



Department
for Environment
Food & Rural Affairs

Net gain

Consultation proposals

December 2018



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Foreword

Proper stewardship of our natural world is at the heart of responsible government. Clean air and water, healthy trees, rivers and biodiversity are not just vital for our health - they are fundamental to the prosperity of future generations and to civilisation as we know it.

Nowhere do the state of the natural world and the actions of government meet more regularly and more critically than in the planning system. At a time when we want to build more homes for growing populations¹, and at a time when our natural resources are under pressure², it is more important than ever that we create the right frameworks to promote sustainable growth.

This document seeks views on whether we should introduce mandatory requirements to the planning system in England so that development must deliver biodiversity net gain. We also set out the proposed next steps for our longer term ambition to embed environmental net gain. It is my firm belief that strengthening our approach to net gain over time could bring countless benefits to wildlife and habitats, as well as to communities and developers.

The increased demand for housing offers us an exciting opportunity. Applying a biodiversity net gain approach to national issues like house building could help deliver the 25 Year Environment Plan's ambition to be the first generation to leave our natural environment in a better state than we found it.

We are consulting on whether to mandate that new developments must achieve a biodiversity net gain to be measured using the 'Defra metric'. This could improve how the planning system addresses development's impact on habitats, allowing new housing without negatively impacting our wildlife. If introduced, the government would need to carefully evaluate any mandatory biodiversity net gain policy before moving to extend its scope. This consultation, however, also seeks views and evidence that could help shape the future development of environmental net gain. The government is supporting this by initiating a research project to test how biodiversity net gain might be extended in future to cover other aspects of natural capital. By making natural assets such as clean water, biodiverse habitats and healthy soils more investable alongside investment in built capital, our prosperity will be secured, and future generations will have access to the same resources that we enjoy.

If introduced, this approach could provide a more consistent framework for the businesses that work so hard to provide the homes and infrastructure we need for a modern economy.

¹ Government has committed to building 300,000 homes per year on average by the mid-2020s because insufficient housing is making it harder to rent or buy a safe, secure property and hindering companies trying to attract a skilled workforce, <https://www.gov.uk/government/publications/fixing-our-broken-housing-market>

² Many of our most important habitats are in poor condition and the diversity and abundance of wildlife is in decline, <http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx>, <https://www.gov.uk/government/statistics/biodiversity-indicators-for-the-uk>

Used positively the planning system can bring together developers and environmentalists to conserve key natural and heritage assets, as we have seen on countless occasions. By working collaboratively with water companies, tourism services, energy providers and waste experts, I have no doubt that profitable development could transform itself into a driving force of biodiversity enhancement. Reassured by a robust biodiversity net gain policy, local communities could be more confident in accepting development that delivers growth, jobs and amenities, while having a positive impact on local wildlife.

Used clumsily, however, planning law can become a tedious, confusing and expensive hurdle for developers to avoid.

We are seeking views on whether mandating biodiversity net gain would streamline planning processes and give greater clarity and certainty for developers. Varied environmental planning conditions across different regions have created confusion and resentment. We are proposing that a single, consistent national approach would reduce uncertainty for the environment, for the community and for the developer.

We would work closely with local authorities to ensure that there is sufficient flexibility to meet local priorities whilst maintaining national consistency for developers. And we would also be seeking advice from the leading local authorities, such as those in Warwickshire, who have already successfully implemented biodiversity net gain in their local policies.

We are seeking views on the advantages and impacts of such an approach, as well as the practical challenges of implementing mandatory biodiversity net gain nationally. We are also seeking evidence on how to bring broader aspects of natural capital into a net gain approach.

I am confident that developers, environmental NGOs, utility companies, local authorities and the public will respond to this consultation with constructive and challenging responses that ensure government does its duty to provide the homes we need, and the enhanced natural environment we deserve.

We will continue to work with the devolved administrations to deliver a sensible national framework. This consultation is focused on tackling planning law in England, but the United Kingdom has a shared goal to protect our natural heritage.

It is my profound hope that we will use the opportunity presented by leaving the EU to become a world leader in environmental excellence and that we use this opportunity to set world-leading standards on everything from environmental land management to a sustainable construction industry. By using rigorous scientific and financial metrics alongside strengthened legal principles, we can show that economic growth and a healthy environment are not only natural partners but the building blocks for true prosperity.

The Rt Hon Michael Gove MP

A handwritten signature in black ink that reads "Mich Gove". The signature is written in a cursive, slightly informal style.

Secretary of State for Environment, Food and Rural Affairs

Summary

The government is committed to improving the environment, benefitting local communities and delivering sustainable development. The 25 Year Environment Plan sets out the government's ambitious goals for environmental improvement, following through on our promise to be the first generation to leave the environment in a better state than we inherited it.

This consultation delivers on an action we set out in the 25 Year Environment Plan. In the Plan we set out our ambition to embed an environmental net gain approach in the planning system in England, and that we would consult on whether to mandate biodiversity net gain.

Mandating biodiversity net gain could improve the planning system. We want to test and seek further evidence for this assumption through this consultation.

The first part of this consultation sets out the objectives of net gain policy for the environment, development and local communities. An effective net gain policy could enable us to build the houses, commercial premises and local infrastructure we need and at the same time improve our environment by more than compensating for biodiversity loss where it cannot be avoided or mitigated. A stronger requirement to protect and enhance the environment through development could increase habitat for wildlife species. Clear and consistent processes for developers could support housebuilding and other construction, helping developers to get their planning applications right the first time. Greener developments with access to local natural spaces will be more pleasant and healthier places to live and work, and habitats delivered for wildlife through biodiversity net gain could deliver wider social and economic benefits.

The second part of the consultation examines the core concepts of biodiversity net gain and environmental net gains. It describes how biodiversity net gain is set out in planning policy and where it is currently practised by local planners, developers and infrastructure providers. We have an ambition that, in addition to biodiversity enhancements, development will deliver wider environmental benefits in the future. Therefore, as well as delivering biodiversity net gain in local planning we want, over time, to identify an effective broader environmental net gain approach delivering resilient and sustainable development, which can be granted planning permission with greater local acceptance and less cause for delay. We recognise that developing such an approach is complex and it may be that the net gain approach used for biodiversity is not the best way to deliver all wider environmental improvement objectives. At this stage we are seeking evidence on what aspects of natural capital should be considered and the options we should consider in developing an environmental net gain approach.

The third part of the consultation seeks views on whether to mandate biodiversity net gain for development requiring planning permission³. We propose a new standardised approach to biodiversity net gain that is designed to be simpler and clearer for all stakeholders to use while delivering measurable, verifiable net gains for nature. Net gain for biodiversity should seek firstly to avoid and mitigate against environmental damage. It will operate alongside existing planning policy to ensure that current environmental standards, including the existing protections for habitats such as ancient woodland, species and designated sites, are maintained and implemented. To achieve biodiversity net gain and compensate for biodiversity loss, habitats should be created or enhanced, preferably as part of the same development or nearby. This will maintain habitat connectivity, avoid the erosion of nature in any single area and benefit communities affected by development. Where suitable local compensation opportunities are not available, however, we are proposing that a tariff could be paid so that biodiversity net gain can be achieved without delaying development. A tariff could fund habitats for both strategic and local biodiversity priorities, whilst achieving biodiversity net gain overall.

This part of this consultation also seeks views on how best to implement biodiversity net gain, including the most appropriate measurement, delivery and monitoring mechanisms to ensure it delivers high quality places and reduces uncertainty and unnecessary processes for local planning authorities and developers. We are also seeking views on how to better integrate species into a biodiversity net gain approach, where this would benefit the conservation of a species, and how to move from net gain for biodiversity to broader environmental net gain in future.

Considering the evidence received through the consultation will be key to delivering biodiversity net gain successfully, and achieving the most for the environment and developments. Submitted views and evidence on wider environmental net gain will help to shape future refinements to planning policy and guidance.

We will engage with stakeholders alongside consultation to test the opportunities and challenges presented. The evidence received through consultation will be key to understanding whether these proposals will deliver the benefits described, and enable us to deliver an effective policy on biodiversity net gain which enhances the environment, supports development and benefits local communities.

³ Nationally significant infrastructure or other development not requiring planning permission is not in scope. House extensions are not in scope of our mandatory proposals.

Biodiversity net gain in the planning system: core proposals and objectives

Our proposal is that biodiversity net gain will be delivered within the existing planning and development process. This summary is illustrated in the infographic that follows.

When assessing potential development sites, habitat surveys will identify habitats and their condition as is already done for much development. Surveys help identify opportunities for enhancement as part of green infrastructure as well as possible constraints.

Development design will proceed as normal, but better informed by figures for biodiversity losses and gains. A standard biodiversity metric will be populated with habitat information from the site assessment and landscape plans. This will help demonstrate at an early stage that harm has been avoided as far as possible and that new green infrastructure will be of good environmental quality. The metric could also help to anticipate the costs of achieving net gain to factor these into land purchase where possible. No existing planning protection for the environment will be weakened and the principle of avoiding harm first (known as the “mitigation hierarchy”) will continue to ensure that preventing damage to nature will always be prioritised, wherever possible.

If net gain cannot be achieved on site, the metric would provide the right information to discuss habitat enhancement or creation with local providers or with the local authority during pre-application negotiations. The tariff rate would offer a guide for the upper limit of habitat compensation costs, alongside information from growing habitat creation markets.

When preparing local plans, local authorities are able to identify opportunities for habitat improvement that would benefit local people and support nature recovery. They would be able to choose to bring improvement sites forward themselves or work with other providers.

When developers and local planning authorities are consulting with the local community prior to submitting a planning application, it will be possible to use biodiversity net gain figures and habitat enhancement measures to explain the benefits and costs of a development proposal more transparently.

With clearer expectations, developers will be able to submit planning applications with greater confidence that proposals can be supported on biodiversity grounds.

For local authorities, transparent figures for biodiversity losses and gains can be quickly checked and provide confidence that impacts will be positive. Figures will also indicate the environmental quality of green infrastructure as part of development design.

As part of the planning permission, developers would sign up to predictable conditions, obligations or a tariff payment to secure biodiversity net gain. The availability of a tariff would prevent planning permission from being delayed by net gain requirements, and local authorities will be able to demonstrate that positive impacts to help improve the environment for local communities have been secured.

How our proposals for biodiversity net gain work in practice

The scenarios show the broad mechanisms through which a residential development could achieve biodiversity net gain under the policy proposals.

The same principles could apply for wider development and construction.

SCENARIO A

The developer is able to avoid harm, mitigate and enhance on site.



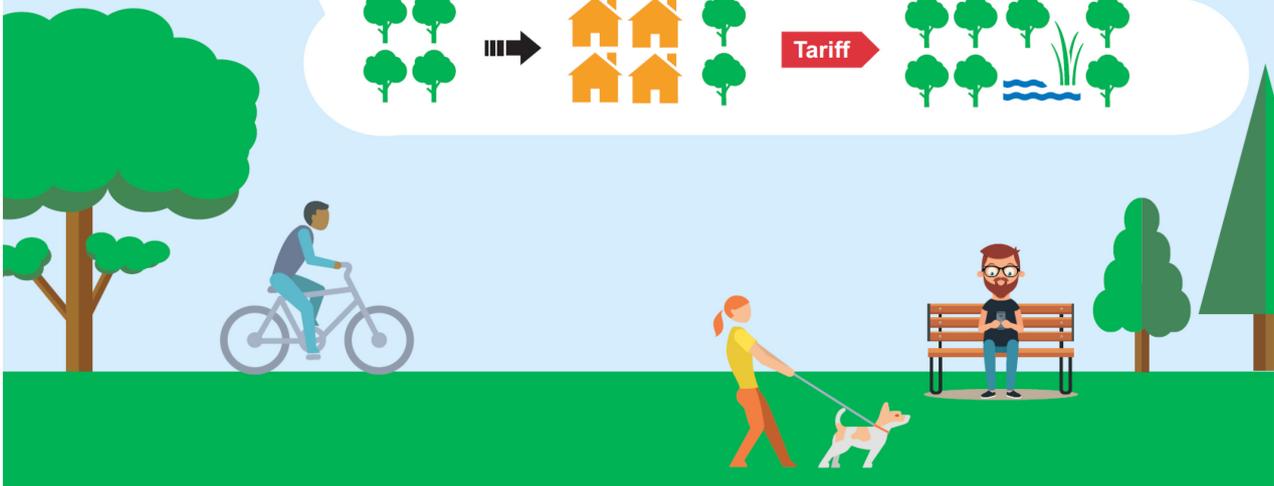
SCENARIO B

The developer is unable to avoid, mitigate and compensate all impacts on site, but is able to secure local compensatory habitat creation.



SCENARIO C

The developer is unable to avoid, mitigate and compensate on site, and unable to find local compensatory habitat to invest in. The tariff is therefore used to fund cost-effective habitat creation projects according to local and national conservation and natural capital priorities.



How to respond

Consultation questions are included in “Policy proposals and questions” and at “Annex A” at the end of this document.

Please respond by 10 February 2019.

Please respond through the online survey (Citizen Space) accessible via Gov.uk

Responses can also be sent by email to netgainconsultation@defra.gsi.gov.uk or by post, specifying which question(s) you are responding to:

Net Gain Consultation
Department for Environment, Food & Rural Affairs
First Floor, Seacole Block
2 Marsham Street
London, SW1P 4DF

This consultation is in line with the government’s Consultation Principles. This can be found at www.cabinetoffice.gov.uk/resource-library/consultation-principles-guidance.

Representative groups are asked to give a summary of the people and organisations they represent and where relevant who else they have consulted in reaching their conclusions when they respond.

Information provided in response to this consultation, including personal data, may be published or disclosed in accordance with the access to information regimes these are primarily the Environmental Information Regulations 2004 (EIRs), the Freedom of Information Act 2000 (FOIA) and the Data Protection Act 2018 (DPA). We have obligations, mainly under the EIRs, FOIA and DPA, to disclose information to particular recipients or to the public in certain circumstances.

If you want the information that you provide to be treated as confidential, please be aware that, as a public authority, the Department is bound by the Freedom of Information Act and may therefore be obliged to disclose all or some of the information you provide. In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

If you have any comments or complaints about the consultation process, please address them to:

Consultation Coordinator
Area 1C, 1st Floor Nobel House
17 Smith Square,
London, SW1P 3JR.

Or email: consultation.coordinator@defra.gsi.gov.uk

What are we trying to achieve?

Securing positive outcomes for the environment

Mandating biodiversity net gain could ensure that new development enhances the environment, contributes to our ecological networks and conserves our precious landscapes. A mandatory approach could be an important early step towards meeting our 25-Year Plan goal for thriving plants and wildlife.

Successful implementation of biodiversity net gain would restore and create high-quality habitats that can provide a home for a diverse range of species and build resilience to climate change. We will identify opportunities for biodiversity net gain to contribute to the Nature Recovery Network and enhance local networks, helping to create 'more, bigger, better and more-joined up habitats' as recommended by Sir John Lawton's review for government, *Making Space for Nature*.⁴ We will explore how new data, tools and strategies can help identify potential areas for habitat enhancement and creation that help meet the needs of local communities and secure multiple positive environmental outcomes. Creation of floodplain marsh or upstream woodland, for example, can protect communities from flooding.

At the moment, many of the hidden environmental costs of development (such as biodiversity loss, carbon emissions, unsustainable water use, and worsening air quality) are not considered systematically, with no mechanisms to compensate for the harm to nature, communities and future generations. Nor are the benefits of creating greener developments properly understood. Net gain approaches could help to redress the balance and provide clear mechanisms and opportunities for developers to leave a positive legacy of environmental enhancement.

⁴ Lawton, Professor Sir John (2010), *Making Space for Nature: A review of England's Wildlife Sites and Ecological Network*, <http://webarchive.nationalarchives.gov.uk/20130402170324/http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf>.

Improving the process for developers

It is important that any approach to mandatory biodiversity net gain helps to support housing delivery and wider development by standardising requirements in the planning process (see Figure 1 which illustrates the potential process advantages described in this section). Introducing a transparent and consistent requirement could provide certainty, allowing developers to factor in obligations up front so that more accurate estimates of land values can be made at the point of purchase. This certainty will also allow developers to plan accurately at an early design stage, avoiding the need for additional surveys, uncertainty over obligations or protracted negotiations with local planning authorities. We know from the strategic approach taken for specific species such as great crested newts that streamlining and clarifying requirements at an earlier stage has great potential to reduce the time taken for developers to secure necessary consents, de-risk processes and deliver high standards.

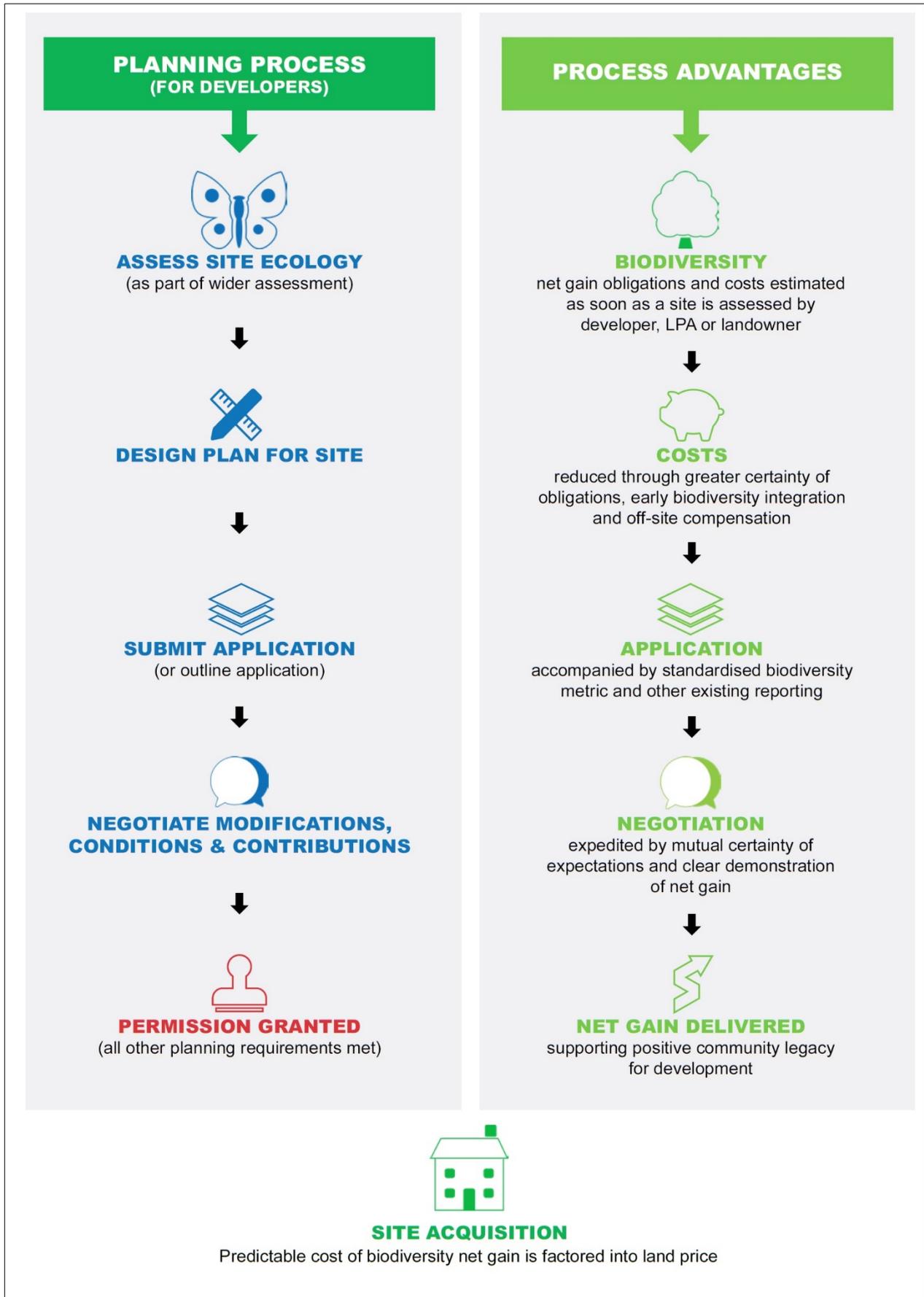
Developments that better incorporate nature will be more attractive through successful place making, potentially invoking less opposition locally⁵. We expect that opportunities for environmental enhancement will make development in the right places easier. In time, a wider approach to net gain could have the potential to help assuage many more of the most common environmental objections to development, enabling developers to assure communities upfront that their environmental concerns have been addressed.

Several major developers and planning authorities already set specific biodiversity net gain requirements, recognising the additional benefits delivered from creating greener developments that make better places to live and are easier to sell. We are taking lessons and feedback from these sector leaders to inform the development of our proposed mandatory approach. A standardised requirement for biodiversity net gain, applied equally to all development within scope, could create a level playing-field for developers. In this consultation, we are seeking further views and evidence from those in the development sector on potential costs and benefits of this approach, see “Impact on developers” section and “Key evidence gaps”. Any policy on mandatory biodiversity net gain will take into account the responses to this consultation and targeted stakeholder engagement that is undertaken during consultation.

The government will only mandate biodiversity net gain if it is satisfied that it will deliver benefits for development, including greater certainty and process cost savings.

⁵ Bramley, G. (2011), ‘Housing: Homes, planning and changing policies’ in National Centre for Social Research, *British Social Attitudes: 28*, http://www.bsa.natcen.ac.uk/media/38952/bsa28_8housing.pdf.

Figure 1: Selected benefits of net gain at a development scale



Creating better places for local communities

Successful implementation of biodiversity net gain would help to drive better delivery of local plans and place making. It would stimulate improvements in the design quality of residential developments. The provision of environmental amenities, such as high-quality and biodiverse urban woodlands, green spaces and parks, will create better places to live and work.

Biodiversity net gain, in combination with future Green Infrastructure Standards, has the potential to ensure that an increasing proportion of new homes have access to natural spaces and wildlife within walking distance. This brings health and wellbeing benefits, particularly to urban and suburban areas where high-quality and accessible green infrastructure can be scarce, contributing to poor mental and physical health; access to public green space is an important factor in connecting people with nature and tackling obesity⁶. There is a growing body of evidence suggesting that living in greener environments is associated with reduced mortality⁷.

Where it is not possible or appropriate to deliver biodiversity net gain on a development site, we would propose that opportunities to achieve biodiversity net gain in the wider local area, including on local sites for nature should be explored, taking into account the potential community benefits from improved access to nature. This would ensure that people living in areas of high development receive the associated environmental benefits as much as possible before environmental enhancement further afield is targeted. Strategic investment of tariff revenue could help to create bigger, better and more connected natural spaces for communities to enjoy when suitable local habitat investment opportunities are not available.

A broader environmental net gain approach which helps to deliver cleaner air and water, increased flood resilience and greater energy efficiency could have the potential, in time, to transform our environment and support healthier lives.

⁶ Lachowycz, K. and Jones, A. P. (2011), Greenspace and obesity: a systematic review of the evidence, *Obesity Reviews*: 12 (5), <http://onlinelibrary.wiley.com/wol1/doi/10.1111/j.1467-789X.2010.00827.x/full>

⁷ Gascon et al. (2016), Residential green spaces and mortality: A systematic review, *Environment International*: 86, <https://www.sciencedirect.com/science/article/pii/S0160412015300799>

Definitions and current practice

What is net gain?

Net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. This means protecting existing habitats and ensuring that lost or degraded environmental features are compensated for by restoring or creating environmental features that are of greater value to wildlife and people. It does not change the fact that losses should be avoided where possible, a key part of adhering to a core environmental planning principle called the mitigation hierarchy⁸. Net gain is not a new concept. Several countries around the world have already adopted biodiversity net gain policies⁹ and net gain for biodiversity is already supported through national planning policy¹⁰.

Many developers and local planning authorities (LPAs) already provide environmental improvements through well-designed development, but do not measure losses and gains and so do not make claims of biodiversity or environmental net gain. Some developers are going further to measure and ensure that each development enhances biodiversity. Mandating biodiversity net gain could provide the incentive and consistency in approach for other developers to deliver gains for the natural environment, improving wildlife habitats in quality or extent.

Biodiversity net gain

Development that adopts a biodiversity net gain approach seeks to make its impact on the environment positive, delivering improvements through habitat creation or enhancement after avoiding or mitigating harm as far as possible. Based on a standardised approach, biodiversity net gain delivers measurable improvements by comparing habitat losses and gains and steering mitigation and compensation accordingly. New or enhanced habitats can help deliver local and national biodiversity priorities such as the Nature Recovery Network and local strategies for nature, including green infrastructure strategies.

⁸ The mitigation hierarchy is supported in the NPPF and described in “Policy proposals and questions” and in the glossary.

⁹ International habitat compensation schemes include the Wetlands Compensatory Mitigation and Conservation Banks in the United States and BioBanking in New South Wales, Australia.

¹⁰ NPPF paragraph 170 states that planning policies and decisions should minimise impacts on and provide net gains for biodiversity; paragraph 174 requires plans to pursue opportunities for securing measurable net gains; paragraph 175 requires planning decisions to encourage biodiversity improvements in and around developments and paragraph 118 states that the planning system should take opportunities to secure net environmental gains.

True measures of biodiversity, a term meaning the diversity of life, are complex and no single metric or number can summarise biodiversity's many qualities, benefits and characteristics. Established biodiversity net gain approaches use habitats as a proxy for biodiversity in a given area; this approach recognises that a mixture of connected high-quality habitats will support a wide range of plants, animals, fungi and microorganisms. Using habitats as a proxy measure, together with appropriate ecological advice, makes it more practical for LPAs and developers to agree on the biodiversity losses or gains due to a development.

The origin of biodiversity net gain approaches, and lessons from biodiversity offsetting

Government has previously considered how losses of nature through development can be stopped and habitats enhanced. Defra ran six 'biodiversity offsetting pilots' between 2012 and 2014. The pilots contributed to our understanding of biodiversity measurement and policy. Elements of the pilots' actions are ongoing, including biodiversity net gain policies implemented in areas such as Warwickshire, Coventry and Solihull. The pilots' evaluation, however, found that a voluntary approach was not sufficient to deliver net environmental benefits or a level playing field for developers. We have also listened to concerns that delivering genuine environmental benefits cannot be achieved if the easiest or cheapest option is for development to pay its way out of any obligations, meaning that the mitigation hierarchy is undermined.

The Defra metric

A metric helps to measure biodiversity losses and gains in a more transparent and verifiable way and provides a common reference point for agreement between a developer and an LPA. In 2012 Defra and Natural England developed a biodiversity metric to support the biodiversity offsetting pilots. The project looked at how the creation of new habitat could be used to compensate for developments with a negative overall impact on biodiversity. The metric enables practitioners to calculate the losses and gains by assessing habitat:

- **Distinctiveness:** whether the habitat is of high, medium or low value to wildlife.
- **Condition:** whether the habitat is a good example of its type.
- **Extent:** the area, in hectares or kilometres (depending on habitat types), that the habitat occupies.

The information needed to populate the metric should be included in ecological assessments before development¹¹ and for the habitats proposed after development. The

¹¹ An extended Phase 1 survey is the initial 'walk over' by a professional ecologist, mapping key habitats and features and checking whether protected species may be present. This is usually sufficient best practice to ensure planning policy and legal biodiversity requirements are assessed as early as possible in the development process. It is used to inform the need for further more detailed surveys, including for protected species.

metric translates some of this information into biodiversity units. To achieve net gain, a development must have a higher biodiversity unit score after development than before development.

This original Defra metric has been adopted and adapted by a range of planning authorities and developers to help to calculate biodiversity losses and gains. Natural England are updating the Defra metric in collaboration with the Environment Agency and a wide range of external stakeholders (see the box below, “Defra Metric 2.0” for details).

No metric will be able to take every detail and characteristic of biodiversity into account or deliver guarantees that all wildlife species will benefit; for this reason, individual wildlife species are not directly accounted for in the core biodiversity metric.

The value of habitats to legally protected species is measured in other ways, largely through appropriate qualitative assessment, though more objective approaches are emerging such as those being developed for great crested newts. It is anticipated that the quality and robustness of such tools will improve as they evolve.

Defra Metric 2.0

The Defra metric 2.0 will be a freely available update to the current Defra biodiversity metric that Natural England will be testing with stakeholders alongside this consultation¹². Designed to address some of the known shortcomings with the original metric, the updated version will incorporate a number of new features, and a downloadable tool will simplify the calculation process by automating the metric calculations. It will allow for on-site biodiversity net gain calculations as well as calculations to determine the contribution of compensatory habitat off site.

Defra metric 2.0 will continue to be habitat focussed and retain the same core approach to calculating biodiversity unit value as the original metric. It will now, however, flexibly incorporate green infrastructure features (such as green roofs and street trees) and rivers into the metric and allow for greater sensitivity of habitat condition and distinctiveness scoring. It will also include measures to take better account of spatial factors, including an updated ecological connectivity component.

Defra metric 2.0 will provide consistency in habitat classification across local authority boundaries. Users will be able to copy and paste GIS¹³ data, where available, directly into the tool. We will consider whether, in the longer term, we might want to bring the metric into a web-based portal to make its use even simpler for users and planning authorities.

¹² <http://publications.naturalengland.org.uk/publication/6020204538888192>

¹³ Geographic Information Systems allow sites and habitats to be mapped digitally, providing greater accuracy and a more transparent means of showing where important habitats are on a site. They can also help to greatly speed up the process of surveying on large or complex sites.

Environmental net gain

At this stage, government is only considering mandatory implementation of net gain for biodiversity, but our longer term commitment is to embed wider environmental net gain principles in development. Our approach would be determined following evaluation of the impacts and lessons learned from the implementation of any biodiversity net gain policy, making sure that the government’s overall approach supports the environment, development and the planning system.

Biodiversity net gain would increase the quality and amount of habitat for wildlife that is delivered through development, but we want to go further and explore how we can develop approaches which also take account of benefits from, and impacts on, natural capital (see Figure 2). A development that enhances biodiversity and these wider aspects could be considered to be delivering environmental net gains.

Figure 2 – The potential for environmental net gain in development. The distinctions made in this table are not clear cut in theoretical or academic terms, but are helpful to illustrate the potential scope for environmental net gains in development. Examples of what might be measured in practice are likely to vary for marine development, and for non-development application of net gain (neither of which are within the scope of this consultation).

			Examples of what might be measured in practice
Environmental	Natural capital stocks: natural assets, including biodiversity assets such as terrestrial and aquatic habitats or species diversity which underpin the assets’ capacity to deliver ecosystem services.	Biodiversity: habitats and the wildlife species they support.	Wildlife habitats (as measured by the Defra biodiversity metric)
			Protected species’ habitats / populations
		Ecosystem services: the capacity of habitats, and the wildlife they support, to provide wider ecosystem and cultural services.	Water quality regulation
			Air quality regulation
			Places for recreation
			Carbon storage and sequestration
			Flood water regulation
			Wildlife for enjoyment and appreciation
	Natural capital pressures: direct and indirect pressures on national and international natural capital stocks.		Energy efficiency
			Water efficiency
			Transport efficiency
			Waste and recycling efficiency
			Construction materials and processes
		Light and noise pollution	
		Recreation impacts on protected sites	

Net gain for biodiversity must remain the core requirement of natural capital and environmental net gain approaches – the social, environmental and economic value of natural capital is underpinned by biodiversity and these assets cannot be enhanced unless they are made resilient as part of functioning and healthy ecological networks. Simply put, the loss of biodiversity places all of the benefits we receive from nature at greater risk of decline or even collapse. This consultation therefore focusses on whether the government should introduce mandatory biodiversity net gain. However, we would also value responses that help us to gather evidence as to how wider environmental impacts could be measured and addressed in any future environmental net gain approach (also see “Ambitions for wider environmental net gain” section).

Development can affect natural capital in two broad ways:

- Direct loss or gain of natural capital: By changing the areas of various habitats we also change the benefits that this natural capital can provide for people. For example, an increase in woodland could provide benefits such as carbon capture, recreation or flood risk reduction.
- Indirect impacts on natural capital: By changing the pressures placed on natural capital by new development we also affect wider natural capital stocks. For example, a new home that is water efficient might exert a smaller pressure on rivers and other water bodies and might contribute to reducing the impact of droughts.

Both of these types of impacts should be addressed in environmental net gain approaches, but progress towards such a wide ambition needs to be made at a rate that, whilst being ambitious, minimises risks to the environment and does not inhibit the timely and cost-effective delivery of much-needed development.

The assessment of natural capital net gain, which encompasses biodiversity net gain and the enhancement of assets which deliver ecosystem services, can be complex and is an evolving science. We will continue to engage with stakeholders to address key policy questions including:

- Whether, or where, trade-offs between individual benefits from natural capital, excluding biodiversity, should be permissible (i.e. could we trade between flood risk reduction and air quality improvement?),
- whether natural capital net gain is best achieved through explicit measurement at the development level, or by more effectively taking natural capital into account in spatial planning,
- whether certain assets or benefits should be prioritised over others depending on the location (e.g. to give a higher weighting to natural flood risk mitigation measures upstream of flood risk zones),
- whether ‘assets’ or ‘benefits from assets’ should be considered in a metric (i.e. is a woodland more valuable because more people use it?), and
- how total net gains could be achieved across diverse measures of natural capital benefits (i.e. could we add units of reduced flood risk to units of air quality to calculate a net gain overall?).

Once we have a clear understanding of these complexities, we will be able to consider options for using net gain to address the remaining considerable hidden costs for communities, society and future generations that are not often accounted for, or compensated, currently. Robust assessment of natural capital net gain will require the development and improvement of data, tools and metrics. We recognise the significant social benefits that might come from explicitly targeting such improvements and are contributing to the progression of these tools and approaches. As part of this work, Defra and Natural England are developing (with academia, industry and planning authorities) a new tool called an 'eco-metric' which aims to measure the ability of habitats to deliver ecosystem services. The eco-metric is currently being tested to see how well it measures change in benefits from natural capital, and what proportion of these benefits would be delivered through the biodiversity net gain approach at its core. If successful, it will provide a freely available tool for assessing both biodiversity and broader natural capital net gains.

It is still uncertain how net gains against some of the "Natural capital pressures" (see Figure 2) aspects might be defined. For example, a net gain in water efficiency might mean an improvement on the current average water efficiency of homes, or it might mean exceeding standards or targets for new development. What this might mean for various types of commercial or industrial development is not yet clear.

Many of these components of net gains for "Natural capital pressures" are already targeted through planning policy, building regulations and government strategies. For example, the Buildings Mission sets out to halve energy usage in new buildings by 2030¹⁴. Through the Clean Growth Strategy, government will be working with industry to increase the amount of UK timber used in construction, locking in carbon, and encourage more businesses to support cost-effective emissions reductions, such as planting trees or making other land use changes.

In deciding how to achieve environmental net gain, it will be necessary to weigh the considerable environmental costs to society of inaction against considerations around the practicalities and any costs or delays to development. Exploring what net gain means for these measures, and how these measures might be adapted for voluntary application outside the scope of this consultation, will require further work and engagement with expert stakeholders and across government.

¹⁴ The Industrial Strategy sets out Grand Challenges to put the UK at the forefront of the industries of the future, with missions to tackle these challenges. It is crucial that developments should be planned to reduce emissions, helping to mitigate climate change, alongside incorporating net gain of biodiversity, in line with the Climate Change Act 2008.

Biodiversity net gain in practice

Net gain in planning policy

Legislation requires public bodies to have regard to conserving biodiversity¹⁵, and biodiversity net gain is an established part of planning policy. The National Planning Policy Framework (NPPF) has recently been revised to make clear that planning should '*identify and pursue opportunities for securing measurable net gains for biodiversity*'¹⁶ and LPAs and developers already take biodiversity into account in planning discussions and decisions. Biodiversity is often assessed with the support of professional ecologists who provide advice throughout the planning and development process to LPAs and developers. The quality and sensitivity of habitats and species are considered when deciding if land is suitable for development, and developers avoid purchasing the least suitable sites or risk refusal of planning permission. Developers design the layout and landscaping of development to avoid significant harm and provide new habitats, as part of green infrastructure and to provide biodiversity enhancements sought by local plans. Green infrastructure can include trees, hedgerows, meadows, ponds or green roofs and green walls. Where harm cannot be avoided then mitigation or, if necessary, compensatory measures for specific biodiversity impacts are negotiated and secured through planning conditions and legal obligations.

This system works well to avoid the most severe impacts on biodiversity and protect the best sites for wildlife, but less well to manage the gradual erosion of lower value habitats. Cumulatively, even 'insignificant' losses of habitat at a development scale add up to significant rates of biodiversity loss overall. The approach also leaves much to be agreed in relatively subjective and discretionary ways – while this offers some flexibility, it can also result in uncertainty and costs for both developers and LPAs. Current practice enables some enhancement but without reliable measurement there is no way of understanding how much this benefits the environment and people.

In practice, a variety of approaches are employed by the 353 local authorities in England which developers must navigate and adapt to. For example, some LPAs have adopted existing metrics to achieve biodiversity net gain, whereas others rely on local plans identifying habitat features or sites for conservation. Both developers and LPAs rely on professional advice and ecological data which can vary in quality, presentation and cost. Consequently, it can prove challenging to reach an agreed position around a qualitative technical ecological report; ultimately, both developers and people who have objected to an application must rely on informed but subjective reporting and conclusions.

¹⁵ Section 40 of the Natural Environment and Rural Communities Act 2006

¹⁶ Paragraph 174, NPPF

Some LPAs have adopted mandatory biodiversity net gain policies (see box below). This helps to ensure that a consistent approach is applied to development and that biodiversity gain can be achieved at a development and local plan level. However, there is little consistency in policies or approaches nationally or even between adjacent LPAs. Mandatory net gain for biodiversity across England would reduce inconsistency, provide greater certainty for developers and provide a more efficient means for LPAs to implement national planning policy whilst addressing local environmental priorities.

In **Warwickshire, Coventry and Solihull** a system has been implemented to ensure that development leads to no net loss of biodiversity, facilitated by Warwickshire County Council.

Biodiversity impact assessments are required for all developments, providing evidence of the application of the mitigation hierarchy, subsequent on site compensation, and any residual biodiversity loss triggering biodiversity offsetting. This requirement is set out in LPA policy, and within the county wide Green Infrastructure Strategy. The county has comprehensive online mapping of ecological information, which enables both planning applicants and LPA strategic planners to determine the potential ecological value of a proposed development site. This information is also used to identify ecologically rich or deficient areas and the ecological linkages present or needed to join them together at a site, regional or national scale.

Biodiversity impact assessments involve an ecological survey to assess the biodiversity value. The biodiversity impact is calculated using the Warwickshire version of the Defra metric. The metric is also used to quantify the amount of offset necessary to compensate for any residual biodiversity loss and the mapping ensures that compensation puts “*the right habitat in the right place.*”

Greater Manchester has expressed an ambition to be a carbon neutral, climate resilient city-region with a thriving natural environment and circular, zero-waste economy. The Greater Manchester Combined Authority will produce a Natural Capital Investment Plan by the end of this year which will promote investment and delivery of opportunities that protect and enhance Greater Manchester’s natural capital to support a healthy population and economy.

The Greater Manchester Spatial Framework is a spatial strategy for Greater Manchester. It is a new plan for jobs, homes and the environment. The framework will reflect the strategic priorities in national planning policy across Greater Manchester and provide the context for local plans, including a measurable net gain in biodiversity value through new development. Greater Manchester is developing guidance for delivering biodiversity net gain at a city-region level; this is the first step towards embedding wider net gain for people, places and nature.

Net gain approaches in industry

There is growing momentum within the development and construction industry to implement biodiversity net gain:

- Housing developers have committed to achieving biodiversity net gain, for example Barratt Homes, Berkeley Group, and Redrow Homes have all adopted biodiversity net gain approaches (see the box below about the Berkeley Group's approach);
- Infrastructure programmes are adopting a biodiversity net gain approach, including Crossrail, the East-West Rail Alliance and the Greater West Programme (note that nationally significant infrastructure projects are outside the scope of this consultation);
- Utilities and land managers, such as National Grid, Thames Water and Yorkshire Water are increasingly working towards biodiversity enhancement targets and commitments, and some are exploring means of also achieving gains in benefits from natural capital; and
- Professional and industry bodies¹⁷ have supported the adoption of biodiversity net gain approaches through the provision of good practice principles¹⁸ and guidance based on established international best practice¹⁹. Biodiversity net gain is already recognised in sustainable building standards (from BREEAM) which incorporates the Defra metric, and work is underway to incorporate biodiversity net gain into BRE Global's CEEQUAL quality assurance scheme for infrastructure. Work is underway to develop a British Standard for biodiversity net gain²⁰.

Berkeley Group – creating net biodiversity gain within all new developments

The Berkeley Group made a commitment in 2016 that all new developments from May 2017 will create a net biodiversity gain within the development site. Berkeley's commitment has been informed by the learning and experience they gained in delivering a number of high quality, biodiversity rich developments. For example, at their 'Kidbrooke Village' development Berkeley partnered with the London Wildlife Trust and consulted the Royal Borough of Greenwich's Biodiversity Action Plan to provide green space that engaged the local community and increased biodiversity. This work also led to increased engagement with the local community and 20 hectares of new parkland within the development, which will deliver 4,800 new homes. Berkeley Group have adapted a version of the Defra biodiversity metric to forecast biodiversity losses and gains.

¹⁷ Construction Industry Research and Information Association, Chartered Institute of Ecological and Environmental Management, Institute of Environmental Management and Assessment supported by Balfour Beatty.

¹⁸ Biodiversity Net Gain: Good practice principles for development 2016.

¹⁹ As set-out by the Business and Biodiversity Offsets Programme (BBOP), <http://bbop.forest-trends.org/>

²⁰ Work to develop the new British Standard is being led by the British Standards Institute working with Natural England, Defra and a wide range of industry, NGO and land management bodies. The new standard will likely be in two parts: design and pre-construction and construction/post-construction and is anticipated to be available in 2019/2020.

Our view (that we want to test and seek evidence for via this consultation) is that the increasing but patchy use of net gain, using voluntary approaches to fully deliver on the objective of national policy, means that the market for developable land is uneven; developers that do not plan to include any habitats in or around their development can outbid those who want to deliver more. This means that the costs of habitat mitigation are borne by the developer instead of being factored into the land price at the outset to reflect the biodiversity value of the land.

Outside of local or voluntary biodiversity net gain schemes, not all development is delivering measurable improvements for biodiversity and local people, and appears to be cumulatively failing to properly address the decline in England's biodiversity. Our view is that there is an opportunity for mandatory biodiversity net gain to mainstream the best of these existing approaches. There have been a number of calls for government action to strengthen policy on the application of biodiversity net gain and through this consultation document we explore how best to put a mandatory approach into practice.



Photo: London Wildlife Trust

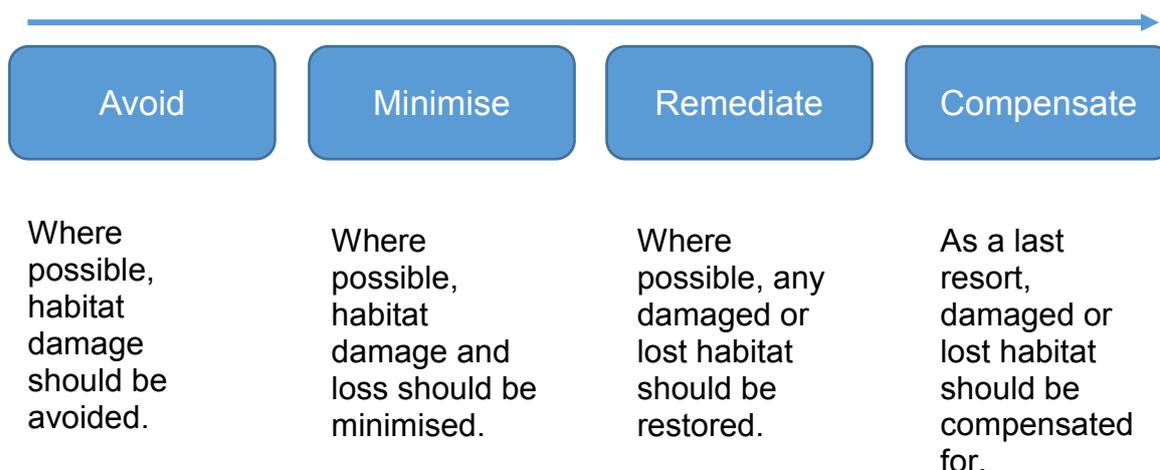
Policy proposals and questions

Approaches to delivering a net gain for biodiversity

We propose that net gain for biodiversity should:

- Complement and reinforce national planning policy.
- Support the mitigation hierarchy (see Figure 3), which avoids, minimises, remediates and as a last resort compensates for adverse impacts on biodiversity.
- Secure measurable benefits for biodiversity, so that we contribute to national and international environmental priorities and provide benefits for the local communities where development takes place.
- Not weaken the strong protections for designated wildlife habitats or irreplaceable habitats set out in national planning policy. This means that where projects result in damage to irreplaceable habitats, or designated features of internationally or nationally protected sites, these should be appropriately mitigated or compensated for, even if net gain in other (non-protected or 'replaceable') habitats is achieved.

Figure 3: The mitigation hierarchy



Net gain for biodiversity could be delivered by:

- Applying sensitive design that avoids the loss of high-quality habitats, minimises the impact of a development on site, enhances habitats in poor condition and delivers desirable places to live by creating new habitats on site.
- Using off-site local and strategic compensatory habitat creation and enhancement only where net gain cannot be reasonably achieved on site, for example on land provided by habitat banks, land-owners or brokers as part of a flexible market which supports identified biodiversity priorities and contributes to local and accessible nature.
- Where opportunities for on-site and locally-sourced compensation are not available, achieving gains through payment of a tariff. A tariff would be designed to incentivise habitat protection and strategic compensation (in line with the mitigation hierarchy),

raise revenue to invest in strategically important habitats that benefit local communities, support nature recovery and reliably achieve net gain overall at a national scale.

Teignbridge District Council, RSPB, EAD Ecology, Hallbaron Ltd

This example shows how a cash payment can be used to invest in habitat improvement when opportunities are not available at the planning application stage.

A 9.5 hectare site on the edge of Teignmouth coastal market town in Devon was granted planning permission for up to 255 dwellings. The Defra biodiversity metric was used to calculate losses of biodiversity on site and the levels of biodiversity compensation that would be built into the scheme design. This was insufficient to achieve a biodiversity net gain outcome and so the shortfall of biodiversity units was translated into a cash sum paid by the developer via a Section 106 agreement to the planning authority to be used to deliver biodiversity enhancements elsewhere in the county. These monies were used to purchase nearby land to create grassland and hedgerow habitats to achieve an overall biodiversity net gain outcome.

Net gain for biodiversity should be simple and certain to understand and implement. Our proposed approach would achieve this by:

- Working with national planning policy, including updated detailed guidance, which could be underpinned by a clear duty in legislation.
- Using the Defra biodiversity metric (see section “The Defra metric”) so that the approach to measuring biodiversity and any residual tariff obligation is transparent and consistent.
- Developing monitoring and quality assurance processes that provide confidence in the conservation and development outcomes secured.
- Providing a workable approach that can be adapted and updated to include components of environmental net gain such as natural resource use efficiency, water quality, flood risk management and air quality.

Scope

What development should be in scope of a net gain policy?

Currently, planning policy in the National Planning Policy Framework is a material consideration for all development decisions controlled at an LPA level, primarily under the Town and Country Planning Act 1990²¹. If net gain for biodiversity was mandated, it should adopt the same approach as current biodiversity net gain policy²² by covering all new developments that results in loss or degradation of habitat, including buildings such as housing, offices, shops, business space and local infrastructure. Developments that would result in negligible loss or degradation of habitat, for instance material change of use of or alterations to buildings and house extensions, would fall out of scope. We are seeking evidence on whether this scope would be appropriate.

We are considering what, if any, appropriate exemptions to a possible future mandatory biodiversity net gain policy might be made to developments by size, sector or site location. Broad exemptions could undermine the environmental objectives of the policy, but some might have little impact, or be proportionate where development would otherwise be compromised. We consider that **permitted development**²³ and house extensions meet these criteria, and we are seeking evidence in this consultation as to whether some small²⁴ and brownfield sites (in particular, those listed on brownfield land registers) should also be appropriately exempted from possible future mandatory biodiversity net gain requirements. Any types of development that are exempted from mandatory requirements would still be subject to environmental planning policies.

Unlike in the current system, increased availability of compensation sites and the provision of the residual cash tariff could provide a mechanism for all appropriate sites to be able to meet biodiversity requirements. We are therefore also considering whether a simplified process for assessing biodiversity net gain could be available to amplify these process benefits for some sites, as an alternative to providing a full exemption. This simplified process could take the form of:

- A simple walkover survey and habitat plan for the proposed development prepared by an appropriately qualified person.
- The use of a simplified version of the Defra metric with condition values pre-populated, resulting in marginally lower or higher levels of net gain on individual sites but close to the target overall.

²¹ Section 57 of the Town and Country Planning Act 1990 (as amended).

²² Paragraph 170 of the NPPF.

²³ Permitted developments include small house extensions and driveways, small extensions to other buildings, most infrastructure improvement works and many changes of use of land. They do not require planning applications to proceed.

²⁴ Planning applications are not considered to be major development where: the development is for less than 10 homes; the development is for homes on a site less than 0.5 hectares if the number of homes is unknown; the development is for other buildings with floor space less than 1,000 square metres and on a site under 1 hectare (see the Town and Country Planning (Development Management Procedure) (England) Order 2015).

- The ability to purchase the, likely low, number of necessary biodiversity units locally or through payment of the tariff upon receipt of planning permission.

In the 25 Year Environment Plan we outlined our commitment to embed an environmental net gain approach in infrastructure. While **marine planning and licensing policy and nationally significant infrastructure projects** are not in scope of this consultation, we are considering how to best support and mainstream the net gain approaches that many infrastructure and marine projects are already taking. For marine planning and licensing, we will evaluate the actions that projects are already taking to address their environmental impacts and consider how best to implement net gain in the marine context.

- 1. Should biodiversity net gain be mandated for all housing, commercial and other development within the scope of the Town and County Planning Act?**
- 2. What other actions could government take to support the delivery of biodiversity net gain?**
- 3. Should there be any specific exemptions to any mandatory biodiversity net gain requirement (planning policies on net gain would still apply) for the following types of development? And why?**
 - a. House extensions**
 - b. Small sites**
 - c. All brownfield sites**
 - d. Some brownfield sites (e.g. those listed on brownfield, or other, land registers)**
- 4. Are there any other sites that should be granted exemptions, and why? For example, commercial and industrial sites.**
- 5. As an alternative to an exemption, should any sites instead be subject to a simplified biodiversity assessment process?**

Biodiversity features in scope of net gain policy

Planning policy and legislation already protect our network of internationally and nationally designated sites (Special Areas of Conservation and Special Protection Areas, Ramsar sites and Sites of Special Scientific Interest) which cover our most important wildlife habitats; government has no intention of weakening or changing these existing legal and policy protections. Net gain will not weaken existing planning policy protection for irreplaceable habitats such as ancient woodland.

Some high-value habitats outside the protected sites series are identified by local partnerships as 'Local Sites'. Local Sites (sometimes known as Sites of Interest for Nature Conservation or Local Wildlife Sites, although they can also be identified for their geological interest) are given additional protection as is made clear in national planning policy²⁵. Net gain will not weaken existing planning policy protection for Local Sites, but can currently be used as an approach to deliver more robust mitigation and compensation when development does occur within or near to Local Sites.

²⁵ Paragraphs 171 and 174, NPPF.

The metric takes relative levels of habitat importance into account when assessing the value of habitats for biodiversity. We consider that this allows a local authority to apply a high weighting for areas that are designated local sites, and therefore no further modifications are required. We welcome views on whether the metric should consider local designations in any other ways.

6. Do you agree that the Defra metric should allow for adjustments to reflect important local features such as local sites? Should the Defra metric consider local designations in a different way?

How are species treated within a net gain policy?

The approaches to net gain outlined in this consultation, including the Defra biodiversity metric, are based on habitat assessments and do not account for development impacts on individual species. We are exploring approaches that allow net gain to deliver for individual species impacted by development and will look to bring these into scope over time.

The district level licensing approach for great crested newts developed by Natural England offers one possible model for taking this forward. District level licensing for great crested newts involves building up a picture of great crested newt abundance, distribution and habitat condition at district level and assessing the impacts on great crested newt from all planned development in the district over the whole local plan period. Zones are mapped that reflect the level of impact anticipated and developers pay a proportionate tariff for newt habitat creation. This approach is currently being rolled out to 150 local authority areas by 2020 and will be managed adaptively, changing in response to monitored outcomes. We recognise that a successful national rollout must be based on robust monitoring and a clear view of how local measures add up to deliver national and international conservation priorities. We recognise that current approaches to district level licensing are not perfect, and will be improving and adapting the approach as it matures to improve the certainty of conservation outcomes.

Implementing district level licensing alongside biodiversity net gain approaches would allow off-site habitat compensation approaches to be brought together for maximum benefit for great crested newts and wider biodiversity interests, whilst allowing developers to benefit from streamlined regulation. These benefits would be most firmly secured if local authorities were obliged to ensure a district level licensing scheme for great crested newts was available.

We would like to explore introducing further strategic approaches for additional species alongside biodiversity net gain over time. We recognise that the approach will not be appropriate for some protected species and will need to collate evidence to determine which, if any, protected species other than great crested newts would benefit in conservation terms and how such approaches would best be implemented without weakening their protection. We will consider how this can be made the most cost-effective for LPAs, maximising the advantage of integration with biodiversity net gain and continuing to streamline the process for developers.

- 7. Should local authorities be required to adopt a robust district level licensing approach for great crested newts, where relevant, by 2020?**
- 8. For what species is it plausible to use district level or strategic approaches to improve conservation outcomes and streamline planning processes? Please provide evidence.**

Ambitions for wider environmental net gain

Some aspects of development's environmental impact, in addition to biodiversity, are relatively easily measured and may already be measured as part of standard development processes. Water and air quality standards for instance could provide a useful means to improving the impacts that development has on the health of our national and global natural capital stocks. Many of these impacts are managed through building standards. Building standards, and similar types of regulation, may remain the best approach, but we are interested in exploring if it might be beneficial to incentivise performance against and beyond these standards through a wider environmental net gain approach. This might further streamline environmental requirements for developers, and thereby simplify processes for developers and LPAs by presenting progress against wider environmental requirements or targets in one place.

There are a wide variety of natural capital impacts that could be considered within broad environmental net gain (see Figure 2 in the "Environmental net gain" section) in the long term, some more suitable than others:

- For water, we might limit projected water use to a recommended number of litres per day.
- For air quality, development could be required to be 'air quality neutral' and not to contribute to potential exceedance of international air pollution limits or national pollutant objectives, in line with our Clean Air Strategy.
- For flood risk, we might require development to achieve greenfield run-off rates for surface water with sustainable drainage systems and for properties to meet a given flood resilience standard.

The right approaches for measuring and incentivising these standards is less clear than those for biodiversity net gain at present so they are not in scope of the current proposal for a mandatory approach.

- 9. Are there wider elements of environmental net gain that could be better incentivised? If so, please specify which, and any benefits that such incentives could provide.**

Measuring biodiversity

A biodiversity metric

In the “What is net gain?” section we recognise that biodiversity is complex and that no single approach can fully guarantee net gains for biodiversity. There are, however, simple and robust ways to measure the habitats that support biodiversity, and there are considerable benefits to mandating net gain through a single metric. Consistency means that all users of a metric, including local planning authorities, developers, ecologists, NGOs, communities and consultees, can become familiar with the workings of a metric and can focus on the quality of the inputs and outcomes more than the means of recording. It also means that less time should be taken processing applications, freeing up ecologists’ and developers’ time for more constructive input into scheme and habitat design. More fundamentally, it means that clear and certain obligations can be set, without having to account for varying interpretations through different metrics.

Our view is that an effective biodiversity net gain policy requires an approach to measurement that is:

- transparent and robust – an approach that is open to scrutiny by LPAs, local communities and consultees, and robust enough to give developers confidence that the measured gains will be sufficient to meet expectations.
- workable and practical – an approach that is proportionate to the scale of the potential impact and that can be implemented and scrutinised in a timely manner.
- consistent – we want to avoid the costs to LPAs and developers of processing assessments, and channel this expertise into the design of developments and habitats. Having a consistent metric should help to keep the focus of assessment on the outcomes and ecological advice, rather than the means of measurement.

We propose that, for biodiversity net gain, the Defra biodiversity metric would provide a suitable base metric upon which to set possible mandatory requirements. Over time, we can explore opportunities to develop the metric to make its assessment more sophisticated without significantly increasing the time or resources taken to use it (for example, by connecting it to potential future internet-based habitat mapping or biological records). This should help to address some existing limitations of the metric with regards to consideration of individual species and wider environmental value.

Natural England are already working to update the original version of the Defra metric to incorporate the best of the adaptations and amendments made by schemes and organisations over the past six years. Focussing government and industry resources onto one metric will mean that future updates should further improve the environmental and development outcomes and will have a much greater evidence base for possible alterations.

10. Is the Defra biodiversity metric an appropriate practical tool for measuring changes to biodiversity as a result of development?

11. What improvements, if any, could we most usefully make to the Defra metric?

How much 'gain'

Losing and recreating habitat inevitably involves some risks; for example, that compensation habitats won't reach their target state, or will take longer than expected to do so. The Defra metric accounts for some of these factors. It includes a factor for the difficulty of achieving the target habitat and for the time taken for habitats to be established. Therefore, we are confident that the Defra metric, and therefore the number of biodiversity units that must be created, is sufficient to mitigate and compensate for harm caused by the development. Nevertheless, to account for remaining uncertainties and risks, and to provide an overall gain for nature, we are including an extra margin.

Our initial view is that a 10% gain in biodiversity units would be a suitable level of net gain to require in order to provide a high degree of certainty that overall gains will be achieved, balanced against the need to ensure any costs to developers are proportionate. In practice, this means that if a site is worth 50 biodiversity units before development, the site (and any offset sites and tariff payments) should be worth 55 units at the scheme's conclusion. The proposed 10% would be a mandatory national requirement, but should not be viewed as a cap on the aspirations of developers that want to voluntarily go further or do so in the course of designing proposals to meet other local planning policies.

12. Would a mandatory 10% increase in biodiversity units be the right level of gain to be required?

Mitigation hierarchy

The mitigation hierarchy is a central and valued principle of environmental planning. It broadly states that development should:

- Avoid impacts,
- Minimise impacts,
- Remediate/restore habitats affected by impacts , and
- As a last resort, compensate for any residual harm through habitat creation or restoration.

This hierarchy is reflected in national planning policy, and local planning documents. The introduction of biodiversity net gain would not weaken, undermine or replace the mitigation hierarchy, and the process of achieving net gain is entirely compatible with the proper application of the hierarchy. Industry guidance and principles stress the importance of the mitigation hierarchy in applying net gain approaches.

In circumstances where, due to proper application of the first stage of the hierarchy, development will result in minor losses of habitats which are not of particular value to wildlife, it is clear that compensating for these losses at a site level might not always

provide the best outcomes for wildlife. In some cases, it might be advantageous in conservation and development terms to allow for a greater proportion of residual impacts than usual to be dealt with through off-site compensation or tariff contributions. This would allow pooling of the investment to secure greater strategic environmental gains. It is recognised that any such allowance could, however, present a risk of readily granting permission to degrade the site of the development, and so clear guidance on appropriate circumstances would need to be introduced. These might refer to the size of the site, its ecological or other importance in the local context, and the distinctiveness of the constituent habitats.

Such allowances would not in any way compromise the operation of the mitigation hierarchy on sites which are not within the clearly defined circumstances.

13. In clearly defined circumstances, should developers be allowed to pay through the tariff mechanism without fully exhausting on-site and local compensation opportunities?

Spatial preference

In an approach that considers both on-site and off-site environmental improvements, there needs to be careful consideration of where we want habitats to be delivered. To some extent, this issue is resolved by the application of the mitigation hierarchy, as avoidance, minimisation and remediation of impacts will be restricted to the site and its immediate surrounds.

Where compensatory habitat creation or enhancement is required to achieve net gains, this can be delivered within the site, nearby to the site or nationally to address national conservation priorities. Evidence from stakeholders suggests that local delivery is preferable because it prevents any one local area from losing significant amounts of habitats and provides benefits for the communities which are affected by development in the first instance. It is desirable to prevent local ‘pockets’ of habitat loss because it could reduce connectivity between local habitats, and could compromise local residents’ access to nature. The Defra metric already includes a simple multiplier to incentivise the delivery of compensation measures in local or strategic locations.

We propose that a spatial hierarchy underlines the design, updating and operation of the entire net gain approach. This would mean that, where possible, biodiversity units should be delivered on site. Those that cannot viably be delivered on site should be delivered locally, according to a local plan or strategy. Where suitable compensatory habitats are not available locally, then investment in national conservation priorities may take place through a tariff. This principle could be communicated through guidance and be incentivised through the operation of the Defra metric and the pricing of the tariff (see “Tariff rate” section) so that distant habitat creation is generally more expensive than delivering habitats on site or locally.

14. Would this be an appropriate approach to directing the location of new habitat?

Assessment of habitat type and condition

A standardised approach to biodiversity net gain should result in less investment in reporting and negotiation between LPAs and developers, and more investment in creating nature-friendly development and new habitats for wildlife.

Currently, the ecological reports that explain a development's impacts can sometimes be inaccessible to the public, the developer and even to the LPA officer. The technical detail within them is important, but there is rarely a simple explanation of what habitat is being lost and what is being gained. At present, developers will most often use their own in-house ecologists or contract ecological consultants to undertake ecological assessment of potential development sites. For smaller sites, the ecological assessment might be undertaken by non-specialist staff.

The greater transparency and consistency of a completed biodiversity metric would (because it states exactly what habitats are lost and gained) reduce uncertainty for developers when designing schemes, and for communities and planning officers when assessing a potential development. In order to most effectively meet the housing and other development needs of local communities we are considering how else net gain can improve the planning process for all involved and ensure that the assessment of habitats is accurate and cost effective.

In the future, there could be the potential for meeting survey requirements for certain habitats or types of developments through the use of area-wide surveying and improved satellite or remote sensing habitat mapping; these methods would need development and evaluation before they were widely implemented to ensure that such approaches are robust and would not result in misidentification or loss of distinctive habitats.

15. How could biodiversity assessments be made more robust without adding to burdens for developers or planning authorities?

Baseline

Understanding whether net gain is achieved through development at a national scale will require better habitats data at a national scale. Defra is currently exploring how national metrics and mapping might help to support the establishment of a baseline, and to chart progress against it. This is discussed further in the later “Quality assurance” section.

On a development scale, the baseline for voluntary biodiversity net gain is generally taken to be the point at which a planning application is submitted; the incentive to intentionally degrade habitat prior to assessment is low under voluntary schemes because there is an expectation that the developer intends to leave a positive legacy.

If net gain were made mandatory, there could be a stronger incentive for some developers and landowners to degrade their land in advance of seeking permission to develop it. There are reported cases of suspected pre-consent habitat degradation under the current planning system, although it is not known whether this is a regular occurrence. These include cases of vegetation clearance and the disturbance of protected species. Landowners may be incentivised to degrade their land to reduce environmental obligations long in advance of its sale for development.

In a mandatory net gain policy this risk could be mitigated by:

- Clear guidance for developers and planning authorities on the relevant assessment baseline including how to take account of recent or even historic habitat states where there is evidence of deliberate habitat degradation. Consideration should be given to how to avoid the risks of penalising landowners making legitimate land use change decisions before deciding to sell their land for development.
- The use of existing land cover data to provide approximate fixed baselines of habitat type. For example, providing spatial data that would tell an LPA whether a site was wooded, grassland or bare ground in 2017 and broad habitat categories from existing aerial imagery of urban areas. Setting a fixed temporal baseline will also help government to monitor trends in habitat cover over the longer term, and to assess whether net gain is being delivered. The habitat data would need to be robust and readily accessible to LPAs and the Planning Inspectorate.

16. Should a baseline map of broad habitats be developed?

17. Should this be applied, as a minimum baseline, to:

- a. net gain calculations for all development?**
- b. net gain calculations in cases of suspected intentional habitat degradation?**

18. What other measures might reduce the risk of incentivising intentional habitat degradation?

19. How can the risks of penalising landowners making legitimate land use change decisions before deciding to sell their land for development be mitigated?

Delivering biodiversity outcomes

How should biodiversity priorities be identified?

It is likely that mandatory biodiversity net gain would provide the greatest benefit where it improves, extends or connects existing wildlife habitat and contributes to wider ecological networks, helping to meet the 25 Year Environment Plan ambition to deliver Professor Sir John Lawton's vision for more, bigger, better, and more joined-up wildlife habitat²⁶. In some local areas, where biodiversity net gain is applied on a voluntary basis, local 'opportunity maps' are used to identify areas where habitat restoration and creation would be of greatest benefit. There is an existing requirement under paragraph 174 of the NPPF to map components of local wildlife-rich habitats and ecological networks, identifying designated sites, connecting habitat corridors and stepping stones, and areas identified by partnerships for habitat restoration or creation.

We propose that the delivery of compensation habitats be aligned with national and local scale strategic habitat objectives, and that government explores how local habitat opportunity mapping might be coordinated and supported through a national habitat mapping framework. In line with government's 25 Year Environment Plan ambitions, these spatial strategies could prioritise wildlife conservation, but also take account of natural capital opportunities and demand for benefits from nature. These maps could also form a useful planning tool for LPAs and developers in identifying the most suitable areas for development (as they do where such maps are already in place locally), and help to align development sector improvements with other types of environmental investment.

20. The provision of compensatory habitats would need to be guided by habitat opportunity maps. At what scale should these maps be developed?

- a. **Locally (e.g. local authority or National Character Area)**
- b. **Nationally (i.e. England) as a national framework to be refined, updated and amended locally**

21. What other measures should be considered to identify biodiversity and natural capital priorities?

Provision of compensatory habitats

Where net gain for biodiversity cannot be delivered on site, it is possible to create or enhance other sites to achieve biodiversity net gain. An adequate supply of high-quality local compensatory habitat sites would be needed to ensure that developments can proceed without difficulty or delay. Delivering biodiversity outcomes through habitat creation or enhancement is not easy or certain; so it would be essential that providers have the knowledge and expertise to ensure that compensatory habitats are delivered in

²⁶ Lawton, Professor Sir John (2010), *Making Space for Nature: A review of England's Wildlife Sites and Ecological Network*, <http://webarchive.nationalarchives.gov.uk/20130402170324/http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf>.

the timeframes, and to the quality standards, agreed so that environmental outcomes would be secured.

It would need to be clear that compensatory habitat would be additional to efforts that would have been undertaken without the development's contributions; there should be no 'double counting' of improvements, for example, such as a created biodiversity unit being claimed twice by two different developments. There could, however, be circumstances in which biodiversity units generated through other planning requirements could be counted towards biodiversity net gain. Industry guidance and principles that have been developed for net gain set out a range of principles for compensation habitat, including additionality and recommendations against 'trading down' in habitat distinctiveness terms.

There are a number of different ways in which a developer could source the required biodiversity units – including on another site the developer owns, directly from a landowner, via a land broker or from a habitat bank.

Habitat creation could be secured or delivered in advance of development through the use of **habitat banks**. Habitat banks provide a market-based environmental solution to address loss of biodiversity or ecosystem services. Habitat banking can provide an effective and efficient way to combine many small developer contributions towards larger scale green infrastructure, provide a simple process for developers and a commercial opportunity for landowners and brokers in conservation activity.

Mandating net gain for biodiversity may stimulate the establishment and growth of local habitat creation markets which will trade biodiversity units. If mandatory biodiversity net gain is introduced, we propose that the level of the tariff is set above the cost of local biodiversity units. The intention of this would be to ensure that the market for compensation habitat creation is able to meet anticipated demand and delivers value for money but is not undercut by the tariff (see "Tariff rate" section). We propose that this market could also allow developers who have delivered biodiversity units beyond what is mandatory at a site, to accrue these surplus biodiversity units as credits and / or trade them with other developers.

We also want to consider which mechanisms could assure the delivery of quality compensation sites, both within developments and off site. We are interested in whether a system of accreditation for compensation habitat providers would support this, and how such a scheme could provide certainty without delaying habitat creation and development's access to compensation sites.

22. Would mandating net gain through the planning system be enough to stimulate the growth of a market for biodiversity units?

23. What further measures would help to ensure that the market provides:

- a. **Sufficient biodiversity units for development?**
- b. **Cost-effective biodiversity units?**

Legacy

Biodiversity net gain should make sure that development delivers improvements in biodiversity; developed sites are rarely reverted to nature and the aim should be that any compensation or mitigation for habitat loss should last for the duration of a development or be established on a permanent basis. Currently, industry principles and common practice of biodiversity net gain suggest that compensatory habitat should be actively managed for 25-30 years. After this period, habitat could in theory be changed to an alternative land use. We are therefore seeking to identify what mechanisms would enable the practical delivery of biodiversity net gain whilst also securing lasting environmental benefits.

In the unlikely scenario that a created or enhanced compensation site was selected for new development, the target condition of the habitat would be used as the baseline for the new development. Records of compensation sites (which could simply be a completed metric) would need to be held by the LPA, local records centre or a national delivery body to facilitate this approach. For example, Green Space Information for Greater London (GiGL) provides a central repository of data to support Transport for London to deliver biodiversity net gain.

There would be some risk of compensation habitat loss to wider land use change decisions, such as reversion to arable or pasture land. There may be potential through new agricultural schemes to prevent this. Other risks, such as clearance by the landowner for various purposes or damage during necessary infrastructure maintenance are also being considered. One model to secure the long-term stewardship of habitats is to transfer the land to a trust with an endowment to fund maintenance, as has been done for some public open spaces with the Milton Keynes Parks Trust and the Land Trust.

In line with our commitment in the 25 Year Environment Plan, we are assessing the potential role of conservation covenants to enable landowners to create a legally-binding obligation with respect to their land that delivers lasting conservation benefits for future generations. This would provide long-term assurance that compensatory habitat will be maintained to the standard required. Covenants would apply to compensatory habitats and not to development sites generally. Working with landowners, conservation groups and other stakeholders we will review and take forward the Law Commission's proposals for a statutory scheme of conservation covenants in England.

24. Should there be a minimum duration for the maintenance of created or enhanced habitats?

25. If so, what should the minimum duration be?

- a. Less than 25 years
- b. 25 to 30 years
- c. Longer than 25-30 years
- d. Permanent

26. Would conservation covenants be useful for securing long term benefits from biodiversity net gain or reducing process and legal costs?

27. What safeguards might be needed in the implementation of conservation covenants?

Calculating and collecting the tariff

Tariff rate

If mandatory net gain is introduced, we propose that, where a development was unable to mitigate biodiversity loss on site or purchase the required biodiversity units locally, the developer would be required to pay a cash tariff on their shortfall against net gain obligations. The price for a tariff on biodiversity units would need to reflect the costs of creating and managing compensation habitat in a suitable location, strongly incentivise the protection of existing habitats and encourage suitable local compensatory habitat creation when necessary.

We propose that the biodiversity net gain tariff price should cover the costs of:

- replacing and maintaining lost habitats, taking account of variation in land prices across the country; and
- delivery and monitoring costs of the compensation scheme.

The tariff price should also provide an incentive to:

- retain habitat on site and to limit local habitat losses; and
- seek net gain through use of local habitat creation schemes (whilst also encouraging cost-efficiency in local habitat creation or enhancement schemes).

Setting a high tariff rate could strengthen the incentive for local habitat compensation and generate the greatest community support for development, enabling local habitat markets to establish and be competitive while avoiding the risk of a tariff being a too easy route to permission to degrade the site of a development. The tariff rate could also be used to cap the price of the most inefficient habitat creation schemes.

We estimate that a tariff on biodiversity units, which meets the principles listed above, might be set between £9,000 and £15,000 per biodiversity unit. This range is based on the application of the existing Defra biodiversity metric, and would be adjusted in line with planned metric updates to avoid unjustified increases or decreases in costs. The tariff range is based upon existing costings for habitat creation and estimates for administrative costs. We will review this range in light of evidence from consultation responses and further engagement with stakeholders. Any final tariff rate would be a fixed price, set according to the development's location.

Tariff example: An illustrative development

A developer is building on a one hectare arable site. Around 0.1 hectare of the site will be landscaped grass and shrub planting, meeting local greenspace requirements. The rest will be developed with buildings, roads and hard landscaping. It is agreed that the remaining habitat loss cannot be avoided, minimised or remediated. There are no suitable habitat compensation sites available in the local area at the time of the planning application. The residual net gain requirements are therefore subject to tariff payment.

Biodiversity units before development = 2

Biodiversity units after development = 0.42

Biodiversity unit target to achieve net gain = 2.2*

Biodiversity units to be compensated via the tariff = 1.78

Tariff payment (at an illustrative £12,000 per unit rate) = £21,360

*Note: the risk adjustment factors in the Defra metric would likely require a developer to plan to achieve much more than 2.2 units, which is then adjusted to 2.2 units after accounting for time lags and difficulty of achieving the target state

28. Does this proposed range for tariff costs fit with the principles set out in this section?

29. Would this proposed range for tariff costs provide opportunities for cost-effective habitat banks and compensation providers to compete?

30. Do you agree with the proposed principles for setting the tariff rate, as set out in this section? Please suggest any other factors that should be taken in to account.

How a tariff could be collected and spent

We want to understand what mechanisms for collecting and spending the residual cash tariff would be straightforward for developers, deliver the best outcomes for the environment and local communities, and would not place additional burdens on LPAs.

Currently biodiversity is considered as part of a dialogue between LPAs and developers. At the end of this process there are existing mechanisms within the planning system²⁷ that can be used to levy developer contributions towards environmental enhancement where required. This would provide a mechanism to enforce and collect the tariff, with the advantage that it uses existing familiar LPA powers. We are considering how any model

²⁷ Planning obligations are secured by legal agreement under Section 106 of the Town and Country Planning Act 1990 (as amended) to fund infrastructure and affordable housing, these either take the form of negotiated agreements with obligations on both the developer and the local authority or unilateral undertakings, which can follow standard templates with minimal drafting required.

might affect the relationship between net gain and wider environmental and social demands on developer contributions and whether alternative models for collection might be preferable.

If a tariff is collected, decisions will have to be made about how it would then be invested. Habitat creation and enhancement would need to be carried out and monitored to ensure net gain was achieved, and it is preferable for these actions to be planned or completed prior to the loss of habitats that was is compensating for. Local decision-making about where and how the tariff could be spent might ensure investment is closely tied to local nature recovery and could deliver benefits for local people most affected by a development. On the other hand, there could be an important advantage to spending the tariff nationally in that it could create a fund to effectively deliver our national biodiversity enhancement priorities at the best value and with the greatest synergy with other 25 Year Environment Plan policies.

We are also considering the possibility of a model which blends a local and national approach – for example through a percentage split of tariff spend towards local and national priorities or clear national guidance on how local delivery can best contribute to national environmental outcomes. Such a blended model might aim to spend tariff revenue according to national nature strategies, but with a secondary objective of matching revenue investment to revenue sources where possible, thereby ensuring that the communities experiencing the greatest development rates would benefit the most from the resulting investment in nature.

31. How should the tariff revenue be collected?

- a. **Locally (e.g. through a local authority)**
- b. **Nationally (e.g. through Natural England or another national body)**
- c. **Other, please specify**

32. How should the tariff revenue be spent?

- a. **Locally (e.g. through a local authority)**
- b. **Nationally (e.g. through Natural England or another national body)**
- c. **Through a blended model, allowing spending at both levels**
- d. **Other, please specify**

33. If tariff revenue was collected and spent nationally, should spending prioritise areas which have contributed the most through biodiversity net gain tariff payments?

Delivering net gain in the planning system

Impact on Local Authorities

Successful net gain policy would work effectively with planning policy, strengthening the approach to biodiversity net gain outlined in the NPPF. The policy approach outlined in this consultation should clarify how LPAs assess biodiversity impacts and the mechanisms available to achieve biodiversity gains. We recognise the pressure that many LPAs are under to balance their various policy, legal and funding requirements. We have taken this into consideration in designing this policy, and believe that this policy would represent a step towards more consistent, transparent and accessible reporting of environmental impacts by developers. Specifically, we think that the policy would lead to:

- Clearer reporting of ecological impacts.
- Developers undertaking more mitigation and compensation planning in advance of submitting applications.
- Developers submitting fewer inappropriate applications (i.e. those that would show a clear net loss for biodiversity).
- The potential for LPAs to offer (paid-for) habitat compensation brokering and advice.

These outcomes should provide long term benefits for LPAs. We recognise, however, that any changes to approaches in the planning system would create challenges in the short term. To manage this we propose that:

- Implementation of mandatory biodiversity net gain requirements would take place after a notice period of at least a year from the passage of any new legislation to allow developers, LPAs and ecologists to factor the requirement into planning processes, and to become familiar with the policy, metric and guidance. A notice period would also enable LPAs to consider the need to create green infrastructure or habitat opportunity maps where these are not in place, to ensure wildlife and people benefit from compensation habitat delivery.
- Joint work with industry bodies such as CIEEM, IEMA and CIWEM could be undertaken so that training opportunities would be available that would be fully compatible with government policy, and that advice services were in place, for example through Natural England and Environment Agency area teams.
- The introduction of a mandatory policy would be accompanied by clear guidance, drafted in conjunction with LPAs, to ensure that any concerns are addressed. Industry guidance, which will shortly be available for reference, can provide a reference point.
- We engage in greater depth and breadth with LPAs throughout and after the consultation period to establish further risk and opportunities in this policy area²⁸.

²⁸ If you, or your organisation, are willing to be a part of this engagement, please contact netgainconsultation@defra.gsi.gov.uk

The way in which the net gain tariff scheme is delivered would also be likely to impact the activities of LPAs. We would be particularly interested in views from LPAs on how the operation of a tariff could be optimised in light of any effects it might have on the existing developer contributions framework.

34. What further measures will help to prevent burdens on local authorities increasing?

35. How could the proposals be refined to manage any negative impacts on the scale and delivery of other developer contributions (e.g. through Section 106 or Community Infrastructure Levy payments)?

36. Would you, as a planning authority stakeholder, prefer any net gain tariff revenue to be paid through:

- a. local authority administration?
- b. a nationally managed funding scheme (which could then reinvest in local habitat schemes best aligned with national strategic environmental priorities)?

Impact on developers

This consultation sets out our proposals for establishing a more consistent and predictable biodiversity net gain process for developers. This should help to reduce risk and uncertainty from the process of acquiring planning permissions, and it creates the potential for bringing existing requirements and mechanisms into a single transparent metric-based approach.

We recognise, however, that the proposed approach has potential costs for developers and so welcome views on how it could be improved from a development perspective, including to keep costs to a minimum. We would also welcome views on whether any existing environmental planning requirements beyond biodiversity, could be usefully within scope of a future, broader environmental net gain approach.

The limited available evidence from LPAs and industry suggests that that a wide range of development types can successfully achieve biodiversity net gain; we recognise, however, that development and construction is a broad sector and that our engagement to date is unlikely to have reached those delivering development of all types. We have therefore included the impacts of biodiversity net gain on commercial, industrial, public sector and local infrastructure development within the “Key evidence gaps” section at the end of this consultation document, and would welcome all relevant evidence on this subject from consultees. Understanding the distribution of possible impacts is key to designing and delivering the policy successfully and achieving the most for the environment and developments.

- 37. How could the proposed net gain process be improved for developers?**
- 38. What other steps, considerations or processes in environmental planning could be integrated within a net gain approach?**
- 39. Would any particular types of development (e.g. commercial, industrial, public sector, local infrastructure) be disproportionately affected by a mandatory biodiversity net gain requirement?**

Implementation of mandatory biodiversity net gain

If biodiversity net gain is implemented on a mandatory basis we will need to ensure that the transition to mandatory biodiversity net gain minimises both operational impacts to developers and LPAs, and manages any environmental risks from allowing development through before the requirement is imposed.

LPAs have different levels of access to professional ecological advice, whether that be in-house, through partnership with other public bodies or by engaging private sector consultants. Professional ecologists will be familiar with the inputs to the biodiversity metric but may need to increase their capability to use the tool effectively, with the support of professional bodies. Local authority planners would also need to become familiar with the principles of the metric to assess planning applications. We will engage with LPAs on how to ensure that planning departments are able to apply the policy effectively.

We propose that to reduce risks and allow industry to prepare for the new requirements, staggered points could be created at which requirements come into effect. The time could be used by industry and LPAs to attend training and become familiar with the working of the metric. It could be used by government to develop accreditation schemes or for piloting of biodiversity net gain with a tariff. We propose that a notice period of at least one year after the introduction of new guidance would be required to prepare for this transition.

In order to support the smooth introduction of a mandatory biodiversity net gain policy, Defra would work to support the delivery of guidance to minimise burdens on developers, consultees and local planning authorities, and to maximise public understanding of the new approach.

- 40. Do you agree that the proposal for staggered transitional arrangements would help to ensure smooth implementation of biodiversity net gain policy?**

Right of appeal

We recognise that, whilst a metric should facilitate agreement, developers and LPAs might sometimes disagree on the assessment of existing habitats or compensation proposals. If there was any disagreement about any aspect of the submitted metric this could be discussed during optional pre-application discussions or during the determination of planning applications. A standardised net gain metric would aim to simplify biodiversity discussions as they would be less subjective and qualitative than at present. If agreement were not met then the planning system would continue to offer the right of appeal against refusal or non-determination of an application.

We would be interested in views, particularly from developers and LPAs, on whether existing planning procedures would be sufficient under a mandatory biodiversity net gain requirement or whether reliance on them would cause any issues. There may be advantages to introducing an additional assurance process, for example to verify a proposed metric calculation.

- 41. Would the existing dispute resolution process provide the best way to overcome any disagreement over whether net gain is achieved?**
- 42. Would an additional arbitration or approval process be necessary? If so, please specify why.**

Monitoring and evaluation

Quality assurance

A transparent net gain policy would enable local people and organisations to see what environmental outcomes are required and hold developers, LPAs and land managers to account. To provide confidence that biodiversity net gain is achieved, we intend to introduce monitoring of the quality of delivery on the ground and measures to help ensure that outcomes are achieved. We intend to engage further with stakeholders in due course but this could include quality assurance measures such as:

- Supporting the use of biodiversity net gain best practice principles²⁹ and standards that industry and professional bodies are developing.
- Exploring the potential, and benefits of, accreditation in delivering net gain policy. In an earlier section (“Assessment of habitat type and condition”) we discuss the advantages of a simplified and more standardised habitat assessment process. There is currently no requirement for those who complete habitat surveys to be professionally qualified, and we could explore, working with professional bodies such as CIEEM and IEMA³⁰ who provide membership and chartered schemes for ecologists, the future potential for accreditation. This could help to increase confidence in the assessment process and avoid the risk of habitats being undervalued; it should not increase delay, survey or reporting costs for industry. An accreditation scheme for those providing habitat enhancement and compensation could also be considered, in view of the challenges outlined in the section “Provision of compensatory habitats”.
- In the future, there could be the potential for meeting survey requirements for certain habitats or types of developments through the use of area-wide surveying and improved satellite or remote sensing habitat mapping; these methods would need development and evaluation before they were widely implemented to ensure that such approaches are robust and would not result in misidentification or loss of distinctive habitats.
- Establishing whether additional means for insurance or recourse are needed in case post-development habitat is cleared, degraded or ineffectively managed or if the same habitat compensation is used to offset several developments.

This could also include monitoring the delivery of net gain by:

- Ensuring that data about habitat losses and gains could be easily collected and accessed at local and national scales. Consistent use of the Defra metric would ensure that data on anticipated biodiversity losses and gains is available in a standardised format, and we will consider how we could streamline collection of data from local authorities with a digital process and data standards for open access by stakeholders.

²⁹ <https://www.cieem.net/biodiversity-net-gain-principles-and-guidance-for-uk-construction-and-developments>

³⁰ The Chartered Institute for Ecology and Environmental Management and the Institute of Environmental Management and Assessment.

- Assessing post-construction development and compensation sites, potentially through random sampling, to ensure they are making progress to deliver the amount, type and condition of habitat expected.

43. Are there any issues or measures, other than those outlined, that we should take into account when considering how to monitor biodiversity net gain?

44. Should local authorities be required to provide information about habitat losses and gains?

45. What technological or other innovative mechanisms could facilitate the delivery and monitoring of biodiversity net gain?

Evaluation

The success of a net gain policy should, in part, be measured by whether new developments in our communities make more thoughtful use of habitats and embrace sustainability in their design. If successful, we should see new and improved spaces for nature appearing in our landscapes, and more abundant and diverse wildlife using them.

Any net gain approach we propose will, however, not be perfect and we would need to review the approach to ensure that it is delivering for the environment and for development. These reviews would be restricted in scope, but should be able to refine, update and adapt the approach (including responses to scientific and technological changes) and potentially alter tariff rates (to reflect changes in land prices which might change costs of habitat creation). Any such changes to the approach should be supported by evidence of changes both in habitat distribution and behaviour in designing habitats as part of development. Reviews should not be used to arbitrarily strengthen or weaken requirements. We propose that such updates should be accompanied by engagement with key environmental, LPA and industry stakeholders to help government to ensure that the right opportunities for improvement and streamlining are identified.

Any final net gain policy will be delivered as part of the wider delivery of the 25 Year Environment Plan, and there is a clear opportunity to link the evaluation of achievement of net gain at a national level with national metrics being developed by Defra for the Environment Plan. The use of a single biodiversity metric for biodiversity net gain should allow for easy collection and sampling of data, and we will explore what level of data collection at a national level would be adequate to provide insights into environmental outcomes.

Key evidence gaps

Benefits and costs of mandatory biodiversity net gain

We would welcome further evidence that addresses the following identified evidence gaps. Please submit evidence, or related enquiries, to netgainconsultation@defra.gsi.gov.uk.

Evidence gap	What we would like from you
Transition and ongoing delivery costs to central (e.g. Defra, Natural England) and local government (e.g. LPAs).	Evidence of how much a biodiversity net gain approach costs to implement. We are aware of evidence from the biodiversity offsetting pilots, but these costs included development of the approach and spatial strategies which are now better understood.
Interactions with other contributions such as Section 106 and Community Infrastructure Levy.	Evidence of whether a biodiversity net gain requirement would affect wider developer contributions. If so, how significant would this effect be?
Distributional impacts of net gain on viability.	Will a mandatory biodiversity net gain requirement affect some types of development disproportionately?
Recent trends in habitat loss and gain due to development, likely habitat under threat due to future development, and expected habitat delivery through net gain.	What types of habitat are typically lost through development? Is development typically achieving no net loss of biodiversity, and is performance improving?
Further detail on costs to small and large developers and developments, including familiarisation costs and impact of tariff.	Are there any further costs or benefits not identified in this document or the accompanying Impact Assessment? Please provide evidence of these costs or benefits.
The impact of biodiversity net gain delivery for <ul style="list-style-type: none"> commercial development; public sector development; industrial development; and local infrastructure development 	To what extent do these development types already achieve net gains, or no net loss of biodiversity, and is performance improving? What is the typical habitat type and condition on these sites and how does this differ from other types of development (i.e. residential)? Is there typically a greater net negative impact on habitats through development of these types, resulting in greater costs for net gain?
Net gain interactions with on-site delivery of housing and other green infrastructure (e.g. parks, recreation)	Will biodiversity net gain negatively or positively affect the quality of green space for recreation and enjoyment within new developments?

Evidence gap	What we would like from you
<p>Whether net gain approaches, where adopted, help to speed up and/or unlock development in previously borderline sites.</p>	<p>Can you provide examples of where net gain has helped to expedite, or has delayed, planning processes?</p> <p>Can you provide examples of where a net gain approach has unlocked development that would otherwise be unacceptable (e.g. by mitigating or compensating for otherwise unacceptable impacts, or by achieving local support), or prevented development that might otherwise have proceeded?</p>

Glossary

BBOP:

Business and Biodiversity Offsets Programme

Biodiversity unit:

A unit which represents a combined measure of habitat distinctiveness, area and condition.

BRE Global:

Building Research Establishment Global

BREEAM:

Buildings Research Establishment Environmental Assessment Method

CIEEM:

Chartered Institute for Ecology and Environmental Management

CIRIA:

Construction Industry Research and Information Association

Ecosystem services:

The services provided by natural capital, such as pollination and biomass which lead to benefits to society.

Environmental net gain:

In short, this means improving all aspects of environmental quality through a scheme or project.

Achieving environmental net gain means achieving biodiversity net gain first, and going further to achieve increases in the capacity of affected natural capital to deliver ecosystem services and make a scheme's wider impacts on natural capital positive.

IEMA:

Institute of Environmental Management and Assessment.

LPA:

A local planning authority is responsible for deciding whether a development, which could be anything from an extension on a house to a new shopping centre, should go ahead. This includes borough, district and county councils, unitary authorities, national park authorities and development corporations where relevant.

Mitigation hierarchy:

The principle that environmental harm resulting from a development should be avoided (through locating development where there will be less harmful impacts), adequately mitigated, or, as a last resort, compensated for.

Natural capital:

The elements of nature that directly or indirectly produce value to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions

Nature Recovery Network:

An expanding and increasingly connected network of wildlife-rich habitat. It will be designed to stimulate the recovery of wildlife and will support the delivery of other economic and social benefits, such as water quality improvement or flood attenuation.

Net gain for biodiversity:

Delivering more or better habitats for biodiversity and demonstrating this measurable gain through use of the Defra biodiversity metric.

NPPF or National Planning Policy Framework:

The National Planning Policy Framework sets out government's planning policies for England and how these are expected to be applied.

Offsetting:

The creation or enhancement of wildlife habitat to compensate for loss or degradation elsewhere.

RSPB:

Royal Society for the Protection of Birds

Annex A: List of consultation questions

1. Should biodiversity net gain be mandated for all housing, commercial and other development within the scope of the Town and County Planning Act?
2. What other actions could government take to support the delivery of biodiversity net gain?
3. Should there be any specific exemptions to any mandatory biodiversity net gain requirement (planning policies on net gain would still apply) for the following types of development? And why?
 - a. House extensions
 - b. Small sites
 - c. All brownfield sites
 - d. Some brownfield sites (e.g. those listed on brownfield, or other, land registers)
4. Are there any other sites that should be granted exemptions, and why? For example, commercial and industrial sites.
5. As an alternative to an exemption, should any sites instead be subject to a simplified biodiversity assessment process?
6. Do you agree that the Defra metric should allow for adjustments to reflect important local features such as local sites? Should the Defra metric consider local designations in a different way?
7. Should local authorities be required to adopt a robust district level licensing approach for great crested newts, where relevant, by 2020?
8. For what species is it plausible to use district level or strategic approaches to improve conservation outcomes and streamline planning processes? Please provide evidence.
9. Are there wider elements of environmental net gain that could be better incentivised? If so, please specify which, and any benefits that such incentives could provide.
10. Is the Defra biodiversity metric an appropriate practical tool for measuring changes to biodiversity as a result of development?
11. What improvements, if any, could we most usefully make to the Defra metric?
12. Would a mandatory 10% increase in biodiversity units be the right level of gain to be required?
13. In clearly defined circumstances, should developers be allowed to pay through the tariff mechanism without fully exhausting on-site and local compensation opportunities?
14. Would this be an appropriate approach to directing the location of new habitat?
15. How could biodiversity assessments be made more robust without adding to burdens for developers or planning authorities?
16. Should a baseline map of broad habitats be developed?
17. Should this be applied, as a minimum baseline, to:
 - a. net gain calculations for all development?
 - b. net gain calculations in cases of suspected intentional habitat degradation?

18. What other measures might reduce the risk of incentivising intentional habitat degradation?
19. How can the risks of penalising landowners making legitimate land use change decisions before deciding to sell their land for development be mitigated?
20. The provision of compensatory habitats will need to be guided by habitat opportunity maps. At what scale should these maps be developed?
 - a. Locally (e.g. local authority or National Character Area)
 - b. Nationally (i.e. England) as a national framework to be refined, updated and amended locally
21. What other measures should be considered to identify biodiversity and natural capital priorities?
22. Would mandating net gain through the planning system be enough to stimulate the growth of a market for biodiversity units?
23. What further measures would help to ensure that the market provides:
 - a. Sufficient biodiversity units for development?
 - b. Cost-effective biodiversity units?
24. Should there be a minimum duration for the maintenance of created or enhanced habitats?
25. If so, what should the minimum duration be?
 - a. Less than 25 years
 - b. 25 to 30 years
 - c. Longer than 25-30 years
 - d. Permanent
26. Would conservation covenants be useful for securing long term benefits from biodiversity net gain or reducing process and legal costs?
27. What safeguards might be needed in the implementation of conservation covenants?
28. Does this proposed range for tariff costs fit with the principles set out in this section?
29. Would this proposed range for tariff costs provide opportunities for cost-effective habitat banks and compensation providers to compete?
30. Do you agree with the proposed principles for setting the tariff rate, as set out in this section? Please suggest any other factors that should be taken in to account.
31. How should the tariff revenue be collected?
 - a. Locally (e.g. through a local authority)
 - b. Nationally (e.g. through Natural England or another national body)
 - c. Other, please specify
32. How should the tariff revenue be spent?
 - a. Locally (e.g. through a local authority)
 - b. Nationally (e.g. through Natural England or another national body)
 - c. Through a blended model, allowing spending at both levels
 - d. Other, please specify
33. If tariff revenue is collected and spent nationally, should spending prioritise areas which have contributed the most through biodiversity net gain tariff payments?
34. What further measures will help to prevent burdens on local authorities increasing?

35. How could the proposals be refined to manage any negative impacts on the scale and delivery of other developer contributions (e.g. through Section 106 or Community Infrastructure Levy payments)?
36. Would you, as a planning authority stakeholder, prefer any net gain tariff revenue to be paid through:
 - a. local authority administration?
 - b. a nationally managed funding scheme (which could then reinvest in local habitat schemes best aligned with national strategic environmental priorities)?
37. How could the proposed net gain process be improved for developers?
38. What other steps, considerations or processes in environmental planning could be integrated within a net gain approach?
39. Would any particular types of development (e.g. commercial, industrial, public sector, local infrastructure) be disproportionately affected by a mandatory biodiversity net gain requirement?
40. Do you agree that the proposal for staggered transitional arrangements would help to ensure smooth implementation of biodiversity net gain policy?
41. Would the existing dispute resolution process provide the best way to overcome any disagreement over whether net gain is achieved?
42. Would an additional arbitration or approval process be necessary? If so, please specify why.
43. Are there any issues or measures, other than those outlined, that we should take into account when considering how to monitor biodiversity net gain?
44. Should local authorities be required to provide information about habitat losses and gains?
45. What technological or other innovative mechanisms could facilitate the delivery and monitoring of biodiversity net gain?