin Ng, Andrea Lange, and Robert J. Donovan (2005). Increasing walking: how important is distance to, attractiveness, and size of public open space. *American Journal of Preventative Medicine* 28 (2S2), 169-176.

[xii] Department of Health press release, 13th August 2009, downloaded at:
http://www.dh.gov.uk/en/News/Recentstories/DH_104254

[xiii] Snowdon, H. (2006) Evaluation of the Chopwell Wood Health Project. Primary Care Development Centre, Northumbria University. Available at http://www.forestry.gov.uk/pdf/fr0406_chopwell_final.pdf/$FILE/fr0406_chopwell_final.pdf

[xiv] Mapes, N. (2011) Wandering in the woods: A VisitWoods pilot project. Available at http://www.dementiaadventure.co.uk/uploads/wandering-in-the-woods-a-visit-woods-pilot-project-v-1-0.pdf

[xv] http://vimeo.com/50827782

[xvi] Hartig, T., Evans G.W., Jamner L.D., Davis D.S., and Gärling T. (2003). Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology* 23, 109-123.

[xvii] Ulrich, R.S. (1984). View through a window may influence recovery from surgery. *Science* 224, 420-421

[xviii] Van den Berg, A.E., Koole S.L., and van der Wulp N.Y. (2003). Environmental preferences and restoration: (how) are they related? *Journal of Environmental Psychology* 23, 135-146.

[xix] Ward Thompson, C., Roe, J., Aspinall, P., Mitchell, R., Clow, A., Miller, D., (2011) More green space is linked to less stress in deprived communities: Evidence from salivary cortisol patterns. Landscape and Urban Planning 105 (2012) 221–229

[xx] CABE Space (2005) 'Does money grow on trees?'

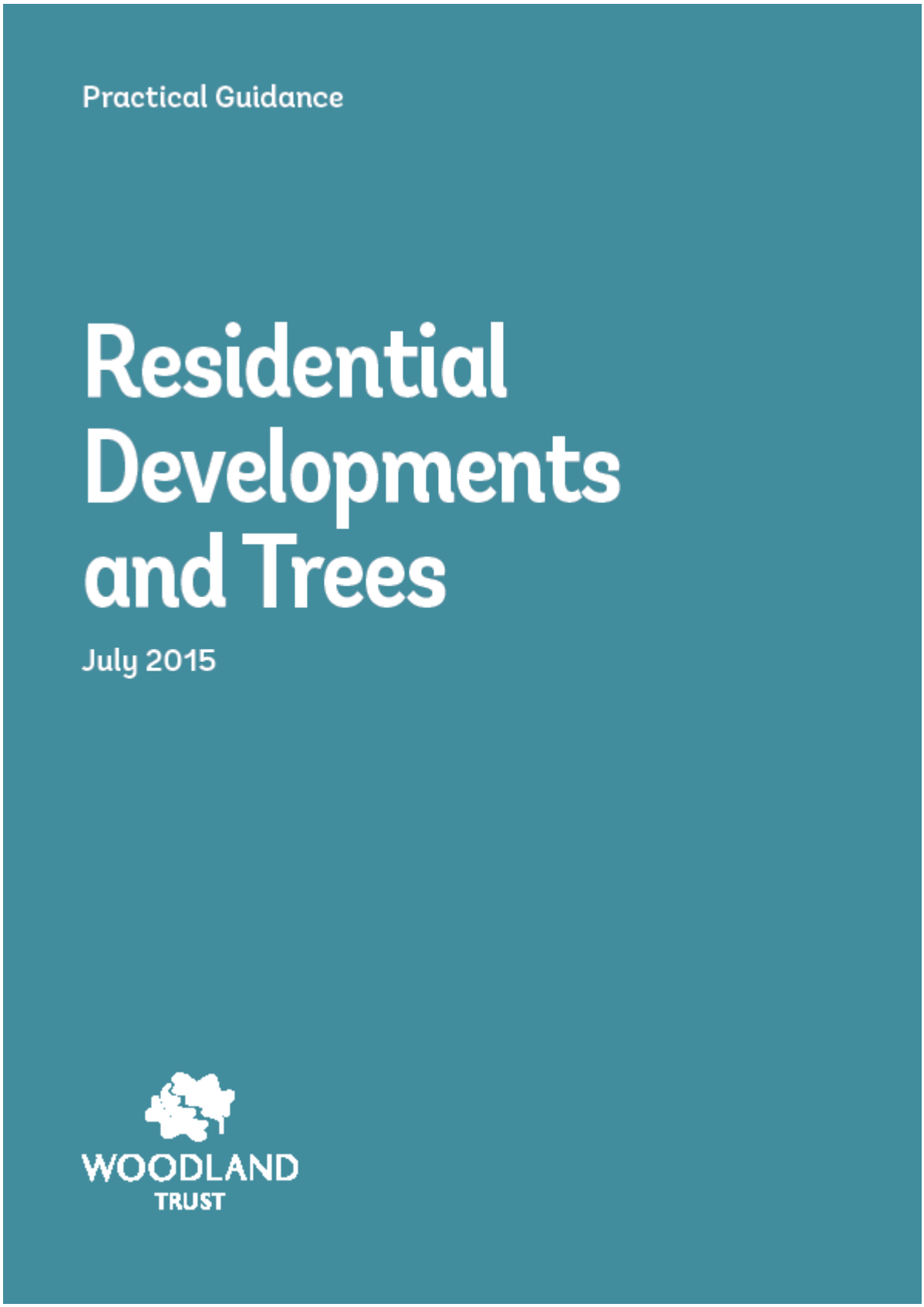
[xxi] Department for Communities and Local Government (2008) *Trees in Towns II. A new survey of urban trees in England and their condition and management.*

[xxii] Wolf, K. (1998) *Urban Nature Benefits: Psycho-social dimensions of people and plants*. University of Washington College of Forest Resources, Factsheet 1,1998.

[xxiii] Kaplan, R. (1993) *The role of Nature in the workplace*. 'Landscape and Urban Planning, 26, pp193-201.

[xxiv] Department of Environment (1997) Managing Urban Spaces in Town Centres – Good Practice Guide'.

Appendix 1 Residential Trees and Development (2015, Woodland Trust)



London Assembly

Encouraging biodiversity in new housing developments.

Response from the London Borough of Southwark.

In this investigation there are a number of specific questions the committee is seeking to answer, as set out below. Respondents should address any questions where they have relevant views and information to share, and feel free to cover any other issues they would like the Committee to consider. Please offer specific examples to illustrate where possible.

1. Why is it important to encourage biodiversity in new housing developments?

Surveys by the RSPB and others show that urban green infrastructure (GI), is critical for biodiversity. The built environment is a dominant habitat type in London with many species living on, or around the built environment.

Incorporating green infrastructure into housing developments provides multiple benefits. Such as moderating climate (helping to reduce the Urban Heat island effect thus saving lives), water attenuation, reducing pollution. Access to GI improves health and wellbeing and provides cultural identity.

Omitting biodiversity from new housing developments would mean costs of environmental management would increase as alternative methods would have to be sought to achieve what is provided naturally, air conditioning for example.

Providing habitats on new housing developments would provide green links, habitat connectivity and address habitat fragmentation.

Much of current housing land is a green desert with little encouragement for public interaction. No ball games or dogs are frequent restrictions on housing land.

Often housing land is managed as a high maintenance regime with over zealous estate officers requiring frequent management of shrubs and hedges. Grass is mown right up to boundaries and trees are shaped for appearance, Dead wood is removed as unsightly.

Creation of open space in new developments has resulted in a change of land use with provision of play and conceptual landscaping. This is an improvement but still shows a reluctance to create a Natural Estate.

In Southwark Planning policy, development management and the Ecology Office work to ensure that biodiversity is incorporated into new housing developments. Many new buildings have had

nesting and/or roosting features installed. Biodiverse green roofs have been installed on a wide spread basis in new developments.

2. How rigorously is biodiversity considered in planning applications and agreements?

This depends on the planning authority's policies and practice and if there is an ecologist employed by the borough. With out an ecologist consideration would be weak and inconsistent.

It also depends on how strong the national and regional policies are on biodiversity and Green infrastructure.

Southwark Council has an ecologist who screens many applications for ecological matters as part of the planning process. Backed by planning policy the ecology office seeks biodiversity gain for major applications as a matter of course. This is delivered by conditioning the actions such as provision of green roofs as part of granting planning approval.

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

It is difficult to answer this question. Post completion inspections of housing developments rarely include ecological mitigation. If the development signs up to BREEAM a post completion report is completed and this includes ecological mitigation. Councils do not have the capacity to inspect housing developments for ecological mitigation at present. Some developers are required to undertake ecological monitoring as part of the planning conditions.

Green Space Information for Greater London has started to record Green Infrastructure features in London.

Southwark Council has implemented many ecological enhancements. These may not be considered mitigation as we have not developed on parks or green space. Some brownfield land has been developed so biodiverse green roofs were installed to mitigate for this. Many nest/roost boxes offer increased potential for birds and bats and are not replacing lost nesting/roosting sites.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?

The current policy is not strong enough. Some cities have much stronger policy on issues such as flood management which insist on green roofs and SUD's on all new applicable buildings.

There is no legal requirement on developers to provide GI. Biodiversity can be value engineered out of developments if developers want to maximise profit.

The use of 'Should' in many London Plan environmental Policies is not strong enough 'Should' does not mean a developer will comply, also who enforces the policies? The environmental policies lack partnership delivery.

Southwark believes Ecology Officers are critical to delivering biodiversity policy. Councils lacking biodiversity officers have reduced capacity to ensure biodiversity policy and planning conditions are applied to developments.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

London's biodiversity policy could be more effective by the following measures:

- By re-launching the London Biodiversity Partnership or taking a partnership approach to policy formation and delivery.

- By adopting other national cities where policy is stronger and/or by leading on projects that would provide health and biodiversity gains. Vienna undertook a major project to combat the heat island effect and also benefit biodiversity.

- Major applications should have a compulsory submission on GI in the same way they have to produce a Design and Access statement.

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

Thoughts on this question are surmised below.

Advantages – Produce clear and stronger policy. Incorporate new initiatives into SPG. Cover multiple issues. Provide the main reference point for new development in relation to biodiversity.

Disadvantages - Not binding, quickly becomes out of date.
The SPG would require extensive Information gathering to show how it encompasses a diverse subject and also the whole of London.
Guidance may not be suitable/applicable for all areas or situations.
People will find loopholes.
How would policy be enforced and who would monitor it?
How would it fit with national policy of development at any cost?

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes[2]?
- Are there disadvantages to such schemes?
- We are particularly interested in evidence on how they could be introduced in London and what effects they might have.

Offsetting should be used as a last resort. If interpreted differently it could give assumption of permitted development on existing green spaces as long as the developer can offer some offsetting somewhere else. Land is a premium in London so where does the offsetting go?
Offsetting is subjective could miss impacts and risks causing ecological collapse.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

Provides joined up approach.
Could be linked to health budgets.
Makes biodiversity an integral part of a network.

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

Improved health and wellbeing
Robust ecological network
Improved management of pollutants, flood water and urban heat island.
Improved social cohesion and community partnerships.
Food growing and pollination
Provides cultural cohesion

Encouraging Biodiversity in New Housing Developments (London Assembly)

Response from the RSPB to the Call for Evidence

Contact: Juliette Young, Senior Policy Officer,

Alan Johnson, South East Regional Conservation Manager,

30th September 2016

Summary and Conclusions

Our detailed response to each question is provided after this summary.

It is important to encourage biodiversity in new housing developments for a range of reasons – not least a moral imperative to save nature and recognising that nature is crucial to people's quality of life and provides important life-support systems. Our recent State of Nature Report demonstrated that over half (56%) of UK species have decreased since 1970 and urbanisation is one of the key drivers for change in our nature.

We are committed to ensuring that well-located new housing developments deliver biodiversity enhancements, as evidenced by our partnership with Barratt Developments PLC.

Consideration of biodiversity through the planning system is varied. Opportunities for biodiversity enhancement may often be overlooked, and may depend on the scale of the biodiversity impact. Positive biodiversity policies in plans may be poorly implemented on the ground. Access to independent ecological expertise remains a concern and a lack of monitoring data means it is difficult to infer how rigorously biodiversity is considered through the planning system. **We recommend that a requirement for better monitoring of biodiversity enhancements in housing developments forms one of the key outcomes of this call for evidence**.

Biodiversity enhancements can be delivered through a variety of design measures such as Sustainable Urban Drainage Systems and green roofs, however, it is important that designers have access to ecological expertise to ensure that positive outcomes are achieved for biodiversity.

The future management and maintenance of new housing developments may act as a barrier to delivery of biodiversity enhancements (particularly where different developer partners take on the development at different phases). Helping developers to understand the longer term cost savings of inclusion of biodiversity enhancements would help break down this barrier.

London is space-limited and this will be exacerbated as new, taller, highly-dense developments come forward. Space for delivery of new biodiversity enhancements will be similarly limited. **Consequently, scope for retrofitting biodiversity enhancements into existing developments must form part of future biodiversity policy**.

A better understanding of how well existing London Plan Policies and Guidance have been interpreted and implemented will be key to developing a robust future policy. **We**

recommend that evidence is gathered to determine the extent to which London Plan biodiversity policies have been expressed and implemented by London Boroughs and what this has meant for biodiversity enhancement on the ground. Good practice examples could be incorporated in future London Plan Supplementary Guidance. It would also be helpful to review the extent to which biodiversity has featured in Mayoral decisions on developments.

In order to improve policy and guidance **we recommend that the existing Biodiversity Strategy undergoes a significant refresh and update**. London Plan biodiversity policy could be strengthened by placing a requirement on developments to provide positive net gains for biodiversity. Clarity on what constitutes a net gain will be key as will an emphasis on the need for all developments to rigorously apply the mitigation hierarchy.

Policy could be further refined to place more emphasis on key principles in the National Planning Policy Framework, to include **planning for biodiversity at a landscape scale across London Borough boundaries**.

We recommend the production of improved guidance to help practitioners determine when brownfield land is of high environmental value – ensuring the best brownfield sites for nature are protected.

There are advantages in creating a single piece of guidance on biodiversity, however, this would need to be flexible enough to allow practitioners to adopt site-specific, creative solutions for wildlife. **Such a guidance document should also apply to both new and existing housing developments** (i.e. include scope for retrofitting).

In respect of biodiversity offsetting, our view, informed by Defra's biodiversity offsetting pilot programme is that **any offsetting system should be mandatory for all developments and should sit within a clear and consistent national framework that sets minimum values for nationally important habitats and species**. A key question-mark over the application of such a system in London is whether there is sufficient space to deliver compensation close to the point of impact.

Considering green infrastructure as a holistic network could be beneficial (helping to capture the multi-functional benefits). Involvement of a multi-disciplinary team (including project ecologists, architects, environmental NGOs, specialist designers of biodiversity enhancement features as well as practitioners from other sectors such as health) in the development of such a framework will help support mutually beneficial outcomes. The Green Infrastructure Task Force provides an existing network whose membership could be expanded. **The future management of a holistic network will be critical**. **A unified approach to green infrastructure management across London would ensure that the wildlife benefits of green infrastructure are fully built into management prescriptions**.

Developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments is likely to have many complementary social benefits including improved health and wellbeing and reduced health inequalities.

Q1. Why is it important to encourage biodiversity in new housing developments?

1. The RSPB is the country's largest nature conservation charity, inspiring everyone to give nature a home. Together with our partners, we protect threatened birds and wildlife so our towns, coast and countryside will teem with life once again.
2. We believe we have a moral imperative to save nature – nature is important in its own right as well as being crucial to people's quality of life and providing important life-support systems. We provide more information on the social benefits of access and connection to nature in our response to question 9.

3. The State of Nature Report 2016 (launched on 14th September 2016) gives us the clearest picture to date of both the long-term and recent trends in our native species – over half (56%) of UK species have decreased since 1970. The UK has lost significantly more nature over the long term than the global average. All four countries of the UK rank in the bottom quarter of countries assessed in the Biodiversity Intactness Index. Urbanisation (including loss of green space such as parks, allotments and gardens and loss of wildlife-rich brownfield sites) is one of the key drivers for change in our nature – the report states that 7% of urban species are threatened with extinction from Great Britain. This highlights the need to ensure that all opportunities to protect and enhance biodiversity are supported.

4. The RSPB accepts that there is a significant need for new housing in the UK. However, we believe that the quality and location of this housing is just as important as the quantity. In particular, we believe that new housing developments should be delivered in harmony with nature. Urban areas take up just 7% of the UK's land but are home to 80% of the UK's population. Finding space for nature to co-exist is a big but achievable challenge. It is estimated that 47% of Greater London is green[1]. 33% is vegetated green space according to surveyed habitat information[2], excluding an additional 14% which is estimated to be vegetated private, domestic garden green space[3]. It is important that these existing green spaces are retained and improved as well as creating new habitats for wildlife.

5. The National Planning Policy Framework (NPPF) includes a number of strong policies and principles for conserving and enhancing the natural environment. This includes an expectation that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Opportunities to incorporate biodiversity in and around developments should be encouraged.

6. Furthermore, Section 40 of the Natural Environment and Rural Communities Act, 2006 places a duty on all public authorities in England to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. Thus there is a statutory basis for planning to seek to minimise impacts on biodiversity and provide net gains were possible. In addition, biodiversity maintenance and enhancements through the planning system have the potential to make a significant contribution to the achievement of Biodiversity 2020 targets.

7. We are committed to ensuring that well-located new housing developments deliver biodiversity enhancements. This ensures space for nature is maintained and enhanced (protecting nature for its own sake) whilst providing opportunities for people to engage with nature which can in turn improve individual health and wellbeing. In the urban context, we are particularly interested in enhancements for our priority bird species including swifts, as well as our All Nature priority species stag beetle and shrill carder bee.

8. An example of the approach we are taking to deliver nature-friendly housing is our partnership with Barratt Developments PLC – see **Case Study 1** below.

1 Greenspace Information for Greater London, 2015
2 Figure calculated from GiGL habitat dataset (December 2013).
3 Figure taken from 'London: Garden City?' report (Greenspace Information for Greater London, London Wildlife Trust and Greater London Authority, 2010)

Case Study 1: RSPB partnership with Barratt Developments PLC

The RSPB joined forces with Barratt Developments PLC to set a new benchmark for nature-friendly housing developments. This was the first national agreement of its kind in the UK.

The partnership's flagship scheme for 2,450 homes at Kingsbrook, Aylesbury will include a major new urban fringe nature reserve as well as nature-friendly elements in the built environment. A range of biodiversity enhancements are expected to be delivered at Kingsbrook including: SuDs (swales and detention ponds), hedgehog highways in fences, flower-rich grasslands in public open spaces, native tree planting including the rare black poplar, fruit trees in gardens, and swift bricks.

Kingsbrook was recently the 2016 winner of the prestigious BIG Biodiversity Award[4] – "Large Scale Permanent" category.

Additional features of the wider partnership include:

1. Working with the RSPB to share best practice on supply chain management.
2. Engaging with employees and raising awareness of wildlife-friendly best practice.
3. Seconding a biodiversity expert from the RSPB to advise the company.
4. Using RSPB advice and expertise on biodiversity to inspire Barratt homebuyers to 'give nature a home'.

Last month, following close working between Barratt Developments, the RSPB and Action for Swifts, Manthorpe Building Products Ltd launched a new bespoke swift brick offering safe, habitable spaces for swifts. This brick can be easily incorporated into the construction process[5] and retails significantly cheaper than other products on the market. Swifts are highly charismatic, iconic birds, and a characteristic of the summer urban landscape. It is hoped that providing replacement nest sites in new buildings will help to reverse the decline in the swift population.

Q2. How rigorously is biodiversity considered in planning applications and agreements?

9. Whilst we cannot comment specifically on planning in London we understand anecdotally that practice is varied – there is generally a greater commitment from large-scale developers to consider biodiversity. However, we understand that the consideration of biodiversity often depends on the scale of impact – for example, biodiversity may be given more prominence where statutorily designated sites are impacted. Hence opportunities for biodiversity enhancement in all applications are unlikely to be realised. The Wildlife Trusts have published a report on the status of non-statutorily protected Local Wildlife Sites in England (including sites in London)[6]. The latest survey found that more than 11% of 6,590 Local Wildlife Sites monitored in the period 2009 – 2013 were lost or damaged (which included losses to development) – this suggests that the planning system is not doing enough to protect all of our best sites for wildlife. The London Wildlife Trust can provide more specific information on the status of Local Wildlife Sites in London.

10. The extent to which biodiversity is considered within Local Plans in England (which in turn provide the framework for future planning applications) is mixed as evidenced by our joint report, Nature Positive Local Plans, (the report also looked at a number of local authorities in London)[7]. The research findings show practice is wide ranging – for example, around 75% of plans include general policy or strategic statements in relation to wider biodiversity

[4] The BIG Biodiversity Challenge to 'do one thing' invites you to add one new biodiversity enhancement to your construction site, development or existing building

[5] http://www.rspb.org.uk/news/423714-building-new-homes-for-swifts-and-communities

[6] http://www.wildlifetrusts.org/living-landscape/local-wildlife-sites/challenges-local-wildlife-sites

[7] Nature Positive Local Plans Research Report (May 2015 (RSPB & The Wildlife Trusts)
https://www.rspb.org.uk/Images/Nature_Positive_Local_Plans_Research_Report_May_2015_tcm9-407749.pdf

enhancements and habitat connectivity and securing a net gain in biodiversity over the plan period, but plans are less robust in setting out what specific measures or actions secured through the planning system are required to realise those ecological network aspirations. Around 80% of the sample was found to explicitly require or indirectly encourage biodiversity-positive habitat features within new developments. However, the extent to which positive statements of intent are actually implemented is less clear – our overarching recommendations from the research include the need for more robust implementation of the NPPF and the importance of improved access to ecological expertise and information.

11. The need for improved access to independent ecological expertise has also been highlighted in surveys undertaken by ALGE in 2013[8] of ecologists and planners working for local government in England (including LPAs in London). The survey findings indicated there is clearly an ecological skills gap within the planning system. Importantly, the report is of the view that many local planning authorities do not currently have either the capacity or the competence to undertake the effective, and in some cases necessarily lawful, assessment of planning applications where biodiversity is a material consideration. Clearly this is a significant barrier in ensuring biodiversity is properly considered through the planning process and remains a concern through cuts to local authority and statutory agency budgets.

12. Also of interest are statistics provided by GiGL (who provide environmental records for Greater London) which suggest that only a small proportion of all planning applications received in London have commissioned and completed data searches via GiGL. This suggests that ecological information used to support planning applications in London may be incomplete and/or inconsistent[9].

Q3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

13. Similar to question 2, we are unable to comment specifically on practice in London and we understand that the evidence base (demonstrating how effectively ecological mitigation measures are implemented in housing developments) is limited. We recommend that a requirement for better monitoring of biodiversity enhancements in housing developments forms one of the key outcomes of this call for evidence. In order to be effective, monitoring would need to be undertaken regularly and for a significant period of time (say 10 years) from completion of the development.

POINTS TO NOTE

Interpretation of policy

14. We understand that the requirement for biodiversity enhancements is often driven by the conclusions of the ecological impact assessment prepared to accompany the planning application – the greater the impact (and if, for example, designated sites are impacted) the greater the likelihood of delivery of biodiversity enhancements. In other words, delivery of biodiversity enhancements may not be seen as a necessity for <u>all</u> new developments.

Enforcement of Planning Conditions

15. Delivery of ecological mitigation is often linked to specific planning conditions. We understand that enforcement of conditions is mixed in practice and dependent on the capacity

[8] Association of Local Government Ecologists (November 2013): Ecological Capacity and Competence in English Planning Authorities. What is needed to deliver statutory obligations for biodiversity. Accessed here: http://www.alge.org.uk/publications-and-reports
[9] For further details please access the GiGL site here: http://www.gigl.org.uk/planning/data-searches-and-planning/

and experience of the LPAs – refer to the 2013 ALGE Report for further information on the Ecological Capacity and Competence of English Planning Authorities.

Inclusion of biodiversity enhancements through other design measures

16. Biodiversity enhancements may be provided indirectly through delivery of other design measures such as green roofs and Sustainable Urban Drainage Systems (SuDs) (which do not have biodiversity as the overall design aim). Both green roofs and SuDs have strong support in London Plan policies and guidance. However the quality of biodiversity enhancement depends on the ecological knowledge and understanding of the design team (i.e. whether they understand how the design of the feature can be used to enhance biodiversity).

17. Although not specifically related to housing developments, good examples of biodiversity enhancement as part of multifunctional sustainable drainage schemes can be seen on the Susdrain website and include:

    - http://www.susdrain.org/case-studies/case_studies/alcester_primary_care_centre_warwickshire.html
    - http://www.susdrain.org/case-studies/case_studies/bridget_joyce_square_london.html
    - http://www.susdrain.org/case-studies/case_studies/derbyshire_street_pocket_park_london_borough_tower_hamlets_1.html
    - http://www.susdrain.org/case-studies/case_studies/hollickwood_primary_school_london.html

18. The RSPB alongside the Wildfowl and Wetlands Trust (WWT) have prepared a good practice guide on sustainable drainage systems for local authorities and developers highlighting how SuDs (including green roofs, living walls and rain gardens) can be designed to benefit both people and wildlife[10].

Knowledge and Understanding of Design Team

19. The development design team's knowledge and understanding of ecological issues and how biodiversity can be incorporated into design can have a bearing on how well biodiversity is incorporated in new developments. Landscape architects lead on the design of non-built spaces such as greenspace and recreational and open spaces. It is important that landscape architects have access to independent ecological expertise to ensure that opportunities for biodiversity enhancement are fully incorporated into new development.

20. A potential solution would be for 'access to ecological expertise' to form a key selection criterion when tendering for landscape architect services.

Future Management and Maintenance of New Housing Developments

21. The future management and maintenance of new housing developments can have a bearing on biodiversity enhancements. If developers intend to just design and build new developments they may be resistant to inclusion of biodiversity enhancements which can be viewed as a barrier to future development sell-on due to the perceived management/maintenance costs. Helping developers to understand the longer term cost savings of inclusion of biodiversity enhancements (such as increased marketability of properties) would help to break down this barrier.

Retrofitting versus New Housing Developments

22. New housing developments in London may include site redevelopments or creation of tall, highly dense developments where space for creation of biodiversity enhancements is likely to be limited. This is likely to be acting as a barrier to delivery of biodiversity enhancements.

[10] Sustainable Drainage Systems: Maximising the Potential for People and Wildlife – A guide for local authorities and developers (RSPB & WWT, 2012). See here: https://www.rspb.org.uk/Images/SuDS_report_final_tcm9-338064.pdf

23. Consequently, scope for retrofitting biodiversity enhancements into existing properties must be a key consideration of future biodiversity policy for London.

Q4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?

24. The current London Plan includes a number of strong policies for protecting, maintaining and enhancing biodiversity such as Policy 7.19*: Biodiversity and Access to Nature*. There are a number of other policies, which do not have biodiversity protection/enhancement as their specific aim, but would still indirectly support biodiversity. These include Policy 2.18: *Green Infrastructure;* Policy 5.3: *Sustainable Design and Construction*; Policy 5.10: *Urban Greening*; Policy 5.11: *Green Roofs and Development Site Environs* and Policy 7.21: *Trees and Woodlands*.

25. In addition, there are a number of supporting Supplementary Guidance Documents (SPGs) which provide further non-statutory guidance on specific policy issues. Whilst there is no specific SPG covering biodiversity a number of the existing SPGs include guidance which would support aims for biodiversity protection/maintenance and enhancement. These include the Housing SPG; the Sustainable Design and Construction SPG and the Green Grid Supplementary Planning Document.

26. The Central Activities Zone (CAZ) SPG which was prepared in March 2016 covers a significant area of central London. The environment section of the CAZ SPG provides a short reference to biodiversity: "*..CAZ local authorities should consider... addressing biodiversity and access to nature issues in policy 7.19 in the unique circumstances of CAZ*.." The remaining paragraphs of the SPG then make reference to green roofs and green walls – delivery of green roofs / green walls has clearly been successful in London, however, these are not always designed to maximise biodiversity gains. Encouraging or requiring housing developers to design green roofs / walls specifically for biodiversity would help deliver biodiversity enhancements.

27. Although the current London Plan policies and guidance on biodiversity seem reasonably robust, the interpretation and implementation of these policies by both the Mayor (when making decisions on developments) and at the local level is key.

28. We cannot comment specifically on how well policies and guidance have been implemented in practice in London. We recommend that the investigation undertaken by the Housing Committee specifically includes a review of how well existing policy and guidance has been expressed in policy terms by London Boroughs and what this has meant for delivery of biodiversity enhancements on the ground (i.e. has this significantly improved delivery of biodiversity enhancements in new developments?). If certain boroughs have been more successful than others then it would be worth exploring the reasons for this. Furthermore, it would be helpful to draw together evidence on how much importance is placed on biodiversity within Mayoral decisions on developments – the Mayor's Biodiversity Strategy published in 2002 includes a proposal (proposal 11) to take biodiversity issues into account in the consideration of planning referrals and comment on biodiversity issues where relevant (part of Policy 1 of the Strategy: *The Mayor will work with partners to protect, manage and enhance London's biodiversity*). This would help illuminate how much importance is placed on biodiversity in London more generally and whether a strengthened policy approach is needed.

29. Clearly, the existing Biodiversity Strategy is now quite outdated and will require a significant update and refresh particularly as this is used to underpin policies in the London Plan (including policy 7.19) and as the national policy framework has changed (through adoption of

the NPPF). The NPPF is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature. Paragraph 109, bullet 3 of the NPPF states that the planning system should contribute to and enhance the natural and local environment by "..*minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resistant to current and future pressures ".* These could form part of the overarching principles of London Plan biodiversity policy as well as planning for biodiversity at a landscape-scale across local authority boundaries. Furthermore, adherence to the mitigation hierarchy (with impacts first avoided) must be at the front and centre of all decisions on developments and this must be clear in any new/revised biodiversity policy.

HOW COULD POLICY BE IMPROVED?

Overarching Strategy for Green Infrastructure

30. We can see merit in developing an overarching Green Infrastructure Strategy for London (see our response to question 8 below). This would set a framework for delivery of new and improved green infrastructure across London, providing clear guidance for London Boroughs. A framework of this sort should help design and support delivery of biodiversity enhancements at the habitat/landscape-scale.
31. Policy 2.18: *Green Infrastructure and the Multi-Functional Network of Green and Open Spaces* of the existing London Plan provides a good overarching framework for a future Green Infrastructure Strategy. Local Planning Authorities should be encouraged to have biodiversity aims at the forefront during the design new and improvement of existing green infrastructure.
32. In developing this strategy, consider whether to incorporate green and blue infrastructure (i.e. The Thames and its tributaries, lakes, ponds and canals).
33. An excellent example of city-wide delivery of green infrastructure (including delivery of biodiversity enhancements) and partnership working is through the **Greening the Business Improvements District** (BIDS) project in London managed by the Cross River Partnership. See here: http://crossriverpartnership.org/projects/greening-the-bids/

Improvements to existing policy

34. Part A of existing London Plan policy 7.19 [bold emphasis added] states: A: *The Mayor will work with all relevant partners to ensure a proactive approach to the protection, enhancement,* ***creation,*** *promotion and management of biodiversity in support of the Mayor's Biodiversity Strategy. This means planning for nature from the beginning of the development process and* ***taking opportunities for positive gains for nature*** *through the layout, design and materials of development proposals and appropriate biodiversity action plans.*
35. Part C of the policy goes on to say [bold emphasis added]: Development Proposals should: a **wherever possible, make a positive contribution to** the protection, **enhancement, creation** and management of biodiversity
36. London Plan policy 7.19 is supported by some helpful guidance within existing SPGs, although this is not necessarily aimed specifically at encouraging more opportunities for biodiversity.
37. In order to maximise the opportunities for *more* biodiversity, London Plan policy 7.19 should be strengthened (or a new biodiversity policy drafted). This could place a '**requirement**' on developments to minimise impacts on biodiversity and provide positive net gains for biodiversity. In reviewing biodiversity policies careful thought should be given to the types of developments which would be required to achieve positive gains and how to define what is a 'positive gain' in respect of biodiversity owing to limitations that exist to truly deliver net gains

(particularly in the London context where space is limited). Opportunities to incorporate biodiversity in and around new developments should be part of positive gains.

38. It will also be important to highlight in policy or guidance that achievement of positive net gains is different to any future system of biodiversity offsetting. As previously stated, all decisions on developments should have the mitigation hierarchy front and centre (with impacts avoided as first principle) – this should be emphasised in any policy revisions.

39. The need for monitoring could be better highlighted in policy and guidance and will help to measure how well provision of biodiversity enhancements are achieved on the ground.

40. Part E of the policy (*When considering proposals that would affect directly, indirectly or cumulatively a site of recognised nature conservation interest...)* could be improved by deleting 'site of' – this will ensure that all types of biodiversity (including habitats and species) are also fully protected in accordance with the mitigation hierarchy.

41. Improved London Plan policy emphasis could be placed on the following principles in the NPPF:

    - Positive support for developments where the primary objective is to conserve or enhance biodiversity.
    - Planning permission should be refused for development resulting in loss or deterioration of irreplaceable habitats.
    - Be clear that planning permission should be refused if significant harm from development cannot be avoided, adequately mitigated or as a last resort compensated (in line with the mitigation hierarchy).
    - Plan for biodiversity at a landscape-scale across local authority boundaries.

42. Paragraph 111. of the NPPF is clear that planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land) provided it is not of high environmental value. The RSPB recognises that redeveloping brownfield land can provide opportunities for sustainable development, reduce pressure on the Green Belt and other undeveloped land, and offer chances to promote economic regeneration (of particular significance in London). However, some brownfield sites are havens for wildlife and support some of the UK's most scarce and threatened species. In many cases they provide the last 'wild space' in urban areas for local communities, allowing them access to nature and consequently improving the communities health and wellbeing. It is clearly important that brownfield land of high environmental value (in biodiversity terms) is properly defined and understood. This will help ensure that paragraphs 17 and 111 of the NPPF are interpreted correctly.

43. Further London guidance could be provided to ensure that planning practitioners fully understand how to determine if a brownfield site is of high environmental value (in biodiversity terms). As a minimum this could incorporate the definition provided by Wildlife and Countryside Link[11] - i.e. a site is of high environmental value (in biodiversity terms) if:

    - *It contains priority habitat(s) listed under section 41 of the Natural Environment and Rural Communities Act 2006*
    - *The site holds a nature conservation designation such as Site of Special Scientific Interest, or is selected as a local wildlife site.*

44. The RSPB also requests that all brownfield sites being considered for development be supported by an up to date ecological survey and assessment undertaken by a recognised expert (for example, a Chartered Member of the Institute of Ecology and Environmental Management). Any revisions to policy could include specific reference to brownfield land

[11] http://www.wcl.org.uk/docs/Brownfield%20high%20environmental%20value%20FINAL%20June%2015.pdf

recognising the prominence given to this for redevelopment and to ensure that the best brownfield sites are protected for wildlife.

Q5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

45. Refer to points made in respect of Question 4 above.

46. In order to better support opportunities for new biodiversity, the London Plan policy on biodiversity should be strengthened – **there should be a requirement for housing developments to minimise impacts on biodiversity and to achieve positive net gains in biodiversity such as through improvement of existing habitat, creation of new habitat or through design features** (such as biodiverse roofs, green walls, SuDs and enhanced features incorporated into multi-functional landscape designs, where delivery of biodiversity is one of the key aims).

47. This would establish a statutory policy framework which actively expected developers to deliver biodiversity enhancement if consent is to be granted. This revised policy framework could be clearly linked to the statutory duty on all public authorities in England (under Section 40 of the NERC Act, 2006) to minimise impacts on biodiversity and provide net gains where possible.

48. References to 'no net loss' of biodiversity in either policy or guidance should be removed and replaced with a requirement to seek positive net gains for nature. As mentioned earlier, it is important that LPAs and developers are clear that the mitigation hierarchy must be fully employed in respect of all new housing developments with impacts avoided as a first principle.

49. We can see the value in creating a single piece of planning guidance to cover biodiversity and implementation of ecological mitigation in new housing developments. Further comments are provided in our response to question 6.

50. If the existing policy framework is improved, this must be supported by improvements to policy implementation. As such, LPAs will need to have full access to independent ecological expertise to help scrutinise planning applications and to ensure biodiversity enhancements are fully implemented on the ground.

Q6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

51. The main advantages of creating a single piece of planning guidance to cover biodiversity and implementation of ecological mitigation would be as follows:

- Creation of a single point of access for all information pertaining to biodiversity reducing the need to trawl through multiple guidance documents to find out the relevant information.
- Provide 'cradle-to-grave' advice for developers on best practice for biodiversity from pre-application through to ensuring effective management of habitats in perpetuity.
- Provide an opportunity to produce more detail on what is expected.
- Provide best practice examples on how housing developments have successfully incorporated biodiversity enhancement and creation.

52. It will be important to re-emphasise that the SPG would form a material consideration in planning decisions.

53. Although it is helpful to have more detail set out in a single SPG, it must be recognised that every site is different. Consequently any future SPG would need to be flexible enough to allow developers/designers/project ecologists etc to adopt site-specific, creative solutions which could result in wider wildlife benefits (green roofs and living walls should be seen as examples, but not the sole options available to developers). Project ecologists and others should be encouraged to look for wider site-specific opportunities for biodiversity enhancement beyond those prescribed in the SPG.

54. If the Mayor is minded to produce a new, single piece of planning guidance on biodiversity this should cover new housing as well as options for retrofitting biodiversity enhancements into existing housing developments. We also recommend that any new SPG highlights the significant social benefits deriving from biodiversity. We would be pleased to provide further evidence in this regard.

55. The Exeter City Council Residential Design Supplementary Planning Document (SPD) is an example of an SPD which has improved the overall sustainability standard of new housing stock (including biodiversity enhancement of new developments). See **Case Study 2** below.

Case Study 2: Exeter City Council Residential Design SPD

Exeter City Council published a Residential Design Supplementary Planning Document (SPD) to support the policies in the City's local plan. The SPD is designed to guide developers on how to meet the city's high standards for housing design, safeguarding its valued green spaces and enhancing those in need of improvement.

The Council worked closely with the RSPB and Devon Wildlife Trust to ensure that developers consider and incorporate biodiversity enhancements into new dwellings. Since the SPD's adoption, the sustainability standard of new housing stock has improved.

The document offers guidance on how to cater for the needs of key species that rely on nesting opportunities within buildings, including swifts, house sparrows, starlings, swallows, house martins and bats. It includes detailed notes on appropriate orientations, dimensions and density of bird and bat boxes.

The importance of landscaping, using hedges, trees and shrubs, climbing plants and wildflower-rich grasses, for creating new habitats for key species is covered in detail. Where habitat is lost at ground level, the SPD points to the importance of creating new habitat for species through the provision of living (green roofs). http://exeter.gov.uk/resiguidespd/

Q7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes? Are there disadvantages to such schemes? We are particularly interested in evidence on how they could be introduced in London and what effects they might have?

56. The current approach to compensating for biodiversity losses arising from development is far from perfect with the majority of losses going uncompensated. Therefore, an improved system for compensating for such losses – in particular the cumulative biodiversity losses arising from smaller-scale developments that currently go unaddressed – could potentially result in better biodiversity outcomes. For example, the 2010 Making Space for Nature report (the 'Lawton' report) highlighted the strategic use of biodiversity offsets – established through the planning process and closely linked to conservation goals/priorities – as one of several mechanisms that could potentially be used to "enhance ecological networks". However, it is important to note that in many cases the failure to avoid and/or mitigate the adverse

biodiversity impacts arising from development is just as serious – if not more so – than the poor implementation of compensatory measures. As such, compensation is an issue that cannot be viewed in isolation from the proper application of the mitigation hierarchy as a whole (see further details below).

57. The use of biodiversity offsets has the potential to contribute to positive biodiversity outcomes under specific conditions. However, if used inappropriately, it could also make things considerably worse. That offsetting biodiversity loss is risky is evidenced by the fact that there are no systems in the world that have been able to demonstrate no net loss of biodiversity, and a wealth of studies showing (often considerable) net losses.

58. Currently, there is a lack of evidence to demonstrate that the use of offsets can contribute to positive conservation outcomes. The results of Defra's biodiversity offsetting pilot projects highlight the considerable evidence gaps that still remain, particularly with regard to offset delivery and management.

59. Biodiversity offsetting should only ever be used for projects that have rigorously applied the mitigation hierarchy and must always be a measure of last resort (i.e. after all efforts to avoid or mitigate harm through appropriate location and design have been exhausted). Re-creating or restoring complex natural processes is inherently difficult and full of risk. As such, in-situ conservation is always preferable.

60. Biodiversity offsetting will not result in better outcomes for biodiversity if it leads to a weakening of existing policies and/or a failure to properly apply the mitigation hierarchy. As such, it must never be used to circumvent responsibilities to avoid and minimise damage to biodiversity or to justify projects that would not have otherwise been allowed under other policy or statutory obligations. It should be the responsibility of planning authorities to ensure the mitigation hierarchy is observed and to decide what offset is required to compensate for any residual loss. Independent ecological expertise will be essential to be able to properly fulfil this responsibility.

61. Biodiversity offsetting is not appropriate in all circumstances, in particular where the risk of offset failure is high and/or where offsetting is infeasible such as in the case of threatened species or in effect 'irreplaceable' habitats such as ancient woodlands and limestone pavements. Part of the development of any offsetting system must include a systematic, evidence-led assessment of the feasibility of restoring or creating habitats successfully, including for the species/species communities dependent on them.

62. For biodiversity offsetting to be implemented successfully, it is essential that there are significant improvements in the measurement and assessment of the biodiversity impacts of proposed developments, including the impacts of any proposed mitigation and on-site compensation measures.

63. As part of its biodiversity offsetting pilot programme, Defra produced a 'metric' and technical guidance to help quantify the net biodiversity impacts of proposed developments. Evidence from the pilots suggests that, where supported by adequate (independent) ecological expertise, the transparent and consistent use of a quantitative metric on all development proposals (alongside other quantitative and qualitative information on biodiversity impacts) has the potential to improve how the planning system deals with biodiversity.

64. Our view is that there should indeed be a mandatory 'biodiversity assessment' submitted alongside all planning applications and that a more systematic approach to assessing potential harm to biodiversity could bring considerable conservation benefits.

65. However, for biodiversity offsetting to deliver positive conservation outcomes, the way in which any offsetting scheme is designed and implemented is key. At minimum, and in line with long-term conservation goals, an offset must compensate for the biodiversity that will be lost due to the development and be secured for the lifetime of the development's impacts. As such, there must be a robust legal agreement that sets out clear responsibility for

implementation, appropriate management, and monitoring in order to secure and maintain the biodiversity value of the offset. A responsible authority needs to be identified to oversee the administration of the scheme and verify effective offset delivery.

66. A significant improvement in the current level of ecological capacity/expertise within local planning authorities should be viewed as a pre-requisite to implementing a successful system of biodiversity offsetting. In the absence of sufficient ecological capacity and expertise, there is a serious risk that the mitigation hierarchy will be undermined resulting in worse biodiversity outcomes. In addition, without ecological expertise, local planning authorities will also struggle to maximise any potential benefits from the strategic location of offsets in line with conservation priorities.

67. Our view, informed by the results of Defra's biodiversity offsetting pilot programme, is that any offsetting system should be mandatory for all developments (all new dwellings, commercial buildings, and any other type of developments over certain size thresholds) and should sit within a clear and consistent national framework that sets minimum values for nationally important habitats and species. A key question-mark over the application of such a system in London is whether there is sufficient space to deliver compensation close to the point of impact.

Q.8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

68. The obvious benefit to biodiversity of planning, designing and managing green infrastructure as a holistic network would be to set out a framework for delivery of an integrated habitat network. This framework would provide a genuine vision on where and how new wildlife corridors could be developed to help join up existing important biodiversity sites and habitats. This would also create the bedrock for delivery of new and improved habitats in areas of nature deficiency. There is obvious value in looking at green infrastructure holistically (ensuring that multiple benefits can be fully captured), however, there is potential for tensions if outcomes are not aligned – for example where land use changes would adversely impact on biodiversity sites. This could be overcome by having a multi-disciplinary team involved in the development of such a network. Such a team should include project ecologists, building and landscape architects, NGOs (such as the RSPB and The Wildlife Trusts who can bring wider knowledge of wildlife and community engagement), specialist designers of biodiversity enhancement features (such as green roofs/walls and SuDs) as well as practitioners from other sectors such as health.

69. The existing Green Infrastructure Task Force would be a good place to start (re: drawing together a network of experts). The recent report *Natural Capital: Investing in a Green Infrastructure for a Future London*, prepared by the GLA on behalf of the Task Force has a number of helpful recommendations on green infrastructure in London (we do, however, draw attention to our points on biodiversity offsetting as set out under question 7 above).

70. A holistic green infrastructure framework would provide a clear steer to local planning authorities to support the preparation of local green infrastructure strategies.

71. The future management of a holistic green infrastructure network will be critical. A unified approach to green infrastructure management across London would ensure that the wildlife benefits of green infrastructure are fully built into management prescriptions.

72. The provision of a new holistic green infrastructure framework for London could refresh the existing All London Green Grid (ALGG) providing a briefer vision and strategy for green infrastructure for London with a set of detailed projects (making use of the existing ALGG document) at the back.

Q.9. What social benefits can be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

73. Incorporating nature in and around where we live not only improves the natural environment and biodiversity, but is also good for our health and wellbeing. The social benefits of nature are receiving more recognition in scientific literature.

74. For example, obesity is a growing burden on the NHS and it has been shown that those with easy access to nature are three times more likely to participate in physical activity and 40% less likely to become overweight or obese[12]. The Monitor of Engagement with the Natural Environment's (MENE) Annual Report from 2013-14 survey highlighted that 45% of people asked, stated that one of the main reasons they went into the natural environment was for health or exercise. A further 29% said they visited the natural environment to relax and unwind[13]. **This highlights the importance of having accessible natural environments around housing developments to both support exercise regimes but also to support people's mental health and wellbeing**.

75. The benefits of nature on people's mental health are widely reported within scientific literature, however, recently it has become apparent that the quality of the natural environment may be more important than the quantity of it. People are twice as likely to report low psychological distress when living close to quality green space compared to those living near low quality green space[14]. **Therefore, it is important not only to plan for easy access to green spaces in our living environment but also to improve the quality of these green spaces – incorporating greater levels of biodiversity in our green spaces could be one way to achieve this**. This will not only improve mental health outcomes and general wellbeing but it will help to create new habitats for biodiversity across the UK and in particular in our urban areas.

76. Accessibility to green spaces around housing developments is not only important for reducing health inequalities but there are links between economic deprivation and limited access to nature, which could then lead on to health inequalities[15].

77. Integrating new and improving existing green spaces around housing developments will help improve health and wellbeing outcomes and will help to reduce social inequalities in the local communities it supports. A recent report by Natural England[16] found that if people lose their access to convenient, quality greenspace this could lead to a reduction in physical activity. This could then lead to an additional 374 deaths per year, with an economic cost of £434 million per year; with a further 2,300 additional cases of life-limiting diseases equating to an additional £23.6 million per year. A further article from the University of Exeter has also estimated that green spaces are worth £2.2bn to public health in England, again through providing opportunities for physical exercise[17]. Therefore, providing access to good quality green spaces that are biodiversity rich is important not only for individual physical health and wellbeing but our health economy as well. If we also took into account the mental health benefits that nature could provide, the economic benefits of nature could be even higher than the above estimates.

78. A good example of greening an existing housing estate can be seen at Clapton House Estate in East London. Further details can be seen here: http://www.grassroofcompany.co.uk/urban-community-gardens.htm#

[12] Wells, N.M., Ashdown, S., Davies, E.H.S., Cowett, F.D. and Yang.Y. (2007) Environment, design and obesity. Bowler, D.E., Buyung-Ali, L.M., Knight, T.M., and Pullin, A.S. (2010). *A Systematic review of the evidence for the added benefits to health of exposure to natural environments.* BMC Public Health, 10: 456-466.
[13] MENE: Annual report fro the 2013-2014 survey v2. http://publications.naturalengland.org.uk/publication/6579788732956672?category=47018.
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[15] Allen, J. (2013) *Health Inequalities and Open Space.* Presentation. UCL Institute of Health Equity.
[16] ROLLS, S., FORDHAM, R. & SUNDERLAND, T. 2016. Investigating the potential increase in health costs due to a decline in access to greenspace: an exploratory study. Natural England Research Reports, Number 062.
[17] White MP, Elliott LR, Taylor T,Wheeler BW, Spencer A, Bone A, Depledge MH, Fleming LE, Recreational physical activity in natural environments and implications for health: A population based cross-sectional study in England, *Preventive Medicine* (2016), doi: 10.1016/j.ypmed.2016.08.023

79. The RSPB has long been aware of the health benefits of nature – see for example our early work on Natural Health alongside Dr William Bird[18]. To follow up this work and to re-engage with the health agenda across the UK we have recently launched a new project to explore where and how we can provide nature based health interventions and how to apply this to wider advocacy work. As part of this project we will also be looking at providing bird and nature watching packs for people living with early stage dementia.

80. Over the last ten years we have also been looking at how connected children are to nature and the importance of this for their health and for how this relates to pro-nature and pro-environment behaviours[19]. Our 2013 study on connecting to nature[20] found that only 21% of children had a level of connection to nature that we view as a realistic and achievable target for all children. Through our wider research, we know that greater levels of connection to nature correlate with better self reported health and engagement with pro-nature or pro-environment behaviours. Therefore, we need to ensure there are good quality green spaces in housing developments and near schools to allow children to develop healthy connections with nature.

81. The World Health Organisation claims 16,000 Britons die each year as a result of air pollution (Ambient air pollution: a global assessment of exposure and burden of disease). Increasing cycling and walking facilities with associated green infrastructure would improve London's air quality and environment while encouraging Londoners to be more active.

82. Extreme weather events are increasing in frequency and the Mayor's Office acknowledges the contribution densification adds to increased temperatures. Incorporating more green space would help reduce the heat island effect and allow for better absorption of heavy rainfalls which have added extra burdens and costs to the Capital's emergency services, notably the extra call-outs placed upon the Fire Service to respond to flooding.

83. Incorporating a mandatory and comprehensive strategy for protecting and enhancing biodiversity near housing developments in London would therefore have significant wins not only in terms of biodiversity gains but also in terms of wider benefits to society.

18 Natural Fit (2004), Natural Thinking (2007), Natural Health; www.rspb.org.uk/health.
19 The Impact of Children's Connection to Nature: A Report for the Royal Society for the Protection of Birds (RSPB). (2015). http://www.rspb.org.uk/Images/impact_of_children%E2%80%99s_connection_to_nature_tcm9-414472.pdf
20 Connecting with nature: Finding out how connected to nature the UK's children are. (2013) http://www.rspb.org.uk/Images/connecting-with-nature_tcm9-354603.pdf

Bat Conservation Trust submission to the London Assembly inquiry into 'Encouraging Biodiversity in New Housing Developments'

End date: 31 October 2016

The London Assembly's Housing Committee has launched an investigation into the promotion of biodiversity in new housing developments. The committee will examine what the Mayor could do - during the ongoing review of the London Plan - to better protect, maintain, enhance and encourage new opportunities for biodiversity in new housing developments.

We welcome submissions from any organisations and individuals with views and information to share on this topic. Submissions should aim to address of the questions outlined [below], *and other issues, within the terms of reference, you think it important for the investigation to cover.*

Why is it important to encourage biodiversity in new housing developments?

- Within an urban landscape, new developments provide an opportunity to strengthen and enhance existing biodiversity networks. For a number of our 18 bat species the built environment offers roosting and foraging opportunities to replace those natural habitats that have been lost or heavily degraded in the wider landscape. In line with these significant degradations and losses across all natural habitats we have seen a massive decline in our bat populations over the last century. As bats are one of the government's bio-indicator species (http://jncc.defra.gov.uk/page-4271), this is alarming in terms of the wider implications for the UK's biodiversity. And high quality, biodiverse environments supporting healthy bat populations aren't just good for the plants and wildlife present, they also contribute directly to our physical and mental wellbeing. More on this can be found in the UK Green Building Council Task Group Report: Health and Wellbeing in Homes: http://www.ukgbc.org/resources/publication/uk-gbc-task-group-report-healthy-homes

How rigorously is biodiversity considered in planning applications and agreements?

- There are some developers who take a very positive approach to incorporate biodiversity value into their developments but we are aware that rigorous consideration of biodiversity in the planning process is not being evenly applied across England, partly due to two-thirds of LPA not having access to ecological expertise. Both the British Standard for biodiversity management, assessment and information provision in the development-planning process (BS42020) and the Bat Conservation Trust's (BCT's) Partnership for Biodiversity in Planning are trying to address this: http://www.bats.org.uk/pages/partnership_for_biodiversity_in_planning.html

To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

- There is a real lack of evidence when it comes to monitoring finished development sites and therefore we don't have a good understand of how a number of our ecological mitigation measures are working. This lack of a feedback loop raises concerns on ongoing advice not being informed by and adjusted to allow for failures that occur on the ground. There needs to be much more emphasis and inclusion of post-construction monitoring when handover of sites occurs. When handover of the facilities management documents occurs, this should include detailing maintenance regimes for biodiversity on site as well.

- The importance that is placed on monitoring is emphasised by the successful application to the Esmée Fairbairn Foundation (EFF) in January this year by BCT for funding for an Investigations and Mitigation Project. The EFF funding works towards improving the approach to bat roost mitigation, investigating both the implementation and effectiveness of bat roost mitigation by visiting sites for a cross section of licensing (monitoring) and planning cases. In addition, there will be a Mitigation Case Studies symposium in January 2017 with the emphasis on monitoring and lessons learnt to guide best practice.

- In addition, the new BRE Strategic Ecology Framework document (http://www.breeam.com/strategic-ecology-framework) has been developed to guide developers through their obligations in terms of ecological requirements in new builds and is at pains to emphasise the importance of post-mitigation monitoring; '*Ecological aspects of a project take time to establish and mature. Throughout the design, construction and management of ecological features it is necessary to monitor and review progress against the objectives and targets set. However, this is often not given sufficient prominence in implementation plans and project programmes. As with Handover, this can mean that opportunities are missed and expected benefits are not realised, potentially leading to the failure of the initiative'.*

What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely a Supplementary Planning Guidance/SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

- Mitigation of or creating new green spaces has to be guided by ecology surveys done in accordance with best practice for each site. Guidance in a SPG could be very valuable in covering over-arching principles, highlighting further sources of information and by including case studies. The key element in any ecological design work is the application of knowledge acquired on the site and this should be emphasised in at the start of any guidance documents. When we are looking at creation of habitat in new developments, the issue of artificial light pollution needs to be considered in line with an ecological mitigation and also the health and well-being of residents. This may require an additional but linking SPG. So in summary the advantages of an SPG on this subject are a strong foundation for good practice. The disadvantage that needs to be recognised is the expectation that guidance can be a template for all development needs and the potential need to update guidance based on new evidence. To overcome these issues, firstly it needs to be made clear it is guidance and should be applied as relevant on a case by case basis. And secondly, ensuring good links to online resources and research could help keep the guidance relevant / up to date.

What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes? - Are there disadvantages to such schemes? - We are particularly interested in evidence on how such schemes might be introduced in London and what effects they might have.

- The benefits of biodiversity offsetting may be that schemes can attain net gain of biodiversity overall for a development by helping meet biodiversity requirements locally / not just on site. However, we have to be careful not to remove areas of perceived low biodiversity to strengthen areas with higher biodiversity elsewhere. For example, ignoring the value of brownfield habitats which provide specific foraging and nesting requirements to species such as the black redstart, whose stronghold is now in our cities. There is also a great deal we still don't know about how our urban bat species use the environment, especially for roosting, only recently was it discovered in the Netherlands that bats were hibernating in disused 1970s tower blocks! In particular the focus needs to be at species level rather than

habitat as the latter approach can be very damaging for species. For instance, a bat roosts relies on an area of rough grassland for foraging. Biodiversity offsetting (in the way it is often operated) may value that rough grassland and if it is being lost will compensate for it over and above the area of loss but elsewhere. For that colony of bats, if that elsewhere is outside the range the bat can fly if will be a loss that will impact that colony and may even result in its loss. So thinking about the species that rely on a habitat and what the loss of that habitat will mean to them and how to offset within their functional range is important.

- Green space 'factor' schemes looks to keep the habitat creation within the site boundary, the emphasis being permeability of the habitats to be lost and created. This encourages the creation of woodlands and wetland habitats, however again we have to be careful not to downgrade habitats that appear less valuable for biodiversity but for a number of species, are stronghold habitats. Brownfield habitat such as that found on an extensive green roof is scored lower than intensive green roofs. However intensive green roofs are frequently open to people, whereas extensive green roofs tend to be restricted access and therefore may be more suitable for nesting birds or bats that require less disturbance.

What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

- Connecting a green space to the existing local green infrastructure creates green corridors through a landscape which is key for encouraging and strengthening biodiversity. This is especially true for the types of biodiversity found in cities, frequently 'on the wing' / moving through the environment and therefore exploring along these lines of habitat for feeding and nesting / roosting resources. It is therefore important to think of a created or protected green space in a landscape context to truly appreciate its value and ensure that it fulfils the aims set by a development project or planning committee. In this context, artificial light pollution is also a key consideration in the way it may impact / inhibit movement of wildlife through the urban environment and may render newly created habitats devoid of key species it was designed for, such as bats and invertebrates: http://www.bats.org.uk/pages/bats_and_lighting.html

What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

- Green spaces should not just be valued for the species of plant and animal that are recorded / encouraged there, but also for the contribution it makes to creating spaces for local communities to meet and engage with wildlife, carry out gardening etc. This is a more difficult value to quantify, but no less important. In an urban context the biodiversity a community encounters on their doorstep may be the only time such an interaction takes place.

- In the UK there are a number of studies by Natural England (NE) which promote the various social benefits of access to green space and biodiversity. Work with charities such as Mind, show that making greater use of 'green care' helps people suffering from mental ill-health: https://www.gov.uk/government/news/connecting-with-nature-offers-a-new-approach-to-mental-health-care . Dementia Adventure (a Community Interest Company which connects people living with dementia, with nature and a sense of adventure) was commissioned by NE to review the existing evidence of the benefits and barriers facing people living with dementia in accessing the natural environment and their local green space to guide future policy and practice in tackling these barriers.

- Dr William Bird was the Strategic Health Advisor for Natural England and is the founder of Intelligent Health Ltd www.intelligenthealth.co.uk. This organisation emphasises the importance of access to green space on health and well-being through initiatives such as Beat the Street '*an evidence based intervention to increase physical activity levels across a community. The programme connects individuals with their local environment and supports long term behaviour change by creating a social norm around getting active*' - http://www.intelligenthealth.co.uk/wp-content/uploads/2016/02/IH-BTS-Brochure.pdf

- In the US a number of studies on children living in cities has shown that connection with nature as a child can have lasting health benefits and this primarily comes about by direct nature experience and '*close to home nature'*: http://www.childinthecity.eu/2016/07/21/nature-health-and-the-equity-of-urban-parks/

- If green spaces in cities are to thrive they have to be protected and taken on by local communities. Councils frequently don't have the resources to carry this out this role, therefore ownership and recognising social value is key in achieving this. Again, where urban green spaces are adapted for children's development (http://www.childinthecity.eu/2016/07/21/nature-health-and-the-equity-of-urban-parks/) and nature is included in the process, benefits include '*forming attachments to things outside ourselves'* – encouraging this feeling of ownership and creating green spaces that contribute to place making in our urban environment.

Jo Ferguson
Built Environment Officer
Bat Conservation Trust

Royal Botanic Gardens, Kew: Input to London Assembly Investigation into Encouraging Biodiversity in New Housing Developments

Background

Royal Botanic Gardens, Kew aims to be the global resource for plant and fungal knowledge, building an understanding of the world's plants upon which all our lives depend. We have scientific collaborations and partnerships in over 110 countries worldwide and have two sites in the UK, at Kew in West London and Wakehurst in Sussex. Our gardens attract over 1.5 million visits every year, with 79% of visitors to Kew Gardens learning something new about plants during their visit.

We have a wealth of plant collections, data and expertise on plants and fungi. We use the power of our science and the rich diversity of our gardens and collections to provide knowledge, inspiration and understanding of why plants and fungi matter to everyone.

We believe that a greater connection with nature, a better understanding of plants and why plants are important can enrich lives and lead to more people engaging in actions that support biodiversity conservation. Our vision is for a world where plants and fungi are understood, valued and conserved, because all our lives depend on them.

In order to support this investigation into 'Encouraging Biodiversity in New Housing Developments', we would like to offer evidence in relation to three areas of Kew's activity: (1) Grow Wild, our UK-wide outreach programme, (2) tree management.

Grow Wild

Grow Wild (www.growwilduk.com) is the UK-wide outreach programme of the Royal Botanic Gardens, Kew, primarily funded by the Big Lottery Fund. Since 2012, Grow Wild has changed lives through bringing people together to transform local spaces across the UK with native, pollinator-friendly wild flowers and plants. Over three million people have taken positive action to improve themselves and where they live thanks to Grow Wild. There are many layers to the programme including:

- Distributing free seed packets and seed kits to individuals and groups (including unengaged and disadvantaged audiences) – resulting in 2 million seed 'sowing actions'.
- Funding flagship sites, community projects and youth projects – resulting in 375 transformational projects – the majority including or led by young people and involving 100 trained volunteer mentors.
- Promoting Grow Wild through integrated multi-channel marketing campaigns (TV, print, radio, website and social media) and at events/festivals across the UK – providing 400 million 'opportunities to view' and participate in Grow Wild's activities.

For the past two years, we have worked with Forest Research – the research agency of the Forestry Commission – to evaluate the Grow Wild programme. The full findings can be found at https://www.growwilduk.com/content/wellbeing-and-seed-kits, but a few relevant highlights include:

- 52,000 free seed kits were distributed to young people, resulting in enough seed being sown in urban areas around the UK to cover 525,000 square metres of specially grown native wild flowers.

- 73% of recipients of free seed packets said that they 'felt connected to something bigger' and 79% said that they 'felt a greater sense of responsibility for native wildlife'.
- 63% of participants in community groups that received seed kits said that they 'felt a greater sense of belonging to their neighbourhood' and nearly 25% of groups went on to 'do something else for their community, like starting a community project or event'.

Based on our experience with Grow Wild, we believe that encouraging individuals and groups to take positive action through providing them with appropriate guidance and resources can result in both improved local biodiversity and also greater community engagement and community action.

There are two specific case studies of urban communities attached (one from London and one from Wales). These demonstrate real examples of how Grow Wild has enabled people to connect with plants, and to derive wider societal benefits.

Tree management

The natural habitat for most tree species is within woodland or forest, surrounded by other trees with a natural ground covering that is normally sparse and shaded. The habitat that many urban trees are found in is quite different to that, often isolated in parkland, gardens or on streets with the ground covered by grass or hard surfaces. Therefore, it should not be a surprise if we find that trees in urban landscapes suffer from stress and do not thrive. Active tree management in urban landscapes is therefore often necessary.

Trees in urban landscapes have often been planted in monocultures (single species), all planted at the same time, such as long avenues of London Plane Trees (which is successfully grown in urban areas because it is relatively resistant to urban environmental stress such as pollution and soil compaction). This situation leads to two issues – a lack of genetic diversity and a lack of age diversity. In planning ahead for the future, especially in light of the impact of climate change in London as well as the possibility of new tree pests and diseases arriving, we should be seeking to ensure that the stock of trees in London are genetically diverse and that age succession is fully planned in. A more diverse tree stock is also likely to support more diverse natural wildlife.

There is a developing body of evidence to indicate that having mature and healthy trees in the urban landscape can improve the local environment, particularly in relation to providing local cooling effects and increasing human wellbeing and mental health. In thinking ahead to the future, and considering the points above, we believe that a long-term planning horizon is necessary. As such, the choice of trees to plant today, which will be healthy and mature in the decades and centuries to come, is crucial. Kew has not done extensive research into the specifics of which trees should be planted today in order to thrive in the future, but the sorts of characteristics we think are important to consider are:

- Is a particular species drought tolerant and does it have a high tolerance of extreme temperatures?
- Does the planted stock have a high genetic diversity?
- How can planting schemes encourage a well-spread age distribution?

The final point to make here is that in order to bring about healthy, vibrant, mature trees in urban landscapes, the focus of tree management needs to be placed on *establishing* young trees at least as much as it is focused on *planting* young trees. A simple focus on planting, without sufficient emphasis on establishing them, is likely to yield far inferior results over the longer term.

LONDON ASSEMBLY HOUSING COMMITTEE – CALL FOR EVIDENCE

Encouraging Biodiversity in New Housing Developments

1. Why is it important to encourage biodiversity in new housing developments?

National, regional and local planning requirements all promote the importance of enhancing biodiversity. Therefore, from a planning policy compliance point of view, it is clearly important for new housing developments to show that they include positive measures wherever possible to encourage biodiversity.

The NPPF highlights that the planning system should contribute to and enhance the natural and local environment by minimising impacts on, and providing net gains in biodiversity and should help the Government meet its commitment to halt the decline in biodiversity.

The London Plan (2015) requires that development proposals make a positive contribution to the protection, enhancement, creation and management of biodiversity (wherever possible). It also sets out a hierarchy of how to consider proposals in terms of managing potential impacts on sites of nature conservation interest by:

1 Avoiding adverse impact to the biodiversity interest
2 Minimizing impacts and seeking mitigation
3 Only in exceptional cases where the benefits of the proposal clearly outweigh the biodiversity impacts, seeking appropriate compensation.

Local authorities are by law (section 40 of the Natural Environment and Rural Communities Act 2006) responsible for conserving biodiversity, which includes restoring or enhancing a population or habitat, in exercising its functions. The H&F Proposed Submission Local Plan protects identified conservation areas and green corridors from development that is likely to cause demonstrable harm to their ecological value. Outside of these identified areas, proposals should enhance the nature conservation interest through initiatives such as new green infrastructure and habitats, tree planting and brown and green roofs and protect any significant interest on the site and any nearby nature conservation area, appropriate to the scale and nature of the development.

Biodiversity and the areas created to promote it can provide a number of environmental and community benefits – e.g. helping to improve local air quality, reducing noise impacts, promoting sustainable drainage and reducing flood risk, managing and reducing other climate change impacts such as the urban heat island effect. Access to green space and biodiversity can also help promote healthy living, increase physical activity and reduce stress.

2. How rigorously is biodiversity considered in planning applications and agreements?

This is difficult to answer as only a limited amount of monitoring of the implementation of planning policies in completed developments is possible. As outlined above, there is a clear direction from the NPPF, the London Plan and Local Plan to promote and encourage biodiversity, so it is considered in planning applications, but this is alongside many other competing issues.

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

As for Question 2, this is difficult to answer, for similar reasons. However, the council's latest Annual Monitoring Report (2015) provides the following information in relation to Open Space Indicators, which is relevant in terms of ecological impacts/measures:

Indicator 32 – The area of garden land granted permission for development

• **London Plan policy 3.5:** Quality and design of housing developments

• **Borough-wide Strategic policy OS1:** Improving and Protecting Parks and Open Spaces

• **DM policy E4:** Greening the borough

Target: None

2014/15 Outcome: The total number of applications were 5 and from these 11 units of accommodation were gained.

Indicator 33 – The net change to areas of nature conservation areas

• **Borough-wide Strategic policy OS1:** Improving and Protecting Parks and Open Spaces

• **DM policy E3:** Nature Conservation

Target: To ensure no net loss where there is an identified need.

2014/15 Outcome: Over the monitoring period, there were nine applications that affected nature conservation areas. All applications were in accordance with DM LP policy E3 as having no adverse impacts on ecology, biodiversity and the natural environment.

INDICATOR 34 – The net change in total areas of public open space

- **Borough-wide Strategic policy OS1:** Improving and Protecting Parks and Open Spaces

Target: To ensure no net loss where there is an identified need.

2014/15 Outcome: There were no applications for development on public open space during the review year.

The 2014/15 Annual Monitoring Report stresses that the NPPF, like the London Plan, enables boroughs to resist inappropriate development of residential gardens where justified in light of local circumstances, but does not impose a blanket restriction on such development. This locally sensitive approach is supported by the NPPF which makes clear that the SHLAA allowances for windfall sites in the 5 year housing supply should not include residential gardens. The Core Strategy reinforces this approach in Policy OS1 and supporting text which protects back garden space and seeks enhancement to front gardens and greening of streets. DM LP policy DM E4 seeks to maximise the provision of gardens, garden space and soft landscaping and to protect back gardens from new development.

Broadly, it appears the policy is fulfilling its function of protecting gardens from development which is demonstrated by the small number of applications for outbuildings or new dwellings in garden areas. It should be noted that these developments will be offset by the approval of a number of areas of new garden space.

The relevant section of Core Strategy policy OS1 and the borough's nature conservation hierarchy continue to protect the borough's sites of nature conservation importance while policy DM LP E3 seeks to impose planning conditions to ensure the general enhancement of nature conservation areas. The policy is also fulfilling its function of protecting and seeking to enhance the existing open spaces, whilst being flexible to accept re-provision of an appropriate type and scale where this can help improve the quality of the open space.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?

The main strength is in having a specific policy on biodiversity which sets out requirements for new developments and which also provides the means to develop detailed guidance for developers and ensure that required measures are implemented to provide ecological improvements and promote biodiversity in new housing developments.

The main weakness is that the policies and guidance are not worded as strongly as they could and perhaps should be. They allow too much flexibility

in how ecological and biodiversity improvements are implemented which then results in a limited and less integrated approach to providing appropriate measures for biodiversity in new developments.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

As commented in answer to Question 4, there is scope to make the wording of key policies in the London Plan (Policies 2.18, 5.10 and 5.11) more stringent to ensure that a range of biodiversity related issues are considered and implemented. There may also be a case for developing a specific policy on biodiversity to stand alongside the existing policies on green infrastructure and green walls and urban greening.

Biodiversity should not just be protected in the areas it is already found but actively encouraged in new areas. Given the multitude of functions and benefits that open space and biodiversity rich areas can provide, they should be a key consideration in terms of how major housing developments are designed.

In general, there is a relatively poor understanding of the importance and value of biodiversity across London. This lack of recognition and underappreciation contributes to a somewhat weak approach in policy terms to the issue. It is no surprise that biodiversity often finds itself at the bottom of the list in terms of priorities when new housing sites are being designed.

There may be a case for more work by the GLA and others to increase current levels of understanding of biodiversity issues – for example by promoting the use of local surveys to provide a baseline of information which could be tracked by repeating surveys in the future (e.g. once every 10 years). Councils, residents, local groups, developers, schools etc could be encouraged to report and monitor survey information, identify gaps in biodiversity provision and develop actions to help increase local biodiversity levels.

Greater awareness and protection could be given to metropolitan sites, railway embankments and the Thames (green and blue corridors) and requirements could be placed on councils to have a biodiversity action plan and to integrate biodiversity into their own green spaces.

In some cases access to information is not freely available and this can limit the possibility of working to promote biodiversity. For example, a licence is required to access the Green Space Information for Greater London for H&F.

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely a Supplementary Planning Guidance/SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

The main advantage would be that all relevant information would be in one place, but the disadvantage is that biodiversity is not an issue that can be considered in isolation from other planning matters. It needs integrating into a range of planning and design and construction issues. If a biodiversity SPG was to be developed, this would need to be referenced in other SPG documents to ensure people make the links between other planning requirements and the needs of biodiversity assets.

Also, see answers to the previous Questions which highlight that an integrated and more holistic approach is required on this topic with further work required to develop an in-depth understanding of the borough's biodiversity and that of neighbouring boroughs.

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes?

Not familiar with these schemes.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

See responses above which have included reference to the broad range of benefits that biodiversity and associated green infrastructure can bring to developments and the wider community. A strategic, holistic approach to planning for nature within and across local areas would be beneficial as this approach would guide development to the best locations, encourage greener design and enable development to enhance natural networks. Retention, protection and improvement of the natural environment should be core objectives of the planning system.

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

Some key social benefits have been referenced in answer to the preceding questions. Other benefits include provision of opportunities for employment and volunteering, reducing social tension and increasing social cohesion, encouraging physical exercise and outdoor recreation activities, increasing exposure to nature and creating a less stressful environment. Establishing new areas of green infrastructure can also help empower communities to protect their local environments.

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Your ref

Our ref AKC

Leonie Cooper
London Assembly Housing Committee
City Hall
The Queen's Walk
London
SE1 2AA
BY EMAIL

9 November 2016

Dear Ms Cooper

London Assembly Housing Committee's investigation into promoting biodiversity in new housing developments

Land Securities is a FTSE 100 company and the largest Real Estate Investment Trust (REIT) in the UK on the basis of equity market capitalisation with a commercial property portfolio worth £14.5 billion. We have an established track record as one of the foremost property developers in the UK and a significant number of our development and investment properties are located within London. We are predominantly a commercial developer, however welcome the opportunity to comment on the London Assembly Housing Committee's investigation.

In response to your key questions, we would like to make the following comment:

How rigorously is biodiversity considered in planning applications and agreements?

We don't believe biodiversity is rigorously considered in planning applications and agreements. The attention to biodiversity is usually given where there is a 'trigger' or known impact (such as a site of importance for nature conservation (SINC) or significant habitat) or if there is anything visible at the outset and where there is a requirement to complete an Environmental Impact Assessment.

Green building certifications such as BREEAM or Code for Sustainable Homes assess biodiversity. However not all developments are subject to this certification request as a regulatory condition. In these instances biodiversity is unlikely to be addressed unless the developer has their own corporate sustainability commitment to biodiversity.

Our most recent planning applications have included Environmental Impact Assessments (EIA), which detail our aspirations to protect and enhance biodiversity through minimising our contribution to pollution and contamination on a development site, and introducing areas of natural space in the form of green roofs and walls as well as ornamental trees within the public realm. We undertake an EIA whether it is required for planning or not, again highlighting how commitment to biodiversity can depend on the developer.

(cont / 2)

To what extent and how effectively are ecological mitigation measures implemented and maintained in completed housing developments?

The success of any measures implemented will take time to understand as this requires long term monitoring. At present there is no reporting mechanism or requirement to do so once a development has been completed so the ability to understand whether any biodiversity gain has been made is lost.

How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

Depending on the availability of resource and expertise available within the London Assembly on biodiversity, policy or guidance should be reflective of how the London Assembly look to measure and assess biodiversity performance specifically how they quantify gain. Also, guidance should be aligned with other NGO's work i.e. The Wildlife Trusts and Natural England.

What benefits does biodiversity bring to your housing developments, for example, increasing prices paid for properties?

Being a predominantly commercial developer, we have limited examples of how biodiversity has benefited housing developments. There are benefits we have seen in our commercial developments however, the principles of which we believe can be applied to housing developments.

We believe that adding natural space and features can help our office customers to attract talent, and retail customers to increase footfall and the dwell time people spend in store, ultimately making our schemes more attractive to occupiers and therefore more successful. We have achieved this through installing rooftop gardens at 1 & 2 New Ludgate EC4 and The Zig Zag Building SW1, and planted walls at 20 Fenchurch St EC3, New Street Square EC4 and 62 Buckingham Gate SW1. We believe creating natural spaces and enhanced public realm across all of our London developments is vital to the success of any scheme, as it would for a housing scheme.

Green infrastructure can also provide tangible environmental benefits such as shade, cooling and wind interception, improvement to air and water quality, better drainage and flood protections, and insulation in winter. It can provide a vital buffer for habitats and species too, ultimately contributing to the protection of biodiversity.

Additional Comment

From the research we have undertaken as part of our corporate sustainability commitment on biodiversity, enhancement is most effective where there is connectivity to the wider landscape. Therefore the value to be had from isolated pockets of biodiversity enhancements will be less than those larger spaces create from a collection of measures. We believe it's important that any future governance takes this in to account, and recognises each site is unique and therefore any biodiversity enhancement measures will be bespoke, and therefore successful, dependant on adjacent and neighbouring sites.

(cont / 3)

We believe policy should be asking 'How will this design increase biodiversity gain?' as well as the potential for developers to off-set and contribute to a large scale biodiversity project/initiative.

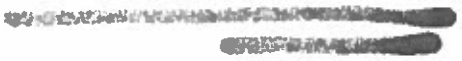
An example of large scale biodiversity enhancement could be contributing to a green space selected by the Mayor, the contributions for which would help cover the creation, development, management and enhancement of the area. A collective, not individual approach, may prove to be the most effective way of biodiversity enhancement within London.

We trust this representation is helpful and we would be happy to discuss in more detail should that be of interest.

Yours sincerely,

Alex Chitty
Development Surveyor
London Portfolio

[redacted]



From:
To:
Cc:
Subject:
Date:
Attachments:

Dear Charlotte

Thank you for your letter to John Allan dated the 20th October inviting a response to the key questions of your investigation which we have provided below:

Question 1:
How rigorously is biodiversity considered in planning applications and agreements?

Biodiversity is considered very rigorously in planning applications although this will vary from development to development and Borough to Borough. For example, Barratt London has recently submitted a planning application in the London Borough of Barnet for a previously developed site in the Green Belt. The implications of the development for its effects on biodiversity has involved extensive discussions with the planning officers and their specialist advisors. The application was accompanied by a chapter on biodiversity in the Environmental Impact Assessment which included extensive surveys. The planning permission will include various conditions to preserve and enhance biodiversity. The application also involved extensive negotiations with third parties including the London Wildlife Trust. As part of the design of all of our schemes a Biodiversity Action Plan is developed at pre-planning stage which identifies species already on site, those which can be encouraged to establish on site and sets out a strategy for the implementation of mitigation measures during the construction phase and post occupation.

Question 2:
To what extent and how effectively are ecological mitigation measures implemented and maintained in completed housing developments?

Our developments typically incorporate a range of measures from brown roofs and nesting boxes to meadow planting, de-culverting and naturalisation of watercourses and many other such features which often form a focal point and pivotal part of the amenity space. Whatever the form, the maintenance of these features will fall under the regime for the residential management company where they are part of the development estate.

Question 3:
How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

We are of the opinion that existing planning policy at national, regional and local level works well in relation to biodiversity and no further legislation or planning policy is necessary.

Question 4:
What benefits does biodiversity bring to your housing developments, for example, increasing prices paid for properties?

The more significant features, for example de-culverting and naturalisation of water-courses passing through or nearby developments, have a very positive and tangible impact on desirability and as such, demand for properties and sales values. Such features create an oasis in ecological terms and high quality amenity for the development and surrounding neighbourhood. The impact upon dense urban schemes is particularly beneficial and the creation of habitats can also provide an opportunity for study and learning for the wider community which may not otherwise exist.

I hope that you find our replies of some use and please do ask for further details or specific examples should you require them.

Yours sincerely

Mike Scott

MICHAEL SCOTT
TECHNICAL DIRECTOR

Housing Committee Rapporteurship Minutes – Biodiversity in new housing developments

Informal meeting with the Landscape Institute
Tuesday 25th October 2016 12pm – 1pm approximately

Contact
Charlotte Harrison, Assistant Scrutiny Manager – extension 4456

Venue
Leonie Cooper's office, 7th floor

Attendees
Leonie Cooper AM (Rapporteur – Housing Committee)
Charlotte Harrison (Assistant Scrutiny Manager – Housing Committee)

Stephen Russell (Head of Policy at the Landscape Institute)
Noel Farrer (Former President of the Landscape Institute, landscape planner and designer, with a focus on estate renewal and new housing developments)

Minutes

Green infrastructure (GI) and biodiversity

- Green infrastructure is the approach to landscape planning, design and management which delivers a wide array of benefits – including enabling biodiversity enhancements.
- But importantly, additional benefits can be delivered simultaneously. It is a highly efficient approach to land use
- GI could be the delivery mechanism for multiple different agendas
- The amount of people (i.e. density) can have a negative impact on the quality of the place
- Including biodiversity, landscape and GI in developments brings people back to nature, bird song and seeing seasonal change in the environment
- The term biodiversity is very niche and possibly puts people off from engaging with it
- Berkeley is keen on landscape as it gives their developments higher values and speeds up the sale of properties – kerb appeal
- There are strong links to this in the London plan and Infrastructure plan

Development Corporations

- Old Oak and Park Royal is an area of opportunity for embedding green infrastructure and biodiversity into a large scale development
- Current aspirations for the development are unclear and there is a focus on the Ealing Local Plan for guidance
- It is thought that the GLA believe they do not have full control and this may be why there are barriers to implementing a clear vision
- Developments at Old Oak and Park Royal are coming through quickly and private developers may be putting on pressure on the GLA to get planning through in order for development to start
- The land at Old Oak has been divided into a number of separately-packaged sites so is not allowing for an overall vision for the whole site

- The LLDC and Olympic Park had a clear vision and aspirations from the beginning through the Olympics. Landscape expertise was instrumental – from writing the brief, the appointment of planning and design teams and having an 'intelligent' client.
- Green infrastructure led the LLDC view on development - time and money was spent removing contaminated land

Developments in London

- Vauxhall – there was significant encroachment on the green space by the developers and the development was developer driven, missing other key infrastructure needs. It is described as an "opportunity area" and this may have impacted the view taken on biodiversity
- Ram Brewery – historical properties have been lost to proper prominence by poor design, vertical walls and tower blocks
- Winstanley Estate – the masterplan currently requires 4.5 hectares of park and is delivering 2,600 homes
- Woodberry Down – A community management company has been set up and joint working with the London Wildlife Trust and Thames Water has ended in improved wetlands, with access for recreation as well as involvement in improvements for nature by local people
- Battersea – the developments main area of green space is a roof park and the river frontage
- Private sector is shifting aspirations due to the funding available

Design, landscaping and planning

- Design reviews completed for smaller schemes could be a vehicle for change in larger developments?
- There is a tendency to reinvest in social housing but not the surrounding environment
- Masterplans sometimes do not capture or deliver a sense of place, or deliver quality of life

Supplementary planning guidance

- This could be a vehicle for change and highlight the cross-cutting nature of biodiversity
- It would challenge sceptical views on biodiversity, moving from the current situation with some developers and LAs where it is *either* landscaping or social and affordable housing, due to claims of impact on viability / return on investment

What are the blockages?

- Some developments do not have a clear vision so delivery is sometimes poor
- Developers do not believe they will reap financial benefits at the point of sale, so do not include it in their viability assessments as they do not wish to spend time and/or money on something they view as an add-on or unnecessary

What does success look like?

- Strong aspirations are needed at the beginning of any project but these need guardianship throughout the development process to ensure they are realised
- Green infrastructure and biodiversity need to be included pre-plan
- Including biodiversity in developments has a positive impact on the kerb appeal of a development, as well as a positive impact on nature and the people who live there
- Joined-up thinking is needed and GI needs a masterplan for the whole of London

SUSTAINABLE HOMES
research • accreditation • consultancy

Sustainable Homes response:

Call for evidence – Enhancing biodiversity in new housing developments

for every home to encourage MORE SUSTAINABLE LIVES

October 2016

SUSTAINABLE HOMES
research • accreditation • consultancy

Contents

About Sustainable Homes

Sustainable Homes is one of the UK's leading sustainability organisations, carrying out high profile research, training, bespoke consultancy and providing industry leading accreditation through SHIFT We help landlords, Government, the housing sector and corporate supply chains take steps to improve their environmental performance, engage in groundbreaking research and network across the sustainability sector.

Our purpose is for '*every home to encourage sustainable lives*'. Homes are responsible for around 25% of overall emissions in the UK but this can be reduced by addressing poor design, inefficient heating systems and educating residents. The COP 21 Agreement marks a step change in the approach to reducing dependence on fossil fuels and cutting carbon emissions. 2016 is set to be the hottest year on record; there are 188 signatories of the Paris deal and over 25% of World Bank investment is set for projects relate to climate. Action is needed now – with fossil fuel-intensive and dependent industries coming under more scrutiny, this pressure will be felt further down the supply chain over the next few years.

We deliver our purpose through:

- Providing industry-wide accreditation in the form of SHIFT with a proven track record of improving client's environmental and business performance
- Delivering high quality, high profile and impactful research that has influenced policy and helped raise the profile of our corporate partners
- Providing expert and bespoke consultancy making a difference to a client's business and their customer's homes whilst delivering insight and value
- Providing accredited training courses on housing standards, retrofitting, energy efficiency, climate change adaptation and other issues
- Being the trusted, independent thought leader of the sector – influencing Government, the supply chain and other stakeholders through advocacy, industry insight and campaigns

Our response to the call for evidence on *Enhancing biodiversity in new housing developments*

Sustainable Homes welcomes the opportunity to submit a response to the London Assembly's call for evidence on *Encouraging biodiversity in new housing developments.* We have responded to each question with as much detail and insight as possible, based on the SHIFT accreditation responses and our own experience and expertise. Some questions were easier to respond to than others, but we have tried to give as much information as possible. We have responded to question 1-7, but have not entered a response to question 8 as we feel this has been covered in other areas.

Quantification remains an issue and whilst this is not an end in itself, the better we can quantify the benefits of enhanced biodiversity alongside the qualitative impacts, the easier it is to enforce and grow. Overall, we feel that the Mayor's existing policies have already led to an increase in biodiversity in new developments and an enhancement in ecology. Even as recently as ten years ago green roofs were rarely seen on planning drawings or CGI diagrams. However, there is inconsistency across the spectrum of new developments in London, often influenced (positively or negatively) by the attitude of each local authority and the strength of its policies; the developer's approach; the priorities of the client; and the often underestimated influence of sales directors being more concerned with aesthetics and sales values.

1. Why is it important to encourage biodiversity in new housing developments?

There are a number of reasons why this is vital on new developments. The pressure on development space in London means that people having access to quality space can be central to a scheme's success or failure. Biodiversity provides huge co-benefits and can provide amenity space, health benefits, climate resilience, educational resources, aesthetic benefits and property values (*Demystifying green infrastructure*, UKGBC, page 12, http://www.ukgbc.org/resources/publication/uk-gbc-task-group-report-demystifying-green-infrastructure) and fosters a sense of pride within the community that brings other social benefits too.

The quotation below is from the UKGBC report of Green Infrastructure:

> *GI can increase the value of land and property. This provides benefits for both sale and rental markets for the client. This can also benefit the local authority by increasing the value of the land, therefore encouraging inward investment, which can help in processing the planning application more swiftly. Well planned improvements to public spaces encompassing GI within town centres can boost commercial trading by up to 40%.....Indirect economic benefits felt by the planning authority include, NHS mental health treatment, benefits for farming subsidies (improved pollinators, improved crop yields, cheaper food).*

2. How rigorously is biodiversity considered in planning applications and agreements?

We view the enforcement of agreed planning as more of an issue than in planning applications. It is however considered at early stages in planning and design and the use of ecology consultants is standard practice. However, it is often given lower priority by clients and contractors – seen as a 'nice to have' rather than a 'need to have'. The focus is more on the delivery of units and tenure mix rather than enhancing existing biodiversity. Whilst we do not view this as being either right or wrong it can be viewed as a burden rather than a duty.

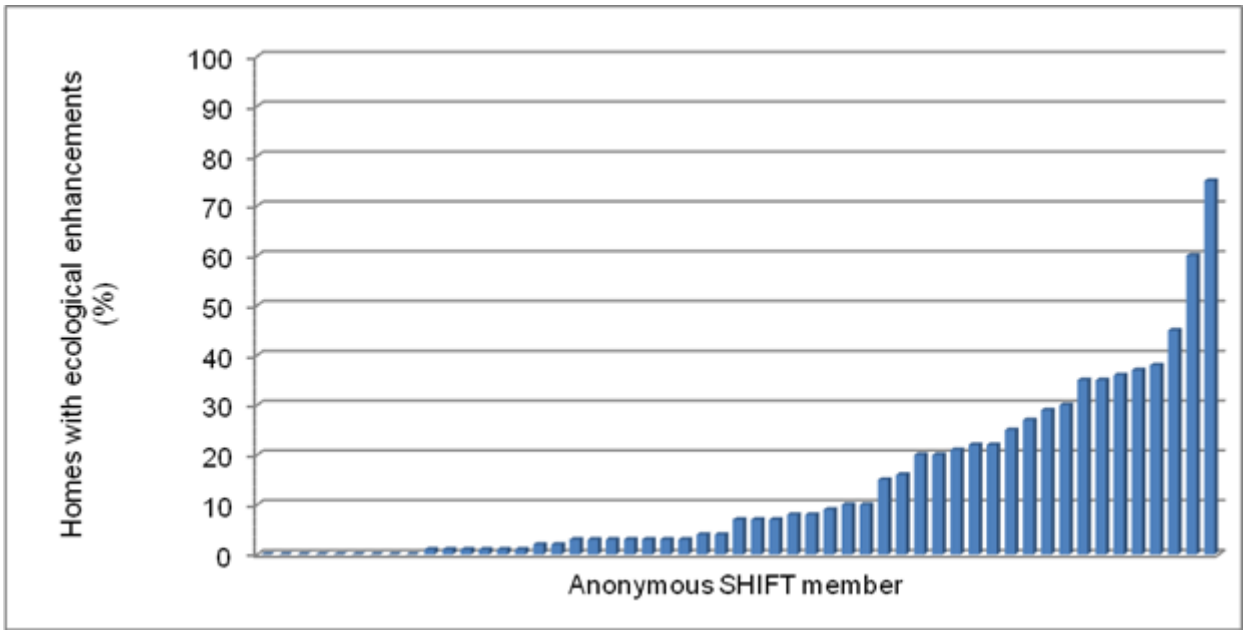
As stated, ecological assessments are standard and recommendations are there to be implemented. However, unless these are enforced by the planning authority then biodiverse green roofs will soon be costed or designed out to become brown roofs. Planning authorities do not have the resources to enforce. In this respect the duty of the GLA and its policies should be to impose a minimum standard or introduce a scoring system such as the Green Space Factor or Green Points System that attaches a biodiversity or ecological score to that scheme. This would then have to be publicly displayed and promoted in sales brochures and identified at outline planning, and would be subject to scrutiny at the final planning stage.

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

That is dependent on a number of factors which are not standard or universal across schemes. For example:

- the expertise and strength of local planning policies (biodiversity action plans, tree strategies)
- attitude of developer
- size and type of scheme
- can be influenced by existing ecological or biodiversity pressure or need (bats, birds etc)
- type of scheme – large-scale regeneration; small in-fill site; single tenure development

The simple fact is that we do not know. Not all clients or project initiators keep a database of ecological or biodiversity enhancements. In relation to Sustainable Homes' clients through SHIFT we ask for performance through an ecological enhancement metric. This is one of the most underreported and hardest to evidence of all of the metrics within SHIFT.



Our metric requires landlords to identify the neighbourhoods with ecological enhancements (conversion of amenity land into food growing areas and allotments; requiring contractors to build new homes with ecology points in the Code for Sustainable Homes; having dedicated planting schemes in care homes with herb and food gardens; tree surveys; green roofs, living walls; turning garage areas into communal gardens) and the number of homes within that neighbourhood who potentially benefit from that ecological enhancement. However, despite this metric having appeared in the most recent SHIFT assessments over a period of 4 years, the percentage of homes within our client base with homes benefiting from ecological enhancement improved by 5% to 13%. Given that our clients represent over 1 million homes this is a poor return in terms of ecology. This also does not take into account that clients may be underreporting because of lack of knowledge of ecological enhancements or where they have been included.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for more biodiversity?

Strengths

- Recognised as an area on a macro level that needs high level policy and direction
- Simple and clear and not too prescriptive

Weaknesses

- Could actually do with being slightly more prescriptive
- Minimum standards is an area that could be improved
- Wording and phrasing could be stronger – 'wherever possible' for example leaves too much wriggle room
- Clause E could be stronger – 'no net loss' would be better. In exceptional circumstances 'compensation' is an option but in our view should not be a viable alternative in any circumstance
- Developers and clients should always be obliged to enhance rather than simply maintain (the latter should not be an option)

- More needs to be said about connection and networking between sites. This is often neglected in proposals as cross LA boundary considerations are not always present

What is actually key is local authority interest – do they have a biodiversity action plan that is current and workable?

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

All relevant policies within the Mayor's domain should include a reference to biodiversity. It has been encouraging that recent messages coming from the GLA have made links between separate environmental policies. There needs to be better identification and linking around biodiversity policies and other general policies. In today's climate, in order to make the case for sustainability as an area for action to be taken seriously: we are having to work harder to link it to wider business and other benefits. Therefore biodiversity should not be sold exclusively as biodiversity – what are the co-benefits?

London is already very biodiverse, nevertheless it is important to maintain a balance of nature alongside new development, e.g. green roofs mitigate buildings' overheating, cleaning air, surface water runoff as well as habitat.

One of the areas where London lacks some direction is in terms of accessibility to nature. This is in terms of both public and private ownership, but also in terms of the placement of 'new' green or biodiverse space. In the case of the former, amenity space on new schemes is at risk of being segregated or cut off from users of a certain tenure class. In the case of the latter for example, Swedish and German cities have a better access to green roofs on top of buildings. In the UK there is not usually the same rights or opportunities of access (though there are some isolated examples).

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

Advantages

- Simplicity and unambiguity
- Reduces developer scope to negotiate out enhancements

Disadvantages

- Potential for shoehorning as with renewables therefore reducing their effectiveness and popularity. There would then need to be an allowable solutions approach to avoid this
- Will require some policing to ensure its ecological benefit is there to stay. E.g. a small raised bed on a housing estate looks great on an early drawing, but may become an electrical substation in a later drawing; just as Merton Rule renewable schemes sometimes proved useless after completion.

7. **What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes 2? - Are there disadvantages to such schemes? - We are particularly interested in evidence on how they could be introduced in London and what effects they might have.**

- There is a need to ensure that any offset areas directly benefit the people who are affected by a new development. If this is not feasible then offset projects should be limited to the local authority area in which the development is based, and the authority should have a database of prioritised areas where offsetting would be acceptable
- The Natural Capital Protocol is an existing methodology that can be used. The first stage quantifies the human wellbeing benefits of natural capital (e.g. green open spaces). The second stage converts these into financial benefits
- In general, biodiversity and other policies should be focussed on improving life satisfaction of people. ONS data shows that in London, this is woefully low compared to other European countries. Focus on wellbeing would allow easy inclusion of biodiversity into other policies and hence no need for a separate strategy.
- Sustainable Homes advocates using a Green Space Factor or Green Points System (http://malmo.se/download/18.d8bc6b31373089f7d980008924/1383649554866/greenspacefactor_greenpoints_grabs.pdf) as an alternative to make it clear for planners, developers, clients, purchasers and renters the value of the biodiversity on the proposed or completed development. This provides a direct comparison between schemes and would encourage developers to improve the biodiversity performance of their developments through essentially, indirect competition. As with the Code for Sustainable Homes, the existence of a points system simplifies the reasoning that motivates the required effort to improve biodiversity on a site.

Thank you for giving us the opportunity to respond to this call for evidence.

Yours sincerely,

Bevan Jones | Managing Director | **Sustainable Homes** (

The Sustainable Homes team

Bevan Jones, Managing Director

Bevan has over 10 years of working in sustainability in public and private sectors in which time he has contributed to a number of key studies and reports such as the UK's first Climate Risk Assessment, The Economics of Climate Resilience for DEFRA, CBx's Heat Networks Study and Future of London's Managing London's Exposure to Climate Change study.

Before joining Sustainable Homes Bevan spent 3 years at Catalyst Housing delivering the sustainability strategy and embedding sustainable approaches to business. He has worked for Dutch consultancy, Ecofys where he delivered work for the UK Government and contributed to EU projects. Bevan began his career in local government working on a range of climate and sustainability projects.

Expertise: Climate change adaptation | Climate change and business planning | Sustainable organisations | Carbon management | Sustainability strategy | Consultancy

Sarah Daly, Director of Strategic Sustainability & Partnerships

Sarah has a varied background having spent over 20 years running an award-winning business consultancy, which latterly specialised in sustainability in the built environment for the public and private sector. She was managing director of Heath Avery Architects for three years and then returned to strategic sustainability with her own consultancy mygreeneye, whilst completing an MSc Sustainable Development.

Specialisms include: highly commercial strategic sustainable development; partnership development; circular economy, disruption and sustainability strategy; CSR, corporate sustainability, marketing strategy and communications; corporate affairs; lobbying and policy development; transformational change; supply chains and stakeholder engagement programmes.

Expertise: Strategic & Corporate Sustainability | Sustainability Marketing | Consultancy | Supply Chains & Stakeholder Communication

Richard Lupo, Senior Sustainability Consultant

Richard is a Chartered Environmentalist and Full Member of the Institute of Environmental Management and Assessment (IEMA). At Sustainable Homes he has carried out over 50 full sustainability assessments of social landlords using the SHIFT standard. He has also facilitated the design of housing stock energy efficiency improvement strategies using the CROHM format. Other consultancy work includes calculating and making recommendations for improvement of office carbon emissions and business fleet emissions. In addition, he is an experienced Code for Sustainable Homes (CfSH) assessor.

Richard has trained and qualified over 300 CfSH assessors as well as training building professionals on Housing Quality Indicators and sustainable refurbishment. At Imperial College London Richard developed a waste silt recycling process, gained an MSc in Environmental Engineering and studied the impact of new regulations on hazardous waste disposal.

Expertise: Environmental accreditation | Training | Auditing | Consultancy

Joana Malato, Marketing and Communications Manager

Joana has joined Sustainable Homes whilst completing her PhD in Sustainability Marketing with a focus on the cement industry and the adoption of more sustainable materials. Joana has an MSc in Strategic Marketing (Cardiff University) and has broad marketing experience having previously worked in different marketing roles, both in-house and agency, and as a lecturer at Cardiff Metropolitan University.

At Sustainable Homes Joana leads on marketing and communications through maintaining the website, developing and implementing different strategic and marketing campaigns, and coordinating Sustainable Homes' events and exhibitions.

Expertise: Marketing and communications | Strategy | Digital marketing | Event management

Bill Wright, Sustainability Consultant

Bill has a background in renewable energy and energy efficiency, having gained a BSc in Environmental Science from Kingston University and an MSc in Renewable Energy from the Centre for Alternative Technology (CAT) in Wales.

He has helped to implement vocational training courses for renewable energy technicians on the EU's 'Transfer of Innovation' programme, and also worked as a Solar PV designer and installer. Bill was the lead for Sustainable Homes' high profile research, the National Energy Studies I and II. These focused on energy efficiency through behaviour change, and the relationship between SAP and how residents use energy.

He has completed more than 20 sustainability assessments for landlords within the SHIFT accreditation scheme, as well as several pieces of consultancy for clients involving resident engagement, domestic and commercial energy monitoring, and thermographic imaging.

Expertise: Energy monitoring | Research | Environmental accreditation | Consultancy | Training

Begum Bidik Nash, Sustainability Consultant

Begum is a mechanical engineer. She also has an MSc in Sustainable Energy Technologies and Management with Distinction (Brunel University).

Previously, Begum assisted European clients on waste management, solar energy, energy efficiency and other issues and has worked with Bill in carrying out the National Energy Study (NES) - a behaviour change study of 500 homes across the UK.

Begum is also responsible for carrying out in depth environmental auditing through SHIFT and is currently helping a high profile housing association develop their sustainability strategy.

Expertise: Energy monitoring | Research | Environmental accreditation | Consultancy

Emma Jones, Marketing and Communications Assistant

Emma has worked predominantly in communications and research, and has lived in 8 different cities in four different continents. Emma has a wealth of experiences, which she brings to the team and to the delivery of our successful national conferences and events on a range of sustainability and housing issues. She has also led her local rugby team to win the league two years in a row!

Emma studied Arabic and Middle Eastern Studies at the University of Leeds, and has just completed and MSc in Inequalities and Social Science at the London School of Economics. She is interested in the social impact of policies and businesses. Emma also speaks Spanish, German and Arabic.

Expertise: Website management | Events organisation | Communications | Languages

London Borough of Sutton

Environment, Housing & Regeneration Directorate
Executive Head of Environmental Commissioning – Matt Clubb

Your Ref:
My Ref:
Please ask for: David Warburton

Date: 12 October 2016

Please reply to:

London Borough of Sutton
24 Denmark Road
CARSHALTON
Surrey
SM5 2JG
www.sutton.gov.uk/biodiversity

Charlotte Harrison
Assistant Scrutiny Manager
Housing and Planning Committee

RE: London Assembly - Biodiversity Investigation
Call for Evidence

Dear Charlotte,

Further to your recent email of 3rd October to stakeholders, Elizabeth Milne, chair of ALGE (Association of Local Government Ecologists) forwarded it on to ALGE members working as LGE's within London.

I have provided below my thoughts on the questions asked. Please note that this is not an official Sutton position, rather the opinions of a professional ecologist working for a local authority.

My second caveat is that almost none of the opinions or assertions within the following have independent verification or objective support provided. Thus is mainly because I do not have the time to go through and provide links to all suitable evidence.

The following should, in the main, be taken as a series of thoughts and feelings on the subject, rather than a dispassionate assessment but I hope that the allusions I make are readily recognisable to real world issues with significant evidence for support (i.e. CABE Space studies on ownership of green spaces and reduced ASB; improvements in patients with mental health issues having access to nature and green spaces; decline of London's house sparrow population etc. etc.)

Call for Evidence:

1. Why is it important to encourage biodiversity in new housing developments?
    - Well documented benefits to UHIE, thermal regulation and insulation, water attenuation, feeding stations, peace of mind and aesthetics (depending on what has been put in on site). It is vitally important to ensure there is nature

where people are, so that they learn to share land with wildlife and habitats (rather than the 'them and us' situation, where nature is fine to most people, as long as it is in the countryside or can watch it on Springwatch).

2. How rigorously is biodiversity considered in planning applications and agreements?
    - Depends on the planners at each LPA! Some are more conscious and conscientious than others but, in my experience, this is mainly as a deferral to myself as 'the expert'. Without Local Government Ecologist support (or through an SLA with a local Wildlife Trust, for example), I do not know how rigorously planners would consider biodiversity. I think that it would not be as effective as with a LGE, as planners are hugely stretched on the mass of issues associated with most applications that require resolution and biodiversity is often too complex and detailed for most planners to adequately deal with.
    - The upshot of consideration starts at the value that is placed on biodiversity and natural habitats at fundamental levels: that of government and national policies and wider governmental attitudes to natural capital; the way that planners are educated and trained and the emphasis placed on planners through institutions such as the RTPI in regards ongoing CPD and competence, particularly in regards increasing concern over sustainability issues (of energy, water and the natural world)

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?
    - Difficult to quantify, as I am not aware of any records held by Planning in Sutton as to what has actually been implemented, based on recommendations made by the Biodiversity team. We hold records of recommendations made and there is sometimes a correlation with this database with signing off conditions on applications but there is no specific record.
    - I am also not aware that there is a specific programme of enforcement to check that conditions have been implemented correctly (including landscaping and planting regimes etc., let alone biodiverse roofs). Ground trothing seems to me to be absolutely vital to ensure what has been proposed and signed off at condition level is actually delivered and fit for purpose but I do not have time to do so and I can't believe that Planning have sufficient resources (or expertise) to make such judgements.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?
    - Overall, I think 7.19 is a strong policy, with clear aims. The issue, in my opinion, is not with the policy *per se* but with the regard developers and planners take towards this. It certainly does not seem the case that '…planning for nature from the beginning of the development process…' is applied to most of the applications I look at; instead, I retrospectively apply it to say 'you've not considered NPPF Para 118, London Plan 7.19, or SDP DM17, therefore, I recommend that…'. Clearer guidance on making consideration of 7.19 and associated policies mandatory (perhaps through an SPG / SPD) may be of use it raising the profile of planning for nature from the start.

- I think that one of the issues is that there is no mandatory obligation for undertaking or creating a 'net gain'. The NPPF references moving away from 'net loss' and towards 'net gain', as does the London Plan but it is not built into the mind-set of developers that they MUST do something. The BAF in Berlin and other schemes (even appropriating the DEFRA Offsetting Trial to try to quantify mitigation and enhancement, as I a sometimes do) must help in providing a clear goal to work towards. It seems to me that if there is an ecological consultant working with the developer, their recommendations are, often, generic (not site and landscape specific) and generally consist of sticking up a few bird and bat boxes and calling that enhancement. Without a clear quantification of what needs to be created, it is difficult to argue that the proposed 'enhancements' are not really anything of the kind.
- The Mayor's Biodiversity Strategy is good but outdated and I have no idea of the relevance and impact it currently has on development and planners within London i.e. does anyone know it is still live and applicable, other than a handful of LG Ecologists?
- In regards protection, I fully understand the reasoning to apply a hierarchical nature on the protection weighting on SINCs but this often seems, in practice, to permit development in, on or affecting lower order SINCs (Borough Grade or lower), as the weighting is reduced. This may mean that there is the danger of 'death of a thousand cuts'. It is well documented that targeted nature conservation has worked very well (bittern, cirl bunting, chough etc.) but across Europe, the most common species have declined most[1] because 'faster decline of common species is perhaps expected, considering most efforts in conservation are directly aimed at rare species.' In my opinion, we shouldn't forget the rare or scarce species which receive targeted works but we also need to work holistically to ensure the common species are maintained (cf. house sparrow crash in London and other major cities). Preservation of local sites of 'lesser value' are an important resource in this regard but are, I think, being gradually eroded.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?
    - As noted above, I think clearer guidance, the creation of mandatory policies, planning for net gain in all developments and reduction in erosion of lower tier SINCs may all contribute.

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely a Supplementary Planning Guidance/SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?
    - I think I've outlined some of the advantages above and I can't really think of disadvantages, perhaps excepting that there is ever more information for developers to absorb, perhaps adding to complexity in balancing the three 'legs' of the social, economic and environmental 'stool' (which, in practice, is heavily skewed against environmental anyway…)

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1 http://ec.europa.eu/environment/integration/research/newsalert/pdf/common_European_birds_have_declined_more_rapidly_than_rarer_species_401na1_en.pdf

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes?
    - Are there disadvantages to such schemes?
        i. Yes. It commodifies biodiversity as to 'just another resource to exploit', often with little regard for suitable available space locally and timescales and funding for implementation and monitoring to ensure it functions correctly post creation and for decades afterwards. If nature can be 'bought', as perhaps demonstrated by these schemes, it loses resonance as 'somewhere or something special' in the public consciousness, not to mention the devastation to local species (be they common or with higher regard from local BAPs or on the NERC lists…)
    - We are particularly interested in evidence on how such schemes might be introduced in London and what effects they might have.
        i. I have no personal experience of offsetting but would be concerned if they were considered in Sutton, as the space for mitigation schemes just isn't readily available. In more urban areas, space is often even more limited, leading to offsetting somewhere removed from the locale and a reduction in green space for local residents and wildlife.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?
    - Increases in niche availability, edge effects, connectivity for more mobile species, feeding stations etc. The downsides could include population sinks, where areas of GI are suitable for small scale breeding but not large enough to be self-sustaining, thereby depleting individuals from donor populations

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?
    - Increases in:
        i. Ownership and respect
        ii. Education and understanding and empathy (see vii),
        iii. mental and physical health (through people's seeming inherent connection with nature – E.O. Wilson's 'Biophilia', although the case studies on the health aspects are a proxy for something very difficult to verify scientifically), particularly if they are engaged with management and upkeep,
        iv. rest and recuperation,
        v. cooperation,
        vi. positive outcomes to input (i.e. seeing management / interaction leading to increased species diversity, habitat change etc., in both the short and longer terms),
        vii. 'sharing' (i.e. almost being forced to consider that there is something else out there in the world, not just them and their solipsistic views of priorities)

I hope that the above assists in providing some consideration of the issues from an ecologist 'at the coal face'.

Kind regards,

D. Warburton

David Warburton CBiol MRSB FLS MCIEEM
Biodiversity Manager
Biodiversity Team
LB Sutton

Meeting with Valerie Selby, Wandsworth Council

Policy and Planning

- 20 boroughs do not currently have biodiversity or ecology officers.
- There is a dedicated London Borough Biodiversity Forum which has seen this decline.
- CIEEM has best standards for guidance, which includes a competency framework for how to value ecology.
- Another issue is that ecology may not always sit within a planning department, and may be within the parks department for example, so may not be involved in planning decisions.
- The Biodiversity Strategy 2002 for London needs refreshing.
- Local Authorities are not obliged to have a Biodiversity Action Plan (BAP) but they must have a due regard for biodiversity.
- The Sustainable Urban Drainage Systems (SUDS) is a positive example of how adaptations can become the norm in planning applications.
- Local Authorities have different ways of working
- The All London Green Grid SPG is bottom up, looking at projects that were already in place. More could be done to make this SPG more strategic.
- The work done in the Business Improvement Districts (BIDs) is a good example where you can prove the success and value for money from green infrastructure.

Barriers

- Perceptions that mitigation will take a long time is seen as a barrier, but the maximum time this should take is one year if it is done at the right time.
- Planning applications do not include any or insufficient evidence, but baseline desk surveys should be done with all applications.
- Boroughs do not have money to manage biodiversity or open areas.
- The cost of maintenance is a factor which developers take into account. This maintenance is normally done through management companies set up after completion of the site.
- There are problems with monitoring. Monitoring is not actively done so it is difficult to know if what has been implemented has had any effect on biodiversity.

Guidance

- Support and guidance needs to be accessible for a range of people. Planners need to be able to reference what is required.
- Developers need examples of where biodiversity could be included; this could show a step by step process for developers.

From:
To:
Subject:
Date:
Attachments:

Hi Charlotte,

Thanks for your email.

We've worked on two national projects that have looked at how best to mobilise developers' data throughout the UK. One was with BuildUK which looked at what data were being generated, and who ought to bear the time cost in turning them into useful outputs (the developer, their consultants, or local environmental records centres). It resulted in BuildUK revising their ecological scope of works to make it clear that BuildUK members should share data in local environmental records centre-ready format. This enables environmental consultants working on the BuildUK members' behalf to charge for the time taken to comply with this, and LERCs benefit from receiving records centre-ready data. I'm not sure if the scope of works was ever published though due to changes at BuildUK.

The other longer term project is via the Biodiversity Data Users Group (BDUG), convened and chaired by Sally Hayns, CEO of CIEEM. Data sharing is part of the CIEEM code of professional conduct (http://www.cieem.net/data/files/Website_Downloads/Code_of_Professional_Conduct.pdf) and BDUG has been collaborating on this for a while now. Again, the challenge is to ensure developers are required to make their data available so that they cover the cost of the work in making it happen. Otherwise, CIEEM members or local environmental records centres have to do this, and we don't have the resources.

One of the outputs of BDUG is the consultants portal (http://www.consultantsportal.uk/), which is a straightforward means of sharing data for consultants, but it's not widely used yet. Another approach has been to make data sharing a condition of licences, as per Natural England's great crested newt licence https://www.gov.uk/government/collections/great-crested-newt-licences, but this isn't working 100% brilliantly either because Natural England don't have the capacity to ensure licence conditions are being met.

At a London level, GiGL has worked with members of the London Boroughs Biodiversity Forum, some of whom have written data sharing into their local planning guidance, which means the Borough can pass developers' data on to us, but it is often buried in hundreds of pages of written report and requires a lot of work to add to our data holdings. We've also explored harvesting reports from the planning portal and other online sources, but intellectual property rights and copyright prohibit this.

The silver bullet *could* be a requirement on developers to share data, which means they'll cover the cost of the production of GiGL-ready data via their environmental consultants, plus a means of monitoring that data sharing has happened, which we could do here at GiGL.

Happy to talk about it on the phone if it'd help.

Mandy

****

Mandy Rudd
GiGL Chief Executive
Greenspace Information for Greater London CIC (GiGL)
the capital's environmental records centre

Director
Association of Local Environmental Records Centres (ALERC)

GiGLLogoSMALL

AccreditationEmailFooterSMALL

From: [redacted] [mailto:Charlotte.Harrison@london.gov.uk]
Sent: 02 December 2016 10:55
To: Maria Longley
Cc: Mandy Rudd
Subject: RE: London Assembly - Biodiversity Investigation

Hi Maria

Yes that would be useful if you could send something over as an example.

Best wishes

Charlotte Harrison

Assistant Scrutiny Manager – Housing and Planning Committee

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A: Greater London Authority, City Hall, The Queen's Walk, London, SE1 2AA
[redacted]

ARUP

Subject	Encouraging biodiversity in new housing developments
Date	30 September 2016

London Assembly Housing Committee consultation

The London Plan and supplementary planning guidance offer strategies for protecting biodiversity and enhancing green infrastructure within the strategic framework for the development of Greater London over the next 20 – 25 years. Within the context of the Mayor's commitment to substantially increase the number of homes for Londoners, including supporting housing associations to make available 80,000 new homes a year, the provision of accessible and biodiverse green space is of key consideration, particularly in areas identified as deficient in access to nature[1].

The benefits of regularly accessing natural green space have been widely recognised. According to the London Sustainable Development Commission's (LSDC) Quality of Life report[2], access to urban green space is critically important to the wellbeing of London's residents. The benefits are wide ranging. Physical wellbeing is improved as space for exercise has shown indication of reducing obesity, reducing the risk of coronary heart disease and strokes, decreasing blood pressure and lowering cholesterol, as well as better overall perceived health[3]. Furthermore urban green space has also been shown to reduce stress and mental fatigue through an aesthetic 'restorative effect'[4].

The benefits of urban green space also extend beyond the individual as there is evidence that if it is of sufficient size then social benefits can be seen. These arise through the provision of amenities, such as playgrounds which enhance the cognitive and motor skills and socialisation of children[5], and through greater social interaction and community cohesion as free and open space supports an increased sense of belonging to an area[6].

The London Plan provides a solid framework to guide biodiversity protection and enhancement efforts in the Greater London area. However, we are let down by the mechanisms to practically implement ecological enhancement measures, which are too often seen as "nice to have" rather than fundamental to a development.

Crucial to the success of any guidance is the ability of planning departments to rigorously enforce it, which requires the expertise of competent Ecologists and thus the funding for those roles whether internal or outsourced. Currently the weak link is the significant lack of ecological expertise within some planning departments of a number of London boroughs, as identified by the London Assembly Environment Committee and All Party Parliamentary Group for Biodiversity (APPGB)[7]. Without this in-house expertise, the assessment and enforcement of biodiversity considerations within planning proposals, no matter what the guidance is, is not sufficiently addressed.

[1] Policy 7.19 The London Plan

[2] London Sustainable Development Commission (LSDC) (2012) Quality of Life report Available at: http://www.londonsdc.org/documents/research/LSDC_QoLindicators_2012_Summary.pdf

[3] Richardson, D. and Parker, M., (2011) *A Rapid review of the evidence base in relation to physical activity and green space and health*. HM Partnerships for NHS Ashton Leigh and Wigan

[4] City of London Coporation (2013) City of London Review: Green Spaces – The benefits for London Available at: http://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/research-2013/Green-Spaces-The-Benefits-for-London.pdf

[5] Fjùrtoft, I. and Sageie, H., 2000. The natural environment as a playground for children. Landscape description and analyses of a natural playscape. *Landscape and Urban Planning 48, 2000, pp. 83-97*

[6] Konijnendijk, C., Annerstedt, M., Maruthaveeran, S., and Nielsen, A., 2013. *Benefits of urban parks a systematic review. A report for IFPRA*. Ifpra. [pdf] Available at: http://www.ifpra.org/images/parkbenefits.pdf

[7] 'Protecting and enhancing biodiversity in London' letter to former Mayor of London Boris Johnson (26 March 2015)

Arup Ecology have had the opportunity to work with clients who understand the fundamental role natural space can play in improving the economic and social aspects of a development and its users. Too often, the balance between economic, social and environment becomes tipped so as to reduce or eliminate any ecological commitments which are not mandatory. A holistic approach, ensuring the appropriate balance of all three aspects, is crucial to developing a green infrastructure network which works for developers and end-users. The recently launched Wild West End initiative demonstrates this holistic approach[8]. Some of the West End's largest property owners are working together to encourage wildlife back into some of the most iconic areas of London and creating greater connections with nature for residents, visitors and workers to enjoy. Those property owners are already seeing the benefits of this initiative in today's sustainability driven economy. However, it is important to understand the drivers for residential developers to also encourage biodiversity given that they often do not experience the resulting benefits as an end-user.

Currently schemes such as Code for Sustainable Homes exist to encourage the incorporation of ecological enhancements within residential projects. However, more often than not, the ecological aspirations of a project become diminished over time due to pressures resulting from other areas and it becomes a case of squeezing in the committed requirements rather than exploring ways the design can be holistically created so as to address all the needs of the end-users.

This consultation by the Housing Committee is greatly welcomed. Generally, we consider that current guidance and policy is not necessarily where the problem lies, but rather the mechanisms for enforcing it, as this is what is currently letting down the implementation of green infrastructure. Fundamentally, an attitude shift needs to occur, and for this to happen mandatory requirements, potentially in the form of green space 'factor' schemes, need to be developed and used, with the support of ecological expertise within planning departments. Should guidance be refreshed, it should be done in a manner which makes it clear for developers to follow and planners to source, and prescriptively state the expectations and requirements of policy.

Submitted on behalf of Arup Ecology

[8] http://www.wildwestend.london/

Meeting with Mark Hunter, Head of Strategic Development, Wandsworth Council

Barriers to biodiversity

- Pressures (political and from residents) to deliver new homes in some cases means that biodiversity gets pushed aside
- Pressure from developers on open space means that open space that is there has to work harder, for example, play space, so ecological value of a site will often decrease
- Conflicting priorities during a development may also mean that biodiversity planned at the beginning may not come to fruition

Biodiversity in planning

- Environmental Impact Assessments (EIA) often have a large chapter on biodiversity
- However it is not often clear when an environment statement is needed and is down to the Local Authority to decide
- Regulations around EIA are vague and change depending on the type of development, for example, brownfield sites and tall buildings
- Local Authorities have different ways of working and there priorities will be different – this will impact what they plan for
- Section 106 agreements would not be appropriate for this as developers may reduce the number of affordable homes they provide in favour of developers
- Some developers have said that the current section 106 agreements are too time consuming and there is a danger that creating more conditions would prevent the development of new homes

Green Infrastructure (GI)

- At Nine Elms GI was not done at a strategic level as it was difficult to impose a quota or similar due to several different developers being on site at different times
- A linear park has been developed at Nine Elms which increases the ecological value of the area

Housing Zones

- These zones normally develop homes through joint ventures between the public and private sector. Biodiversity is a difficult to promote to some developers and there is a potential to increase ecology and not the amount of housing developed

Management

- Long term management and maintenance of biodiversity and GI (for example the linear park) is sometimes difficult
- Funding this is a barrier – there are questions over using service charges, a trust or a developer management company
- Developers normally set up a management company but they would prefer low maintenance costs, which could lead to low ecological values

What can the Mayor do?

- A monetary value must be given to biodiversity in order to show the value to developers
- Links to air quality could increase the use of GI in London
- A single piece of guidance would be a good step and could include case studies and examples of best practice

From:
To:
Cc:
Subject:
Date:

It would be useful if you could explain the approach Mount Anvil takes to biodiversity in housing developments?

Creating a positive legacy is key to our business ethos and an essential part of this is the quality and diversity of the public realm we create. This includes landscape and biodiversity. Our approach to biodiversity is always taken on a site by site basis. As a mixed-use London developer we only develop brownfield sites, where there is often limited or no biodiversity. This provides us with an excellent opportunity to incorporate and enhance the biodiversity on the site within our developments. In instances where there are existing habitats or wildlife on the site or in buildings, we ensure that mitigation measures are appropriate to ensure that these species or habitats are not significantly harmed throughout the development of the site and look for ways enhancements can be made. From our experience biodiversity enhancements do not exist in isolation and they are always integrated within the landscape and public open space strategy that will sit alongside other elements such as play space provision and public open space requirements.

On our Hampstead Manor site, working very closely with the existing community and LPA, we have provided additional wild planting areas to increase habitat creation, replacement trees, alongside bug hotels and the addition of a pond. This compliments the historic setting of this unique development, which is situated in a SINC. Whereas on more urban, central London developments such as Keybridge house, we are exploring different opportunities to enhance biodiversity through integrating water elements and variations of plant species through a more contemporary landscape public realm scheme within this mixed-use development. Both these developments provide biodiversity enhancements but these are designed, delivered and planned in very different ways. This re-highlights our earlier point that that biodiversity enhancements should be considered on a site by site basis rather than a one size fits all approach.

We would be delighted to show you and your team around our Hampstead site once the landscape/biodiversity enhancements are complete.

Is biodiversity seen as an extra added cost to the development or does it have its own value (potentially increasing property values or similar)?

There are additional costs associated with biodiversity enhancements to developments, although these vary greatly dependant on the amount, type and area of enhancements proposed. The cost-benefits associated with these enhancements vary greatly from site to site. On larger strategic sites, there is perhaps more scope to deliver such enhancements, whereas in contrast, on smaller, constrained sites the opportunities are less so.

Our experience is that residents and communities want high quality, diverse green spaces to enjoy with good access to visible nature and local wildlife. This is strongly linked to creating high quality developments with landscaping areas that are well used and really valued by our residents. During design development, we put significant focus on soft landscaping and realise any opportunity to deliver biodiversity enhancements. In reality, this won't necessarily increase property values, rather improve the saleability of a development and creates an improved external environment which positively connects to its wider surroundings.

Is a stricter policy on biodiversity needed? Would it be viable for developers to implement and who would be responsible for maintenance?

Biodiversity should be considered on site by site basis rather than a one size fits all approach. In our view, prescriptive policies are not successful as they do not consider the existing environment and development context. For example, policies requiring green roofs are often redundant on tall buildings, as the quality of the micro climate at that level does not provide ideal conditions for insects. We should look to integrate biodiversity enhancements in a flexible way taking into account the challenges in delivering sites.

Other thoughts:

- Clear guidance from LPAs and environmental bodies when there is a requirement to deliver biodiversity enhancements
- On smaller or more challenging sites, adopting a flexible approach is essential to ensure that biodiversity requirements don't undermine other policy objectives such as delivering affordable housing and high quality design
- In our experience, there is little policy focus on management and maintenance of biodiversity and green spaces, and perhaps this is something to focus on and consider. This relates to the long term success of these environments and their legacy.
- The cost of the maintenance and management of completed developments will ultimately go onto the resident's service charge so it is important to look at low maintenance biodiverse landscape design options
- There should more flexibility in terms of the timings of delivery of landscape and biodiversity as it is often not possible to implement until towards to end of the construction period
- There may be opportunity to involve communities in the maintenance of green spaces as we have done on our Hampstead Manor site.

Jon Spring
Land Director

Greenspace Information for Greater London CIC
the capital's environmental records centre

Encouraging biodiversity in new housing developments

Thank you for the opportunity to provide feedback on the above consultation.

Greenspace Information for Greater London CIC (GiGL) is the capital's environmental records centre, a not-for-profit community interest company that works with partners, clients and the public to meet a range of environmental data service requirements to inform local, regional and national decisions affecting London's natural environment.

General feedback
GiGL maintain a London-wide data-holding representing many years of working in partnership with thousands of local and national experts, local groups, professional ecologists, and others who generate data on London's natural environment.

This evidence base contains datasets on urban greening features (green roofs and walls, rain gardens etc.), open space designations and land use, habitat location, areas of deficiency in access to nature, a species dataset that includes species important for planning.

GiGL data is available to act as an initial baseline. A commitment to update GiGL partnership datasets with new site and species information can demonstrate how the gains and losses in species, habitats, open spaces and protected sites, as a result of housing development will be monitored.

Specific feedback

How rigorously is biodiversity considered in planning applications and agreements?
Current best practice guidelines set out in the National Planning Policy Framework (NPPF) and the Chartered Institute of Ecology and Environmental Management's (CIEEM) code of professional conduct advocate accessing a robust and up to date natural evidence base at key stages of the planning application process.

GiGL holds this evidence base for London and our monitoring revealed that about 1% of planning applications in London have an ecological data search report commissioned from GiGL[1]. A recent research project carried out on behalf of the GLA suggests a significantly higher percentage of planning applications than are screened will have an effect on biodiversity.

To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?
This is unknown. Any measures or recommendations in planning applications are not submitted anywhere and there is no monitoring or reporting if the measures have been installed. Identifying future biodiversity gains would be easier if there was monitoring and a database to search recommendations would be helpful but these are not currently being submitted anywhere. GiGL could store the information about recommendations.

[1] http://www.gigl.org.uk/planning/data-searches-and-planning/

How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?
Work with the GiGL partnership to establish a long-term monitoring programme for London's natural environment. Up-to-date species, habitat, and open space data is vital to ensure the ecological baseline is robustly understood and the impacts quantified and assessed thoroughly. Monitoring planning applications for the impact and proposed mitigation and improvement measures would increase knowledge of what is happening in London.

What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?
One measure mentioned in the London Plan, areas of deficiency in access to nature[2], might be a useful addition to measuring this aim. Improvements in the biodiversity and quality of Sites of Importance for Nature Conservation (SINCs) will reduce the areas of deficiency which are calculated as areas where people have to walk more than one kilometre to reach an accessible wildlife Site of Metropolitan or Borough Importance.

[2] http://www.gigl.org.uk/our-data-holdings/designated-sites/areas-of-deficiency-in-access-to-nature/

London Assembly Call for Evidence

Encouraging biodiversity in new housing developments

www.landuse.co.uk

The London Assembly's Housing Committee has launched an investigation into the promotion of biodiversity in new housing developments. The committee will examine what the Mayor could do - during the ongoing review of the London Plan - to better protect, maintain, enhance and encourage new opportunities for biodiversity in new housing developments.

In particular, there is concern that current guidance focuses on protecting existing green spaces and biodiversity but '***does not properly promote ways of creating and increasing functional landscapes and wildlife habitats across the capital'***.

This document presents LUC's response to the Call for Evidence. Founded in 1966, LUC employs over 100 committed and experienced professional staff at offices in London, Glasgow, Edinburgh and Bristol. We provide expert and integrated advice on planning, environmental assessment, landscape design, urban regeneration, ecology and rural futures. LUC has particular experience of policy development, including in relation to biodiversity and Green Infrastructure, and the design, delivery and enhancement of open spaces in London and wider.

1. Why is it important to encourage biodiversity in new housing developments?

Importance of access to nature is well documented, providing a range of benefits, but in particular encouraging biodiversity on people's doorstep can maximise these benefits. Benefits include:

- Protection of biodiversity for its own sake, with evidence increasingly suggesting urban areas provide increasingly important habitats/reservoirs as declines are experienced in the wider countryside.
- Social benefits of diverse/high quality greenspace including mental and physical health; social capital
- Other environmental benefits associated with green space / habitat creation including water attenuation (addressing surface water flooding in particular), filtering air pollution, thermal regulation in face of climate change and increased hard surfacing (e.g. see Greening the BIDs programme - https://www.london.gov.uk/WHAT-WE-DO/environment/parks-green-spaces-and-biodiversity/greening-london
- Importance of a 'Green Infrastructure' approach in delivering multiple benefits

2. How rigorously is biodiversity considered in planning applications and agreements?

- Varying level of consideration / enforcement by LPA's subject to resource availability and particular the presence of in-house ecology expertise.
- Incidental evidence and experience of LUC suggests ecological expertise / capability to consider ecological issues has decreased, with implications of the robustness of assessment of planning applications, potential for impacts, robustness of mitigation, and importantly the appropriateness of proposed enhancement measures and whether this will indeed deliver enhancement.
- Consideration of protected species issues would seem to gain more consideration than wider habitat issues, given framework for legal protection and presence of best practice guidance which can be considered by officers.

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

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- See above re resource availability for monitoring / enforcement.
- Code for Sustainable Homes as previous mechanism for requiring design and implementation, and importantly with some level of monitoring/evidence required as to implementation. Although the mechanism was cumbersome and not necessarily based on sound ecological principles (for example in terms of calculating gains and losses) it did provide a mechanism for implementation, and a benchmark for LPAs to target.
- LUC have undertaken number of monitoring studies which have attempted to monitor the implementation of proposed mitigation as committed to in planning applications, but the findings largely highlighted the difficulty in tracking planning applications from pre and post consent. As an example, we attach a report prepared on behalf of the Natural England London Team in 2009 which sought to determine the implementation of mitigation and enhancement recommendations from NE on the ground.

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for more biodiversity?

- Mitigation of local biodiversity losses and small scale enhancement will not address the overall impact of large scale housing growth in the capital. The potential for funding, through developer contributions and CIL, is very significant and this opportunity must be captured. An ambitious vision and strategy is required, on a scale to match, for example, those of the City Corporation and its predecessors in creating Hampstead Heath and Epping Forest.
- Mismatch between policy and practice. While the policy framework provided by the London Plan and Borough Plans, there is often a mismatch between policy and practice. This may reflect a lack of understanding of the policy context and/or how to apply the relevant policies in practice in relation to specific planning applications.
- Guidance to assist decision making would be of help here, particularly given the decline in biodiversity expertise within LPAs.
- Similarly guidance may help address the relatively weak support for enhancement within policy, which is often expressed in terms of providing encouragement rather than requiring or expecting enhancement to be delivered. There is some support for the provision of enhancements provided in legislation through the Biodiversity Duty imposed on public bodies within the Natural Environment and Rural Communities Act 2006 although this is fairly weak legislation.
- Attempts have been made to provide further support, for example Association of Local Government Ecologist's Biodiversity Toolkit http://www.biodiversityplanningtoolkit.com/default.asp although this does not appear to have been maintained.
- BS 42020:2013 Biodiversity — Code of practice for planning and development includes discussion re the delivery of enhancements as part of the mitigation hierarchy, but again this is couched in terms of existing biodiversity legislation and policy with proportionality discussed.
- Therefore to enable greater delivery of the enhancement of biodiversity would likely require other drivers/hooks as discussed above, not just in terms of biodiversity legislation and policy requirements. This can be best achieved through a Green Infrastructure approach.

- To this end, inclusion of Green Infrastructure in the London Infrastructure Plan 2050 is to be welcomed.
- LUC undertake numerous audits of open spaces and Green Infrastructure throughout London. These include:

    - Open Space Audits informed by Mayor of London's guidance on Open Space Strategies as well as the Green Flag Award criteria, with the methodology designed to provide robust outputs sufficient to inform assessments of open space requirements
    - Surveys of Sites of Importance for Nature Conservation in accordance with the Greater London Authority's Open Space and Habitat Survey Methodology to inform the assessment of existing and identification of proposed SINCs
    - Green Infrastructure Audits including on behalf of Business Improvement Districts (link as above) to identify opportunities for new GI
- There are similarities between such approaches, but increasingly LUC are attempting to deliver combined audits/assessments to provide a holistic understanding of green space provision. This aims to deliver benefits in terms of strength of outputs as well as cost effectiveness, and may also facilitate the delivery of enhancement by taking a GI approach and identifying the multiple benefits which can be delivered, and the range of policy objectives which would be met. However there is some conflict with trying to ensure guidance is adhered to and combining the methodologies.
- It is therefore considered that there would be benefit to developing a standardised GI audit method / form for London Boroughs to ensure consistency in policy development. This would need to be sufficiently robust to support a number of requirements and the development of policy, including open space, biodiversity (SINCs) and wider GI delivery. It would require consultation in terms of what the required elements are in terms of policy development, and potential 'added benefits'. The scope of this study could also explore the key delivery mechanisms for GI/open space and biodiversity, and ensure that there is recognition of the role of spatial and development planning, and that this is reflected in targeting the information gathered in the audit, and the stakeholders who are engaged.
- A further perspective is provided by the following toolkit, which identifies ways in which local community groups can ensure open spaces are adequately valued and protected, which may also provide insights in to how enhancement may be achieved or barriers to enhancement: http://parksforlondon.org.uk/wp-content/uploads/2015/07/Planning-toolkit-for-Londons-parks-and-green-intrastructure.pdf

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

See above discussions

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely a Supplementary Planning Guidance/SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

The ALGG SPG covers wider issues associated with Green Infrastructure provision in London.

To be useful, any further/specific SPG would need to genuinely and clearly add to the policy context – describing *how* to implement policy. It could take the form of a 'decision tree', showing how biodiversity will be addressed through the planning process, for example, and address ome of the issues identified above in terms of multiple benefits

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes?

We note that there is considerable work underway currently regarding the delivery of Net Gain for biodiversity. Natural England (Nick White lead), IEMA, CIRIA and CIEEM are currently developing guidance re delivery of Net Gain. We do not therefore provide significant detail below but raise some key points from our understanding.

- Are there disadvantages to such schemes?

- Must ensure that such schemes would lead to genuine enhancement, and not simply deliver existing commitments.

- We are particularly interested in evidence on how such schemes might be introduced in London and what effects they might have.

See above. In London the social benefits which can be provided to people are of particularly importance and any scheme for the measurement/delivery of net biodiversity gain must ensure adequate consideration of this alongside (but not at the expense of) biodiversity benefits.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

Long term benefits in terms of developing a more sustainable and robust outcome. Identifying measures which result in multiple benefits can foster greater support from a wider range of stakeholders, including in terms of the provision of resources (whether that be involvement in the development of proposals, or delivery of maintenance/management on the ground, as well as achieving funding support).

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

There is an increasing body of evidence relating to the physical, mental health and educational/ developmental benefits.

The Camden Active Spaces project provides an interesting case study. Commissioned by the council, Camden Active Spaces is a pilot project to address the borough's childhood obesity rates, which are amongst the worst in London. Erect Architecture, LUC and Wayward worked with seven Camden schools to design physically challenging and imaginatively stimulating play spaces for a ranges of age groups

from infant to secondary. The facilities are also intended for use beyond school hours by the local community.

Concurrently University College London have been conducting a study to monitor change in pupils' activity levels before and after the installation of the new active spaces. This study will provide important data for understanding the drivers for physical activity amongst less active children, and how these can be prompted by design, and we understand is due to be published Autumn 2016. See attached document for further information.

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ENCOURAGING BIODIVERSITY IN NEW HOUSING DEVELOPMENTS

RESPONSE BY THE LONDON FORUM OF AMENITY AND CIVIC SOCIETIES

This response to the scrutiny being carried out by the Housing Committee of the London Assembly is being submitted by the London Forum of Amenity and Civic Societies, a charity established in 1988 to network, inform, support and represent what are now more than a hundred community and civic groups in London.

1. Why is it important to encourage biodiversity in new housing developments?

Construction of new housing will be a major force affecting land use in London in future decades. Promotion of biodiversity in new housing developments is therefore important for the overall status of biodiversity in London. Improvements in biodiversity reduce the quantities of carbon emitted to the atmosphere. It can also reduce exposure to air pollution. By regulating surface water runoff and thus limiting flood risk, and by moderating high summer temperatures, it helps the process of adapting to the effects of climate change.

Equally important, attention to biodiversity improves the quality of new housing and the quality of life for people living in it, not only in the ways mentioned above but also by giving them access to nature in their daily lives. In a city which is increasingly densely developed it becomes all the more important to ensure that everyone can have direct experience of nature.

Biodiversity should live up to its name by ensuring diversity of flora and fauna. As well as generally providing greater interest, diversity can be important in protecting against attack by infections or pests on any specific species or family, or against the effects of unusual weather patterns.

Green spaces are beneficial in other ways apart from the contribution they make to biodiversity. As well as providing facilities for sports they also provide scope for informal recreation and relaxation. Given careful planning and management the promotion of biodiversity should not interfere with these other functions, but the task of sustaining successful multiple use may become increasingly challenging in some locations as London's population rises and there is increasing emphasis for health reasons on the benefits of regular physical activity.

An emphasis on achieving a high standard of biodiversity in new housing schemes must not be allowed to become an implicit justification for surrendering existing open spaces to housing schemes.

Important as it is to encourage biodiversity in new developments, and recognising that there may be wider scope for positive action in such areas, attention also needs to be paid to protecting and enhancing biodiversity in areas of existing development within London. This applies to public areas, such as streets and other areas of the public realm, but also to privately owned land. Private gardens account for a substantial proportion of London's biodiversity and their potential could be much greater. However, that lies outside the scope of the present scrutiny.

2. *How rigorously is biodiversity considered in planning applications and agreements?*

Our general impression is that no systematic attention is given to biodiversity when local planning authorities consider planning applications and agreements. Where biodiversity is taken into account in preparing and justifying planning applications our impression is that this is usually on the initiative of private developers and their consultants and not in compliance with instructions by the local planning authority. The inclusion of green roofs or green walls on new or extended buildings is likely to be on the initiative of developers and their consultants. Where a developer is designing and providing landscaping there is an inherent incentive to simplify the construction and maintenance required, rather than to achieve the maximum benefit for biodiversity.

3. *To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?*

The experience of our member societies is that there are frequently problems over the implementation of agreed mitigation measures. The measures may not be carried out in the form originally specified (for example, different species of tree may be substituted). Even if the mitigation measures have been carried out as specified they may be nullified by subsequent lack of maintenance; for example, neglect of newly planted trees is a notorious problem and may well lead to them dying.

Conditions or contributions relating to biodiversity should be embraced in carefully drafted legal agreements and changes to such agreements should be strongly resisted by boroughs. We are concerned that at present requests by developers to remove such conditions are often treated by planning officers as a minor matter on which there is no right of objection. The legal provisions should extend to the ongoing maintenance of the biodiversity elements in developments.

4. *What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for more biodiversity?*

The strategy section of the London Plan policy on biodiversity and access to nature (7.19 B) makes a number of cross-references to other policies in the Plan but only for the negative purpose of avoiding adverse effects to European sites of nature conservation importance. There should also be cross-references to other Plan policies in the context of enhancement and creation of biodiversity, the positive objectives which are mentioned in 7.19 A. In the case of some of the other Plan policies mentioned in 7.19 B the positive interactions are likely to be more important in practice than negative interactions, for example 7.14 (improving air quality) and 7.15 (reducing and managing noise). But the promotion of nature conservation needs to be made integral to all types of development.

Moreover section F of policy 7.19, on preparation of Local Development Frameworks, does not at present reflect the principle of planning for nature from the beginning of the development process that is stated in the explanatory text (7.61).

The London Plan policy on green infrastructure (2.18 F) requires boroughs in preparing their Local Development Frameworks 'to set out a strategic approach to planning positively for the creation, protection, enhancement and management of networks of green infrastructure by producing green infrastructure strategies that cover all forms of green and open space and the interrelationship between these spaces'. The Mayor needs to promote this policy to boroughs, and the GLA should review borough plans to see whether they comply.

The Plan's policies for promotion of sustainable urban drainage should be explicitly linked with the target in the Regional Biodiversity Action Plan (incorporated in Table 7.3) for the creation by 2020 of large numbers of additional ponds of less than 2ha.

There should be more emphasis in the London Plan on the need for ongoing management of measures taken to enhance biodiversity; the bland references to 'management' in 7.19A and 7.19 Ca and the reference in the supporting text are not sufficient. Sub-paragraph Ca should be expanded to include words on the following lines: 'and ensure that provision is made for the ongoing management of measures taken to enhance biodiversity'.

5. *How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?*

The creation of biodiversity should be an integral part of planning for estate regeneration. See also the answers to questions 2, 4, 6, 8 and 9.

6. *What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?*

A new planning guidance document would have symbolic value in raising the profile of this issue. But drafting and producing it would be a significant distraction from progressing other tasks, and users would face the risk of complication and possibly confusion in trying to relate it to other guidance. Rather than adding to the number of SPGs it would be better to provide appropriate additional guidance in the revised versions of the Housing SPG and the All London Green Grid SPG which will have to be produced following adoption of the Replacement London Plan.

7. *What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes?*

Are there disadvantages to such schemes

We are particularly interested in evidence on how they could be introduced in London and what effects they might have.

The methodologies devised by the city councils of Berlin and Southampton which are quoted as examples seem to put the main emphasis on control of surface water runoff and penalise schemes for the extent to which they involve impermeable surfaces. If so they can provide only an indirect and partial measure of biodiversity. Limiting surface water runoff is a desirable objective in itself but in large housing schemes (which are the subject of this scrutiny) can be more effectively controlled by sustainable urban drainage schemes.

Seeking to offset damage in a particular location by taking compensatory action elsewhere is a valid concept in the case of carbon emissions, and could be applied to a more limited extent in the case of surface water runoff. But in the present context it would mean that the residents in a housing development would not themselves have the benefit of planned improvements in biodiversity.

It is difficult to comment in more detail without seeing a specific proposal for a biodiversity offsetting scheme or a green space 'factor' scheme for London. However, planning permissions for off-street parking areas could have a condition requiring use of a permeable surface and also a condition requiring planting elsewhere to compensate for the loss of plants in the parking area.

8. *What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?*

The policy in the London Plan is that, in drawing up their Local Development Frameworks, boroughs should 'identify and protect and enhance corridors of movement, such as green corridors, that are of strategic importance in enabling species to colonise, re-colonise and move between sites' (7.19 F e). We endorse the importance of such a network of biodiversity sites and intervening spaces in assisting biodiversity to adapt to climate change (London Plan, paragraph 7.62). It will not be possible for boroughs to identify strategic green corridors, some of which will cross borough boundaries, unless there is a recognised network of green infrastructure.

9. *What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?*

The benefits of promoting biodiversity have been summarised in response to question 1. Even if a mandatory strategy for protecting and enhancing biodiversity near housing developments is put in place its ultimate success will depend on the interest and enthusiasm of the people living in those developments. It will therefore need to include actions to enlist and foster such interest and enthusiasm as an essential element in creating a sense of place. It may often be advantageous to encourage the formation of local voluntary groups to be responsible for the ongoing maintenance of measures taken to enhance biodiversity and develop ideas for further enhancement. This is particularly so in the case of the last four of the categories of public open spaces identified in Table 7.2 of the London Plan: Local Parks and Open Spaces, Small Open Spaces, Pocket Parks and Linear Open Spaces. To the extent that public support is continuing and growing for the concept of London as a National Park City that could be a powerful motivating force for harnessing such voluntary effort.

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Charlotte Harrison
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London Assembly
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14th October 2016

Dear Charlotte,

ENCOURAGING BIODIVERSITY IN NEW HOUSING DEVELOPMENTS

Thank you for inviting London Wildlife Trust to provide evidence to the above investigation of the London Assembly's Housing Committee.

We have the following comments relating to the specific questions set out in the investigation papers and raise a couple of other matters which we believe will be of the committee's interest.

The Trust believes that the key policies and guidance are largely in place to ensure that biodiversity is better incorporated into new – and existing – housing developments. However, declining skills within local authorities, awareness of the opportunities, and questions over long-term management appear to some of the key issues that prevent this being standard practice.

We recommend that the Committee explore the production of specific guidance and the establishment of a strategic advisory service (similar to that in place between 1986-2000) – which the Trust is keen to explore further with the GLA and others – which could help to reconcile the pressures to build more homes, and conserve the city's ecological assets.

We would also like to extend an invite to Committee members to visit our recently opened Woodberry Wetlands which has been developed in close partnership with Thames Water and Berkeley Homes' Woodberry Down regeneration scheme. We would be happy to showcase how this project can help demonstrate the opportunities for biodiversity in new housing developments.

I hope you find our response useful for the Committee's inquiry; please do not hesitate to contact me if you have any further questions.

Regards,

Mathew Frith
Director of Policy & Planning

c.c. Ross Jardine, Research and Support Officer to Leonie Cooper AM

ENCOURAGING BIODIVERSITY IN NEW HOUSING DEVELOPMENTS

October 2016

London Wildlife Trust has a specific interest in this area, as it helps to underpin our charitable objectives for a city rich in biodiversity and helping to ensure people are better – and freely – able to get the well-being benefits from access to the natural world. We contribute to the relationship between housing development and biodiversity through a range of activities and projects, including:

- Advocacy and response through the planning system
- Surveying and reviews of Sites of Importance for Nature Conservation
- Working directly with developers, e.g. Berkeley Homes at Kidbrooke Village
- Housing estate enhancements, for example Natural Estates and Cockney Sparrow
- Community green infrastructure projects, such as Lost Effra and A Cool Place to Live
- Developing new nature destination sites as part of urban regeneration, such as Woodberry Wetlands
- Research, for example the changing nature of London's gardens
- Campaigns such as Garden for a Living London.

With the benefit of the Trust's experience we have the following responses to the Committee's questions.

1. Why is it important to encourage biodiversity in new housing developments?

- Helps to sustain biodiversity – especially mobile species (birds, inverts) and flora
- Provides people an essential contact with nature
- Ecosystem services help provide adaptation to climate change, improve air quality, urban heat island mitigation, etc.

***1a** Gardens for wildlife*

London Wildlife Trust strongly believes that the biodiversity of land cannot rely on the maintenance of a hundred or so nature reserves and the network of Sites of Importance for Nature Conservation (SINCs) throughout the capital. Whilst these sites are critical for sustaining and enhancing the ecological integrity of key habitats and priority species, they only cover 19% of Greater London.[1] However, the SINCs and the wildlife they support are, in turn, helped by the overall biodiversity interest of land that is not designated for its wildlife interest – everything from recreation grounds, road verges and farm fields to gardens and buildings. Not everywhere is suitable for enhancement, and clearly management for wildlife has to be balanced with other societal needs, but we believe there are many opportunities in new development – and existing housing estates – to enhance their biodiversity interest.

Gardens and the communal grounds of housing – whether or existing or new – are particularly important for providing a wildlife resource at a landscape scale – and on the doorstep that all-important contact with the natural world.

No study has been undertaken on the strategic biodiversity value of London's gardens. However, there is a growing body of evidence to demonstrate importance of gardens (and similar land typologies) for a range of wildlife and how this may or may not be influenced by size, location, structure and management.[2] For example, the Trust looked at the role of 300 of the city's squares and small parks in supporting biodiversity in 2004, and suggested that "*the best-managed gardens for people, with a rich, well vegetated and well-maintained landscape, were also likely to be good for birds*." [3]

[1] The 1571 SINCs are identified as being of either Metropolitan (140 in London), Borough (878) or Local (573) Importance. All Metropolitan sites include the nationally and internationally important sites statutorily designated as a Site of Special Scientific Interest (37), Special Protection Area (2), Special Area for Conservation (3) and/or Ramsar site (1). Some sites may be subject to a number of designations.

[2] See: http://www.wlgf.org/linked/ecology_and_biodiversity_papers.pdf

[3] Sibley, P., Hewlett, J., Vickers, D., Gannaway, C., Morgan, K. and Reeve, N., 2004. *London's Small Parks and Squares; A Place for Nature?* London Biodiversity Partnership.

The Biodiversity of Urban Gardens in Sheffield (BUGS) study in 2000-02, and its second phase across five other cities (2004-07) highlighted the strategic importance of gardens for wildlife, for example the number of ponds recorded was far higher in density than in the surrounding countryside. The BUGS studies clearly showed that garden size is important. Garden size plays an overwhelming role in determining garden composition: larger gardens support more vegetation, and more likely to contain trees taller than 2 metres, vegetable patches, and composting sites. Un-vegetated land becomes proportionally more significant as garden size declines. All types of vegetation increase with garden size, and large gardens support disproportionately greater vegetation cover above 3m. [4]

A range of species are commonly associated with gardens, but their fortunes are changing. For example birds that typically utilise gardens include robin, wren, blackbird, chaffinch, great spotted woodpecker, blue tit, great tit and chiffchaff. Over the past 15 years numbers of great spotted woodpecker, wood pigeon, jay, magpie and ring-necked parakeet using gardens have risen, whilst song thrush, house sparrow and greenfinch have declined. It is difficult to correlate the reasons for these declines; some are influenced by garden structure/location, but climate change, habitat changes - including fragmentation - elsewhere, disease and predation, are also influential. For example, the feeding of birds in gardens is thought to have contributed to the upswing in numbers of goldfinch, but the decline in house sparrow numbers - less clearly understood - appears to be linked to chick survival in their first few weeks.

Other species for which gardens are important include hedgehog, bats, fox, frog, toad, smooth newt, and wide variety of invertebrates, from butterflies, moths and bumblebees to spiders, earthworms and molluscs. Plants are a mixture of planted species (for example lawn grasses and ornamental shrubs) and colonising species (such as some trees and herbaceous flowers – aka weeds). A study of one ordinary 740m^2 garden in Leicester by owner Jennifer Owen over 30 years identified 2,673 different species; 474 plants, 1,997 insects (including 59 species of bee), 138 other invertebrates, 54 of bird species, and seven mammals. It is estimated that had she the time and expertise available, the final tally would have been in excess of 8,000 species.[5]

The promotion of gardening for wildlife has been underway over the past 35 years, and there are now plentiful resources to aid people to enhance their gardens for biodiversity.[6] Whilst the accumulative impact of this effort has undoubtedly helped to challenge and change orthodox gardening practices and raise awareness of garden wildlife, there is a view that ultimately this reaches only a minority of garden owners. There have been profound changes to gardens especially over past 20 years that reflect a range of pressures that prevent them for being utilized to their maximum environmental benefit (see 1c). These trends may have undermined the positive impacts of people managing gardens for wildlife.

***1b** Contact with nature*

A critical value of gardens is that they are the place where most people have the most direct contact with nature on a daily basis (not parks, nature reserves, or national parks). Whether through birdsong, watching butterflies flit over flowers, feeding hedgehogs, or watching the seasons change, a great many people have an indirect – and for some, a direct – connection with nature where they live. Some of this is reflected in the growth of the bird-feeding industry; it has been estimated that up to 75% of households provide food for wild birds at some point during the year and, nationally, the bird feeding industry is estimated to be worth c£200 million annually.

This contact with nature – and at its simplest form a basic vegetation of lawn, shrubs, flowering plants – is increasingly recognized for the mental and physical benefits to people's health and well-being. Much of the research is focused on those that garden, and this is itself a barrier. Nevertheless, physical improvements from active gardening include increased muscle strength, mobility, balance, fine and gross bilateral and hand-eye motor coordination and motion.[7] A Kansas University study looked at

[4] See: http://www.bugs.group.shef.ac.uk/index.html

[5] Owen, J., 2010. *Wildlife of a Garden. A thirty year study*, Royal Horticultural Society.

[6] See: http://wildaboutgardens.org.uk/about.aspx and http://www.wlgf.org/

[7] Soderback, I., Soderstrom, M. and Schelander, E. 2004. *Horticultural therapy: the 'healing garden' and gardening in rehabilitation measures at Danderyd Hospital Rehabilitation Clinic, Sweden*. Pediatric Rehabilitation Vol. 7, No. 4, pp. 245-260.

volunteers, including those that gardened, who were assessed for general physical and mental health including hand strength and pinch force. The more active gardeners among the volunteers showed the best levels of physical health and all the gardeners had stronger and more nimble hands, as well as higher-than-average levels of self-esteem. Research has also shown that people with learning disabilities benefit from the sociability of gardening, improve learned and cognitive skills and benefit physically from gardening regularly. An experiment compared gardening to reading as a stress-relieving activity; test subjects that gardened experienced a more significant decrease in stress when compared to the subjects that were assigned to read.[8] Caring for plants can lead to a powerful reversal of dependency roles in gardeners with learning disabilities[9], whilst frustrations and anger can be released or channelled safely into gardening.[10]

***1c** An essential part of the city's green infrastructure*

Gardens, as part of the city's green infrastructure, provide a range of ecosystem services, such as helping to manage (soak up, slow down) surface water run-off, help cool the urban heat island effect, mitigate air pollution, provide space for food-growing, biodiversity and amenity, and can – collectively, and in some cases individually - also be considered an important cultural asset. This is recognised within the All London Green Grid Supplementary Planning Guidance (ALGG SPG) which also identifies that the coverage of garden greenspace is not equally distributed across London; "*areas where quantity and quality is poor should help to determine priorities to enhance the ALGG*."[11]

Gardens – both vegetated and hard surfacing - cover approximately 24% of London, with over 3.8 million separate plots front and rear, supporting over 2.5 million trees.[12] These figures are probably an under-estimate as they don't include communal grounds and gardens of housing estates (social and private) for which no accurate data exists. Their overall 'anatomy' is changing – from green to grey – as well as declining in average size. On average – for every London garden - between 17m^2 of vegetation disappeared between 1997-98 and 2006-07 (for example, lawns decreased by 2,200 ha in total over this period).[13]

Gardens created within new developments are smaller than the average garden in London (200m^2), plus there is an average increase in hard-surfacing/building of 210m^2 and an average loss of 200m^2 greenspace per development. The likelihood – based on current trends - is that new housing development will create smaller gardens - with very little vegetation to start with – and even fewer gardens overall.

***1d** Garden changes; a cultural shift?*

The changes within gardens are largely outside the scope of the planning process (there are local impacts from 'garden grabbing' but at present this is insignificant to the removal of vegetation for other uses), and therefore difficult to regulate (even if this were a desirable means of 'control'). Even for matters subject to planning, such as front garden paving and Tree Preservation Orders, there are fewer resources within local planning authorities to monitor and enforce decisions (see Question 3).

Garden ownership is highly complex (we don't know in any detail the proportions of various tenures and management across London) and garden use and management is subject to a complex mix of cultural, economic, and social values and pressures. The significance of social norms – and therefore social categorisation – in determining individuals' behaviour in using their garden space is recognized; "*the consequences must be that privately-owned garden space continues to be driven into a hidden domain,*

[8] Van den Berg, A., and Custers, M., 2011. *Gardening Promotes Neuroendocrine and Affective Restoration from Stress,* J. Health Psychology, January 2011 16: 3-11.

[9] Haller, R. and Kramer, C. 2006. *Horticultural therapy methods making connections in health care, human service and community programs*. Hawthorne Press, New York.

[10] Buzzell, L. and Chalquist, C. 2002. *Ecotherapy: healing with nature in mind*. Sierra Club Books, San Francisco.

[11] Mayor of London, 2012. *Green infrastructure and open environments: the All London Green Grid Supplementary Planning Guidance*, Greater London Authority.

[12] Smith, C., et al, 2010. *London: Garden City? Investigating the changing anatomy of London's private gardens and the scale of their loss*, London Wildlife Trust, GiGL and Greater London Authority.

[13] Smith, C., et al, 2010.

with ever less opportunity for sharing of knowledge and building of cultural commonality. It is mostly the make of car on the drive that makes a social statement today; not the quality of planting." [14]

However, over the past 7-10 years there has been an explosion of activities from outside the formal conservation frameworks, often driven from the grass-roots. 'Guerilla-gardening', bee-keeping, pop-up allotments, communal rain-gardens, new wildflower meadows, and city nature blogs for example, have grown significantly, fuelled by an active social media. Some of these have helped progress towards meeting London's biodiversity conservation objectives, but others pose challenges as to whether they really address ecological needs or even based on good science. Nevertheless, the action and support of many individuals and groups demonstrates a desire to make their neighbourhoods a better place for people and wildlife. Such ideas can help shape how new development can incorporate features to enhance biodiversity.

2. How rigorously is biodiversity considered in planning applications and agreements?

- Not that effectively outside applications affecting SINCs or other designated sites, or very large developments with significant and visible impacts;
- Biodiversity considerations are usually triggered by impacts (e.g. SINCs, significant habitat or feature loss/damage) and if there is nothing visible/perceived at the outset, it is rarely specifically encouraged within new development (unless landscape specifications are guided as such by the client);
- Whilst biodiversity is a material consideration for planning decisions it is low on the agenda, and is rarely given equal consideration to other matters;

2a *Planning policies*

The planning policies for biodiversity within the *London Plan* and current and/or emerging local plans are generally comprehensive and if implemented as set out, would help to conserve and enhance the current network of ecological assets within London. We recognise that the planning system is not the sole contributor to nature conservation, nor is development and the planning process solely responsible for loss and damage to biodiversity. Nevertheless, within Greater London it is of much greater significance than agriculture (the most significant driver of biodiversity loss in the wider countryside), and as such – in light of the review of the *London Plan* – planning policy and decisions require greater weight in protecting biodiversity than they currently do.

Most developments above a certain size trigger the requirement for environmental assessments, including ecological appraisals, etc. They are often of a scale that also triggers responses from local people that can help to shape or even determine the final design of a development. If a site which directly affects a Site of Importance for Nature Conservation (e.g. through encroachment), this can also serve to raise efforts to avoid, reduce or mitigate any damage or loss, but this may still depend on expertise within the planning team, and/or advice being sought from a reputable independent source (rather than relying solely on the applicants' submission, such as consultants' ecological reports, which never propose a development does not proceed).

The presence of legally protected species (e.g. great crested newt) will also trigger necessary responses from applicants, but these generally are a means to avoid breaching the legislation; and can result in some unintentional consequences, For example the Trust has been contacted by consultants working for developers to find homes for reptiles (protected) that need to be 'moved out of the way for the development'. More holistic approaches to secure gains for biodiversity are not always taken, and planning authorities don't always seem willing or able to press this point home for fear of appeal.

[14] Greenway, J. (2010). *Urban gardens and sustainable cities: explaining the environmentally beneficial behaviours that make a difference*. PhD Thesis, University of Sheffield.

In addition, land being identified as a SINC doesn't preclude it being identified for other land uses. A case in point being Bexley Quarry, a Site of Borough Importance for Nature Conservation but also identified for housing. In 2015 the Council permitted an application for housing that results in the reduction of the SINC from almost 23 hectares to just over 3 ha. The populations of reptiles and birds (including a number of Priority Species) that the SINC supported are unlikely to survive in the remainder (as size matters for some of these). The Council accepted the views of the applicant rather than the advice of the Trust and other local ecological aspects.

***2b** Planning contributions*

On a more positive note, in the same borough, Braeburn Park in Crayford, is now managed as a 20 ha nature reserve by London Wildlife Trust following negotiations between the developer of the adjacent estate (completed in 2003) and the Council to secure an endowment through a Section 106 agreement.

S106 agreements are often opportunistic, and whilst they can help to secure ongoing benefits for biodiversity, by their nature are constrained by proximity to the development. Community Infrastructure Levy (CIL) can also be directed towards biodiversity objectives within a borough, but this has to compete with a range of other societal demands and needs following consultation. For example Camden identifies no strategic allocation to green infrastructure/open space, whereas Hounslow identifies 'Strategic Green and blue infrastructure (including open space, play space and flood risk mitigation).'

3. To what extent and how effectively are ecological mitigation measures implemented in completed housing developments?

- Not effectively known – no real research exists in respect of housing, plus the desired effects take time to realise and are often difficult to completely distinguish from the wider environmental context;
- There is a growing loss of capacity and expertise within local authorities to examine the ecological content of planning applications, determine decisions, and enforce planning conditions;
- Inadequate monitoring and a lack of research are impeding improvements in predicting, avoiding and mitigating impacts, and studies suggest existing processes are ineffective.

***3a** Background of loss*

Anecdotally and from information we have on developments and changes to garden vegetation, London has been losing greenspace rapidly over the past 30 years. Major developments in the docklands, King's Cross, and other parts of London witnessed the loss of urban brownfields and other naturalized vegetation.[15] However, these brownfields mostly developed on land that was at one time built up – and have been part of the 'churn' of land that has been characteristic of London since the 16th century.

Nevertheless, the increasing demand for housing (and supporting infrastructure) means that spaces – whether 'brown' or 'green'[16] – will be under ever-increasing pressure over the next 10 years. New housing and other commercial developments have inevitably resulted in loss of greenspace and fragmentation – accumulatively resulting in losses of biodiversity. Against this has been the marked improvements in site management, particularly of parks, over the past 15-20 years. Enhancements for biodiversity are now much more commonplace, and there is a wider appreciation of the need to provide for wildlife – even within planning policy - that wasn't there for much of the 20th century.

***3b** Mitigation measures*

The lack of ecological expertise (see below), public funding cuts and the demands on the planning system means that many mitigation measures are inadequately defined, conditioned and/or

[15] Schofield, J. (ed), 2002. *Brownfield? Greenfield? The threat to London's unofficial countryside*, London Wildlife Trust.

[16] The distinction of brown- and greenfield is misleading as to a site's ecological value. It is merely a term to define whether a site has had been previously built on (or not). Brownfield land in London can include woodlands and other sites of nature conservation value.

implemented. Most London boroughs have policies in place to protect and enhance biodiversity through Local Plans or Local Development Frameworks but it is unclear who is monitoring their implementation.[17]

With housing in particular there are systemic problems as the developers are rarely the owners long after construction; the sale to new owners – unless bound by a covenant – does not strongly bind later owners (or managing agents) to maintenance of the conditioned mitigation measures. It is a familiar sight to see dead trees, or vegetation no longer managed in the way it was specified.

There are exceptions; for example Berkeley Homes at Kidbrooke Village is responsible for the landscape it is creating through the regeneration of the old Ferriers Estate for at least 15 years. They have recently commissioned the Trust to help shape this further to help meet their corporate biodiversity objectives (for which the Trust developed a Kidbrooke Biodiversity Action Plan) and help better connect the landscape to the new resident community.

We recognise that part of the problem that mitigating for biodiversity can take significant time to determine, and very often success or failure may be down to other factors. Trees that are felled may take upwards of 20 years to 'replace' their value. Slow-worms translocated to another part of a site survive for a few years but might die out within 10 years through predation by cats owned by residents. Populations of house sparrow and dunnock, aimed to be supported by retained shrubberies, maybe replaced by great tit and goldfinch due to wider population fluctuations of species – as well as bird-feeding by residents.

3c *Design for biodiversity*

There has been an increasing number of specifically designed features for biodiversity – in addition to landscaping - available on the market, from bee and bug 'hotels', to nest boxes, bat boxes, otter holts and hedgehog shelters. These are principally designed with developments in mind, and are evolving towards meeting the demands of construction with standard fixtures & fittings.

3d *Loss of skills*

There are an estimated 90,000 planning application in London per annum, and of these some work by the GLA and Greenspace Information for Greater London suggest that between 15-20% of these have a significant impact on biodiversity in some way. Only a minority of these appear to be addressed satisfactorily in some way (e.g. adequate data searches). This is against a background of public funding cuts, pressures on planning departments to determine applications within a tight deadline, and a haemorrhage of professional skills.

There is a growing concern amongst the nature conservation profession that the skills within local authority planning teams to accurately assess and determine planning applications for their impacts on biodiversity are disappearing. The Association of Local Government Ecologists' (ALGE) report on skills and capacity in 2013 identified that "*the majority (90%) of local authority planners lack ecological qualifications, have had very little training and consequently recognise that they have only basic levels of the ecological expertise required to discharge duties and national policy*."[18] About half of London boroughs employ an ecology officer (or equivalent) but not all are employed within the planning department or have formal input into forward planning/development control. The ALGE report identified an average capacity of only "*one ecologist for every three local planning authorities in England, which would appear to be inadequate to deal with the relevant workload*."

In addition, there is still a widely embedded societal view that biodiversity simply is not part of the city. Trust has direct experience of London planning officers stating that there is no biodiversity in their borough.

[17] Burrage, J., Frith, M., Hayes, A. and Rudd, M., 2013. *All change? the status of biodiversity conservation in London*, London Wildlife Trust and Greenspace Information for Greater London.

[18] See: http://www.alge.org.uk/SiteAssets/publications-and-reports/ALGE%20Report%20on%20Ecological%20Competence%20and%20Capacity.pdf

4. What are the strengths and weaknesses of the London Plan (and other Mayoral) guidance on protecting, maintaining and enhancing biodiversity? How well does the guidance encourage opportunities for *more* biodiversity?

- Strengths – policy is comprehensive in scope (biodiversity, GI, urban greening, etc)
- Weaknesses – weak wording, biodiversity still considered to fall within SINCs and designated sites and not recognised as such outside across most of London
- The Mayor/GLA cannot be expected to drive forward biodiversity policies without the support of the borough councils, or NGO partners that have been developing and delivering on such work from times before the GLA was created. Buy-in and support from partners will be critical – but that will depend on a level of commitment from the Mayor, and some resources allocated to ensure that revised objectives of a Strategy are progressed.

4a *London Plan and guidance*

The *London Plan* policies are comprehensive in their scope; whilst biodiversity is specifically addressed through Policy 7.19, it can also picked up on through Policies for Green Infrastructure; Urban Greening; Quality & Design of Housing Developments; Children and Young People's Play and Informal Recreation Facilities; Sports Facilities; Sustainable Design and Construction; Green Roofs and Development Site Environs; Flood Risk Management; Green Belt; Metropolitan Open Land; Protecting Local Open Space; Geological Conservation; Land for Food; Burial Spaces; Blue Ribbon Network; Restoration of the Blue Ribbon Network; The River Thames; and London's Canals and other Rivers & Waterspaces.

The critical issues are the weakness of the wording, the invisibility of biodiversity per se, and what appears to be a widespread belief that biodiversity only lies within Sites of Importance for Nature Conservation and is not otherwise a material consideration.

4b *Policy 7.19 Biodiversity and Access to nature*

The Strategic Aims (A) of Policy 7.19 make reference to the Mayor's Biodiversity Strategy (out of date) and (under B) maintaining integrity of the sites of European importance (which number 5 in total). They make no reference to the 37 SSSIs or the 140 Sites of Metropolitan Importance for Nature Conservation, which are all of strategic value.

Under Planning Decisions the laudable objectives (under C) are qualified by the wording '*should*' rather than '*will*', and caveated with '*where possible*.' Whilst the SINCs are referred to (under D), the definitions of '*strong*' and '*level of protection commensurate with their importance*' is not clearly defined. We welcome the reference to the mitigation hierarchy under E.

On the preparation of local plans (LDFs, under F), however, there is reference to Borough and Local SINCs, but the absence of reference to Metropolitan sites is of concern (suggesting that the boroughs need not worry about them). Again, the requirement is a '*should*' rather than a '*will*'.

Embedding the objectives for biodiversity in Mayoral guidance is reasonably strong on matters of clear relevance, such as the All London Green Grid. However, the draft Supplementary Planning Guidance for the Central Activity Zone had no reference to biodiversity despite the CAZ containing 63 SINCs (the published SPG earlier this year does now reference Policy 7.19).[19]

The GLA hosts the London Wildlife Sites Board – which aims to ensure the designation of SINCs meets the GLA criteria[20] - but this has little power other than make recommendations for the boroughs to take forward. The Board has not yet been 'tested' as to any decisions relating to a proposed variation of, de-notification or notification of a Site of Metropolitan Importance. This is an area which requires clarity for the London Plan.

[19] See: https://www.london.gov.uk/sites/default/files/caz_spg_final_v4.pdf

[20] Process for selecting and confirming Sites of Importance for Nature Conservation (SINCs) in Greater London, 2013. https://www.london.gov.uk/sites/default/files/sinc_selection_process_-_update_march_2013.pdf

***4c** Guidance*

There is a plethora of guidance published by the GLA and many other organisations as to how to incorporate biodiversity into new development, including *Biodiversity Checklist for Land Use Planners in Cambridgeshire & Peterborough* (2001) TCPA's *Biodiversity by Design* (2004), the GLA's *Living Roofs and Walls* (2008), CIRIA's *Delivering biodiversity benefits through green infrastructure* (2011), and TCPA/The Wildlife Trusts' *Planning for a healthy environment; Good practice guidance for green infrastructure and biodiversity* (2013).

On more specific features for biodiversity, including bat & bird boxes, there is RIBA and Bat Conservation Trust's technical guidance, providing details of the range available on the market and how they can best be used to meet a number of species' needs.[21]

Whilst there is a need for guidance, it appears that this is critically required at the planning process, and that efforts are made to assess applications that meet certain criteria at the pre-application stage as best possible. Guidance, too, needs to be consistent and standard, and arguably, for London, tailored for the capital's needs.

***4d** Strategic leadership*

Whilst London helped to spearhead the urban nature conservation policy development in the 1980s – it was arguably a world leader in mapping the city, identifying the SINC network and establishing protection and enhancement policies – there has been a lack of regional leadership on biodiversity conservation from the Greater London Authority since 2008 – until very recently - further compounded by changes at a national level.

The Mayor's *Biodiversity Strategy* has not been updated since it was published 14 years ago. Whilst it has been argued that key elements of the Strategy have been embedded within the GLA's subsequent green infrastructure (GI) objectives (for example the All London Green Grid), much of this has been diluted – as we set out in our response to the London Assembly Environment Committee's investigation on the delivery of the Strategy in 2013.[22]

Public bodies, including the GLA, are subject to the 'biodiversity duty'[23], and whilst we don't doubt this is being met, a clear commitment as to how this may now be visibly delivered through the Mayor's powers would give clarity as to how the GLA family meets this duty.

We believe the GLA has a role in providing strategic leadership on the conservation of London's biodiversity and natural environment (rather than focusing on some elements of it, such as trees) – along with organisations like London Wildlife Trust and the local authorities – which would help the Mayor's manifesto commitments on the environment can be satisfactorily met, against the challenges of a growing city.

5. How could existing Mayoral policy and guidance protect and enhance biodiversity more effectively?

- Seek to resource a specific biodiversity planning advisory service for Greater London.
- Needs to be targeted at quick wins, easy to apply – at the moment there's a plethora of guidance – does it get read?

We believe that there needs to be some 'leadership' from the Mayor and GLA team, which could for example be highlighted through the emerging Environment Strategy, the review of the London Plan, and helping to deliver and showcase best practice in Opportunity Areas (for example Barking Riverside).

[21] Williams, C., 2014. *Biodiversity for Low and Zero Carbon Buildings; A Technical Guide nor New Build*, RIBA and Bat Conservation Trust.

[22] https://www.london.gov.uk/about-us/about-us/london-assembly/london-assembly-publications/biodiversity-london

[23] As set out in Section 40 of the Natural Environment & Rural Communities Act, 2006.

In addition a level of GLA support for organisations - like London Wildlife Trust – to help train and raise awareness of biodiversity planning issues within local authorities and community groups (such as Neighbourhood Forums) could help to start addressing skills and capacity gaps within the decision-making process.

Prior to the GLA, the London Ecology Unit provided such a planning advisory service for most of the local authorities (between 1986-2000). A more streamlined version of this – which the Trust is keen to explore further with the GLA (and perhaps London Councils) – might help in this respect, and demonstrate a commitment to meeting existing policy commitments, and help to monitor the Sites of Importance for Nature Conservation. This echoes the points we made at the London Assembly's Environment Committee in March last year.[24]

6. What would be the advantages and disadvantages of creating a single piece of planning guidance (most likely an SPG) to cover biodiversity and implementation of ecological mitigation in new housing developments?

- Some benefits – whilst clearly an essential element of green infrastructure it often gets lost within the broader ecosystem service benefits that GI delivers, plus GI doesn't necessarily effectively address wild species' requirements.

We believe that there probably benefits of creating a single piece of guidance to highlight some of the specific requirements for biodiversity within the planning system for London, helping to address particular points about – for example - key principles, the SINC network, data and evidence, base, the priority species and habitats, clarity over the mitigation hierarchy, the role of s106, CIL and biodiversity offsetting, and the limits of the planning system.

Such guidance would of course link to existing and related SPGs and guidance (e.g. a revised All London Green Grid), but it would need to be relatively succinct, easy to read, and signpost to useful resources. A disadvantage might be that if it becomes too complex then it won't be read, and it might need to be matched with a programme of training and CPD, which for example organisations like London Wildlife Trust could deliver.

7. What are the features and benefits of biodiversity offsetting schemes and green space 'factor' schemes?

- **Are there disadvantages to such schemes?**
- Yes, depending on the analysis of impact, the quantification of offsetting 'units', adherence to the mitigation hierarchy, securing the long-term management to meet offsetting objectives, plus, in London, finding the space to effectively deliver offsets.
- **We are particularly interested in evidence on how they could be introduced in London and what effects they might have**.
- London Wildlife Trust has experience of delivering a biodiversity offset with Thameslink in respect of habitats destroyed as part of the Bedford to Brighton line upgrade in 2013.
- We recommend that a biodiversity offsetting strategy is developed as part of the review of the London Plan, which could also form part of the specific guidance referred to in **6**.

[24] https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/Biodiversity%20letter%20to%20Mayor%2026.03.15_0.pdf

***7a** Potential benefits*

The Trust fully supports the adoption of any changes to the planning system that will encourage better and more rigorous assessment of the impacts of development to deliver the planning policy commitments to no-net-loss and preferably net gain for biodiversity. A minority of positive case studies showing tangible biodiversity gains are overshadowed by the accumulative erosion of ecological quality across our towns and cities through planning decisions from a high number of, usually, small scale developments.

Biodiversity offsetting aims to provide improved accounting for ecological value and help to ensure that all unavoidable loss and/or damage to biodiversity is accounted for upon a planning decision. This could lead to a step change in the planning system where losses or damages to sites that are perceived to be of low ecological value are often under-represented or ignored completely, and where such small losses accumulate over time to produce a more fragmented and less ecologically resilient natural environment.

Many case studies have shown that earlier compensation and mitigation schemes have not met the requirements for no-net-loss; well-delivered offsets could begin to strengthen adherence to the mitigation hierarchy (avoid, reduce, mitigate, compensate) and ensure any offsite compensation delivers a better outcome for wildlife.

***7b** Issues of concern*

The introduction of biodiversity offsetting has a potential planning tool has not been without controversy. Fundamentally there are concerns that assigning monetary values to nature runs contrary to the philosophy of many working nature conservation professionals, as well as among members of general public (including the Trust's members, volunteers and supporters).

The Government's introduction to its Green Paper in 2013 made the case for offsetting as a benefit to assist developers and contribute towards a growing economy.[25] However, the Trust's response to the Green Paper (as well as that from others from the nature conservation sector) highlighted concerns over significant parts of the proposed system, including:

- declining expertise and capacity within local planning authorities to assess valuation (see earlier comments);
- the protection of designated sites and un-recreatable habitats (e.g. SSSIs, ancient woodland);
- the proximity principle, where the aim is to ensure offsets are delivered very close to the impacts – in London limited space might preclude this;
- weak alignment to the mitigation hierarchy, in that there may be a danger that the offset results in an affordable monetary value which the developer pays rather than seeking to reduce their impacts;
- validity of the Defra offsetting metric, which does not address species conservation, for example;
- varying assessments of habitat quality within the metric which could yield different results;
- the absence of cultural and social values of biodiversity (for example a feature tree); and
- securing effective long-term management – offsets are meant to be secured 'in perpetuity', but land ownership in London is complex, plus the costs of management can be significant.

The Defra offsetting metric only identifies the value of a site based on the habitat type. This could be a flawed approach because it does not make any allowance for specific species being present on site for example, skylark, and the habitat quality is not always indicative of the species on site.

25 https://consult.defra.gov.uk/biodiversity/biodiversity_offsetting/supporting_documents/20130903Biodiversity%20offsetting%20green%20paper.pdf

***7c** Thameslink offsetting pilot*

The Trust has been working with Thameslink since 2013 to help deliver a pilot offsetting scheme, from which we hope can disseminate the lessons learnt when completed. This has resulted in the delivery of compensatory habitat creation and enhancements to three sites – two in Lambeth, one in Hillingdon – to offset the loss of young woodland from linesides in Selhurst. A key issue was finding adequate space in which to deliver an effective offset given that land has multiple uses, and negotiating this with all stakeholders, which takes time. On-going commitments by landowners are not easy to secure – especially for local authorities at a time of significant budgetry pressures, where there are efforts to delegate parks management to community groups who rarely have the capacity (or desire) to take on existing arrangements.

***7d** Strategic overview*

Many of the delivery matters could be addressed if each offsetting scheme was designed well from the outset, and that the evaluation had been accurately assessed by objective ecological expertise.

Nevertheless the 'what' and the 'where' is critical if biodiversity offsetting is to play a critical role in addressing habitat losses from planning, and in this respect a strategy for offsetting for London should be developed in tandem with the review of the London Plan, in order to guide where best to target compensatory habitat enhancement and creation – in line with the habitat targets set out under the Plan's Policy 7.19. There is a danger – especially with a voluntary scheme – that different approaches will be adopted across London, without addressing key biodiversity conservation targets.

London Wildlife Trust has already taken steps to scope this out, and are keen to discuss this further with the GLA.

8. What are the benefits to biodiversity of planning, designing and managing green infrastructure as a holistic network?

- Potentially good, but to date a lot of biodiversity elements are being diluted as most species' needs are rarely specifically considered.

The growing awareness of green infrastructure (GI) provides an opportunity to incorporate a more holistic approach to incorporating biodiversity in new developments as long as this doesn't follow a narrowly technocratic approach. There are aspects of GI – depending on the focus of its interpretation - which potentially fail to address a number of concerns regarding biodiversity conservation or are in danger of diluting it. Laudable measure to enhance street trees, install swales for surface water management, enhance parks for leisure, improve the environmental performance of buildings through greenery, and enhancing the street scene with ornamental vegetation can secure some gains for biodiversity (and often they are 'sold' on their ability to do so). But equally they can make little difference at all. Meeting the needs for a range of species (especially beyond those described as pollinators) are rarely considered.

Whether GI design and delivery reflects local or regional biodiversity objectives does not appear to be rigorously adopted; however, the review of the *London Plan* and the development of the Mayor's *Environment Strategy* present an opportunity to address this.

Green roofs and sustainable drainage systems (SuDS) can provide benefits for biodiversity (as swales have been designed at Woodberry Down) if their design incorporates the appropriate specifications (as set out in a range of guidance, including the TCPA and The Wildlife Trusts' *Planning for a healthy environment; Good practice guidance for green infrastructure and biodiversity*[26]). Nevertheless, advising

[26] https://www.wildlifetrusts.org/sites/default/files/Green-Infrastructure-Guide-TCPA-TheWildlifeTrusts.pdf

developers on their applications, and specifications requires planners' awareness of the issues and having the appropriate expertise.

9. What social benefits could be gained by developing a more comprehensive (and mandatory) strategy for protecting and enhancing biodiversity near housing developments?

- These could be considerable to meet a range of health and well-being needs, and could follow initiatives outlined by Neighbourhoods Green, etc.

There is a growing body of evidence demonstrating the relationship of access to, activity within and proximity to natural green spaces to people's well-being. For example, the University of Exeter has been building up a body of evidence that people living in urban areas with more green space tend to report greater wellbeing than those that don't have gardens or other green space nearby. They recently reported that green exercise (such as gardening, walking the dog in the park, and conservation work) delivers £2.2bn worth of health benefits in England.[27]

Research undertaken by the Forestry Commission shows that high quality greenspaces can help bring people together, engaging individuals from different social groupings that may not normally interact. Green space offers possibilities: increasing social activity, improving community cohesion, developing local attachment and lowering crime levels, particularly in deprived communities.[28]

Within housing there is a thinner body of research specifically addressing this is, partly because – we believe – the focus has been elsewhere, largely by agencies with their interests on the wider countryside. This was a reason why the author – when working for Peabody – established Neighbourhoods Green in 2003 as an initiative to highlight the issues surrounding the green spaces of social housing, and help shape the journey to improve them for the benefit of residents. The programme has served to demonstrate the significant issues of environmental injustice that afflict social housing neighbourhoods, and the lack of information held at a regional and national level of the quantity and quality of the spaces that social landlords (Registered Providers, RPs) own and manage. In many inner cities the spaces owned by RPs exceeds that of public open space, but this is rarely reflected in the resources applied to maintain them, let alone enhance them.

As part of this work, Neighbourhoods Green (NG) published specific guidance regarding enhancing biodiversity, *A natural estate*.[29] Research conducted by University of Sheffield helped to shape the NG best practice guide in 2010.[30]

Neighbourhoods Green is now co-ordinated by the National Housing Federation, and provides a resource on guidance and tool-kits, including some on Social Return on Investment.[31]

Mathew Frith, London Wildlife Trust, October 2016

[27] See: http://www.exeter.ac.uk/news/research/title_281065_en.html and http://www.exeter.ac.uk/sustainability/newsandevents/archive/title_543531_en.html

[28] See: http://www.forestry.gov.uk/pdf/urgp_evidence_note_011_Social_interaction_inclusion_and_community_cohesion.pdf/$FILE/urgp_evidence_note_011_Social_interaction_inclusion_and_community_cohesion.pdf

[29] Riley, R., Frith, M., Kimpton, B., Massini, P., and Newton, J., 2007. *A natural estate*, Neighbourhoods Green, Notting Hill Housing & Peabody Trust.

[30] http://www.neighbourhoodsgreen.org.uk/upload/public/documents/webpage/Greener-neighbourhoods-weblinks-2110.pdf

[31] http://www.neighbourhoodsgreen.org.uk/home

[redacted]

Dear Georgina Wells,

Recently I have been in correspondence with Lenie Cooper AM with some of my ideas for for a better more green environment to be established in London. She has forwarded me details of the London Assembly "encouraging biodiversity in new housing developments" document and the invitation to write in with ideas for the "Call for evidence" stage. I have put my thinking caps on and put down on paper some ideas I think might be useful.

I am a retired 65 year old man living in South London with my wife and do not have a computer at home. From time to time, London based issues catch my eye, and I enjoy think them over and putting some ideas down in hard copy form for people of influence to mull over and see if they might be of use.

It is important that the planners of our great city try and find ways of building in biodiversity ideas into the very fabric of the environment we live in so we can all benefit from a better with more nature based environment, to live in. What we benefit from today in the form of green parks, leafy walk ways, lakes and ponds is as a result of what people have done for biodiversity in the past and we can all enjoy now. With the efforts of the London Assembly Housing committee and new housing development planners some good biodiversity designs should be made and established in situ, then other planners will follow. Biodiversity experts, if asked should be able to greatly improve the city environment we live in with more trees, plants, birds and insects.

I hope some of these points I enclose are of interest.

Yours sincerely,

Andrew Rolland.

ANDREW ROLLAND

"[redacted]" Submission (To London Assembly Housing Committee). Sept 2016.

[redacted] for the promotion of "Biodiversity" in the ongoing review of the [redacted] plan set up by the London Assembly Housing Development Team. [redacted] "Biodiversity" is a new word and concept to me so I looked up a [redacted] definition. "The existence of a whole variety of plant and animal species in their natural environment."

It is one thing to live in a well planned and designed house, flat or dwelling, but a much better thing to also have it in a setting and environment in atune with nature and the natural world (rather rona than a man made world), to encourage a sense of belonging and local Community. It is important to keep London a green city and its people living in harmony with nature as much as possible. When large new housing developments of over 150 properties are planned it would be good is a Biodiversity officer is employed to work with the planning team of such projects. This officer would seek out other good plans and ideas from similar projects and the help of the biodiversity specialists to build in features such as, Retaining old trees and features from the original site, roof gardens, Victorian garden squares, trees and raised flower beds, water features, grassy areas and appropriate art features as sculptures and fountains. ie Rural type landscaping. Could the London Mayor encourage such wealthy multi million pound projects to give a percentage of their budget to such developments which "would enhance the profile of the project and the lives of the people who live their for many years to come. To help this work to get started asking the [redacted] general public through detailed on surveys what they would like might help. Also having a conference of different professional contributing what could be achieved and is possible would help. and also considering having London Biodiversity London awards for inventive planning might help. Working with the London Borough's Councils would be helpful to gain from their knowledge of what is possible and long term how to maintain such areas. The Dutch nation is very eco friendly [redacted] asked I am sure will have good planning for Community living especially in the Amsterdam Area. UK University Campuses often have the Biodiverse features to create pleasant surroundings.

Group planning from different sources and Backgrounds could meet.

It would be good to have a biodiversity conference with a number of different organisations come together so as to see what is possible to help future planners of New housing developments.
The WWT Centre at Barnes could be such a venue if you were to contact: Petermorris@WWT.org.uk — or at his Base at Wildfowl and Wetlands Trust, Slimbridge, Gloucestershire GL2 7BT.
(Peter Morris at WWT is Head of Public Relations and Campaigns)

Biodiversity Groups who might like to Contribute.
(Let us enjoy and leave a lasting legacy to our children and future generations.)

(1) London Wildlife Trust — Has many up and running nature projects. Creating Nature corridors of connected areas. (Hedge Hog corridors/ highways + City life Pest Control of Animals + Birds at Control.)
(2) London Boroughs who are interested in Biodiversity especially Parks divisions — Maintenance and Tree Specialists.
(3) London Wetlands centre at Barnes — knowledge of Migrating Birds. Has a childrens centre and work with insects, reptiles and Bats.
(4) London Water Authorities: Caring for rivers, river Banks, under ground water ways —
(5) Friends of the Earth — foe.co.uk — (Educating the Public about Wildlife) Promoting Biodiversity benefits for general and better health (Physical + Mental)
(6) Kew Gardens + RHS — horticulturalists — knowledge of plants suitable for city environments. (Student + Research facilities)
(7) Wildfowl and Wetlands Consulting team — Contact Emma Aisworth. A planning Team for redeveloping areas.
(8) London Hospitals garden management teams.
(St George's in South London have won several gardening awards)
(9) to Royal College of Art — for Art features — Sculptures. Use of Colour — Brick design (New Ideas) Mood Control. Better lighting.
(10) Town + Country planners — Architects etc (Roof gardens, Victorian Sq's) Garden allotments Groups, Fruit Picking area's — orchards.
Choosing Good Names for Buildings, Walkways, Paths can be helpful too!

Biodiversity is important in new housing developments as City's can easily end up as man made concrete jungles without the benefits of the natural world, Wildlife, plants insects, birds, green open spaces.

Rowan Trees are very good to look at + berries for birds

From
Mr Andrew Rolland
23 Gracedale Road
London
SW16 6SW

Conference/Seminar discussion Ideas

Sept 2016.

It is good to build in some biodiversity ideas into new housing developments with the help of a "biodiversity officer" the local London Borough at the planning stages with lots of local knowledge. (ie Nature inducing plants and flowers, City friendly trees, Natural materials + Colours).

① Roof gardens:- (for residence use plus special occasions)
Flowers, shrubs and grasses, small water features + raised flowerbeds. Bird food and water for passing and migrant birds wintering in the UK. Bee hives and insect Hotels - Butterfly + Moth habitat. Individual Swift bricks for nesting and possibly Bat box's out of site. In time Robins and other birds may take up residence if attracted.

② Entrance areas and dedicated spaces for biodiversity in Living areas. Try and keep original natural pre Building features like old Trees, walls, wells, Benches and water ways if possible and appropriate. "It will keep a link to the past" Naturalistic Art and sculpture can lift an area. Trees, grass, scrubs, Tree stumps as seats all add green and calm to open leisure calming areas.

③ Small Animals:- If trees are established birds and grey squirrels will be attracted to residential area's and if some sort of nature link corridors were established then they may be able to live and become part of a Living community. Birds of urban area's will quickly adapted to changing conditions. In new Housing developments some learning to live with nature features of education may be needed.

④ Domestic Pets:- British + UK residents enjoy having pets of different shapes and sizes. Maybe some consideration would need to be provided for residents to walk their dogs and be able to meet other dog ee owners. Some sort of raised canopy area for cats to be able to explore and an area where young people may be able to potentially keep rabbits or guinea pigs.

⑤ Future ideas:-
Wildlife nature centres + water features with fish -
Fruit picking areas -
Watching animals living underground :- A glass screened area looking at Rabbits - Fox's - Bearer's?
Allotments for keen gardeners : Veg growing
Old Farmyard features of gates, Barns, ploughs, Styles, Wooden Benches, ect.

VCR:
Date: Tuesday, 29 November 2016
Location: City Hall
Hearing: Housing Committee Rapporteurship on Promoting Biodiversity in New Housing Developments roundtable meeting

Start time: 9.30am
Finish time: 11.00am

Attendees:

Leonie Cooper AM, London Assembly (Chair)
Charlotte Harrison, Assistant Scrutiny Manager, Greater London Authority
Olivia Allen, Sustainability Advisor, Berkeley Group
Laura Boccadamo, Sustainability Advisor, Berkeley Group
Pete Halsall, Director, East Kent Sustainable Homes
Bevan Jones, Managing Director, Sustainable Homes
Anita Konrad, Director of Strategic Partnerships & Programmes, Groundwork London
Anita Mitchell, Head of Sustainability - Europe, Lendlease

VCR:
Date: Tuesday, 29 November 2016
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Leonie Cooper AM: I guess a place to start is maybe to talk about what you think the barriers are to including biodiversity on new developments. We could say a bit about what makes it great to do that, but trying to get to grips with what the barriers are. Some of the international stuff that we have looked at is quite interesting in the way that people have gone through how they included it and why they included it. Thinking about what the barriers are and bearing in mind the Mayor is planning quite a lot of new housing developments, it would be great to think about how we can make it as easy as possible.

One thing that has been raised in a previous session is if you do not have a complete master-planning approach to a whole site. For example, Old Oak is being dealt with as a series of discrete parcels and that makes it quite hard to think about not necessarily wildlife corridors but taking a holistic approach to the site. That might be one thing that you want to think about. Who would like to plunge in?

Olivia Allen (Sustainability Advisor, Berkeley Group): Just building on that, really, it is early consideration --

Leonie Cooper AM: Early? Do you mean as early as possible?

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes. We as Berkeley are looking and we have set ourselves a commitment in May this year that we are going to achieve a net biodiversity gain on all new developments and so we are just going through the process of how we are going to achieve that at the moment.

Leonie Cooper AM: That is a corporate commitment for the whole company on all sites?

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes. At the moment we are developing a toolkit, which is going to be used across every new project that is submitted for planning from May next year [2017]. That is our approach to it.

However, as we have been doing our research and trying to understand how we are going to achieve this and talking to our technical teams and landscape architects that we work with, actually, if it is considered early enough, there is not really a massive cost implication or there does not need to be a massive cost implication. One of the barriers would be if it is not considered early and you have to go back and retrospectively start thinking about these things. Then that is when you come up with barriers. Early consideration is really important as part of the design.

Leonie Cooper AM: Yes, that is one of the things that other people have been saying and our feeling is that maybe one of the deliverables from doing the rapporteurship might be making that very clear statement that all schemes should do that as early as possible. I can see you nodding as well. Is that something that is generally felt around the table to be the case?

Bevan Jones (Managing Director, Sustainable Homes): Yes, we all think sustainability is often the easiest thing to get rid of if you do not get it **accurate**(?) (Inaudible) really early on and it is that early approach. Say if you are talking about an energy strategy that might do something different. It has to be early on because you really have to cost it in and it is the same with biodiversity. It is a bit better these days, but previously sustainability was a real afterthought. It was kind of, "Let us get this built. What green space can we do?" What we are starting to see is people saying, "Actually, we do need quality green space because we have more of a mixed-tenure approach and so we do have buyers who are going to pay a premium and what they want on their list - it might be number six or seven on the list - is quality amenity space". That is one point.

In terms of talking about the barriers, it happens to be something that is not in everyone's everyday vernacular. You talk "biodiversity" and instantly your development team thinks, "That is a specialist", or, "That is someone with a particular set of skills who knows ecology, who can do this and who can do that", and so it does not necessarily fall on their list of responsibilities or things to think about in the first instance. Often, with sustainability stuff, you to go a sustainability expert or you go to a biodiversity expert. You do not just think about it yourself and think, "I need to look at the biodiversity stuff --

Leonie Cooper AM: You sound like you are trying to do yourself out of a job, though, because Sustainable Homes' reason for being surely is that people come to Sustainable Homes.

Bevan Jones (Managing Director, Sustainable Homes): Maybe. Yes, but that is often the thing, but it comes up with that kind of -- it is not quite as bad as a formal organisation, but there is a silo approach in development itself. You have the people who are looking after the bottom line, the people who are looking after the materials and the people who are looking after the master-planning. Not all of them are necessarily pulling in the same direction because some people have regulation in the back of their minds, some people have delivery and are saying, "We need to get this done by a certain date", some people have the bottom line and some people have sustainability.

Some of that is exacerbated. I was going to make a point around discrete parcels of land. A landowner will try to maximise the return and so they parcel it up and sell it in different bits. In my previous job we had a couple of schemes like that where there were site-wide requirements but they were never going to get delivered because the land was parcelled up - and it was a public-sector client who was selling the land - to maximise the return on that land. There was a bit of a break in terms of what the local authority and what the London Plan needed and what the landowner desired, which was maximum return.

Leonie Cooper AM: I can see Pete was nodding there while everyone else was talking. Is that something you would agree with: at any early stage, working in somebody who has that knowledge? Perhaps it is the language, then. Perhaps "biodiversity" is just a scary word.

Pete Halsall (Director, East Kent Sustainable Homes): I would say that, gosh, there is a load of issues, really. Starting with the easiest one, there is an issue of will. Most developers just do not want to do this, present company excepted. Someone said that - I cannot remember the words but it was in the passive form - developers do not want to get involved in protecting bugs. It is as simple as that. You cannot say loosely that is about education. There is something more fundamental. There is a moral issue there, "Something is getting in the way of what I want to do and so get it out of the way".

I am a green developer and I am amazed how many other green developers do not read ecology reports themselves. I have to sit down with my ecologists and say, "Can you explain this? There is an awful lot of Latin here and the summary does not quite deliver it. What are we really saying about the biodiversity of this particular place?" Again, it is a bit more than just calling it loosely acknowledged. Part of it is that there is a cultural antipathy to things that get in the way of the business model and nature is an obvious casualty of that because in this country it is passive and so we can just quite easily knock it out of the way.

Architects are not trained in biodiversity. Why not? Why do they not know about it? It is for architects to get the ear of their clients and persuade them and say, "Look". The architect does have an educative role as the educated person on design and master-planning who should say to his or her developer client, "This is important because ... and these are the things that we can do. If we do it from the very beginning, it is a lot less painful and in fact provides benefits".

I would just be careful about the benefits story. I started out as a green developer in the [United] States 20 years ago and we did this whole benefits thing and there is still a legacy. The problem with benefits is that if they are not delivered in reality, you have lost your credibility and so you have to be careful about that.

Leonie Cooper AM: What sort of benefits do you mean by (Overspeaking)

Pete Halsall (Director, East Kent Sustainable Homes): People will say that green spaces make people happier and they enhance wellbeing. Yes, there is evidence to show anecdotally that in certain situations they do, but a person's wellbeing is a function mainly of their psychological health, really --

Leonie Cooper AM: Leaving that to one side, one of the things - and you have touched on it a bit when talking about, "We would like to chop it out because it might be a bit more expensive and it has these fiddly Latin names and it is all a bit of a pain" - is if you look at it the other way around. I am betraying my roots, having done regen and a bit of sales on sites. If you have a mature tree -- who has ever seen an architect mock up a picture of how the site will look when it is finished when they are trying to sell something off-plan when it is not

built that does not include something that makes it look nice like trees, grass and all the rest of it? At the end of the development when you are trying to sell the units, it is that imaginary -- you need to get the person to think about the Sunday morning when they are lying in bed and the bird is singing in the tree outside and they have the cup of coffee and the millions of Sunday papers all around them or they are looking at them on their electronic device. That, I would have thought, has to be part of the --

Pete Halsall (Director, East Kent Sustainable Homes): Yes, but do not forget there is a distinction there between the visual world and something looking green -- and in fact, if you have ornamental trees, they have zilch biodiversity value because an awful lot of developers use ornamental trees deliberately to reduce biodiversity because that can lead to management problems.

I will just say that the other end of this is -- there is the right-at-the-very-beginning stuff, *ab initio*, put it in at the very beginning, but do not forget the estate management culture for an awful lot of people is very opposed to --

Leonie Cooper AM: We will come back to that point.

Pete Halsall (Director, East Kent Sustainable Homes): Yes, but that is where this can go wrong at the beginning when the estate management person says, "No, we cannot have this because we will have" -- on one of my schemes, you would not believe this but we put in a wonderful series of green walls, green roofs and brown roofs. We had in our food box things a tremendous problem with rat infestations right next to Brighton Station. We are not doing that again but we learned that when you let biodiversity loose, all sorts of things can happen that are unintended. That is another thing. You are trying to deal with a complex natural system here, really. The Latin is fine; all I am saying is we just need more practical knowledge of these things and to know that sometimes biodiversity can take you in a bad direction.

Leonie Cooper AM: Hi. Are you Anita?

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): I am.

Leonie Cooper AM: Hello.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): I am so sorry. I just got locked into Waterloo.

Male Speaker: (Overspeaking) you were locked in the Mayor's office.

Leonie Cooper AM: I had a bad Northern line experience but that sounds much, much worse.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): Try the Hastings Line.

Leonie Cooper AM: I have, actually. I used to work in Hastings. I used to work for 1066, as it so happens. I have done that one and I am never going back. There are tea, coffee and pastries on the table and then we have the healthy side of breakfast over there.

Charlotte Harrison (Assistant Scrutiny Manager, Greater London Authority): Yes, the fruit has been pushed **over**(?), I am afraid, and water as well. What would you like?

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): Sorry for bursting in late (Overspeaking)

Female Speaker: No, not at all.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): You have hit on something that is very important to distinguish and that is biodiversity as opposed to green space. There is potentially a tension there about, say, for example, social engagement. We get a lot of social engagement around planter boxes and herbs and veges. That does not really add to biodiversity in the true sense but it adds a lot of health and wellbeing and social engagement. I do not want it to be seen as one versus the other, but I just wanted to make the distinction about what a green space is versus what a biodiversity strategy is. Whilst they are interlinked, they are two separate things and a lot of the benefits that we talk about are actually just about green space, probably, as opposed to truly biological enhancement through biodiversity.

Male Speaker: Agreed, yes.

Laura Boccadamo (Sustainability Advisor, Berkeley Group): I completely agree with that. That is something we see quite a lot. There is a general misunderstanding between biodiversity and just having a big field. People think that as long as you are putting in a green space you are doing your bit, but they do not really understand the value of the space and what that means for biodiversity. There is an education part that we need to look at.

Leonie Cooper AM: There is and part of that may also be about the amount of time that you have to spend looking after it. Some biodiversity, if you install it, looks after itself and does not actually need to be cared for. Cutting a lawn will take you a long time and will give you the green space, but if you do a wildflower meadow you can leave it to grow up, have flowers, have lots of seed pods, go away and pop up the next year. In some ways you can argue --

Pete Halsall (Director, East Kent Sustainable Homes): You still have to manage them because I have some. You do have to strim them and watch them. I would say that you cannot sell things on the basis that they are going to be painless and beneficial. There is a little bit of a -- you need to upskill your estate management people, really, and get them in the right mind and to say, "It is important that we look after this properly". That is training and skills and (Overspeaking)

Leonie Cooper AM: That is bound to be the case if you have a grassy area outside anywhere.

Pete Halsall (Director, East Kent Sustainable Homes): Grass is the ultimate estate management thing because it is incredibly easy to look after and it is meaningless other than just on a visual basis.

Bevan Jones (Managing Director, Sustainable Homes): Pete hits on something there. We talked about wellbeing and we talked about some stuff that is a bit harder to pin down, but on that point where you might have a biodiverse space or you might have a green space and it needs managing after the two years the development has taken to build, that is where the contractual guys come in. These contractual people come in and should be thinking about the whole-life part of it. It is not necessarily a barrier in terms of biodiversity as a topic area or biodiversity as a black hole in my knowledge; it is about these existing techniques which all people in the development industry have around contract management and putting in place and thinking about things in terms of a management cycle. It does not matter whether it is managing the communal areas or managing the biodiverse areas. Yes, they require a different level of expertise but, if it is not thought of upfront like the management of your communal areas, it does not matter whether you are talking about biodiversity or the lights or the plants or whatever.

That is where you bring it back to the hard pounds and pence in terms of biodiversity. I know that everyone does not quite like that, but what you need to do is to root some of that into the language that people understand and that is how you sell the pound benefit. There is not always a pound benefit as well, which is important to add. That is something that we have done in our careers. Sometimes you just have to pay for stuff and it does not always have a lovely benefit at the end of it; you just do it because it is a good thing to do.

Some of those arguments are easier to have if you have your contractual and your technical people who are comfortable in their worlds saying, "We have a management plan in place. This is how it is paid for through service charges. Because it is this type of space, the service charges for the land management are a bit less". There is a comfort thing there for people.

Leonie Cooper AM: You are saying that Berkeley has decided - possibly because Tony Pidgley [Chairman, Berkeley Group] has personally committed to it or for whatever reason or because you found that you could improve biodiversity by working with experts on certain schemes - and that you have then found that that has had some financial payoffs. For whatever reason, you have decided to do that or because you have a special commitment to corporate social responsibility (CSR). It could be for many reasons.

Do you think that if there was a level playing field and if there was a way of everybody having a shopping list that was given to all developers that said something like, "You must do something from this list to enhance and end up with a net gain in terms of biodiversity", would that levelling of the playing field so that everybody has to do it help? That maybe then challenges what Bevan [Jones] was saying about how sometimes you do things because they

are good and there is a cost. That would then make everybody do something that is good even though there is a cost?

Olivia Allen (Sustainability Advisor, Berkeley Group): It is having a shopping list, if you like. Every site is different and every borough has its own requirement for biodiversity or focus on biodiversity. By having a checklist or a shopping list, you may be in danger of developing a tick-box exercise. Trying to develop a plan that is specific to the project and the area is really important because that is when you have value.

Leonie Cooper AM: It has to be specific to the site, but you were talking about developing a toolkit as well?

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes. With our toolkit, that was something that we considered to make it relevant to project teams and get them on board. It needs to be specific and have value for them and help them rather than, again, just having another form that they have to complete. We tried to incorporate a function that allows them to select their borough and then the interventions that come out will be specific to that biodiversity action plan.

In terms of having a level playing field, we have committed to this because we want to be leading in the industry. If there is a level playing field, then it would encourage these teams to up their knowledge and so, potentially, it could be a good thing. It needs to be specific to the project. Having a checklist that is generic might not be the right way to go about it, but --

Leonie Cooper AM: We were looking at the possibility of something like the Green Space Factor, which has been used elsewhere abroad and also Southampton has developed one. Do you think that kind of approach might pay off?

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): It is an interesting approach. I have a bit of experience with that from the Continent. It works well if it is broader than a site and that is also following on from your point. Quite often when we talk about a new development, we are being very specific and very purist almost about it, "This is a new development and this is where mitigation needs to happen", when actually with biodiversity it just does not stop at the fence.

I am also a bit wary of checklists because we have seen them in **Greenland**(?), for instance, where that was used as an excuse for driving down the standards in terms of biodiversity and the wider non-building of (Inaudible) related features.

With the Green Space Factor or the green factor, it is really about taking a whole-area neighbourhood approach and having an understanding of where we need to invest or where it would be best. Bug hotels are fantastic but, really, if we could go 500 metres down the road and plant trees there or have something else there, it may be much more beneficial. It is about getting clever about it. Yes, there is a formula and, yes, you can assess the benefits and that is really helpful, but to me those methodologies and tools are really there to facilitate a dialogue

between the different actors rather than as a spreadsheet. If we build that conversation into the tools, then they will be useful.

Leonie Cooper AM: Yes. Having them available right from the very beginning is more likely to engender the discussion because, whilst I would like to think that everyone is about to follow where Berkeley is going, there is a chance that some people might need to be dragged in that direction rather than willingly chasing after you because you are the leaders in this area. Some people may not be completely committed to it.

It is an interesting point that you make because this has come up before with people saying, as I was saying, about different sites next to each other being dealt with as different parcels of land but also them not seeing the edge of the development as a Donald Trump wall situation. Actually, it has to be joined with everything else that is around it. You have the concept of the joining of the green infrastructure within the new development joining to whatever it is that is just immediately around it, which may not of course be (Overspeaking)

Bevan Jones (Managing Director, Sustainable Homes): There is a checklist idea in there but, yes, you would have to watch the level of prescription. What might actually happen is a checklist might come along and you guys are sitting there thinking, "This is not as good as we do and so why would we follow this checklist?" For others, it would pull them up to a standard.

It is not like energy where there are very specific design things you could put in it: I could put in energy lights or I could do this. It would have to have a level of prescription that is very mild and it would have to just point people in that direction and say, "This is what you could do. You will have to go to your local area and look specifically at what the local authority is saying in terms of its tree action plan or whatever".

There are some developers who just leave it all to their consultants and they say, "All right. You guys do this for us and we will just get on with building". What it would engender is, "All right. We need to upskill a bit, but this is not telling us what to do. This is pointing us in this direction. Instead of having a paved area here, this could be given over to a biodiverse water attenuation plant system", or whatever. It could be a thing. Sometimes people will just go, "Here is my estate. This is what I will do with it. This is what I have always done", but if you go, "Actually, this is your alternative - one, two, three, four, five - and you could do this", that is less prescriptive. It gives people an idea that they are in control of that and they are not being dictated to by a planner or --

Leonie Cooper AM: That is roughly what we were thinking would be the case: it would be options for people to think about so that the people who may not have it in the forefront of their minds would at least have some choices at an early stage that would perhaps spark their imaginations. Some might be things that they then fall upon with enthusiasm.

The other thing that we were thinking might be useful for the Greater London Authority (GLA) to do - because we have had the opportunity to talk to lots of different people and listen to lots of different people's ideas and different approaches - might be to also have some

really good practice examples where you casually throw something into your conversation when you talk about Woodbury, the wetland area and working with Thames Water, the London Wildlife Trust, Hackney Council and all the other players and parties and you say, "They could have done this instead of that", throw it in very casually and perhaps have some examples where it is existing and things have been done, how it was done as well and who the different players were who gave advice or got involved. That might be of use to have that out there as something people could look at.

Pete Halsall (Director, East Kent Sustainable Homes): Yes, there is a point there about these two businesses. Tony Pidgley is the top guy for shrewdness and of course Lendlease, as well I knew 20 years ago when I was in the States, is a very good business with very good thinking. In both cases, they have discovered that nature is pretty good for selling properties. In a sense, you have to start with that and look at Pidgley's success. If he is chasing nature, ask yourself, "Hang on. There is something going on with this guy".

I was amazed at the *Building* magazine thing. They have this schedule that makes you cringe for contractors, not housebuilders. They conflate contractors and housebuilders, but it is how much turnover each contractor has. It does not mean you are making any money if you have a big turnover; it does if you are Berkeley Homes. Last year Berkeley Homes made more money than all of the other top 20 housebuilders and contractors put together. It is a monumentally successful business. Just to say again that --

Leonie Cooper AM: That also proves that doing nature does not harm your bottom line.

Pete Halsall (Director, East Kent Sustainable Homes): Yes, that is what I am saying, but there is much more to it than that. If you are going to be mega successful - and he has like nine Olympic golds, this guy, in our industry - and if he is chasing nature, then people have to think, "Hang on a minute. We should be getting in his slipstream". In a sense, I am not saying that you should not have **sustainability**(?) because you do need to because it is about raising literacy, understanding, awareness and competency, but follow Pidgley.

Leonie Cooper AM: I do not think we are going to call the final report *Follow Pidgley*.

Olivia Allen (Sustainability Advisor, Berkeley Group): Although he would probably really like that.

Pete Halsall (Director, East Kent Sustainable Homes): Well, it is true (Overspeaking)

Leonie Cooper AM: Tony might launch it for us if we did.

Olivia Allen (Sustainability Advisor, Berkeley Group): It is about demonstrating value with biodiversity and so not just the value to the environment but how that benefits us as a business and how that differentiates our project.

Female Speaker: Exactly, yes.

Olivia Allen (Sustainability Advisor, Berkeley Group): We do training with our sales teams on biodiversity. I did the training with the Woodbury team last week and there is a lot to talk about there in terms of biodiversity, but it is something that really sparks their imagination as well. It is probably not going to close the sale for them but it is just something else they can incorporate into their pitch that sells the dream, I suppose.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): It is pretty easy. It is an easy selling (Overspeaking). It is not a --

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes, it is.

Leonie Cooper AM: It is Sunday morning with the bird in the tree.

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes, compared to other sustainability issues like energy or the (Overspeaking), yes, but it is this --

Male Speaker: Yes (Overspeaking)

Leonie Cooper AM: If you have this really thick lagging on your boiler and --

Olivia Allen (Sustainability Advisor, Berkeley Group): The combined heat and power (CHP) unit, yes.

Male Speaker: (Overspeaking)

Anita Mitchell (Head of Sustainability - Europe, Lendlease): It is one of the most saleable (Overspeaking)

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes, definitely.

Leonie Cooper AM: There are some fabulous styles of boiler(?) (Overspeaking)

Olivia Allen (Sustainability Advisor, Berkeley Group): It is something that people understand --

Leonie Cooper AM: OK.

Pete Halsall (Director, East Kent Sustainable Homes): For a long time, your developments have all been very near the river. A long time ago, he discovered the river, which is common-sense stuff.

Leonie Cooper AM: Do you not think that that is true? Actually, if you have a slope on a site, have a water feature or put in a bit of sustainable drainage there so that it does not matter that the water slopes down and then putting some planting around it that maintains it --

Pete Halsall (Director, East Kent Sustainable Homes): Of course. Yes, of course.

Leonie Cooper AM: -- and then attracts all of those things that begin with B that we are not going to talk about - bugs, bees, butterflies. We want all of those things.

Pete Halsall (Director, East Kent Sustainable Homes): Yes. I wonder about the cultural predisposition here. Are you French or German? Where are you from?

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): I am German.

Pete Halsall (Director, East Kent Sustainable Homes): You are German, yes. The French have this tremendous feeling for landscape, like the Chinese do as well. I done business in Shanghai and in fact not business in Cannes but we have a property thing every year in Cannes called MIPIM. **You have probably heard of that**(?). What is amazing about Cannes is that when you look from your hotel room down, most roofs have some landscaping or grass on them. The Anglo Saxon head just does not do that. It says, "This is my piece of property and that is your piece of property". We are still discovering the subject of public realm and some people are saying, "It is not the buildings; it is the bits between". We are beginning to understand the Continental brain that says, "Let us look at the totality of the landscape --

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London)(?): We are not.

Pete Halsall (Director, East Kent Sustainable Homes): No, but this is our early **baby**(?). That is what we are saying --

Bevan Jones (Managing Director, Sustainable Homes): Fifty percent of us do not, yes, so --

Pete Halsall (Director, East Kent Sustainable Homes): It is a cultural thing there, I think.

Bevan Jones (Managing Director, Sustainable Homes): Yes, but also, OK, there is that cultural thing and there is a different approach to things. It is like shutters on windows. We do not have shutters on windows here because people, for some reason, think they are stupid but (Inaudible).

The other issue here is that if we are going to have a cultural difference but we all agree that something needs to be done about biodiversity, then what comes through - especially with Berkeley schemes, for example, a good example, and Lendlease at Elephant and Castle as well - is quality. What you are not selling is, "Biodiversity: this saves the planet; you will save some money on your energy bills". What you are selling is, "This is a quality scheme that you are about to put some savings into and your investment. You are investing in quality here and so I do not necessarily need to talk to you about bugs and things like that. What I need to talk to you about is the fact that your four walls are very nice but, actually, you look

out on a landscape that is helping to do something and probably gives you a 5% uplift when you come to sell your property in 15 years' time".

Anita Mitchell (Head of Sustainability - Europe, Lendlease): Yes. We get no engagement on energy, water or waste. We get all engagement on health and wellbeing and not when we talk about health and wellbeing but, if you break down, for example, the WELL building rating system, which -- we have a global partnership with Delos, more in the commercial office but it is -- we are using our International Quarter London (IQL) development as a vanguard under the WELL programme. If you have a look at it, it is daylight, views, fresh air, biodiversity. All of those things are innately what we want.

Male Speaker: That is quite nice, is it not?

Female Speaker: It is soothing, yes.

Female Speaker: Soothing music.

Leonie Cooper AM: (Overspeaking) in my mobile handbook (Overspeaking) enjoy the tune.

Male Speaker: That is all right (Overspeaking)

Anita Mitchell (Head of Sustainability - Europe, Lendlease): Enjoy the tune. But if you break it down, all of us -- I have just rented an apartment. I paid extra because I wanted a view. I paid extra for crossflow ventilation. I paid extra for daylight. I paid extra because it was off the street and therefore had better air quality. Inherently, people are valuing these things in their property decision-making. We know that somewhere facing a brick wall will be cheaper to sell than it would be if it was facing a park. These are pretty obvious things. Something by the waterfront or something with a view suddenly goes up in value and so --

Leonie Cooper AM: I had a really interesting discussion with McCarthy & Stone, whose business model, as you will all know, is to try to persuade people that they want to buy somewhere that is probably going to be their final purchase.

Pete Halsall (Director, East Kent Sustainable Homes): Buy-to-die.

Leonie Cooper AM: I was being slightly more polite than that, but yes. They are trying to persuade people to downsize from maybe a large house and buy a flat for maybe £500,000 and then give their two children £250,000 each to go off and buy because that is the way the housing market is working in London. They are incorporating huge amounts of really interesting biodiversity and green bits on roofs and all sorts of other stuff, as well as having - literally - the wellness bar inside and all the other facilities that people can dial up as their care needs change, which I thought was really interesting. They were, clearly, spending quite a lot of money on that. Their particular business model is to build and then sometimes it can take quite a long time for them to sell because it is not a market where people will buy off-plan because it is that final purchase. I found it quite interesting how much attention they were paying to biodiversity.

That speaks quite strongly with what you were saying about incorporating it. What I would like to do is make it as easy as possible for everybody to see the value that you were talking about and you were talking about. I am slightly challenging you on some of the places that China has gone to in terms of megacities it has been building because I do not think much attention is being paid to anything in those megacities. People's lives and health has been seriously impacted, but let us not talk for too long about China.

Pete Halsall (Director, East Kent Sustainable Homes): No. Obviously, the cities are a mess, but if you look at individual developments, they do put an extraordinary amount of care into landscape. It is partly because you can bus in rural peasants for $1 a day and so you do not really have costs *per se*. For $30 you get 30 guys for the day and you have an amazing landscape. There is a different social-economic structure. All I am saying is that in their culture landscape is important. Those cities are dysfunctional now already and one of the reasons they are dysfunctional is because they are not in tune with their own culture and so they have difficulties with that.

Leonie Cooper AM: In terms of having a big building programme, which we have not had so much of over the last few years in London -- we are going to ramp back up, it seems. I do not know whether it is about skills and available workforce but let us assume that we do because that is what the Mayor is very keen to do and keen to see. I want us to be involved in building buildings that in 2050 we are not going to have regrets about and they should incorporate the absolute best practice. That is what this is trying to get towards.

That is why we are having those examples of best practice and also having information if there is money available for biodiversity. Would that be of interest or do you think it is something that can be borne on the bottom line?

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): That is always useful. I would rather not have too much of an emphasis on that because it is really not all about money. The one figure that I would love to get my hands on is the cost of almost fanatically putting in the same plants time and time again when they fade and die because they are the wrong plants in the wrong place. It is all of that. It is almost like a black-and-white attitude that, "What we have now is super cost-effective and it works, but new stuff and biodiversity-rich stuff is really expensive and we cannot possibly afford it". Then you start challenging some of those assumptions and you find that a lot of planting has to be redone because we either cannot plant it properly because we do not know how to or we put plants in that need watering constantly and of course nobody is going to do that. There is a lot of that. You just put a few trees in the ground because they look pretty - the ornamental cherry is one of my personal favourites - and then they die. It is sad. It is about challenging those assumptions as well.

Leonie Cooper AM: Access to guidance on what is --

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): To guidance and to costs, to real costs --

Leonie Cooper AM: And to costs, real costs.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): -- and to say to people --

Leonie Cooper AM: Full-life costs, not just planting costs.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): -- "Do you know how much your current costs compare to the costs of a slightly different approach?" We do a lot of them. We work a lot in the housing context. It is really interesting because time and time again I have contractors saying, "I did not know that", literally. We have cases where they have a plant list that is 15 years old and that is part of the maintenance schedule.

It is those little things that showcase that we can do things differently without breaking the bank. Sometimes we also go to developers and say, "You must do it completely differently; otherwise, you are bad person", when actually it is the incremental change that we also need to promote because this is how you create those little showcases.

That is the other thing. We need to have more of those. Rather than just the big developments where they are doing everything brilliantly (Overspeaking) the little things --

Leonie Cooper AM: That comes back to the case studies and the examples, then, being collated together.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): Yes.

Leonie Cooper AM: That would be something that we thought we could possibly do and then maybe also have easy access to people who can give good guidance because --

Olivia Allen (Sustainability Advisor, Berkeley Group): That is really important. One of our projects that has worked quite well is when we put some hives on top of One Tower Bridge just behind us. We have partnered with Bermondsey Street Bees, who are amazing. They are really brilliant innovation and so knowledgeable as well. They have a hell of a lot more knowledge on apiaries than we do. That has been a fantastic story for us.

Leonie Cooper AM: They are local, are they not?

Olivia Allen (Sustainability Advisor, Berkeley Group): They are local, yes, and so --

Leonie Cooper AM: Maybe having the contacts for the London Beekeepers Association who have the contacts out to the local sets of beekeepers would be something that we could usefully -- although they might not be happy about that.

Olivia Allen (Sustainability Advisor, Berkeley Group): I think they would. It goes back to being project and area-specific and that is where the value comes in.

Leonie Cooper AM: Yes. How much has that cost, would you say?

Olivia Allen (Sustainability Advisor, Berkeley Group): It cost us about £5,000, maybe a little bit more, to get it set up. Then they are now training one of our staff to become the beekeeper. That has been a really nice story as well in that they are eventually handing it over to one of our -- so we are upskilling our staff, we are partnering with someone who is really local, the honey is going to local restaurants and it is being given to the residents. It has generally been a good-news story and something that we have promoted quite a lot within the business as working quite well.

Something that we did with them, which we would never have thought to do, was offsite planting as well for a bee forage, which is really important. Again, I would not have known that and I would not have known to tell our team to make sure we are doing planting -- I think it is St Luke's or somewhere up the road.

Leonie Cooper AM: Yes, bees do have quite a range.

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes. We are working with Bermondsey Street Bees, who recommended that to us and --

Bevan Jones (Managing Director, Sustainable Homes): That goes back to your point about how we look at a site and we border it, but then there is something over in the invisible bit that is not in the drawing and so that can be something. Also, the old sustainable drainage system (SuDS) manual has costs for how you maintain certain SuDS things.

When I was at Catalyst and we were doing land acquisition and there would be a sustainability bit and we would put our sustainability comments in, we would say, "All right, we want a better-than-normal SuDS scheme here, partly because we know that the surrounding areas are concrete but we are building something that is mixed-tenure and so we need this, this and this". The first question from the asset guys in property services was, "How much is that going to cost me per year?" (Inaudible), "Well, approximately this, give or take whatever". That makes the argument a lot clearer because then what you do not get is opposition when you are trying to get agreement. They go, "All right, he knows how much it is going to cost, approximately". It does come back to that financial bit but in a nicer way in that someone then has some knowledge about this weird and wonderful thing. They do not quite know what it is but they know that it manages water or it encourages wildlife and will cost them £200 as opposed to £600 because it is not a plain bit of grass that all the residents will want mowed every week.

Those types of things develop, but they can only ever be a guide. Knowing things like that, like with the bee project saying, "That as a percentage of the overall scheme cost", it is probably nothing --

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes, it would be minimal.

Bevan Jones (Managing Director, Sustainable Homes): -- or point-zero-zero, yes.

Female Speaker: (Overspeaking)

Leonie Cooper AM: In fact, we have not talked about some things you can just do in terms of the way you construct the building that might be particularly good for birds or bats or something. Being able to have a small area of access might in fact not have any running costs associated with it at all because it is just incorporated at that time. With hedgehogs, if you have a million planks of wood out of which you cut small holes so that they can go from one garden to another, it costs nothing; whereas if you then tried to go into everyone's gardens and create it, it would take hours and people would probably wonder what you were doing as well. It is things like that. Fitting a bat access or a bat box or somewhere for swallows to nest, which of course we can completely remove from our current buildings because of the way we build, if we want to, or we could just say, "Yes, let us allow that to happen". Then it has really no ongoing costs, does it?

Bevan Jones (Managing Director, Sustainable Homes): What I have noticed is that where you have a planning authority that is really switched on in terms of biodiversity, has its suite of policies and documents and has someone in the local authority who can stick their head into a planning meeting and say, "Blah, blah, blah", we found that that stuff just gets put on anyway. Even the most reluctant regeneration project manager will just go, "All right. I have just procured all the bat boxes and that is that. That is my line".

Leonie Cooper AM: Beyond that, you need to think about how bats also need to go and forage as well and they like dark corridors. They also need trees, water, things to eat and all the rest of it. Bees need early-flowering plants and the ones that wake up early. There are all of those different considerations.

Bevan Jones (Managing Director, Sustainable Homes): We found that where the local authority was engaged on those issues, it impacted on our designs because we knew about it because we even put pen to paper and we had a better and biodiverse scheme. I have also noticed that in places where we have local authorities that do not have that expertise or have side-lined that expertise or got rid of that expertise in the last six years, they just say, "Go and build it. It is really nice that you are putting in some bat boxes". It is that kind of thing. The level of the engagement from the local authority is also one of the things that is really key to project manager (Overspeaking) it.

Leonie Cooper AM: This would be central guidance that would be available from the GLA. It would not just be on a website that could be accessed only by developers. It would be available for those local authorities that no longer have a fulltime tree officer or fulltime biodiversity officer, which is probably quite a few of them now because of the issues to do with the Government grant being withdrawn from local authorities, which we are all aware of.

Olivia Allen (Sustainability Advisor, Berkeley Group): It is one thing having the guidance available, but if it is not mentioned or does not form part of discussions, then -- so you can have your guidance, but is it actually being looked at and is it being used and is it being used to inform discussions at the right stage of the planning process? That is really important. Guidance is always useful, but how it is used and when it is used, if it is used at all, is going to be --

Bevan Jones (Managing Director, Sustainable Homes): You might have got rid of your biodiversity officer or your tree officer or whatever or side-lined them or whatever, but if you have a planner going, "This is really key to you getting planning permission. I do not know anything about biodiversity but it is in our policies and I do what the boss says. Do it", then the loss of those people is mitigated. That is where, if you do not have a local authority that is switched on in any aspects, then you will just --

Leonie Cooper AM: We are talking about supplementary planning guidance (SPG) with teeth rather than just, "Here is a nice list of something"?

Female Speaker: Yes.

Pete Halsall (Director, East Kent Sustainable Homes): Definitely, but also carrots. Personally, I just think with developers, if they do not get it like you guys do, then make them do it. It is partly an intellectual problem, actually. You cannot say to somebody like a project manager, "OK, mate, I know you have a busy day but you need to read this biodiversity document and really get it". This is the point. We want to be very careful here. If we are saying to somebody, "This is the equivalent of doing a degree of ecology synthesised down to 150 pages and you are going to have to really get this", it is not going to happen. It is not realistic intellectually, apart from whether the person wants to do it.

I would say that the thing about the developer brain is that you are always spending money out. We use money like you guys use water. We really do. The money is always going out. Then we get this big wave of income from sales coming in later. So the psychology of a developer is, "Christ, yet another cheque to write, another cheque, another cheque, another cheque", and they have (Overspeaking) scheme for £750,000 to fund a planning application. That is a lot of money. If you said to a developer, "We will give you a £2,500 voucher from the GLA to fund your ecology or biodiversity study", you would be amazed at the take-up. It is a psychological relief that, "Christ, for once the money is going that way. I am not writing out a cheque to a planning consultant or an architect or a political advisor or an ecology consultant or an archaeology consultant". It might seem like it is a small amount of money, but the psychology of it is, "Wow. I am being given £2,500 here. That is nice. The money is going in the opposite direction for once". If you do that, you will create a warmer feeling around biodiversity, a "these are people who give me cheques" kind of thing. It is carrots and sticks.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): It is not all about giving cheques to developers, speaking as a developer.

Pete Halsall (Director, East Kent Sustainable Homes): Well, no, I am personally an entrepreneurial developer and personally funding (Overspeaking)

Anita Mitchell (Head of Sustainability - Europe, Lendlease): Actually, most of the barriers exist within the local authorities.

Pete Halsall (Director, East Kent Sustainable Homes): No.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): That is our experience. We build it in. We get the enlightened councils that will work with us. We have had to plant 900 trees outside of our boundary on the Heygate Estate to achieve a net biodiversity benefit. That has meant an amount of community engagement, knocking on doors, talking to people about putting a street tree that did not exist before out in front of their house, going back when it has been vandalised because people are worried about light, knocking on their door again and asking why that tree has been removed. It has been an enormous journey that we have had to go on with Southwark Council.

Actually, the barrier, in my personal view and maybe this is as a large developer rather than a small developer --

Pete Halsall (Director, East Kent Sustainable Homes): Not just large; you are an international conglomerate. I cannot tell you. Your culture is not reflective of the "London developer" culture.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): My personal view is that handing cheques to developers by the GLA might not be something that would be kosher in the current market.

Pete Halsall (Director, East Kent Sustainable Homes): I disagree.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): That is just my personal view, but upskilling in the industry and -- there are other ways to do it rather than handing out cash. The city of Sydney, where I have just come from, has a green roofs and walls policy; there are floor-space ratio benefits and there are green door policies. There are other things that monetise that benefit for a developer through fast-track planning approval, more surety about planning control, potential floor-space bonus, etc. If you plant a green roof, it is not counted in the gross floor area (GFA) or net lettable area in a commercial office scheme or whatever it is. Those sorts of benefits are less about handing money to developers but more about encouraging those things and removing some of the financial barriers associated with them.

Pete Halsall (Director, East Kent Sustainable Homes): I would say that the vast majority of developments are done by small and medium enterprises (SMEs) and bigger developers in terms of the overall amount of stuff that is done.

What I will say as a developer - and I am a green guy, which is irritating on that front because it makes my job harder for me as an entrepreneurial self-funding developer - is that people can make money in London by not doing any of this stuff. If the mentality is, "I just want to make money", which is the majority of normal, non-international, non-corporate developers, they are not going to take on these things. They are not going to take on that level that you want them to --

Anita Mitchell (Head of Sustainability - Europe, Lendlease): You have just argued in my favour.

Pete Halsall (Director, East Kent Sustainable Homes): -- unless they are funded to do so.

Leonie Cooper AM: Just to come back Anita's point there, in one sense we have to put our hands in our pockets and pay for the whole of the development and then at the end we sell the units to cover the costs that we have incurred and, hopefully, make some kind of return on our initial investment. Surely, if the gap between initially putting our hands in our pockets and spending all this money and the point of actually starting to market and sell is shorter and is reduced by things like fast-tracking through the planning process or passporting through in some way because you have ticked boxes - and I know you do not like box-ticking - and that sort of thing, is that not as attractive?

Pete Halsall (Director, East Kent Sustainable Homes): That is not going to happen. The reality is that that is not what is happening on the ground. Planning is getting slower. We have policy loosening, which is good, and we have local authority belt-tightening, which is bad. I am seeing planning permissions now taking twice as long. I am talking about from Kent to Bath in terms of my interests and so quite a swathe of the country (Overspeaking)

Leonie Cooper AM: Yes, I have looked at some of the key performance indicators (KPIs) for (Overspeaking)

Pete Halsall (Director, East Kent Sustainable Homes): In that way, it is a theoretical position. At Elephant, you have had a lot of support behind that and a lot of that work was done almost - and we are going to bid for that - 10 years ago and that is a long time. The reality today is that planning is becoming glacial and you just cannot say, "If you are better on biodiversity, you might get a planning benefit". No, because there might not even be a planning officer or they might be part-time --

Leonie Cooper AM: Exactly. That is also because of the cuts and the Government is not interested in funding local authorities. People in London pay a huge percentage of tax that goes to the Government that they then send off around the rest of the country to do I know not what.

Pete Halsall (Director, East Kent Sustainable Homes): What I am suggesting is some sort of carrot-and-stick approach. That is what I am suggesting, whether it is --

Olivia Allen (Sustainability Advisor, Berkeley Group): In theory, if we as a developer demonstrated that we had met these biodiversity aims and that would improve the planning process, then we would probably **put a hand up**(?) but, as you say, whether that happens in reality ...

Bevan Jones (Managing Director, Sustainable Homes): There is also a slight level of -- we have talked about the developers, but traditionally Sustainable Homes' client base has been social housing and housing associations. Developers have a build-and-leave model or build-and-third-party-management model. Housing associations have a build-and-stay model because they tend to build complex multi-tenure schemes with a multi-tenure management approach or "tenure-blind", as they like to call it, but it is not really tenure-blind. That multi-tenure management approach has a level of complexity that is not necessarily reflected in the developer world because you build-and-stay and so what you have to really have is that whole-life costing. Since housing associations are trying to ramp up their development programmes, particularly the larger ones are now essentially medium-sized developers. The issue is there --

Leonie Cooper AM: It is all right. We can speak the name of the G15 --

Bevan Jones (Managing Director, Sustainable Homes): Yes, the G15.

Leonie Cooper AM: -- although we have been in the room for about an hour and they are probably the G10 by now (Several inaudible words).

Bevan Jones (Managing Director, Sustainable Homes): They probably own half of the housing in the United Kingdom (UK). These guys have this different management model, which is not necessarily taken into account by the traditional way that we do development in the UK. They have a really complex model.

If we are talking about putting in green space and redeveloping and, "After our 15-year regeneration or five-year build programme, this place will look wonderful and we will have done our diversity, but we are on to the next site" - obviously, not all of them are like that - what you have is a different model of people whose costs are then different, whose management costs are then different, whose setup costs are then different. They traditionally have not been very commercial operators and are moving into this world where all of this stuff, to them, definitely does look like another cost, to which they are thinking, "We do not make as big a margin on our products because we have 30%, 40% or 50% social housing and we have a nice guaranteed rent for the next however-many years, but we do not make the return because we are selling only 100 properties rather than 450". There is a different thing that complicates that approach.

Actually, yes, handing cheques to developers would not be palatable, but there was an approach a few years back that London Councils did around getting local authorities to have surface water management plans. The local authorities could not or would not - some of them would - go and do it off their own bat. I cannot quite remember where the money came from, but the money was put together for the local authorities to access. Not all of them; I do not

know whether you (Inaudible) or not; I do not know where they are. What we got in the end were 33 surface water management plans, which then means that when you are developing or you are trying to do something, you pick it up and you go, "All right, I know exactly what not to do". That money, rather than going to the consultants or the developers, went via another route but it was accessible and actually helped the developers because they had this document which goes, "All right, I know that they are very concerned about surface water management in this place". That similar approach could be taken here in terms of biodiversity planning and biodiversity ...

Leonie Cooper AM: Green infrastructure?

Bevan Jones (Managing Director, Sustainable Homes): Green infrastructure planning, yes, where you do have that kind of agglomeration of all this stuff and the local authority says, "Yes, we have a deficit in NW1. We need something there, whether it is an offset or whether you do some offsite stuff for us. If we go back to the checklist" - I know that that is not what we will call it - "our five options in that area could be planting, engagement with a school, beehives". There is an approach there.

I said this at the [Environment] Committee the other day [10 November 2016] when I said that the GLA is not just there to hand out money to people. There has to be something, either a developer contribution or an allowable-solutions type of approach but for biodiversity. We have said this in our response, but there is a way of getting the money to help the developer without actually giving it to the developer.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): There is something between checklists and case studies and that is templates and guidance and pro formas. That is more helpful than -- running up a thing about Elephant and Castle, everybody will (Inaudible) unless as a huge developer you have the money to be able to do it. That is the typical response. If you then said, "Well, how did you do it? Can you share some templates? Give me a bat box. Give me a contact sheet and show me the dos and don'ts around beehives. What are the best-practice examples? Give me some pre-formulated templates". In Australia, it would be the Australian Institute of Landscape Architects and I am assuming there is a similar group here. You can develop some toolkits that could go out and then you are not having to pay £2,500. You might only be saying, "Look, here is the checklist. Here are the pro forma templates. Go away and figure out which ones you want to do". It is more of a pick-and-mix rather than developing it bespoke for every site.

Bevan Jones (Managing Director, Sustainable Homes): Yes, but you have to spend some money to get that suite of a quality that people will take seriously. That is something --

Leonie Cooper AM: Something (Overspeaking)

Pete Halsall (Director, East Kent Sustainable Homes): You are totally right. But, look, "sustainability advisor", "manager", "head of sustainability". Smaller developers do not have people like you on the books. This is the point that is being missed by the GLA. You are a

big organisation. You are used to dealing with big organisations. The smaller people do not have --

Leonie Cooper AM: No, we are not. We had that discussion with the people who came from the biodiversity groups and we talked about how to engage with the full range of developers from the large - who might have their own sustainability consultant on board - through to the much smaller ones, the housing associations and so on. We have been entering into that discussion and I am very happy if you have thoughts about how that could happen to take that as well.

Pete Halsall (Director, East Kent Sustainable Homes): To give you an example, I am trading a site that --

Leonie Cooper AM: That is why we are talking about what we provide from the centre and how we can facilitate this at the local authority level with you. We are not just looking at large --

Pete Halsall (Director, East Kent Sustainable Homes): No, I know, but the tendency would be to do that.

Leonie Cooper AM: One of the things that is worrying me about the Mayor's developments is, as well as the procurement framework for Transport for London (TfL), they have 13 very large consortia if a building's name begins with B and a few others as well and some of the G15. They are all very large. Those organisations are going to be looking at all of the big sites first and there are a lot of much smaller sites and some really tiny sites that would take only 10 to 25 units. The idea of this is to make sure that something appropriate is on all of those sites. There is no point in doing this project if we just end up by saying, "Yes, there has to be great green infrastructure on any site that has more than 150 units", because the Mayor is not just looking at developing sites for more than 150 units. I am just putting that out there.

Pete Halsall (Director, East Kent Sustainable Homes): I will give you an example. I am working on a scheme in Kent. I am not going to build it because it is just too far away and so I am trading it out on planning to a local developer. The smaller local developers now like to buy oven-ready sites with planning and it suits my business model because I can make some money on the planning uplift. Also, I can build the green stuff into the planning application and the section 106 and so I can go away thinking, "It is going to be green because it is in the section 106 and it is going to have to be green", and make some money as well.

This guy - the other day, I met with him and his father - is an East Kent-based developer. He is a very wealthy person. They are worth about £10 million between the two of them. These guys said, "We have got to the planning application. It is on the portal now. You have produced 45 documents?" I said, "Yes, you have a tree survey, a bat survey, an ecology survey, an archaeological survey, da-de-da-de-da".

What the SME builders are saying is, "We cannot handle this anymore. It is too much. Twenty years ago these guys would have got planning for their own schemes; now they are

buying schemes with planning because they cannot deal with this amount of stuff: yet another checklist, yet another guy. The buffers were broken probably about 10 or 15 years ago, actually, and they have been in freefall.

What I am saying is that you have to tackle the SME guy in a totally different way. You cannot deal with them in the way that you deal with these guys because the resources are not there. The brains are not there. They work on a very instinctual basis. Bureaucracy just completely flummoxes them. They are not going to spend a month - which is probably what we are talking about - reading and studying local plans, SPGs, checklists for this and checklists for that. They are just not going to do it.

In fact, what I found - and this is perhaps less of a London thing - is that you go into the provinces and even the consultants do not have their heads around this stuff, which is even more frightening and you think, "Christ". London is a good cooking pot for these sorts of things, but you need a specific way of helping the SMEs.

Leonie Cooper AM: You are agreeing with Bevan there because you are also saying that you need a specific way of dealing with housing associations that build and then manage, rather than people who build and then sell.

Bevan Jones (Managing Director, Sustainable Homes): Yes. There are different business models. You cannot go down to that level of granularity with everyone, but there needs to be a recognition - particularly if you are bringing the price of managing this particular type of planting or whatever - that that would help with a build-and-manage model.

I take Pete's point. At Sustainable Homes, we have identified that we have a particular service that we want to offer, which is going to be for small service providers - not necessarily in the biodiversity space - that want to work for housing associations or larger landlords but cannot get their heads around ISO 14001 because they do not have the resources. That is a really valid point. There are these tiers and it is like who is developing, who are the ones that are doing -- even within the G15, we have people who are saying, "We are not doing any more social housing".

Leonie Cooper AM: I know.

Pete Halsall (Director, East Kent Sustainable Homes): That is right. How does that work?

Bevan Jones (Managing Director, Sustainable Homes): Why are you in the G15? Yes. Then you have others who are saying, "We need 50% social, we need 50% on sale product of some kind and, because we realise that, we need to enhance the site and the neighbourhood and the existing community, not just build and then make a load of money". Even within that, you cannot go down to that level of granularity but what you will need is a recognition of these different types of developer, whether it is small, medium, up to large or then over to the build-and-stay model, which is slightly different as well. Yes, it is the recognition of bureaucracy that needs to go into it.

Again, if you come to a stage where you are giving them an idea of what they have to put in rather than them having to go away and learn it all, then that is where the compromise is.

Leonie Cooper AM: It has to make it easier for people.

Bevan Jones (Managing Director, Sustainable Homes): Yes. It is kind of, "I know I am not going to understand why this planting is going in, but I know I need planting of a type from this wheel of options".

Pete Halsall (Director, East Kent Sustainable Homes): Easy or facilitated, yes.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): That is a very (Inaudible) for the GLA and convenient rather than putting it out there in terms of guidance and all of that because, on a very basic level, people like coming to City Hall. It is important to be invited here. If I am invited to come to a venue that is perhaps very interesting but not that prestigious, then that changes the dynamics --

Leonie Cooper AM: You say that in one of our smaller committee rooms.

Male Speaker: There is that feeling(?) walking up to the building.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): It is true, though, is it not? I think --

Leonie Cooper AM: Actually getting off the Tube and finding that there is a sign that says "City Hall" and so you know the way there.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): Yes, it is really important. It would be good to see more of that because, whenever that happens, good conversations happen. It is creating that space. I do not mean that as a soft option. It is really important and it needs to happen alongside the guidance and the SPGs and all the rest of it because you have no way of enforcing anything but bringing people together - and almost offering that space where they are not being harangued by the planners or by their managers or whoever but can actually looking at those options - is really important.

The other point is following on from something that Bevan has said, which is about business cases. I have learned over the years that there are a few people who understand and speak "fluffy". I do that too, but I do it less and less. When you ask me about the benefits of putting green stuff in, I will have figures and to somebody who says, "Putting a green roof on this is going to cost an extra 20%", I can then say, "But it triples the lifespan of that particular building and there is evidence and we are not making it up". Putting in those rain gardens and SuDS schemes here, in our case, we have just done a big programme and 89% surface water flooding --

Leonie Cooper AM: Reduced?

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): -- removed. It is all of that. We need to get a bit clever about that because I find that I go to meetings and suddenly it is like looking into a parallel universe where everybody says, "It will be nice with the bees and the birds and the trees. How wonderful", and then we come back and say, "We cannot afford it". It is (Overspeaking)

Leonie Cooper AM: Actually, one of the first groups of people who came to talk to me after I was elected in May wanted to talk about not so much green infrastructure but adjusting our infrastructure, particularly for surface water drainage and all those kinds of issues. Thames Water probably is the source of some of the finance for dealing with surface water drainage because it is quite difficult for them, particularly when it all arrives in the sewerage works, for example. We will not go into the details of why, but you can imagine that. It was actually the Institute of Civil Engineers, which has a lot of things to say about what we should be doing to adjust our environment to deal with some of these issues. Of course, for them, it does all come down to the engineering side of it and that we can use engineering to stop some of the things that are problems right now to do with surface water runoff. Also, looking in the context of climate change, are we really going to raise the banks of the whole of the River Thames by 10 metres all the way along its length, which might be an option that we need to look at? That does speak to the financial bottom line very well.

Can I just ask a question? Sorry, this is about big sites. Some sites which are very large can take a very lengthy period to develop out. It is my least favourite expression but "meanwhile use" has been raised as something that is quite important. We went to the Battersea Power Station site, which of course did not have very much diversity on it because it was pretty filthy and needed huge amounts of remediation, but there were some peregrine falcons that were in one of the chimneys. They rehoused them on a pole and had to clean the nest. This year they have graced them with four fledglings, which is apparently more than they normally fledge. They have a camera up there and are taking pictures of them eating - which we did not want to look at too much because it was pretty unpleasant - and flying around. It is quite close to Battersea Park and it is also near a waste transfer station and so there are plenty of things that they can feed on, lots of pigeons, starlings and also ring-necked parakeets in Battersea Park, which --

Male Speaker: Ring-necked parakeets? Wow. That is good.

Male Speaker: The noise would be (Overspeaking)

Leonie Cooper AM: Funnily enough, the people from the wildlife organisations, when I said that, were all going, "Finally, we have a way to get rid of these interlopers". That is a prime example. It is a fantastic example. They are right at the top of the food chain, obviously. They are planning to put in not green roofs but grain roofs because they have also found black redstarts as well, which are urban birds that have changed their colouring to live in areas that are dirty. They would not live on green roofs but they like brown roofs so that they continue to be camouflaged. All of this is on a site that has phases 1 to 8 or 9. They have been taking the chimneys down and rebuilding them and there are all sorts of things going on. Anyone

who goes past can see there are a million cranes there and it is still going to go on for a lot longer, but at least it is happening.

Do you all have views about meanwhile use? It does not have to include peregrine falcons. They put in loads of trees that they then wanted to see if other people would like to reuse when they started to develop that part of the site. Some of them they were able to hand over to other people, but some they could not find takers for and so they were also saying, "It would be really handy if we had a book or a place where we could go to find out who would like some trees that we do not need anymore and that sort of thing", or they could have brought in some trees that someone else did not want to use anymore. Meanwhile use?

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): The one thing about meanwhile use is that it is very hard to quantify the impact of the measures you put in because to do anything that resembles longitudinal monitoring is really challenging. We are talking about such long timescales, which then also takes us dangerously close to the territory of "green wash" when we put a few trees in and it looks good for a bit. I am not completely rejecting that, but that is something that depends so much on the length of time you have and on the type of site (Overspeaking)

Leonie Cooper AM: One of the biggest sites has 10 or 15 years, which is why (Overspeaking)

Anita Mitchell (Head of Sustainability - Europe, Lendlease)(?): Yes, they go for a long time.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): (Overspeaking) changing. The sites are changing and what --

Leonie Cooper AM: Why I did not really think about it is from part of this to begin with when we first talked about biodiversity in new housing developments, but if you are spending 15 years developing a site, then maybe it is something that needs to be thought about (Overspeaking)

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): It is **moving around**(?). That is the nature of the sites --

Leonie Cooper AM: I know, sure.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): -- and the example you have just given does make my point, "Now we have all of these trees that we --

Female Speaker: Yes.

Male Speaker: Yes.

Bevan Jones (Managing Director, Sustainable Homes): Or maybe then it is not a biodiversity discussion. It is one of the co-benefits of biodiversity. We have an issue in London that lots of places are cut off to lots of people and that could be down to land ownership or social exclusion and things like that. We have lots of places in London that do not have access to green space. If I am 400 metres over there or 400 metres over there, I might not be able to access any green space. What that does is it allows people access to a site that is going to be cut off, essentially, or would have been cut off for 15 years or ten years or five years.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): It does. It does that. That is the point, is it not?

Bevan Jones (Managing Director, Sustainable Homes): Yes. I meant to say it earlier and I do not know if we have said it in our conversations, but biodiversity is the big Trojan horse to get your other stuff in as well, to get your access to these hidden sites and things like that, or it is the other way around and you use these things as a Trojan horse to get your biodiversity in. There are other things that we can talk about where the goal for all of these is biodiversity. We want to get more biodiversity in, but we open up a site and we have meanwhile use. What we have done is we have an engaged community, which might be **decanted**(?) in the next three or four years and they have a little access to the site. It might feel a bit different for them because they are being allowed somewhere that was behind a hoarding for a year or two years. It does things other than just biodiversity. There are other points, especially when you are talking about development, when we can talk about those other things as well and we should talk about those other things and not just always go, "Here is my biodiversity, here is my social inclusion, here is my resident engagement".

Olivia Allen (Sustainability Advisor, Berkeley Group): At Berkeley, we consider meanwhile space as part of our social sustainability framework.

Female Speaker: (Overspeaking)

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes. It is about access and about the use of space so that it is not left for things that we do not really want happening there. In terms of biodiversity and value, though, it is really difficult. What we have done in some places is temporary allotments and stuff like that, which has worked quite well because they can be moved and it happens quite easily. You are right: things change and phasing changes. In terms of implementing something that is going to have a real biodiversity value, it could be quite difficult and it would be really project specific. However, in terms of access and community engagement, meanwhile space is definitely something that we need to think about.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): We all need to be talking to new strategies.

Anita Konrad (Director of Strategic Partnerships & Programmes, Groundwork London): That is the point, though, is it not, about local community engagement, then, because you have another cost factor, which is that those processes need to be managed quite

carefully to make sure that people get the most out of those spaces. You need almost another budget, people talking money --

Anita Mitchell (Head of Sustainability - Europe, Lendlease): We are talking about big (Overspeaking)

Leonie Cooper AM: Yes, we are talking about big sites with phases, although --

Anita Mitchell (Head of Sustainability - Europe, Lendlease): Yes (Overspeaking)

Leonie Cooper AM: -- as Olivia has pointed out, it does stop other unwanted use taking place.

Pete Halsall (Director, East Kent Sustainable Homes): Can I just say, though, with my old American developer hat on because I started out in North Carolina, in Charlotte, actually? As an American developer, you would always put in later-phase landscape early because you are trying to establish the place. You really would --

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes, we would do that as well. For Woodbury, for example, the landscaping and the public realm and the accessibility has been delivered early because that is what people come to see and --

Anita Mitchell (Head of Sustainability - Europe, Lendlease): It is your calling card.

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes, absolutely.

Pete Halsall (Director, East Kent Sustainable Homes): Also, it is cheaper because you can put less mature species in that will grow themselves - rather than buying mature species, which are bloody expensive - early on.

One of the difficulties in England or in the UK - it is less of an issue in the [United] States, of course, particularly in North Carolina - is that you would be worried about protected species then inhabiting a landscaped zone, part of which might be a development zone. This is one of the things. We have this scheme in Farnham with 500 units where and we are thinking about landscaping it and selling it to a housing developer with a private road in and some already developed landscape for the five or ten-year building. This is an issue that has come up. Are we are going to attract species which at the moment we do not have, strangely, on this site? There are lots of horses and cats, which means not very many protected species (Overspeaking)

Leonie Cooper AM: It is not full of bats and great crested newts at the moment, but you are worried that you might plant something that will attract them?

Pete Halsall (Director, East Kent Sustainable Homes): We are worried that in our sale to a developer or a housebuilder, they might say, "If you put all of this bloody stuff in, there are now going to be" -- in the sense that it could get in the way of the development programme.

Again, you have to get into the developer's mind. Biodiversity is a good thing but, when it manifests as a protected species, it would start to be seen as a problematic thing as well. You have to navigate that quite carefully and address it (Overspeaking)

Leonie Cooper AM: Yes. That, of course, is why the falcon has been carefully rehomed out of the chimney. It is an entirely protected species and the same with the redstarts as well. They are making special arrangements to ensure that their lives are able to continue or at least their offspring's lives can carry on at that site.

That brings us on to - and you referred to this a long time ago, Olivia - the idea of net gain. Clearly, you do not want to lose what is on the site, however nervous people might be, but It is about keeping what is there - possibly getting rid of all of the Japanese knotweed and some of the probably unwanted biodiversity - and then moving on to having and attracting other interesting species. It sounded as though you are building that in now.

Laura Boccadamo (Sustainability Advisor, Berkeley Group): It is difficult with net gain because, just as part of toolkit, what we are understanding is that we do not understand how much work is involved in getting a net gain. We have some sites in London that have quite a high level of biodiversity but they are very small and so we are just working and will (Inaudible) learned from the process as to what we need to do to get a net gain on that site, how much it is going to cost and if we will have to offset our priorities to keep as much onsite as possible, but we are limited with space and so it is going to be a bit of a learning curve for us. Sometimes with the big sites it is easier because you have more space to play with. We will just have to wait and see, but that is where potentially it could become a challenge. It could come down to costs.

Olivia Allen (Sustainability Advisor, Berkeley Group): Something else that we are trying to work out is that we have said net gain but actually how much net gain is what we should be trying to achieve. It depends on the project, but is 1% OK or should we be aiming for 10%?

Anita Mitchell (Head of Sustainability - Europe, Lendlease): Where do you start your baseline? If you have asphalt as your baseline, then putting one pot plant in is a net gain.

Laura Boccadamo (Sustainability Advisor, Berkeley Group): Exactly, yes.

Anita Mitchell (Head of Sustainability - Europe, Lendlease): That is my challenge with a lot of green building writing tools where they start with a very low baseline and that is a global phenomenon.

Bevan Jones (Managing Director, Sustainable Homes): Net gains - and for you guys who have the resources and the brains - you are grappling with it. When I was at Catalyst, I look up the specifications and I started off with green space. There was not a net gain in green space - and, as you said, it is a different thing - because we were regenerating some areas that were just concrete. I walked over and I had a look around and I thought, "This is pretty easy but we could get much more green space or amenity space or whatever", and so I put this thing in our specifications. We then found this perversity, exactly what you said, about just

essentially designing a pot plant into it and going, "There you go, there is your net gain". We said, "That is not really what we were after", and so we took it out. We did not necessarily have the resources to look at it. I could devote maybe an hour a week to look at it.

Then we went for biodiversity instead because we thought, "Actually, we can do it with our green roofs. I do not necessarily have to think about access. I can think about ... etc". Anyway, that also just caused us a massive headache because what we would get is a consultant coming back to us and going, "What do you mean?" We would go, "We thought it was your job to tell us what it meant and then we would discuss it", but they would go, "What do we do?" It was on that level of prescription that was too much. Even on a specific site where you are limited by the geographical space, it was too much for all of us to try to figure out and we found it extremely difficult.

In the end, we took it out and we talked in slightly more vague terms about improvement of amenity space, improvement of biodiversity and improvement of green space. What we put more effort into was the communication between us and our contractors and so saying, "You have to come and talk to us about this and you have to talk to our architects or our landscape designers or our SuDS specialists. You have to come and talk to us about it". It is not necessarily about just delivering, because we would prefer it if they came along and said, "This is going to be really difficult on this site. The roof space we have is not good enough or the access is going to be really difficult". We would prefer it if they came and did that rather than just being prescriptive and going, "Net gain", and then they go, "We do not get it", and they do not do it.

I would be for net gain if we had something that was tangible where you could just go, "Net gain, use this formula and there you go", for your specific site, but it is what you guys are grappling with. Yes, it would be hard for people, but it would also be easier for people like the housing associations who go, "We do not have the resources and the knowledge", to argue it out.

Leonie Cooper AM: We have reached 11.00am and Charlotte will kill me if we carry on. Thank you. That has been really interesting. There are some really valuable ideas and aspects of this that we have teased out. We will come back with something. We will have a draft report, we think, sometime before Christmas and then we will be looking to do a launch of the final report in January [2017].

Some of the things that we have been bouncing around and some of those ideas are about checklists, pro formas, something that is possibly searchable and central around baseline surveys, using Greenspace Information for Greater London (GiGL) and some of the things that people have, and also case studies and things like that, but then teasing out how you apply it to specific sites. It is very different by borough and by the geology and geography as well and all of those things. I cannot tell you yet what is going to finally come out, but thanks very much.

Pete Halsall (Director, East Kent Sustainable Homes): Can I just ask two quick things? The first thing is post-completion monitoring --

Leonie Cooper AM: You will have to be really quick because the next person who wants the room is coming.

Pete Halsall (Director, East Kent Sustainable Homes): -- and what is actually happening on the ground in reality. We have this thing in this country where we build stuff and walk away. I know you guys do not, but do you measure? It is question of --

Olivia Allen (Sustainability Advisor, Berkeley Group): Yes, this is the other thing that, as part of this process. At what point do we measure to see if we have achieved what we said we were going to do? On multiphase long-term developments it is really difficult.

Leonie Cooper AM: Monitoring going forward?

Pete Halsall (Director, East Kent Sustainable Homes): Yes. The other thing is kids. It is fun to come in. You could get young students to come in. I know that he has a four-year term, Sadiq Khan [Mayor of London], but he --

Leonie Cooper AM: He has about three-and-a-half left, but yes.

Pete Halsall (Director, East Kent Sustainable Homes): Three-and-a-half years. He should be thinking about a long-term legacy and getting kids and young students education on this issue because they will then start to influence their clients five, ten and 20 years into the future.

Leonie Cooper AM: That is absolutely true. I am a governor in a primary school. All the children were asked to draw their environment and it turned out to be just lots of pictures of tower blocks. The other side of that was when children were asked, "This is an acorn. What does it become when it grows up?" None of the children at a lot of urban schools could say. That is a really worrying thing.

Thank you so much for coming. I am so sorry you had an experience at Waterloo. It sounds pretty awful.

VCR:
Date: Wednesday, 23 November 2016
Location:
Hearing: Housing Committee Rapporteurship on Promoting Biodiversity in New Housing Developments roundtable meeting

Start time:
Finish time:

Attendees:

Leonie Cooper AM, London Assembly (Chair)
Charlotte Harrison, Assistant Scrutiny Manager, Greater London Authority
Dr Stuart Connop, Senior Research Fellow, Sustainability Research Institute, University of East London
John Day, Urban Conservation Adviser, Royal Society for Protection of Birds
Mathew Frith, Director of Conservation, London Wildlife Trust
Henry Johnson, Hedgehog Officer, People's Trust for Endangered Species
Caroline Nash, Research Assistant, Sustainability Research Institute, University of East London
Matt Shardlow, Chief Executive, Buglife
Dr Carol Williams, Director of Conservation, Bat Conservation Trust
Juliette Young, Senior Policy Officer, Royal Society for the Protection of Birds

Leonie Cooper AM: Coming back to the initial question, there are some good developments in London, clearly, and we will probably visit at least one of those. We are going to get to Woodberry, for example. What do you think are the barriers to incorporating biodiversity more widely into development? There are obviously issues around money, the value of biodiversity and how that is perceived, and whether it might take more time. That sort of thing. Any thoughts about that, plunging straight in?

Mathew Frith (Director of Conservation, London Wildlife Trust): OK, I will kick off. First of all, there is still a deep-seated view that there is no biodiversity in the city and that it is not part of housing development. We have spoken to, for example, planning officers in a number of London boroughs who say, "We do not have biodiversity in our borough. It is in the countryside". You already have a vacuum there that is not going to provide any traction to informing how a development might shape.

In some cases the developers are trying to do the right thing but they are caught between a number of very significant constraints in terms of viability, housing numbers and political pressure to get those housing numbers up. Providing space for anything other than they need to - that applies not just to biodiversity, it also applies to things like play space and so on - will go out the window. There is a fundamental issue still, that recognition that biodiversity is not within the city.

There is also - this is probably going to tread on some peoples' toes here - the view that the protected species element of the legislation does not engender a positive approach to trying to find solutions. It basically diverts attention to trying to sort out the protected species and get the planning application through. Tick that box and you are done. It is not, "What can we do to enhance this estate or this new development as a whole?"

That is a very broad-brush view and that has come from 25 years of working on this stuff. Things have got better, they have gotten better, but we have much more acute pressures in London now than we have ever had before.

Leonie Cooper AM: Yes, and there are additional pressures with money reduced to local authorities, who are now looking at monetising the open spaces that are there, which may or may not contain biodiversity according to them, and also the Mayor's imperative about increasing the amount of new housing. That is why I was keen to do this early on, because obviously they will be reviewing the London Plan. It will be good to include something right

from the beginning of this new mayoralty that tries to address some of the existing issues and moves us to a new level.

I am interested in what you were saying there about the lack of awareness from some boroughs. Do you think having a sort of liaison with the Greater London Authority (GLA) co-ordinating something would improve that? I find it quite surprising that some boroughs would say they have no biodiversity. Not surprising, shocking.

Mathew Frith (Director of Conservation, London Wildlife Trust): Yes. There has been a relative haemorrhage of ecology or nature conservation officers in the boroughs over the last ten years. We still have a significant number, probably about 45% of the 33 authorities, and they are unequally distributed within the structure. Some are within planning teams and some are within leisure services. Some within leisure services do get input into planning decisions, others do not. We also know of a number who were instructed not to get involved in certain planning issues by their planning colleagues because of political sensitivities. That is part of the issue. There is a level of inconsistency across London. We have some boroughs where there is good input - I would say Wandsworth is an example of that, where the ecology officer is informed of planning proposals and has input into those - and there are others in which we do not think there is any scrutiny at all going through. That is part of the problem.

One of the issues that we raised at the previous London Assembly Environment Committee investigation into the progress on the Mayor's Biodiversity Strategy, published 14 years ago, is that prior to 2000, as you may be aware, there was the London Ecology Unit, which was one of the things that spilled out of the old Greater London Council (GLC). That was funded by about 27 of the London boroughs and provided an element of ecological planning input for those boroughs. I used to work for the Unit and that was very good at providing a level of knowledge and capacity. It did not stop the boroughs employing their own ecological officers. It was good if both of those things happened at the same time.

That is gone and what has gone with it has been a level of that strategic scrutiny and, dare I say it, planning support. At the Wildlife Trust, we do not do that. It is something we are interested in and some of the other wildlife trusts around the United Kingdom (UK) do provide that level of service to their planning authorities. Surrey, I know, do that with a number of district councils in the county and the County Council. There is a gap there that needs to be filled in some way and there are a number of solutions. Part of that could be a partnership with the charitable sector. Part of it could be done through the public sector, though I do not think the funding is quite there.

Leonie Cooper AM: No. It is a tricky one. That is a good introduction. I am sure other people have now had some thoughts, both on what I said as my initial question and also on Mathew's fairly lengthy riposte, which has set the scene for a good debate now.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): Could I pick up on a couple of the points?

Leonie Cooper AM: Yes, you are very welcome to.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): As Mathew was alluding to, we have to break down this view, which is not correct, of the hurdle that protected species pose, whether it is for new development or working in an existing area. There are very good cases now. According to the Regulatory Fitness and Performance Programme (REFIT) and in fact our own national review of these things, the process is pretty good when it is applied properly. That happens in two places.

One is through the developers themselves. Engaging early is vital. It is not a problem if you know what you have. You can do interesting and innovative things to incorporate what you have and enhance it that are beneficial for everybody, the developer and the people who are going to live there. But that does not always happen because there is, unfortunately, this stigma about protected species. "That is going to cost you money. That is going to be too hard". We have to get those good examples out there to show that if you follow the correct order in things and consider things at the right stage, it is not a significant hindrance, delay or extra cost in the vast majority of cases. That is one thing you need to dispel.

Just picking up on the other point, if you do that you still have - and it is reflected across the whole country, which is why it is so interesting to look at London - very different approaches between the different-level planning authorities,. We know two-thirds nationally do not have an ecologist or access to ecological expertise.

One thing that some of my colleagues here will know about, and we did include it in our response to the consultation, is the biodiversity planning project, which is working to try, where there is a lack of expertise, to give a foundation of assistance to that whole system. I have every sympathy for planners who, without the knowledge and without the expertise, are given something on which to make a decision and to know how much information to ask for. That is incredibly difficult and ends up with completely different responses from different-level authorities.

The project is looking at a toolkit that will be available for local authorities. It would be used in the pre-planning stage so that when something goes in for planning there will be a level of knowledge. I am not going to take all your time explaining it but you can absolutely have access to all of that. It is protected species and priority species, all of the non-governmental organisations (NGOs) around that, plus local authorities and their planners, plus architects. We want to pull all of them together to make sure it is fit for purpose, to try to, as Mathew is describing, even out that playing field a little bit. That is another area that gives a perceived problem if a local authority is unsure about how to deal with these things.

Leonie Cooper AM: Yes. Getting rid of having 32 different variants, or a slightly smaller number than that - maybe some are working in collaboration - and the City of London. Earlier stages, clearer advice and something that is co-ordinated everywhere so that you start to get rid of that inconsistency. Also, getting rid of a problem that is not very good for humans. Unless you are an obsessive politician, as I am, most people do not know where the borough boundary is because they are technically invisible, as are ward boundaries, and if they are invisible for most people then they are definitely invisible for birds, foxes and

everything else that moves around London just as and where they want to go. Getting that consistency across sites and across boroughs is a really important point. Did you want to come in?

Matt Shardlow (Chief Executive, Buglife): The big issue is space and attitude towards wildlife. We have talked a bit about protected species and their role as well, but the key thing is space. There is huge pressure on space. We see lots of developments where it is difficult to see where you could squeeze the biodiversity in, frankly. There is not much thinking about community space and creating open areas, and where there is it is sometimes a very simplistic approach to that, flat green areas for kids to kick balls on.

I sat for several years on the Veolia funding panel, which oversaw London landfill grants, and we saw quite a lot of stuff coming forward with various level of imagination for managing open areas around housing. Landfill tax in particular is one way to help to get committees to sustain biodiversity in that little scrap of land near them, that bit which does not quite work at the moment, by having a fund that is aimed at improving the environment. We have seen big cuts in last year's budget to landfill tax, which means it is much harder now for them to fund these sorts of environmental projects, but there are sources of funding that could come in and help to deal with some of this open area stuff.

There are other difficulties. There are difficulties with who takes the long-term responsibility for managing those areas. Are the local authorities willing to step up and take responsibility for maintaining wildlife areas if the develop is prepared to put them in? How does the community then fund that work and get the support they need? Where is that money coming from? There are some practicalities around that that are not sorted out. I would just re-emphasise again that landfill and, hypothetically, similar taxes that go into helping communities look after their environment are absolutely critical to enabling people to do this. Much more emphasis should be put on that.

In terms of the buildings themselves, there are things as well One of the things we have done some quite a lot on, and Stuart has done some work on as well, is around green roofs. In some parts of Europe, green roofs on new buildings are a planning prerequisite. There are plenty of flats, garages and all sorts of things like that on which green roofs could be put. The principle as to how you manage those to bring pollinators back into cities and increase the biodiversity of the city is quite well-established. That is a very practicable and practical thing people could do that adds to the life in the city.

Leonie Cooper AM: We were given a lecture about the need for brown roofs as well because of the black redstarts.

Matt Shardlow (Chief Executive, Buglife): You have the roofs there. Most of them will probably classify as brown roofs. It is important that they have bare ground and that it is not just grass. It is a bit of a Mickey Mouse, 'green roof', really. That does not really do a lot for biodiversity. What you want to see is flower-rich. We know how to do that. That is one thing that could be brought in.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): That would be a legislative lever, ideally?

Matt Shardlow (Chief Executive, Buglife): You could do it as a planning condition. In some cases it is a planning requirement that you have to show whether you considered it. Munich, Geneva, places like that.

Leonie Cooper AM: Some of the stuff that we have been looking at internationally is whether we wanted to come up with something like recommending a menu of choices, a checklist that developers have to complete with a green space factor contained within it so that it either has to have a green roof or something else. The Code for Sustainable Homes, which included some of these elements around biodiversity, bit the dust about 18 months ago now. There are still schemes coming through the pipeline that incorporate, at code 4 and above, some of these features, but it might be quite nice to incorporate them back into some kind of Supplementary Planning Guidance that sits alongside or under the new London Plan. I am seeing a lot of nodding as I say that.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): The Town and Country Planning Association (TCPA) did some recommendations about provision for biodiversity and green infrastructure. Exeter took that up and did something that is basically recommending that for every new build there should be so many allocations of bird, green roof and bat provision, and making that the standard document for reference for anyone who thinks they are going to have a development in Exeter. It should incorporate that.

Leonie Cooper AM: Southampton, I think, as well.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): Yes. Similarly, too - I should have brought one; Matt always beats me at everything - the Bat Conservation Trust (BCT) have done work for biodiversity as well, *Designing for Biodiversity*, which was written with architects. We know we have the knowledge. We have worked with the professionals. The Landscape Institute is another one we have worked with to do a similar sort of document. It is putting it into one place and then, rather than saying, "Wouldn't it be awfully lovely if you did", having a little bit more strength behind that.

Leonie Cooper AM: Yes. I don't think we want to say, "Wouldn't it be awfully lovely if you did".

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): No, exactly.

Leonie Cooper AM: Having worked in the development department of housing associations and councils myself, "Wouldn't it be awfully lovely" normally means that goes on to the cutting room floor, to bring a film metaphor in. Something a little bit more strenuous to enhance that consistency. Still a menu of choices because while it would be something for the bats or hedgehogs, if it is in completely the wrong place there is no bat in the world who is going to move in because it is not near any foraging opportunities and all the rest of it, and there is insufficient space across the gardens for hedgehogs to be wild.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): You are absolutely right, you cannot do a template. You cannot dictate because it would have to reviewed case-by-case by someone to assess the suitability of the site.

Matt Shardlow (Chief Executive, Buglife): On that, just a couple of things. The National Pollinator Strategy has some --

Leonie Cooper AM: I can see Stuart's desperate to get in. I will bring Stuart in first and then we come back to you, Matt.

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): A short comment just saying that it is important, the strength of this - there is a lot of information out there and there is a lot of information that can be disseminated - but it is also about the entire process. We know a lot about how to do it but it is still not necessarily happening. It is important that it is not just how you do it, it is detailed guidance on how you get the right people engaged at the right time and how you look at novel funding mechanisms to ensure the sustainability of these.

In areas where you get widespread implementation of things like green roofs it tends to be because there are financial mechanisms or incentives for doing them, a reduction in rates on water from a reduction in stormwater and issues like that. If you can persuade developers that by incorporating green infrastructure you are going to get benefits for the residents and make their properties more attractive for purchasing, you are creating a good lever for them to hook into, why it is important for them.

Leonie Cooper AM: You knew where I was going with my comments at the beginning, then. It is the obvious thing, isn't it? A lot of developers are keen to develop near water or overlooking nature, selling that kind of amorphous 'waking up on a Sunday morning, listening to the birds come through your window as you lie in bed with a coffee and the Sunday papers'. You do not get that if there is no biodiversity. How do you get them to understand that they need to bottle that sense of it being a great place to live? It is all of those mechanisms but bringing it in earlier, I think you are saying.

Sorry, I am just going to bring Juliette in as well. We are still coming back to you.

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): I agree with a lot of what others have said. It is important to point out that we do have quite strong policies in the National Planning Policy Framework (NPPF). There is a strong policy hook around net gain there, that being about delivery of the ecological networks. We have policy. The only question is why that is not then filtering through, down to local authority planning level. That is a question that you still were saying is a significant issue. It is a perennial issue that people continue to raise. That is resourcing in terms of access to ecological expertise so you can fulfil your functions in relation to ecology and biodiversity at a local planning authority level.

I would question whether the right solution is to bring in more tools if we are not addressing the resourcing issue in the first place. Additional tools just mean it is something else that planners, and ecologists who perhaps do not exist, have to respond to.

Leonie Cooper AM: What would be a better way, then?

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): Solving the resourcing issue would help. I do not have any immediate solutions as to how we do that but it would be good if that issue is raised in meetings with Government, for example the Department for Communities and Local Government, and if they are hearing that from all sectors so that they recognise that is an issue.

The other thing is that it is important to understand the existing situation on the ground. What is the baseline? What is the environment that exists at the moment? What is the quality of that? What condition is it in? Before you make any decisions about how you are going to improve it, you need to understand what already exists and whether that is good quality. Is it in good condition?

There is a need for monitoring once a planning application has gone in and you have conditions on biodiversity to make sure it is delivered in reality. It is all very well to say, "Yes, we are going to do XYZ" but if it is not delivered on the ground, that needs to be looked at.

Then there are also things around the design of features, making sure they are designed with the objective of biodiversity. I appreciate there can be competing reasons why you have certain features like green roofs but a biodiverse green roof can be quite different to some of the ones that might be there for resilience reasons. There is also inconsistency in terms of management descriptions across planning authorities and sites. If there is a way to standardise that, that would help.

I did have a look at the Green Space Factor. There was an example from Southampton that I know was circulated. I was interested in how you can envisage that working in a London context. Is it purely for an inner-city, highly dense place where you have lots of impermeable surfaces? The Southampton example seems to be very much about improving permeability and adaptation to climate change. It was not a checklist for --

Leonie Cooper AM: We have a set of examples. I do not know if these are the same. They are all slightly different. If you went to the edges of London, to Bromley, it is very different from Westminster, for example, but the principle about trying to maximise habitat availability, even in the most urban and least permeable places, remains. Housing associations, for example, CityWest Homes and Alma(?), who manage Westminster Council's housing stock, have fitted a lot of green walls and put in a lot of additional features that have made the estates much more liveable for the people who are there. That is existing, that is not new housing development, but they are retrofitting what they can. It is obviously a lot better in the new ones to try to incorporate that at the same time and from the earliest possible stage.

You want to come back in, I can see.

Matt Shardlow (Chief Executive, Buglife): You keep going. I will come back later.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Obviously, yes, I can agree with everything everyone else has been saying around the table. Going back to one of the points Matt made earlier as well, this fear of the European Protected Species (EPS) and all the perceived restraints, they do seem fearful of approaching it at that early stage. Obviously they presume that, "We will not talk to them. It is not important as long as we can tick off the EPS elements". They are missing that whole opportunity.

If they come earlier and talk to the right people - all the information is out there; there are just a couple of examples we have seen but there is no end of information and knowledge out there - as early as possible, you have a better chance. Invariably they will have sorted all the EPS stuff out and then they will come along and say, "How can we get some biodiversity into this development?" Actually, you are too late now because you have passed the reserved matters stage and everything. If you had come to us at the master planning stage and worked through it collectively in an organised way to look at ways of getting these features in as early as possible --

Leonie Cooper AM: One of the companies that we have spoken to said that they were doing that at a very early stage and then also bringing somebody on board as their sustainability consultant, I think they call him. They are looking at sustainable drainage systems (SuDS) as well as biodiversity across the whole field and having them involved as part of the team. It is another one of these massive sites with about eight phases. Some of the sites are absolutely massive. Twenty thousand dwellings will be the result on this particular one.

They are doing a lot of this meanwhile use but they are also struggling with some of the meanwhile use because they brought in lots of trees which they then wanted to move as one stage was finishing. They wanted to rehome those to other sites and could not find anyone to take them, they said, or could not get anyone to take all of them.

I am just wondering whether that embedding during the whole of the process, from the earliest stage onwards, works. A lot of these large developments with big developers can afford to have someone embedded in that way.

Mathew Frith (Director of Conservation, London Wildlife Trust): The issue is, are they providing the security? Part of the issue we have is that there are consultants, a lot of very good consultants, but they are being paid to do a job and get something through planning. We have fought a particular planning issue against a big residential development right by one of our nature reserves in Chiswick. They took what I would call the most reductionist line in terms of their assessment. They did not look outside the red line despite the fact that there was a woodland next door, and the planning officer did not have the expertise to go, "There is the objectors' evidence. There is the applicant's evidence. I will go with the applicant's

evidence". He could not interrogate it. We were looking at all the flaws but there was no recourse within the planning process.

John has made a point there that the planning process itself polarises, often, these issues. You then have the local planning authority and the developer trying to get what they need to get out of it and objectors firing off broadsides. The ability to come together to find solutions becomes very difficult, and more difficult as you go down through that process.

Leonie Cooper AM: If the requirements are included right from the very beginning, you know you have to do this. This is here and you must incorporate it right from the start. Obviously then you are saying you need to have that additional scrutiny, someone from outside as an individual scrutineer coming in to see whether or not they have achieved what they said they would, which I think is the point you were making as well.

Mathew Frith (Director of Conservation, London Wildlife Trust): Getting an engagement at an early stage is absolutely critical. We have been talking to a couple of developers trying to get to that stage, almost before a site is found and an idea is formed in terms of how many units are going to go in there. It is quite difficult to do because, again. of the nature of the development business. Then the question comes back to us. "What is your role? We could employ you as a consultant". Immediately if that happens you are doing their bidding, effectively. That is not to knock consultancies but they are there to do a certain job. What is the level of scrutiny that says, "OK, you have ticked those boxes but you have not looked at everything else"?

I responded to a planning application today that is reserved matters. It is not a residential development, it is a school, and their only enhancement for biodiversity was one bat box even though the local plan and the London Plan basically say, "Where possible, enhancements for biodiversity". Following the planning committee, they came back with their report and one bat box. It is pathetic, it is utterly pathetic.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): That is something to be guarded about because you do get those cases where it is just greenwash. It is just putting up a few bat boxes, or maybe the bees. Typically, the thing you come across is where something might be half-decent provision for a commuting corridor but it is well-lit. It does not exist functionally for the very biodiversity for which it was supposedly in place.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): Should we not be at the stage where we are phasing out boxes entirely? Bird boxes, bat boxes. Everything should be integral, especially now that the Royal Society for the Protection of Birds (RSPB) have a swift box that is available for £6.

Mathew Frith (Director of Conservation, London Wildlife Trust): Bee bricks as well. You can put them into the walls.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): Yes. I do not see why that could not be a standard requirement for most sites. I know we were saying

that every site is different but things like garden connectivity, minimising impermeable surfaces and integral nesting bricks would work on most sites, would they not?

Leonie Cooper AM: Yes, is there any development where those would not be appropriate? Perhaps not incorporating a platform for nesting falcons but --

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): It is just considering where. It is one of the wonderful things of thinking about this in advance. Problems arise with species, especially protected species. In buildings in the past they could turn up wherever they wished to live. Nowadays that is not quite as easy as they are not airtight but are rather closer to that. You are designing where you want them to be so there will not be a problem in the future. Therefore thinking about it in advance, getting it right, making sure you are going to make it useful because it is not level and fragmented from foraging, as you said, you can do all of that right from the word go. It is quite exciting. If people take this and really go with it, the potential is huge. It is not difficult. The information - as we were saying - is all out there.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): All of us around this table will probably play a role some stage or the other in enhancing what is not picked up from the basic culture because they have a role to play. "What EPS species are there?" That is it. Anything outside of that, even things on the natural environment and rural communities (NERC) list, are generally never considered. Someone with that wider vision - like any of us around the table - can look and go, "You can potentially, as an organisation, enhance that development". For that to happen you have to have that involvement at the master planning stage where you can look at the wider picture and say, as Matt [Mathew Frith] said, "They failed to notice there is a wood next to the development" and they missed other opportunities for people and wildlife etc because the planners or developers only focused on that red line that defines the boundary of development.

Leonie Cooper AM: That is why we are thinking it would be helpful to have some examples of best practice easily available where people could get hold of them very easily. When they are being rather pathetic and desperate and saying, "We will just have one bug hotel" and that is it, or whatever it is that they are trying to bring it down to, to have, "This will be really cheap and really easy. You could put this in everywhere, all over the development. It almost would not cost you anything". Running alongside that, you were talking about the Landfill Communities Fund and the different big disposal companies. We have several all over London. Maybe having a guide to the funding that is available. It is geographically specific but there is some other money available as well. Bringing those guides to best practice and to what funding is available together, centrally, so people can look for that very easily.

Talking to people when they were meshing in with their local communities, for example, and getting feedback from local people, is that something else we would want to encourage when developers are doing that work? Maybe that would stop the red line boundaries that exist on a map but do not exist in reality and bring in local knowledge a bit more.

Mathew Frith (Director of Conservation, London Wildlife Trust): It is absolutely critical to get the local community involved at as an early a stage as possible. They are going to be the people that take over the tenancy. They are going to be the people that will then, down the line, put pressure on how those spaces are managed. From the aspect of them understanding why it has been designed in the way it has, it is really important they are involved early. Also in terms of the legacy. There are lots of good projects that are getting the locals involved, getting them trained and upskilled so that they can take over management of it. If they have ownership of it, they understand the value of it and they take over the management of small social enterprises. That is the way to ensure the long-term legacy of the spaces. It has to happen.

Mathew Frith (Director of Conservation, London Wildlife Trust): There is a caveat to that. That is fine for those who go and live in those developments but they may not be available to communicate to prior to those developments being built. That is one of the challenges. Working for Peabody that was always a problem because you basically had to create an open space before the residents moved in so you could not even talk to them to find out what they wanted. That was always a problem in that respect.

A lot of communities do not want this housing to appear in the first place and use anything they can, under the sun, to object to it and will use wildlife as a last resort, even though there may not be anything of great value. That reinforces - this is one of my issues - that whilst things have got a lot better, there is still a perception that those of us who champion wildlife do not have any interest in people and do not understand the needs of people in terms of having access to a good quality home. Whilst we are articulating the contribution biodiversity makes to a healthy and, dare I say it, wealthy - in the way we all understand it - community, the perception is that we only care about the bugs, bees and hedgehogs and do not care about people and that we are putting people out of a home by creating space for biodiversity. That is something we are all mindful of around this table.

However, I know a number of, for example, our members and supporters do not give a fig for people. They do not want more people coming into their community. They will fight tooth and nail to try every trick under the 'not in my backyard' (NIMBY) sun to try to prevent that happening. That gives the wildlife conservation profession, for want of a better word, a bit of a colour that is probably undeserved. We are not seen as professionals like those who are, for example, architects or engineers. Again, we have gone a long way in the last 30 years but there is still a difficulty in trying to be seen to be as an equal professional in those meetings to try to articulate what we believe contributes to a good quality development.

Leonie Cooper AM: It is not just between people who are ecologically-minded and perhaps involved in wildlife groups. It is also between communities that have existed in estates and then watched what was previously a wasteland being turned into a gated community with very posh facilities that they perhaps do not have access to. The other issue, which I think you were alluding to, is about making sure there is that sort of access and that the legacy is not a bunch of dead trees that nobody cared about because they either could not get in or they did not want them there. It should be more similar to going to, for example, Woodberry, seeing that it is something where people have that access to additional leisure facilities as well as

there being a complete change in the nature of the properties. One of my other colleagues keeps talking to me about Barkingside and saying how fantastic it is. We are doing a visit there as well. There are some good examples of how that can be done.

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): Going back to what you were saying, there is a good driver for why we need to be pushing for more than just no net loss as well. If you can show that new developments can embed biodiversity, can improve habitats, can improve open space for people and can improve community space, then those arguments about NIMBYism and how it is damaging wildlife can be taken straight off the table.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): It is worth using really charismatic flagship animals like hedgehogs where you can scientifically show that your developments can improve things for them. That is the thing about the swift nest box. At the Kingsbrook project they have them as integral nesting bricks. The idea is that it is independent of whether the new resident really wants birds nesting in their house. They will see the birds and they will notice they are beautiful and some of them will really love them before they move in. The biodiversity value of the building is independent almost of the views of the new owner coming in. You can be selective about which bits of biodiversity you use as your levers.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): What we are trying to do is to get that education as part of the community feel, citizen science and monitoring. It is not just that it looks nice and the health of people will improve. All of those things are really important but it can also be part of that legacy. All these things we think we are doing, that it is good for nature, unfortunately we do not have time so it is not always followed up on to know if it really is working.

It can be quite a help if you get the community involved to do some of the monitoring. Monitoring schemes already exist. It is enrolling people and saying, "You have got this lovely area. You have moved into this development. Let us see how nature moves in". We have gone in with projects, that are not in new developments, in areas that have not had a community feel to bring in nature as the thing that pulls people together, and gets them out in the dark when they might think they need to be frightened because it is dark. You can actually use nature. Quite the reverse of what people's impression of us might wrongly be, we are all really happiest when we are getting a group of people to love and know the meaning and value of nature being around them.

Leonie Cooper AM: Especially children.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): There are lots of opportunities for that. There is getting that early open door to engaging with the community and bringing them ownership of where they are living. Obviously if that can evolve into practical management of the site, where it is applicable and so on, as well, from going around and --

Leonie Cooper AM: And actually noticing there is some biodiversity there. It is not just the councils who might claim that there is none. Unless you have actually been out with the bats and so on in the dark, you would not necessarily have noticed that there were the bats around the lake and foraging near the trees.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): It is providing the interpretation for the house purchasers. We are obviously attempting to provide developers with information. "Why is there a hole in the fence? Why is there a hole in the wall?" and things like that. They are simple features and interventions. That can then lead on to them understanding why there are these bigger features, which could be some form of landscape feature that is brilliant for invertebrates.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): Or why the lighting is only on demand when it is activated or why it shuts off at certain times in the night. It explains the reasoning behind those sorts of things.

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): Involving communities is definitely important so they understand the value of biodiversity and get an opportunity to input into the design. It is more of an opportunity where you have regeneration or redevelopment schemes, where you have an existing community and then you are going to have regeneration. That is when you can actively get them engaged into what space they are going to move into. It is harder when you have a genuine new build because you do not necessarily know where the residents are going to come from.

That is why it is twin-track. It is also important for developers to understand the value of protecting the biodiversity that exists and also maintaining and enhancing it, and why that can have benefits potentially for saleability further down the line. You can sell a concept of, "We have this wonderful development. Look at the swift bricks we have got here. We have got these lovely new wetlands". That becomes a concept. That is what we are trying to do through our partnership with Barratt Homes. It has a flagship development in Aylesbury called Kingsbrook.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): It is Barratt Homes's largest new development in the UK and it is all wildlife-friendly.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Yes, hopefully.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): They are doing baseline monitoring of the impact on the key groups of species so they will know if it is having an impact.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): We have a control site as well, a normal development of similar size on the west of Milton Keynes. It is the nearest control site we could find of similar size and in a similar state of non-development. They only just started building at Aylesbury a few months ago. It is very,

very early stages. There are three phases to it so it is going to be 15 or 20 years before it is finished.

Leonie Cooper AM: It will be quite interesting to see what they find.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): It is a case of slowly getting them to up the bar a little bit with each phase. We did get a lot of the things in the design code but again, as we have discussed through this session, what you get in the design code and what is delivered on the ground are two completely different things.

Leonie Cooper AM: Tell us how Barratt got involved. Why have they gone down this route? How did they come to want to do this in the first place? What persuaded them?

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): This particular development at Aylesbury has been going on for about ten years of toing and froing, with ecologists working on it and so on, with Aylesbury Vale District Council (AVDC). Part of the section 106 in the end was a piece of land that could potentially be a fairly large wetland nature reserve. At the time - again, this goes back to the scarcity that we now have of ecologists in local authorities - there were two or three ecologists in Aylesbury Vale - now there is only one and those initial key drivers are no longer there - and one of them happened to a leader of the local RSPB group who approached our regional office and said, "I've found an opportunity for a nature reserve. Would the RSPB be interested in taking on this nature reserve?" Those discussions started about five years ago and are still going. It is not certain yet that we are going take it on as a nature reserve.

In the meantime the person who was my boss at the time, who is now the reserves manager for the Midlands region, said, "Hang on, what about the housing site? Is there not an opportunity to try to get what we can into a housing development?" Although it had passed the master planning stage, it was in the early stages. That was all ticking along. Yes, there was a lot of stuff. That must be somewhere in the region of three years ago now. Then people in the higher echelons of Barratt suddenly thought, "Would it be a good idea if we had a memorandum of understanding (MOU) with the RSPB at a national level?" Rather than it starting at a national level and then going out and finding a site at a regional level, it was a bit back to front.

They are basically paying for an embedded adviser on wildlife. They do all the advocacy stuff and pull in support from everyone else. If there are planning issues they know they can go and liaise with Juliette, or it might be landscape and habitat stuff. They did work for an ecology consultant so they have ecology knowledge but they will come to me, as well as some other people, for some of the more in-depth and specific areas of maximising potential benefit for wildlife around development space.

Leonie Cooper AM: It is possible that they might carry this out into other work they are doing elsewhere, including in London?

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Yes, hopefully. They are obviously doing the Aylesbury site. It is slow because, as I mentioned earlier, they are risk-averse. All developers are risk-averse. They do not seem bothered by us making suggestions about the wider green infrastructure but when it comes to the area around the houses where we are saying, "You have got to look at this holistically", it is, "We don't have wildlife around the houses, that's where people are". "No, it's the whole lot". They are starting to come to terms with that.

Now they allowing us to do wildlife-friendly show gardens, with varying success. We are slowly getting them lift the shutters up but as soon as you start with a developer saying, "You want particular wildlife features, like more deciduous plants or herbaceous plants that are going to attract pollinators and so on, around the houses", the shutters are up again because they are risk-averse. "We can't sell the houses". We have had huge problems with encouragement.

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): I think, John, we are getting there.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Yes, we are getting there. It is really good. More of them are coming to us going, "Can you do a wildlife-friendly show home?" There are now other sites. There is a site in Exeter that is doing a one-to-one ratio of nest bricks in a Barratt development, which is really good.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): Will you be able to show that they will sell them quicker and for more money than is standard?

Caroline Nash (Research Assistant, Sustainability Research Institute, University of East London): That is what is needed, is it it?

Leonie Cooper AM: It is both, quicker and more money.

Caroline Nash (Research Assistant, Sustainability Research Institute, University of East London): When I worked as a consultant they would always ask you what was the minimum they could do. Nobody really very often said, "What could we do here? What could we put in?" It was always, "What is the least we can get away with putting in to get our Building Research Establishment's Environmental Assessment Method (BREEAM) point or our Code for Sustainable Homes thing?"

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): It is getting really very good, yes.

Caroline Nash (Research Assistant, Sustainability Research Institute, University of East London): If you can have an exemplar site, it basically is going to have to show it can be financial as well as everything else.

Leonie Cooper AM: Yes, that is where we need to be.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): There is a site near Daventry where they have stuff for Henry [Johnson], hedgehog holes in the fences. They have done a wildlife-friendly show garden and things like that, and they are putting in other features.

Leonie Cooper AM: If you want to persuade anyone from a building company you are working with that it is a good thing and they do not need to worry about putting things very near to the building, take them to a sheltered housing scheme that has gone down this road and see how fantastically the residents respond to having wildflowers, hanging basket and endless amounts of butterflies, birds and bees.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): Leonie, is there scope for a conference or something that is part NGO and part developer where we look at some of these best practice ideas? I have just come from a very inward-looking conference on wildlife gardens with European experts. It was all very interesting but there was no one there from Berkeley Homes or --

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): That is it. It is quite telling that we, as NGOs, are in a room and then you are having a separate discussion with developers. It would be great if we could just --

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): We have had conferences on biodiversity and wildlife with wildlife organisations in the past.

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): So we have, yes.

Leonie Cooper AM: We are meeting with them together on visits as well. On the visit to Woodberry we have Thames Water, the London Wildlife Trust, Berkeley Homes, Hackney councillors, local people and the chair of the residents' association. I said, "Do I need to bring my waders?" but I have been told I do not. Bit of a shame.

You have been waiting a long time to come back in, having started in the beginning.

Matt Shardlow (Chief Executive, Buglife): I was going to say a bit about protected species but I will come back to that. It is worth remembering we have just had the REFIT process in the European Union (EU), which has been the biggest review of the Habitats Directive ever. We had one in the UK a few years ago as well and both of them concluded that this is legislation that is fit for purpose, that we need it and that without it, the species would be in dire straits. In an ideal world, everyone takes absolute responsibility, all your developers are perfectly responsible, everyone has perfect knowledge and knows what needs doing. In practice it does not quite work like that so you need some legislation that draws those hard lines.

If you look at the European exercise - I have watched this carefully - we saw a lot of governments come out with concerns you hear sometimes around bats or newts here but necessarily about bats and newts, different countries having different species and different concerns. Those concerns often stop at the border so the next country does not have the problems at all. The conclusion in the European draft report, which has been leaked - we are still waiting for it to come out but it should be any time now - basically says it is all fit for purpose, the legislation is fine and the directives are fine but sometimes how it is implemented does not work brilliantly well. As some places got it right and some places got it wrong, this is about national governments and local governments learning how to implement this and do it better. There clearly are difficulties. What the legislation should be doing is encouraging fantastic outcomes.

I remember a meeting I had with a statutory nature officer. We were looking at some really endangered invertebrate species that were threatened by a development. I said, "This one needs to go on the list". For invertebrates, normally it is a handful of sites so it does not affect much. However, unless they are protected you cannot look after them. There are several species becoming extinct because they have not been looked after. He was saying, "Oh, I am not sure about that".

Eventually, he said, "Look, I am just not the sort of guy who is into protected species. I do not like telling people what they have to do. I do not like doing that. I am not that sort of regulator. I much prefer other sorts of interventions". I said to him, "What is your biggest achievement then? What do you get the most satisfaction from? Let me understand you a bit more". He said, "The best one we have done was a scheme where we created this network of new wetlands around this city: new ponds, reed beds, a huge area. It was fantastic. Everyone worked in perfect harmony. The developer, the Wildlife Trust and the local authority who got in and managed it, everyone worked together". I said, "How did that come about?" He went, "It was the great crested newt". I said, "So it can work". That is what it should be doing all the time.

The question is why we have this sort of problem. There are two issues and both are fixable, one more easily than the other as the other one is more systemic. One is about knowledge. Ourselves and conservation trusts have been doing stuff to try to get better information available. If the local authorities were able to plan more clearly where there were problems and say, "No, in this area there is going to be a massive biodiversity issue and you are not going to get development there; in this area there is a huge biodiversity issue but some development might be appropriate; in this area there is biodiversity but I am sure we can work around that," the developers go in with open eyes. They can see what is going on, they can understand, they can cost, they can plan and it does not come to trying to get in under the radar or trying to avoid the issue. We see a lot of avoidance issues because they think they can deal with it later.

It should all be on the table in front. Better information. Better knowledge. Clearer planning. Plans that work and do not conflict at the times you have to give a push. It is at that level. Better knowledge. From that perspective particularly, if you know what the variable conservation status of your species is, you can be much more flexible about how you

manage that. That is what they are looking at in Woking with this great crested newt work. If you understand the local status of the great crested newt you do not have to apply the highest bar to everything when you go in at the start. You can say, "There are lots of ponds for this here", or, "What we want is a few more ponds from that development" or whatever you need. You can be more flexible and get less into a blinkered view about each individual site as it comes forward. You can have more planning process. The ability of our authorities to manage our wildlife across landscapes, across areas and across boroughs in a sensible way is part of the solution to the protected species issue.

The other one, which is more fundamental, is that if you compare how we deal with protected species and how we deal with archaeology, we do not have these same issues. It is effectively the same thing. "There is something here of import. We do not know what it is. We need to sort it out. We need to understand it. We need to fix it". You do not have the same conflict over archaeology and part of that is because the archaeology happens within the local authority. We have heard about consultancies and how, when you get a consultancy in, the worst thing that the consultancy can do, as far as the developer is concerned, is run into all sorts of difficulties and costs that they are not expecting. You then end up with 'them and us'. The ecologists over here are trying to work on behalf of the developer to get it through and that throws us into a juxtaposition of having to make sure they are doing their job properly and are not trying to squeeze it through illegitimately. That creates that divide.

If it was treated more like archaeology, you would have more resource within the local authority and more expertise that would be consistent, that would learn, that would develop and that would, over a period of time, find better ways of managing it. You would not have consultants who would have to come in, sort something out and then fly off again and try to get the next job. It would be a much better system if the developer paid money to the local authority to get the job done and it was done by someone who was independent of either side. That way, you would see a lot of barriers come down between the developers and the NGOs.

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): That is right. The resourcing point is key. The starting point should be good strategic planning, not just thinking about things on a development basis. You need to look at London as a whole. Where are the areas we want to protect? What are our best sites for biodiversity? Then we protect and keep those. Where are the areas where we might be deficient and where we feel it might make sense to have more of a planned approach to enhancement in those areas? It is taking that step back from the development scale and thinking on a pan-London scale, based on strategic planning, which I think is what you are referring to. That has to be done by planners and their independent ecologists advising them on that.

Mathew Frith (Director of Conservation, London Wildlife Trust): We do have that information. I would say London has better information (Several inaudible words**)** in London on that. Wildlife sites of importance for nature conservation (SINC) networks have 1,574 sites, 19% of London. We have the areas of deficiency, which have been mapped. There are about 13,000 hectares still that are deficient in accessible high-quality natural green space. There are a number of ways London can help to reduce that area of deficiency. We have the NPPF requirement for local authorities to map out ecological corridors, which we are yet to

see in London. That could then align with some of the habitat suitability mapping that was done about eight years ago, which needs updating. There is a resource issue there. We have the bare bones of something but there still needs to be more done. That, to me, is an opportunity within the London Plan and the Mayor's Environment Strategy. If it is going to have teeth, it needs to take some of those issues and embed them. My worry within the Environment Strategy is that there are six or seven themes and biodiversity is sort of it dropped into it.

Leonie Cooper AM: Does everyone understand how it is going to be different in the next iteration of the London Plan? Instead of having a standalone Biodiversity Strategy, Food Waste Strategy, Waste Strategy, and so on and so on, it is going to be one Environment Strategy that then has chapters within it, as I understand it. That is what is being developed now. The draft should be coming out to selected stakeholders relatively shortly but with the full official consultation from next spring, by which time it may not be particularly changeable being the nature of these things. It is going to be changed in that way, just to make sure everyone knew what we were referring to.

Mathew Frith (Director of Conservation, London Wildlife Trust): Going back to Juliette's point, there is an opportunity to do that and to perhaps remind the local authorities that they have this resource. What I got from John's point was a wry smile. I remember English Nature doing a little project with Barratt's back in about 1996 or 1997 about how to improve the wildlife of your new garden. Clearly, English Nature was not in the right place at the right time because it never took off.

Future management of new developments is going to be critical. We know of some good examples - Barclays is an example - where they stay put. They do not build and then sell to a management company. The issue is you can do all your fine stuff but five years down the line, who is looking after it? Who is enforcing that those conditions are met in the planning decisions? We know that with a lot of them nothing happens at all and biodiversity is almost despite what has happened.

Matt Shardlow (Chief Executive, Buglife): If it starts to look neglected, then it looks neglected. We find even with pollinating stuff that what you need is signs and you need to make it look cared for. Otherwise, people think you are just neglecting it. That takes time and effort and not all councils are set up to do that.

Mathew Frith (Director of Conservation, London Wildlife Trust): Also, local authorities are understandably reluctant to take on the responsibilities. They are trying to find other options so the new development is offered to a management company which may not have any kind of grassroots relationship with the space itself. It comes back to Stuart's point about finding means for empowering, authorising and supporting residents to take on that management. I know there is the thought, "Wouldn't it be nice if residents could do all of that?" In some cases it works but sometimes you need more specialist --

Leonie Cooper AM: It may work; it may not work. There is that issue about signage so that people know. I live right near Tooting Common - hence going to look at the bats on Tooting

Common - and we changed the cutting regime for how closely cropped the grass had to be for the Common. We wanted more biodiversity. We had some complaints from people who thought that the Council was leaving the Common looking a bit of a mess and all that sort of thing, but of course it was a lot better because we still had seeds available and flowers and things much later in the year. Not cutting very short, close-cut in the early spring when crocuses and things were coming up was handy for bees and so on and so forth. Some people did not like it and complained to the parks that it looked quite messy. We need signage to indicate because that looks messy, does it not, to some people who are used to order?

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): If we put it on the roof, they will not be able to see it.

Matt Shardlow (Chief Executive, Buglife): You only see it in the distance. They are just a little bit colourful.

Leonie Cooper AM: Not everything is on the roof, is the point that I am making. You are going to include things that might sometimes have lots of seed pods or seed heads or look a bit lank or lax or be falling over.

Matt Shardlow (Chief Executive, Buglife): On one level it creates dissatisfaction and upset but in the extreme end, it results in people going, "This needs to be developed". You then lose your green space entirely. That is the sort of risk at the extreme end.

Mathew Frith (Director of Conservation, London Wildlife Trust): It goes back to this whole point of having some specialist input. Again, following on from John's point, RSPB's relationship with Barratt's in Aylesbury, is the Cambourne developments in West Cambridgeshire, which are being managed by the Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust. It is a 4,200-dwelling series of developments just outside Cambridge. It is a big, biodiverse landscape that has been shaped by the Wildlife Trust and it is now managing that with the parish council. My ex-colleague used to work for Islington Council and he is now with them. I will get him to provide me with some feedback because that was built about eight years ago. One of the issues is --

Matt Shardlow (Chief Executive, Buglife): Cambourne is really good.

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): It is good for the green infrastructure. It is not so good for the buildings and the gardens.

Mathew Frith (Director of Conservation, London Wildlife Trust): No, but again there are both. You can look at the buildings but for most people it is the landscape and getting that right. Even if you have the right bricks and stuff in the buildings, if you do not have a good quality foraging habitat in the environment you are wasting your time, are you not? It is making sure the two things work together.

That is not saying that the Wildlife Trust or each of us should be round there managing these open spaces, but we do have a role in providing advice. We can step in and help. There are

opportunities to take that forward through section 106 agreements. In our submission we talked about Braeburn Park which was developed eventually by Taylor Woodrow in Crayford, a big old gravel working site, a Site of Special Scientific Interest (SSSI) on there, great for bugs.

Having that relationship and having that section 106 agreement through Bexley Council is enabling us to manage that site and work in with the residents who have been out volunteering with us. At some stage, five or ten years down the line, it is almost being able to give them the opportunity to take on that management with us providing support. It is not a nature reserve. It is trying to get out of that mindset of "Here is nature. This is where people live". The two are embedded. The two are integrated.

Leonie Cooper AM: Yes. That is the whole point, in fact, of the rapporteurship. How can we bring biodiversity into the new housing developments rather than saying that this is a housing development and then you must go here and walk to the nature, which is in another area that has a fence around it?

Henry Johnson (Hedgehog Officer, People's Trust for Endangered Species): Let your dog piss on it.

Leonie Cooper AM: Yes, if you insist. I am not sure how much some of the nature would appreciate that.

Definitely one of the Mayor's things is the whole thing about increasing the number of dwellings in London and there would be some - my least favourite word of the moment - densification so that he can at the same time say, "Look, I do not have to build on the Green Belt". He did also say very strong things about maintaining precious green space and we are exploring as far as we can how we think that can be maintained in the context of this new housing development particularly. What else do you think the Mayor could do to really encourage biodiversity in the new housing developments and those linkages?

One of the things that strikes me as a concern from talking to somebody is the Old Oak massive development up there, which is the equivalent of the Olympic Park Development Corporation. It is a massive development corporation but it seems to be being master-planned in a series of tiny sites, which I am not sure is the best approach to biodiversity. That is one concern for me. I wondered if any of you had any further thoughts, bearing in mind that we are heading towards 5.30pm.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): Could I mention another concern?

Leonie Cooper AM: Yes.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): Following on with needing to make the system work better around protected species, in some of the recent consultations, on potential policies around great crested newts and bats primarily, there is a

good starting point of, "Let us make it better for the wildlife. Let us not be so pedantic. Let us make it better for those species and let us also make it a more streamlined approach". However, in doing that, there are some things around not being tied within the footprint. In shorthand, it is really offsetting. Perhaps in an urban environment, it worries me even more that there may be something like densification. "We are not going to have -- we will do that somewhere else over here".

When the biodiversity offsetting pilot was run, there was one that was based on species to see how it would work. That was encouraging but none of them really had time to give any outcomes because they were all voluntary and it was not taken up so we do not know. There is this whole thing about not being able to look at habitats without affecting the species that rely on them. It is really about the functional distances of those species. There is a concern about thinking, "Well, that is OK because we will do something great over there". You may have had something quite good here that would be cut off and isolated.

There is also the other safeguard that we need around saying, "OK, well, we will do this here and this space is the really important biodiverse space". If it is not actually somewhere that has a management governing it into the future, if it is offsetting - and we have pushed this as far as we can within a number of Government departments - what is to stop that in time being developed itself? It is inching away at losing those vital habitats.

Leonie Cooper AM: A better way is to insist that there has to be some sort of net gain in biodiversity absolutely everywhere. The corridors, the green infrastructure, the green threads, whatever you want to call them, have to spread through everything. You cannot then offset and just have, as I was saying, nature over here in this box that is quite a long way and you can go visit occasionally on a sunny day.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): I think that is the threat.

Leonie Cooper AM: It is the thing that I think you were expressing at the beginning, Matthew, that it is nature versus humans versus the buildings. It is trying to say, "No, it is not either/or. It has to be good for the biodiversity but it is also good for the humans living in it". From the point of view of health, it is a really bad idea to do offsetting. It is not just for the health of the creatures who are no longer in that spot and are perhaps cut off from being able to forage somewhere close by that they can no longer reach, it is also bad for the humans that you are expecting to move into that location, very bad for their health and wellbeing.

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): We would all sign off on this conclusion, would we not?

All: Yes.

Mathew Frith (Director of Conservation, London Wildlife Trust): You are asking what the Mayor could do and clearly there is stuff he can do in terms of policies, in terms of the

London Plan and environment strategy and all that kind of stuff. How many teeth those have is still a little bit unsure.

He also has a role in terms of advocacy and knocking heads together, does he not, and incentives? They do not necessarily have to be particularly heavily financial because I know he does not have a huge amount of money either. It is interesting that the last Mayor - and indeed the previous Mayor to that - had a number of relatively small pots of money to encourage people to do good things. The last Mayor had a Big Green Fund and we had a priority parks programme and a Pocket Parks programme, all kinds.

Again, the language that came out was that they are in existing open spaces; they were not for housing developments. Why not charge the housing providers with, "Here is an incentive to make sure that your development meets all the aspirations for the environment in terms of waste, biodiversity, air quality, and all those kinds of things". They then have to develop that with resident community, with the neighbours to that developer or with ecological representatives, for example. That could be a way of promoting good practice. That then becomes, "This is the Mayor's hallmark of the kind of development I would expect to see in London. Anything that does not meet this standard really should not be built".

To me, that is the kind of thing: promoting good practice through some of his publications and through his media, and not necessarily delivering those programmes through 'the environment' programme. It is making sure that they are through the housing programme.

Leonie Cooper AM: Yes, mainstreaming it. That is why I have been talking about this rapporteurship with Jules [Pipe, Deputy Mayor for Planning, Regeneration and Skills] and James [Murray, Deputy Mayor for Housing]. I have mentioned it to Shirley [Rodrigues], who is the Deputy Mayor for Environment, so she knows about it, but I have mainly been discussing it with Jules and James. Sorry, we will bring Juliette in.

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): It is almost like saying, "This is what good looks like in terms of biodiversity in new housing developments. This is our best practice. This is what we expect developers to be coming up with".

Leonie Cooper AM: Yes. You wanted to come in as well?

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): Yes. It is quite similar to what you were saying in relation to the teeth of it. From my experience, local authorities are increasingly aware of why they want green infrastructure, why they need biodiversity, and why it is important. However, it has such diverse benefits it is very hard to pinpoint who should be funding it and for what reason. Because of that, somebody needs to step up and recognise the intrinsic value and needs to start saying, "It has to be done. It has all of these benefits". New developments are in fact the ideal way of implementing this kind of green infrastructure and showing exemplars of what can be achieved.

My experience of local authorities is that that is what they aim for. However, when they are working with housing developers, they are very pressured. If they start putting up barriers then housing developers will start saying, "OK, we are not going to be able to provide the homes". They need that pressure taken off them.

Leonie Cooper AM: I know. That one bat box that is so expensive they have to take all the social housing off the development. I would like to know what these bat boxes are made out of. Solid gold? I have six at my house made out of solid gold, clearly. "Really? Your whole viability assessment just completely disintegrated because of one bat box?" I do not think so.

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): They need the pressure taken off them. They need to be able to say, "Look, it is not my decision. It is coming from higher up. I am just following the London Plan. I am just following the London guidance of what I have to achieve".

Caroline Nash (Research Assistant, Sustainability Research Institute, University of East London): It is the same for consultants as well. I have worked as a consultant for a while and you can make lots of recommendations or specifications about what you think should go into a housing development but there is nothing to say you have to. There is a section 106 agreement but then does that necessarily get followed up on later? You would say, "Put a green roof in". Then you would say, "Put X, Y and Z in". You would go back, they had not done any of that and there are no checks and balances. There is something that really --

Leonie Cooper AM: It is the whole thing about the enforcement, if you like, or having the teeth, even the sharpened teeth, and then it just has to happen.

Caroline Nash (Research Assistant, Sustainability Research Institute, University of East London): It comes from a higher level of responsibility.

Leonie Cooper AM: Everybody just knows that it is going to be. It is not really up for --

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): It is non-negotiable.

Matt Shardlow (Chief Executive, Buglife): Designed in from the start rather than added on as a forced 'to do' by the local authority as an afterthought. Densification is obviously a horrible word and one that we will all shiver at because what it gives us is not the green open space. I would just again emphasise the green roof stuff. This reduces effectively the footprint by lifting the building footprint up and you will be recreating a certain amount of habitat. You can even have wet bits. We have not talked much about SuDS and things like that --

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Yes, that would be the perfect opportunity to do it.

Matt Shardlow (Chief Executive, Buglife): You could have some of those on roofs as well. If you are having a dense housing area, you can have flat roofs on there and you can have that. Not only does it provide wildlife benefits but it insulates the properties and it slows down the flow of rain out into drains, reducing flooding risk and all sorts of other things.

Leonie Cooper AM: Yes, I went to see a really interesting green wall which is just over there. It is part of the Southwark Business Improvement District (BID). It requires no attention at all but has reservoirs behind it that fill up with water and then it just drips through. All of the water that is there in the reservoirs is not rushing into the drains and causing surface water problems.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Yes. There is the knowledge out there. As Matt said, yes, it strikes fear, this word, "densification", but there is no reason on earth why that cannot have all these features. All right, they are not necessarily biodiversity features; they act as water attenuation. However, if they are designed properly, it is a fantastic place for people to walk through. It can be left as run-off and so on and also it can have some element of benefit. Not a rain forest or whatever but it can have benefit for some degree of biodiversity and allow some species certainly to move through a concrete landscape. There are just so many opportunities walking around places and seeing, "You could have X, Y and Z there", or whatever and it would make it nicer for people but ...

Matt Shardlow (Chief Executive, Buglife): A couple of other things. We are going to start planting little trees. Trees are obviously very important for quality of life but also if you plant the right ones they are pollen and nectar sources. If you get the right trees in the right places, it can also help biodiversity.

Leonie Cooper AM: Preferably at the right time.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): The knowledge is there and if that was pulled in at that very, very early stage, you can end up with some really dynamic, hard built areas that have that soft element within them to make them better, largely for people but also for wildlife.

Leonie Cooper AM: I believe the Mayor has made a commitment to the planting of numerous trees. That is not necessarily over the course of the summer, as he has now established at the October Mayor's Question Time when I asked why he had not started his planting already.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Again, they have to be the right trees.

Leonie Cooper AM: Yes, and in the right places and at the right time, otherwise you plant trees and then you come back to some dead stumps.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): Then using things like tree pits, so again planting them but incorporating them as a SuDS feature.

Matt Shardlow (Chief Executive, Buglife): From the right source, too, so you are not importing invasive species.

Leonie Cooper AM: I was going to say, if anyone has any last things that they want to add to.

Mathew Frith (Director of Conservation, London Wildlife Trust): It is more getting the Mayor and his various teams to recognise that London has an important part to play in the UK biodiversity context as well. It is not just a big, grey place where people live and work and play. It stands within a migratory route of many species of birds, invertebrates and fish and I do not think that is appreciated. A woodcock hit City Hall a couple of weeks ago, as an example of things that get stunned on their way in. Chicago has a programme of reducing its lights during the autumn and spring migrations. Where is that kind of commitment? Where is London thinking in terms of its place within the UK?

We have national hotspots for certain species, whether stag beetle or great yellow rattle, and so on, and I do not think that comes out in a lot of the communications that GLA does. Plus we have 8.6 million people and growing and their actions on a daily basis have an impact on biodiversity, particularly, dare I say it, on the seas, in terms of impact on our sea environment, in terms of the fish that we eat. The Wildlife Trust and others are doing a lot more work on the marine conservation programme and the proposed Thames Estuary marine conservation zone (MCZ), which would be part of the final tranche of MCZs, hopefully. The public consultation goes out, I think, next spring.

It is just part and parcel of the fact that London is not this standalone city. We are connected to the UK biodiversity in many different ways. Getting some semblance of that in communications and the policy, which I think is relatively poor at the moment, would be better.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): That is probably why half of your planners think there is no biodiversity in your borough.

Leonie Cooper AM: That would account for it.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): The trumpet is not blown loud enough about what the city has.

Dr Carol Williams (Director of Conservation, Bat Conservation Trust): Funnily enough, I thought you were going to steal exactly what I was going to say and it was incredibly similar. The sorts of things we are talking about today - the proactive, the positive, drawing a line about "This is what we expect or else it does not happen in London" and involving people and getting it known - excite me massively. If London does it then the rest of the UK is going to listen, and it really needs that. You have smaller places doing it but, like it or not, London does always lead the way. It would be a marvellous thing for all of us, working

across the country, to point at and to be a standard that other cities and other districts and regions should live up to.

Leonie Cooper AM: That is one of the reasons why we were thinking about having the case studies of absolute best practice with some quite shocking examples of biodiversity right in the centre of town. That includes the four falcons who have manage to fledge in their nests this year at Battersea Power Station, which is a tremendous achievement and the most that they have done so far since they have been rehomed out of the chimney. We are not thinking of showing the pictures of them eating the ring-necked parakeets in the nest because people get (Overspeaking)

All: (Overspeaking)

Leonie Cooper AM: Noisy invaders. Thank you, falcons. Sorry, you wanted to --

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): Yes. It related to some of things that have been mentioned at the end in relation to green roofs, trees, green walls, taking us back to one of the things we discussed right at the beginning. That is getting the right expertise involved. Green infrastructure is a big movement now. It is happening more and more. More developers are implementing it. However, 90% of the green walls that go in around London tend to be a very generic system. Having the same plants is not good for biodiversity. They have value but they have much more potential. Getting the right people in at the right time in whatever format that comes, whether it is putting people back in local authorities or in a centralised GLA centre, we need that input to make sure that when those opportunities arise they are designed for biodiversity as well as things like storm water management.

Leonie Cooper AM: Yes, that is a really important point. One of the remarks I made when I was setting off on this journey was that, having a background of working in social housing, when I sat down and talked about the biodiversity on the new housing scheme I was presented with a landscaping scheme that includes huge amounts of cotoneaster and bearberries because they grow very slowly and they are covered in prickles to stop children getting in there. If I have seen that once, I must have seen it 200 times and I never want to see it again. As valuable and fantastic as cotoneaster and bearberries are, I have seen them only too often and I would not --

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): Blandscaping.

Caroline Nash (Research Assistant, Sustainability Research Institute, University of East London): Blandscaping, yes.

Leonie Cooper AM: Exactly. Any further final thoughts? My phone was making noises because I need to definitely start travelling at 5.45pm because I am doing something else at 6.30pm.

Juliette Young (Senior Policy Officer, Royal Society for the Protection of Birds): Just a wider point, being mindful of densification. Yes, but there is a big area around London, the green belt. Can we do more around positive use of the green belt for biodiversity?

Leonie Cooper AM: Yes, there are only too many comments about all the bits of green belt that have degraded. It would be nice to hear people talking more positively about how fantastic the green belt is and how we can preserve the different biodiversity that is there through all the different mechanisms.

John Day (Urban Conservation Adviser, Royal Society for Protection of Birds): I suppose the three strands in there are protecting, enhancing and so on what is there; obviously retrofit them to maximise potential; and then the input into new as well, making sure you maximise the opportunity you can see there.

Leonie Cooper AM: Generally, we would be looking for good depth of biodiversity and good connectivity between difference sites. That is not just maintaining what there is but going for a net gain in the developments, all the time making sure wherever possible that they are linked into both what is around them but also seeing London as a whole, if you like, as well, a pan-London aspect.

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): Last one, apologies?

Leonie Cooper AM: Yes.

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): Just going back a little bit to the community engagement stuff, there is more I would like to say. Signage is great but I do not think it replaces community engagement.

Leonie Cooper AM: No.

Dr Stuart Connop (Senior Research Fellow, Sustainability Research Institute, University of East London): People read signs. Some of them will understand what is going on. If you get people engaged and taking ownership, so that it is their butterflies and they are looking after the park, you are going to get many more people involved in what is going on.

Similarly, when you are doing a new development there was some mention that perhaps there is no community there yet. However, if you are doing a good enough new development, it should be a focus for all the surrounding areas so the people in surrounding areas will get an opportunity to integrate with it, to experience the biodiversity in it. It is important to get those people engaged. In a place like London you are never going to be far away from a surrounding community.

You also have lots of different ethnic groups who respond very differently to green space and need very different things from their green space. Unless you are talking to those communities and finding out what it is that they want, you are not going to be providing the right things for them in the long term. If a different community moves in, you are going to just have problems with social cohesion. Getting the communities involved with the biodiversity design right at the beginning is critical to get everyone involved and engaged.

Leonie Cooper AM: That comes back to one of the points we were making right at the beginning. It is being good for nature but making sure that it is also good for the people who are living in it or are moving into it is part of the process as well. Linking that up with the local communities has to be done, yes.

I am going to draw it to a close because I cannot see anyone else leaping forward at that moment. Can I just say thank you very much for coming along? If you have any further thoughts that you suddenly think "I forgot to say this", do send them over. There might be something that you do suddenly think, "If only I had said so-and-so". It happens to all of us. Thank you very much.