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# biodiversity net gain and planning

**Peter Jones** looks at biodiversity net gain, its measurement and role in planning policies, and reflects on some wider issues raised by attempts to seek biodiversity gain through planning



**The Environment Act 2021 introduces a 10% biodiversity net gain requirement on developers**

Natural England's launch of its Biodiversity Metric 3.0 in July 2021,<sup>1</sup> described as part of a 'new sustainable development toolkit',<sup>2</sup> marks another step in the attempt to measure biodiversity and achieving 'biodiversity gain in planning' as laid out in the recently enacted Environment Act 2021.<sup>3</sup> Under the Act, biodiversity gain is to be made a condition for planning permission in England, subject to a small number of exceptions, and, more specifically, development will need to demonstrate an increase in biodiversity, associated with the development, of at least 10% – a requirement likely to take effect in 2023. This article provides a brief review of the concept of biodiversity net gain and its measurement and an outline of its role in planning policies, and offers some reflections on some wider issues surrounding biodiversity gain in planning.

## **Net biodiversity gain and measurement**

In simple terms, the concept of biodiversity refers to the variety and variability of plant and animal life in a particular environment or habitat. The term 'biological diversity' has been in use for over a

century, and was seemingly coined by Harris in 1916,<sup>4</sup> although the contracted term, 'biodiversity', dates from the late 1980s.<sup>5</sup> That said, biodiversity means 'different things to different people'.<sup>6</sup> Norton, for example, suggested that defining biodiversity can be a challenge 'because the term functions in two arenas – scientific biology and conservation policy'.<sup>7</sup> Pascual *et al.* argue<sup>8</sup> that biodiversity encompasses not only the diversity of species but also diversity *within* species and of ecosystems. Furthermore, they suggest that the popularity of the concept 'rests on the fact that its three-tiered definition (diversity within species, between species, and of ecosystems) provides a 'big tent' that encompasses a variety of interests within the modern conservation movement'.

The concept of biodiversity net gain has been attracting increasing attention, particularly in relation to development. The Chartered Institute of Ecology and Environmental Management has defined biodiversity net gain as 'an approach to development that leaves biodiversity in a better state than before',<sup>9</sup> and has claimed that 'where a development has an

impact on biodiversity it encourages developers to provide an increase in appropriate natural habitat and ecological features over and above that being affected in such a way it is hoped that the current loss of biodiversity through development will be halted and ecological networks can be restored.' For Ladders,<sup>10</sup> solicitors who specialise in planning advice, the biodiversity net gain concept 'seeks measurable improvements for biodiversity by creating or enhancing habitats in association with development'.

The achievement of biodiversity net gain is underpinned by biodiversity offsetting, the term applied to habitat creation and enhancement undertaken to compensate for diversity loss due to development. As such, biodiversity offsetting is often seen by some developers to have the potential to achieve net biodiversity gain in a straightforward and relatively cost-effective manner that does not slow down the development process. On the one hand, developers seek to demonstrate that they have enhanced biodiversity on, or in close proximity to, a development site. On the other hand, where developers claim that they are unable to achieve biodiversity net gains on site, or close by, they can opt to purchase 'credits' to meet biodiversity net gain requirements, with the proceeds being used to enhance biodiversity, or to purchase land specifically for conservation projects, elsewhere.

The focus on delivering net biodiversity gain throws the issue of measurement into sharp relief. In simple terms, biodiversity net gain, or loss, can be seen as the difference in biodiversity prior to, and after, development. However, the measurement of changes in biodiversity poses a major challenge, not least in that, as outlined earlier, biodiversity has a range of meanings.

Nevertheless, a number of measures have been devised by organisations and local authority planning departments to calculate biodiversity net gain. That said, in discussing 'measuring biodiversity' and the development of 'a biodiversity metric', the Department for Environment, Food and Rural Affairs (Defra) recognised 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.'*<sup>11</sup>

By way of a summary, Defra took the view that an effective biodiversity net gain policy required an approach to measurement that was 'transparent and robust', 'workable and practical', and 'consistent'.<sup>11</sup>

Defra initially piloted a biodiversity metric in 2012, focused on a habitat-based approach to determining a proxy biodiversity value, and an updated version, Biodiversity Metric 2.0, was published in 2019.<sup>1</sup> This version was updated and replaced by Biodiversity Metric 3.0 in July 2021, and it is this metric that underpins the Environment Act's provisions for mandatory biodiversity net gain. Natural England has reported that Biodiversity Metric 3.0 can be used, or specified, by any development project, consenting body or landowner that needs to calculate biodiversity losses and gains for terrestrial and/or intertidal habitats, and has published a series of guidelines to accompany the metric.<sup>1</sup> These guidelines include calculation tools, habitat assessment sheets, a user guide, technical supplement sheets, and a number of geographical information system templates.

There is also a Small Sites Metric,<sup>12</sup> which is a simplified version of Biodiversity Metric 3.0. The aim is for this to be used on small sites if a residential development encompasses less than 1 hectare and provides nine dwellings or less, and where there is no priority habitat within the proposed development area. At the same time, Natural England has also released the Environmental Benefits from Nature Tool,<sup>13</sup> which is designed to 'provide developers, planners and other interested parties with a means of enabling wider benefits for people and nature from biodiversity net gain', and which 'uses a habitat-based approach to provide a common and consistent means of considering the direct impact of land use change across 18 ecosystem services'.<sup>14</sup>

While the Defra biodiversity net gain consultation document elicited a number of exceptions for exclusions, including permitted development, building extensions, affordable housing schemes, developments with the primary aim of conserving or enhancing biodiversity, and large-scale infrastructure projects, only the first two were agreed in the government's response to the consultation.

## Planning policies

In recent years the concept of biodiversity net gain has gathered momentum within the planning system. More specifically, in England, the National Planning Policy Framework (NPPF) placed a responsibility on local planning authorities to contribute to, and enhance, the natural and local environment by providing net gains for biodiversity, establishing ecological networks that will prove more resilient to development pressures, and



pursuing opportunities for securing measurable net gains for biodiversity.<sup>15</sup> More recently, Defra, conducted a consultation on the possible introduction of 'mandatory requirements to the planning system in England so that development must deliver biodiversity net gain'.<sup>11</sup> Here, Defra argued that:

*'proper stewardship of our natural world is at the heart of responsible government. Clean air and water, healthy trees, rivers and biodiversity [...] 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.'*<sup>11</sup>

Furthermore, Defra claimed that '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'.<sup>11</sup>

In Scotland, the 2004 Nature Conservation (Scotland) Act emphasised the importance of conserving biodiversity, and while the current Scottish Planning Policy emphasises that 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',<sup>16</sup> and, despite consultation recommendations to the contrary,<sup>17</sup> at the time of writing there is no explicit focus on promoting measurable biodiversity net gain as part of the planning approval of development proposals.

In Wales the latest edition of Planning Policy Wales emphasises that local authorities should 'ensure that information on habitats, species and other green features and resources is kept up-to-date, so that development management decisions are informed by appropriate information about the

potential effects of development on biodiversity',<sup>18</sup> but here again at the time of writing there is no formal requirement for commitments to measurable biodiversity net gains to be written into development proposals prior to planning approval.

## Reflections

The commitment to biodiversity net gain will have implications for a wide range of development proposals, and it will bring further new responsibilities for local planning authorities, but three wider issues merit reflection and discussion.

First, offsetting has attracted relevant commentary in the academic literature. On the one hand, and in general terms, Bull *et al.*<sup>19</sup> identified a number of theoretical problems and practical challenges for biodiversity offsets. On the theoretical side, problems were said to include time lags in achieving gains, the uncertainty of offset schemes, and the longevity of gains. In addressing this last problem, for example, Bull *et al.*<sup>19</sup> suggested that defining how long the benefits of biodiversity gain were expected to last posed a challenge for decision-makers, and that long-term biodiversity gains could be threatened by environmental change. Practical challenges included compliance and uncertainties. Bull *et al.* argued<sup>19</sup> that non-compliance with offset requirements is 'a significant challenge and takes a variety of forms', that uncertainties can arise at 'every stage of offsetting', and that 'the lack of any sophisticated framework for the treatment of uncertainty is a major shortfall'.

More specifically, Knight-Lenihan<sup>20</sup> pointed to the lack of robust evidence to suggest that offsetting actually works, and concluded that offsetting 'is not demonstrably successful' and that 'local planning authorities will be balancing short- to medium-term benefits of supporting biodiversity net gain against uncertain medium- to long-term ecological benefits'.

On the other hand, more positively, zu Ermgassen *et al.* suggested that the potential for greater offsetting off-site offered a major opportunity to 'finance investments in regional biodiversity priorities that can help restore biodiversity at a landscape scale'.<sup>21</sup> Here, they recommended incentivising the delivery of biodiversity off-site – for example, through mandating that a certain percentage of the total biodiversity units delivered by a project must be invested in off-site regional biodiversity priorities or the local nature recovery network.

Secondly, there are concerns about the effectiveness of employing net biodiversity gains as part of the planning process. In an empirical study of six 'early-adopter' local authorities in England, zu Ermgassen *et al.* found that biodiversity net gain risked 'poor outcomes for biodiversity when implemented nationally'.<sup>21</sup> They suggested that appropriate governance measures must be in place if policies are to 'trade immediate biodiversity losses against long term future gains', but that 'current planning system mechanisms for monitoring and enforcing compliance are poorly suited for ensuring these materialize in reality'.

Here, it is important to recognise that funding for local planning authorities within the UK has declined considerably in the last decade, and, given that planning departments will have to take on other new responsibilities, such as digitisation and place-making, the resources available for monitoring and auditing may well prove inadequate to support robust validation of developers' commitments to net biodiversity gain.

**'Funding for local planning authorities has declined considerably in the last decade, and, given that planning departments will have to take on other new responsibilities, the resources available for monitoring and auditing may well prove inadequate to support robust validation of developers' commitments to net biodiversity gain'**

In offering some 'lessons for reconciling infrastructure expansion and biodiversity conservation', zu Ermgassen *et al.* argued that: *'designing governance mechanisms for reconciling infrastructure expansion with biodiversity conservation is deeply challenging. Even ambitious policies are subject to huge uncertainties that risk undermining their biodiversity benefits. The safest*

*mechanism for reducing the biodiversity impact of infrastructure is to avoid impacts to biodiversity initially. In practice, this means redirecting development to previously degraded sites wherever possible.'*<sup>21</sup>

Thirdly, there are wider issues surrounding biodiversity net gain and sustainable development. One of the 'good practice principles' for biodiversity net gain identified by the Chartered Institute for Ecology and Environmental Management<sup>22</sup> is to 'optimise sustainability' and 'prioritise biodiversity net gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy'.

In policy terms, the NPPF emphasises that the planning system has 'three overarching objectives', namely an economic objective, a social objective, and an environmental objective, and that these objectives need to be pursued in mutually supportive ways. Here, the dominant publicly expressed view within the development industry is that all three objectives can be pursued to common mutual benefit. Atkins, the major construction, engineering and design company, for example, has claimed that 'the UK government has affirmed its commitment to sustainable development and has recognised that the provision of housing and infrastructure does not have to come at the expense of biodiversity. It recognises the value of the biodiversity net gain approach, which has wider social and environmental benefits in addition to the targeted ecological gains'.<sup>23</sup>

However, there is also a widely held view is that the policy guidelines within the current planning system privilege economic objectives and, arguably to a lesser extent, social objectives, over environmental concerns for the enhancement of natural capital. Friends of the Earth, for example, has warned that the Westminster government's continuing reforms to the planning system in England aim speed up decision-making and make the system easier to use by developers.<sup>24</sup> This in turn has allowed 'development to proceed regardless of the wider costs to society and the environment', while the 'constant churn of regulation, policy and guidance since 2010 has tended to favour economic over social and environmental outcomes, and speed over quality of decision'.

More radically, the focus on the biodiversity net gain requirement within the planning system pays no attention to sustainable consumption, described by Cohen as 'the most obdurate challenge for the sustainable development agenda'.<sup>25</sup> Sustainable consumption has a range of interpretations – namely 'consuming more efficiently, consuming more responsibly or quite simply consuming less'.<sup>26</sup> The last of these meanings does not seem consistent with the current – and proposed future – scale of housing developments on greenfield sites, which produce a wide range of damaging environmental impacts. While it might be more in harmony with



directing limited development to brownfield sites, it is important to remember that such sites can also provide a wide range of ecosystem services.

However, although strict interpretations of sustainable consumption have no mainstream political, economic or social voice, they do pose food for thought at a time when concerns about climate change are moving up corporate and political agendas, and when extreme climate events are becoming more commonplace.

Conclusion

In England, the measurement of biodiversity net gain is set to become an essential element in the granting of planning permission from 2023 onwards, and this change seems likely to have important implications for the planning process. Planners in private practice will be involved in measuring such gains as part of developers' planning applications, while local authority planners will be involved in monitoring it, and how successfully, biodiversity net gains are being achieved.

● **Peter Jones** works in association with the School of Business at the University of Gloucestershire. The views expressed are personal.

Notes

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