Biodiversity Net Gain in Scotland: Briefing Note for Local Planning Authorities

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CIEEM

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THIS BRIEFING PAPER WAS AUTHORED BY SCOTLAND POLICY GROUP MEMBERS, HANNAH WILLIAMS AND SARAH KYDD, ALONGSIDE CIEEM'S POLICY TEAM.

The aim of this paper is to provide Local Planning Authorities (LPAs) in Scotland with an overview of the Biodiversity Net Gain (BNG) concept, the benefits it can provide and potential mechanisms for implementation in the terrestrial environment, learning from approaches being developed elsewhere in the UK and internationally. The concept of BNG is considered to be one mechanism to achieve 'positive effects for biodiversity'[1] as stated in the Planning (Scotland) Act 2019.

This note is intended to provide an accessible overview, rather than a comprehensive guide, with signposting to more detailed guidance.

What is Biodiversity Net Gain?

The ecological impacts of development are usually assessed as part of the planning application process, with impacts addressed through avoidance, mitigation, compensation and voluntary enhancements. However, this is not generally done in a quantifiable way, clearly evidencing the level of biodiversity loss or gain. Where some degree of measurement is provided, this may be at a simplistic level, considering the areas of habitat lost and the areas gained, without fully considering key aspects such as habitat quality or connectivity. BNG is different in that it requires an accepted process that provides a transparent measurement of the likely ecological outcomes from the proposed measures.

BNG is defined as the outcome of an approach to development that leaves biodiversity in a measurably better state than before. It requires development projects to go beyond 'no net loss' of biodiversity and deliver a net increase in biodiversity either on- or off-site. A key element of achieving BNG is the correct application of the mitigation hierarchy (Figure 1) in the initial stages to ensure what is delivered is additional to what is already required through the planning process. *The Biodiversity Net Gain: Good Practice Principles for Development*[2] sets out 10 key principles to follow when seeking to achieve BNG; following the mitigation hierarchy is the first of these. These principles are fundamental to ensure BNG is delivered equitably and responsibly.

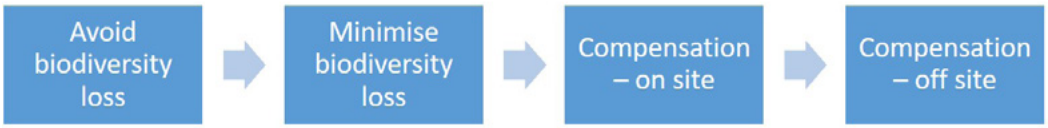


Figure 1: *The Mitigation Heirachy*

Key Benefits of Biodiversity Net Gain

When BNG is appropriately planned and delivered, it can make a real contribution to achieving local and national biodiversity targets, as well as working towards wider environmental and social priorities, such as those set out within local development plans, including health and wellbeing[3]. Figure 2 shows a summary of the potential additional benefits that can be achieved through BNG, although it should be emphasised that the non-negotiable outcome of a BNG approach is a quantifiable increase in biodiversity. *Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide*[4] provides extensive details on these additional benefits.

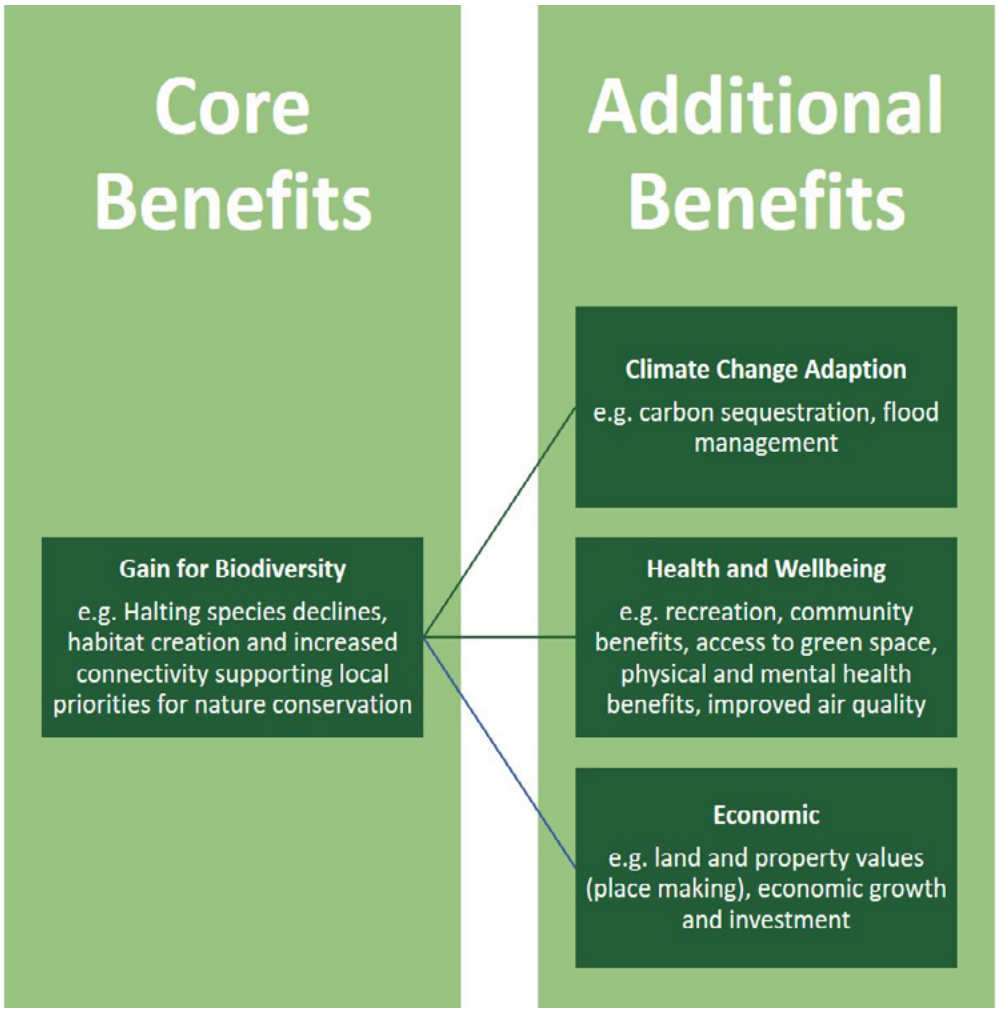


Figure 2: *The multiple benefits of a Biodiversity Net Gain approach*

How does Biodiversity Net Gain work?

The main difference between the current approach to addressing ecological impacts from development and BNG is the use of a metric to provide a **quantitative assessment** of overall biodiversity loss **after** the mitigation hierarchy has been applied. The results from this assessment can then be used to create a project design that delivers a net gain for biodiversity in a quantifiable way.

To enable this quantitative assessment, Defra has created a metric, Biodiversity Metric 2.0[5], which is free to download and use (note the third version is due for publication in spring 2021). It covers all non-irreplaceable UK terrestrial and coastal habitats, though it should be noted that the data informing distinctiveness were developed for habitats found in England and may require interpretation and adaption for some habitats in Scotland.

Before using the metric, a suitably competent ecologist must identify all habitats affected by the project and quantify their extent and condition. Irreplaceable habitats, defined in Technical Note T3 of the *Practical Guide*[4], (e.g. ancient woodlands, active peatlands and limestone pavements) cannot easily be replaced and thus are excluded from the metric. **A development project cannot achieve BNG if irreplaceable habitat is lost.**

The metric, which is based on the UKHab classification of habitats[6], then uses a range of factors (termed multipliers) to determine value, including the condition of the habitat, its size, distinctiveness and the difficulties in creating or restoring it. Not surprisingly, distinctive habitats in good condition that are difficult to restore or create have very high numbers associated with them. Application of these data is used to calculate the number of 'biodiversity units' affected by the development project. These will then need to be compensated to achieve no net loss, followed by additional measures to achieve a net gain.

The same approach is then applied to areas of habitat restoration or creation proposed by the developer, in order to provide the required number of biodiversity units post-development. Post-development, the metric allows the following factors to be accounted for:

- The uncertainty of restoring and creating new habitats
- The difficulty of restoring or creating some habitats to the desired level of ecological function
- The timescale to achieve the functioning habitat
- The proximity of the habitat to the development

It is the difference between the pre- and post-development biodiversity units that demonstrates whether there is a net loss, no net loss or a net gain (Figure 3). The aim, of course, is to ensure that there is a net gain.

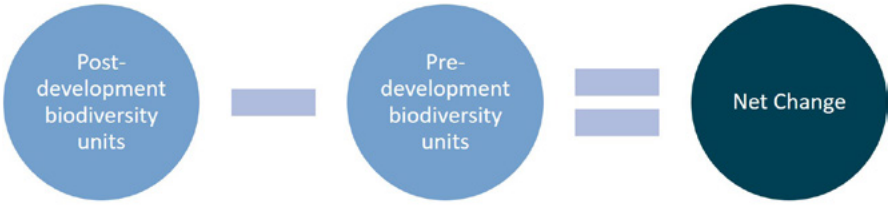


Figure 3: *Process for determing net change in biodiversity units.*

Ideally, the newly restored or created habitat should be done on a like-for-like basis but this may not always be achieved, and alternative approaches may be acceptable or even desirable. This should be understood by LPAs, where for some valuable habitats, retention should be non-negotiable if overall biodiversity net gain for the project is to be achieved.

One of the key aspects of the metric is the use of strategic significance. This is designed to encourage consideration of restoring and creating habitats within areas identified in local biodiversity strategies.

There are concerns that using a metric could lead to instances where valuable habitat is sacrificed to development through payment for biodiversity enhancements provided elsewhere (offsetting). This must be addressed through proper application of the mitigation hierarchy and is the first principle of CIEEM, CIRIA and IEMA's *Good Practice Principles*[7]. The risk of inadvertent or deliberate clearance of ecological features on a site to reduce the number of pre-development biodiversity units (and therefore the post-development units required to achieve net gain) must be prevented. To deal with these risks, it is essential that any metric-based approach is used alongside existing legal and policy protection with strong enforcement measures. This way its use helps create and restore habitats without compromising the protection of the rarest habitats, sites and species.

It is also important to recognise that any metric is inevitably a proxy and cannot capture all the subtlety of the natural world. Like any such tool, the outputs are only as good as the data that go in, so accurate information on baseline habitat condition as well as the ecological features present (e.g. protected species) is essential.

The Defra Metric is currently in a beta format, with a final version expected for release in 2021. Although the BNG approach gives a quantitative assessment, it is important that, to maintain credibility, the metric is used by those with a sound understanding of ecological processes to ensure that the key principles that underpin it are applied appropriately. Ecological expertise and judgement are required to make the most appropriate decisions for on- and off-site habitat restoration and creation to ensure these meet local biodiversity objectives, while also contributing towards nature conservation priorities at regional and national levels.

Further details on how to apply BNG are set out in *Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide*[4]. This document provides detailed guidance for LPAs on the process leading to BNG. A key message is that BNG is about nature, not just numbers, with the aim being to achieve the best outcomes for biodiversity. Thus, it is well aligned with the Planning Act (2019)[8] requirement for planning to achieve 'positive effects for biodiversity'.

Further details are provided in the CIEEM *Biodiversity Net Gain in Scotland* briefing note[9], which also provides examples of projects in Scotland where a BNG approach has been successfully implemented.

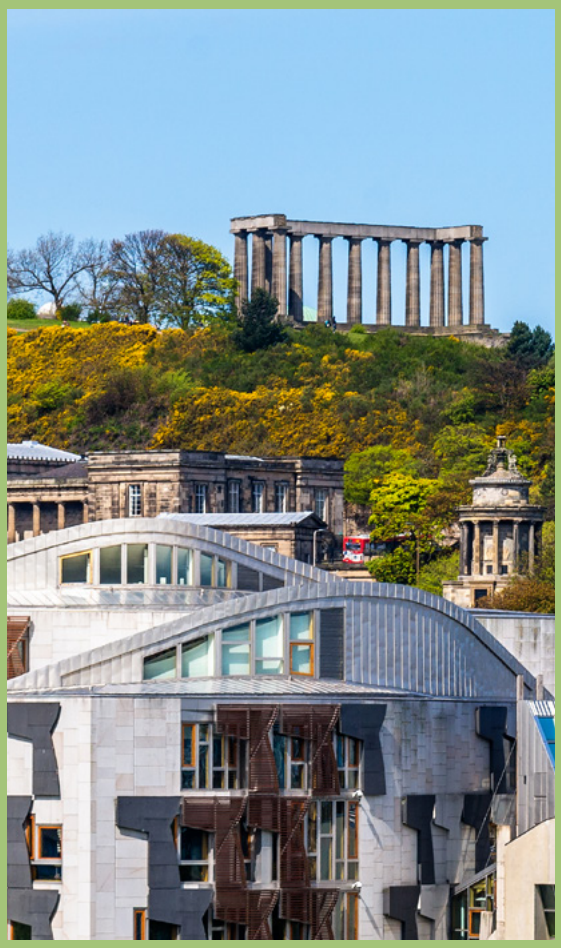
Policy and Legal Support for Introducing BNG

LPAs can set requirements within their local development plan, using terminology linked to current planning polices, for example the term 'positive effects for biodiversity' has its basis in Scotland's planning legislation, and BNG can be used as a mechanism to achieve this.

The following policies and legislation provide 'hooks' through which BNG can be targeted:

Nature Conservation (Scotland) Act 2004: 'It is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions.'

Scottish Biodiversity Strategy: Scotland's Biodiversity - It's in Your Hands (2004) and 2020 Challenge for Scotland's Biodiversity (2013): 'to conserve biodiversity for the health, enjoyment and wellbeing of the people of Scotland, now and in the future.'



Scottish Planning Policy (SPP: 2014): 'The planning system should... seek benefits for biodiversity from new development where possible, including the restoration of degraded habitats and the avoidance of further fragmentation or isolation of habitats'.

Planning (Scotland) Act 2019: Sets six key outcomes from the National Planning Framework, one of which is 'securing positive effects for biodiversity'. When National Planning Framework 4 is published this will be the main national policy through which all six outcomes required by the 2019 Act will be achieved.

Scotland has signed up to the United Nations Sustainable Development Goals, with goal 15 relating to halting biodiversity loss.

Edinburgh Declaration on post-2020 global biodiversity framework (2020): Sets out the concerns and aspirations of the Scottish Government and its partners in delivering for nature over the next decade.

Scottish biodiversity strategy post-2020: statement of intent (2020): Sets out current position and direction of the Scottish Government, in cognisance of the delay to the proceedings for the next convention on biological diversity as a result of COVID-19, for a post-2020 biodiversity framework.

Where LPAs have made a biodiversity emergency declaration, or combined it with a climate emergency declaration, introducing a BNG requirement can be a positive action forming part of the LPA's response to that declaration.

Key Considerations for Establishing BNG Requirements

For LPAs looking at establishing a BNG approach, there are several fundamental aspects to consider at the outset. These include:

- Should numerical gain targets be set?
- What are the options for developments which struggle to achieve net gain?
- What 'in-house' skills and capacity are required to facilitate net gain?
- How should net gains be secured for the long term?
- Mechanisms need to be in place to ensure that assessments of BNG use the underlying principles, that the metric is used correctly and short-, medium- and long-term monitoring on the ground is undertaken to ensure the expected gains are achieved.

These are discussed further below and within Box 1.

Setting a numerical target

BNG is a measurable increase in biodiversity above a baseline, and a key question for LPAs is 'what should that measurable increase be?'. There is guidance on what to consider when setting numerical targets for BNG (see Chapter 6.5 in the BNG *Practical Guide*[4]). There are also organisations and LPAs within England who have set numerical targets, for example, the Building Research Establishment Environmental Assessment Method (BREEAM). The Ecological Calculator for BREEAM schemes provides guidance as per Table 11.9 of the BNG *Practical Guide*. BREEAM suggests a 5% minimum increase in "biodiversity units" above the baseline is required to achieve BNG. However, in our response to Defra's consultation on biodiversity net gain, CIEEM noted that, given the margin of error in BNG calculations, such a low figure could still lead to net loss[10].

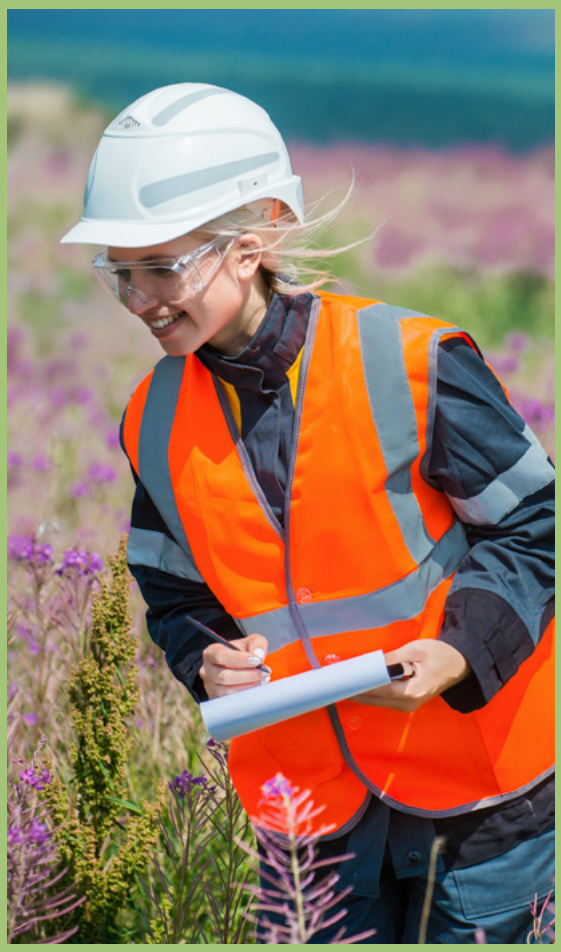
The UK Environment Bill, which at the time of writing is delayed on its journey through the House of Commons, will mandate a minimum 10% increase in 'biodiversity units' above the baseline to claim BNG and will create a requirement of planning permission for most developments in England.

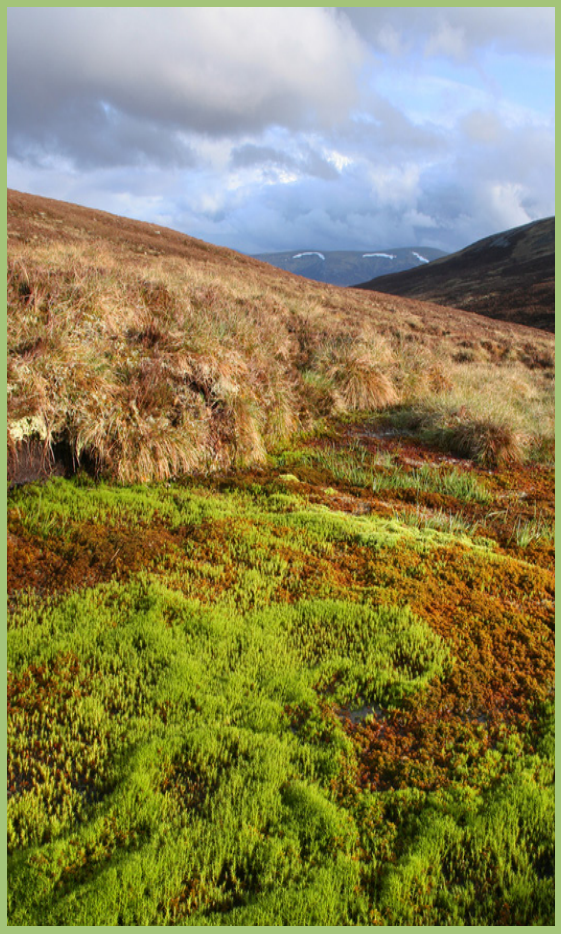
Should any LPA in Scotland look to adopt a BNG approach it will be up to that LPA to decide what targets to set for BNG according to local priorities.

Approaches to 'offsetting'

Where developments cannot achieve BNG within the red line boundary, then offsetting options can be explored. This provides a great opportunity for LPAs to enhance local biodiversity through targeted offsetting.

One approach to this is the use of habitat banks. Habitat banks are areas of habitat that are actively created and managed for nature conservation by the landowners. They provide an 'off-the-shelf' solution for developers to compensate for residual impacts of development, where BNG cannot be achieved within the red line boundary. Local authorities are well-placed to provide habitat banks using land already within their ownership. LPAs also have knowledge of key requirements for nature conservation in their area and which compensatory projects are likely to bring the most benefit to biodiversity. LPAs also have existing relationships and partnerships with other nature conservation organisations ideally placed to help deliver BNG through the provision of offset receptor sites.





The use of habitat banks provides the opportunity to create a coherent and resilient ecological network to achieve the goals of more, bigger, better and joined'[11]. Benefits of this approach include:

- Funding from developers to create new spaces for nature
- Biodiversity design to provide wider ecosystem services such as cleaner air and flood alleviation
- Improvements to health and wellbeing from access to natural greenspace
- Greater ecosystem resilience of designated sites for nature conservation through an enhanced green infrastructure network

Upskilling and resourcing

Key challenges to LPAs wanting to pursue BNG include developing skills and obtaining sufficient resources to implement the approach.

Increased resources to LPAs may be dependent on the trickle-down effect of ambitions turned to actions, underpinning activities at the national and international scale. This includes the declarations of the climate emergency (with recognition of the associations with biodiversity loss) that the UK and Scottish Governments have made, the recent UN high-level Summit on Biodiversity, and the forthcoming Conference of the Parties on Climate Change and Convention on Biological Diversity. Conversely, it may be that LPAs can generate income to fund the resources which would be required to implement a BNG approach (see case study in Box 1).

CIEEM regularly runs online based training and events on BNG, including in-house training where required. This training covers two aspects; one is specifically centred on the use of the Defra Biodiversity Metric 2.0, while the other is centred on the design of BNG into the development process, i.e. looking across the full process of BNG using the best practice guidance mentioned above. CIEEM intends to provide further geographically targeted webinars and training, including in Scotland, if there is sufficient demand.

CIEEM is also working on detailed templates and guidance on how BNG should be reported (over and above submission of the metric calculations) which will encourage developers to evidence how the baseline calculations have been made and how the net gains have been designed. A consistent approach will help LPAs gain the confidence to scrutinise the information that is presented to support a claim of achieving BNG. Webinars on the BNG approach are freely available from the CIEEM website.

Another way for LPAs to upskill has been to bring in outside expertise. This was done recently by The East of the Central Belt

Planning Authorities Natural Heritage Planners Group, formed in 2019 covering the City of Edinburgh, East Lothian, Midlothian, West Lothian and Scottish Borders Council areas. The group discussed BNG and how it might be considered within each of their authorities and as a region as part of the group's purpose to develop and share knowledge and good practice.

The Ecosystems Knowledge Network provides access to a range of free webinars on ecosystems services and natural capital approaches to environmental assessment including BNG.

Conclusions

This briefing note acts as an overview of the BNG concept and raises many of the considerations that are and will be assessed by LPAs. The term 'positive effects for biodiversity' is stated in the Planning (Scotland) Act 2019 and is now the subject of a Scottish Government working group. If 'positive effects for biodiversity' are to be tangible and evidenced, then some form of measurability and quantification ought to be a requirement and BNG is considered to be one mechanism to achieve the term 'positive effects for biodiversity' complementing existing tools.

Training and capacity within LPAs (ecologists and environmental planners) is an area of concern for implementing any systems going forward. Existing guidance and case studies provide lessons on how BNG is applied elsewhere in the UK and internationally. Further guidance is also being produced, such as reporting templates that will act as interim guidance to help LPAs. NatureScot is also compiling case studies on how BNG is currently being implemented in Scotland.

Essentially BNG is about nature, with the process providing a mechanism to demonstrate a measurable increase in biodiversity. Embedded in the approach is the key ecological principle of applying the mitigation hierarchy and notably from the outset it is established that a net gain cannot be declared where irreplaceable habitat is lost.

A key benefit of BNG is the consideration of habitat quality and connectivity rather than just habitat areas lost and gained. Habitat connectivity is crucial to increase ecological resilience of designated sites and forming green networks. The metric also considers strategic significance, designed to encourage consideration of restoring and creating habitats within areas identified in local biodiversity strategies. This could be embedded in decisions underlining Regional Land Use Frameworks made by Regional Land Use Partnerships as currently being trialled in a few LPAs and National Parks.

Box 1: An Example of Biodiversity Net Gain Application

Warwickshire County Council (WCC) was one of six pioneer LPAs to trial a BNG approach, and with support from Solihull and Coventry, currently operates its own BNG programme on all major and minor applications, unless otherwise agreed by the LPA. By implementing this approach across all sub-regional LPAs it has ensured that all developments within the locale are treated in a fair, equal and transparent manner.

At the outset of the trial, a Biodiversity Impact Assessment (BIA) metric based on the Defra parameters was developed, following which the Warwickshire Ecology Team briefed Planning Officers and committee members to aid understanding of the metric and biodiversity net gain. The metric is being used to achieve the National Planning Policy Framework[12] objective of 'no net biodiversity loss… leading to a biodiversity net gain' and the net gain approach is supported by complementary local plan policies.

Details on the metric can be found on Warwickshire County Council's website[13].

The process works as follows: As part of a planning application the developer submits the BIA to the LPA ecological advisor who reviews the assessment. They can then recommend changes to enhance a development further or, if necessary, show where a development conflicts with core strategy policies. In general, the LPA's seek net gains but does not currently have a percentage gain threshold. Where a proposal results in a loss the developer has two options secured through a planning obligation:

- Find and secure an offset site that delivers (for 30+ years) at least the units and habitat lost by the development; and/or
- Pay a financial contribution.

The financial contribution requirement is calculated within the metric, which allows the developer to make conscious decisions on biodiversity impacts as the design of the scheme progresses. In doing so, the applicant demonstrates the Mitigation Hierarchy (Avoid, Minimise and Compensate). Contributions paid to WCC supports an Officer to find and prepare costed management plans for offset sites and arrange payment; plus, the management of legal agreements that secure the management. This includes registering the gains against the losses incurred by development. The entire process aims to be a full cost recovery model. From 2015-2019, Section 106[14] contributions secured £2.3 million.

References

1. NatureScot (2020). *Delivering Scotland's Ambition to Secure Positive Effects for Biodiversity*. Available at: https://www.transformingplanning.scot/media/2131/securing-positive-effects-for-biodiversity.pdf
2. CIRIA, CIEEM, IEMA (2016). *Biodiversity Net Gain: Good Practice Principles for Development*. Available at: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development.
3. Bull, J., Baker, J., Griffiths, V.F., Jones, J. and Milner-Gulland, E.J. (2018). *Ensuring No Net Loss for people as well as biodiversity: Good Practice Principles.* SocArXiv. Available at: https://doi.org/10.31235/osf.io/4ygh7
4. CIRIA, CIEEM, IEMA (2019) *Biodiversity Net Gain: Good practice principles for development, A Practical Guide*. Available at: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/
5. *The Biodiversity Metric 2.0: auditing and accounting for biodiversity value. User guide* (Beta Version, July 2019). http://nepubprod.appspot.com/publication/5850908674228224
6. UK Habitat Classification (UKHab). Available at: https://ukhab.org
7. CIRIA, CIEEM, IEMA (2016). *Biodiversity Net Gain: Good Practice Principles for Development*. Available at: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development.
8. Planning (Scotland) Act 2019, Section 2(4) Available at: https://www.legislation.gov.uk/asp/2019/13/section/2
9. CIEEM Briefing Note – *Biodiversity Net Gain in Scotland* (2019). Available at: https://cieem.net/resource/biodiversity-net-gain-in-scotland-briefing
10. CIEEM (2019). *Mixed bag as Government responds to Biodiversity Net Gain consultation* [online]. Available at: https://cieem.net/mixed-bag-as-government-responds-to-biodiversity-net-gain-consultation/
11. Lawton, J.H., Brotherton, P.N.M., Brown, V.K., Elphick, C., Fitter, A.H., Forshaw, J., Haddow, R.W., Hilborne, S., Leafe, R.N., Mace, G.M., Southgate, M.P., Sutherland, W.J., Tew, T.E., Varley, J., & Wynne, G.R. (2010). *Making Space for Nature: a review of England's wildlife sites and ecological network*. Report to Defra.
12. Ministry of Housing, Communities and Local Goverment (2012) *National Planning Policy Framework*. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2
13. Warwickshire County Council (2018) *Guide to Warwickshire, Coventry and Solihull Biodiversity Offsetting Biodiversity Impact Assessment Calculator v19.0.* Available at: https://apps.warwickshire.gov.uk/api/documents/WCCC-863-791
14. In England, a 'Section 106' is a legal agreement between an applicant seeking planning permission and the local planning authority. The equivalent in Scotland are section 69 of the Local Government (Scotland) Act 1973 and section 75 Town and Country Planning (Scotland) Act 1997 which make provision for legal agreements for developer contributions.

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