

The State of No Net Loss/Net Gain and Biodiversity Offsetting Policy in English Local Planning Authorities: Full Report

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No Net Loss and Net Gain in environmental planning has been a policy focus in a growing number of countries since the early 1980s. Since 1997, I have worked in the environmental consulting industry, worked as a government environmental regulator, and conducted academic research on such policies in the US, Australia and England. The limited academic work on this topic has often been disconnected from policy practices and implementation gaps on the ground; this report is part of research I have conducted since 2016 seeking to understand the development and limitations of Net Gain policy in England from the perspective of the working-face planners and ecologists who will implement it.

Net Gain of biodiversity has become a major policy issue in English planning, with former Secretary of State Michael Gove announcing his full support for a policy of mandatory net gain of biodiversity in September 2019. It appears that some version of this policy will be implemented in the current Environment Bill. No Net Loss and Net Gain (NNL/NG) policies are planning goals aimed at ensuring development leaves biodiversity in the same or better (respectively) condition as an acceptable reference condition. Although NNL policies have largely given way to NG policies in national discussions, local governments lag behind such discussions and it is still common for them to refer to NNL as a planning goal. NNL and NG incur the same implementation challenges, and differ mainly in whether development is expected to achieve biodiversity gains beyond the narrow amelioration of its own impacts; it was not fruitful to distinguish between them for survey respondents, and they will be referred to jointly in this report. NNL/NG have been implemented unevenly throughout England even before the 2012 reorganisation of planning policy in the National Planning Policy Framework (NPPF), and experimentation with the metrics and offset policies needed to achieve NNL/NG was seen with the 2012-2014 Defra Offsetting Pilot. Since the pilot there has continued to be ongoing experimentation and diffusion of the practices and policies of NNL/NG at the Local Planning Authority (LPA) level. This occurred through informal networks of colleagues and was more or

less invisible at the national scale, but has been crucial to building the capacity of Local Planning Authorities (LPAs) to respond to the anticipated NG policy.

Much information about how NNL/NG has been used by LPAs comes from a few high-profile regions or LPAs. In order to observe the broader state of NNL/NG practice across England, from May 2019 to December 2020 a survey was conducted of England's 352 LPAs on the topic of NNL/NG of Biodiversity and the use of Biodiversity Offsetting as a compensatory mechanism. Responses were received from 306 LPAs for an overall response rate of 86.9%. Not all LPAs responded to all questions.

LPA staff at planning offices across Boroughs, Districts, Counties and Authorities, as well as Wildlife Trust staff, were incredibly helpful and professional in taking the time to respond, much-appreciated valuable time taken away from their normal duties. The survey was offered on the internet platform Qualtrics, but in some cases I administered the survey over the phone or by email. Because there have been several LPA mergers over the past few years, I use the LPA map that applied on 1 January 2020 for the purpose of reporting results.¹

Eight LPAs² stated that their planning officers received no ecological input at all on planning applications – in such cases the survey simply did not apply to them. So while 306 LPAs responded to the survey prompt, only 298 completed the survey in part or in whole. The 46 LPAs that did not respond³ were not all bereft of ecological advice or practice – often they were cases where I had made contact with competent but overcommitted ecologists who simply had no time to respond. It is not clear that non-responding LPAs receive any more or less ecological input than the median responding LPA and I suspect that their inclusion would not significantly change the results.

Principal Findings

The principal findings of this survey for NNL/NG policies are:

- **The majority of responding LPAs (56%) report that it is currently practical to deliver biodiversity NNL/NG, but for the remainder, lack of resourcing is the primary obstacle to its delivery.**
- Only 39% of LPAs have in-house ecological expertise, about 82% respondents provide advice to only one LPA, meaning that expertise is thin and decentralised.
- Most LPAs (66%) have Local Plans that incorporate NNL/NG goals in some way, even if aspirationally, but more than half of these Plan goals have been adopted since 2017 and

¹ For example, on 1 April 2019, Somerset West and Taunton merged, as did Bournemouth, Christchurch and Poole; Waveney and Suffolk Coastal Districts merged to become East Suffolk District. Each are treated in this survey as single LPAs. However, the merger of Buckinghamshire County with Aylesbury Vale, South Bucks, Chilterns and Wycombe Districts into the Buckinghamshire Unitary Authority on 1 April 2020 is not reflected in this survey.

² City of Exeter, Isles of Scilly Council, Newark and Sherwood District, Pendle Borough, Rochford District, South Lakeland District, Tonbridge and Maling Borough, and City of Westminster.

³ Since it is easier to list non-responding LPAs than responding LPAs, these are listed in Appendix A.

the rate is accelerating. These goals are therefore broad but experience with them is shallow.

- For 41% of these LPAs, the NNL/NG goal applies to all planning applications, but for the remainder there are a variety of situations where NNL/NG applies. And it is clear that in most cases it may be a request, variously enforced and measured.
- LPAs report applying the NNL/NG request to 17,712 planning applications, which is clearly an undercount and the true number is likely closer to 40,000. Most have applied it to fewer than 20 applications. Only 15 LPAs have experience applying NNL/NG to more than 200 planning applications. Though an undercount, this provides an absolute floor in estimating how wide and deep experience with applying NNL/NG is among English LPAs.
- The NNL/NG goal is considered mandatory for some or all planning applications by 99 of the 306 responding LPAs (32%).
- 34% of LPAs use some kind of metric in considering the ecological impact of planning applications, while 62% do not. The plurality use the Defra 2.0 metric release in 2019, but a wide variety of other metrics are used as well.
- The majority of LPAs do not use a metric to evidence biodiversity gains and losses: 80% of them use best professional judgment or applicant submissions, or do not evidence them at all.
- Where use of a biodiversity metric is requested from applicants, it is only rarely requested for all applications, and its use is sporadic for most LPAs that request it.
- Developers submitting applications are increasingly providing biodiversity metric calculations without being asked, but largely in the counties with longer and stronger biodiversity NNL/NG policy, suggesting that it is becoming a standard part of business in those areas.
- There appears to be a spatial concentration of expertise, experience, and expectation around NNL/NG policy in the counties with longer-held and stronger policies: LPAs in Warwickshire, Somerset, Devon, Oxfordshire, and West Yorkshire consistently show stronger results, and to a somewhat lesser extent, Buckinghamshire, Leicestershire, and Hertfordshire.

The principal findings of this survey for Biodiversity Offsetting (BDO) are:

- **Fewer than 2000 hectares of BDO have been created in fewer than 400 delivered projects.**
- Biodiversity offsetting (BDO) has a relatively high level of legitimacy and implementation, at least in concept. Overall, 63 LPAs reported requiring BDO, while 128 encouraged its use in plan permissions. Only a quarter of responding LPAs reject the use of BDO.
- Definitions of BDO vary, however, and most LPAs which report encouraging its use actually find it used very rarely.
- Where BDO is not used, the reasons vary considerably and respond to local concerns.
- Only 53% of LPAs using BDO assess BDO sites with the same metric used to assess overall NNL/NG – most of the remainder use expert professional judgment.

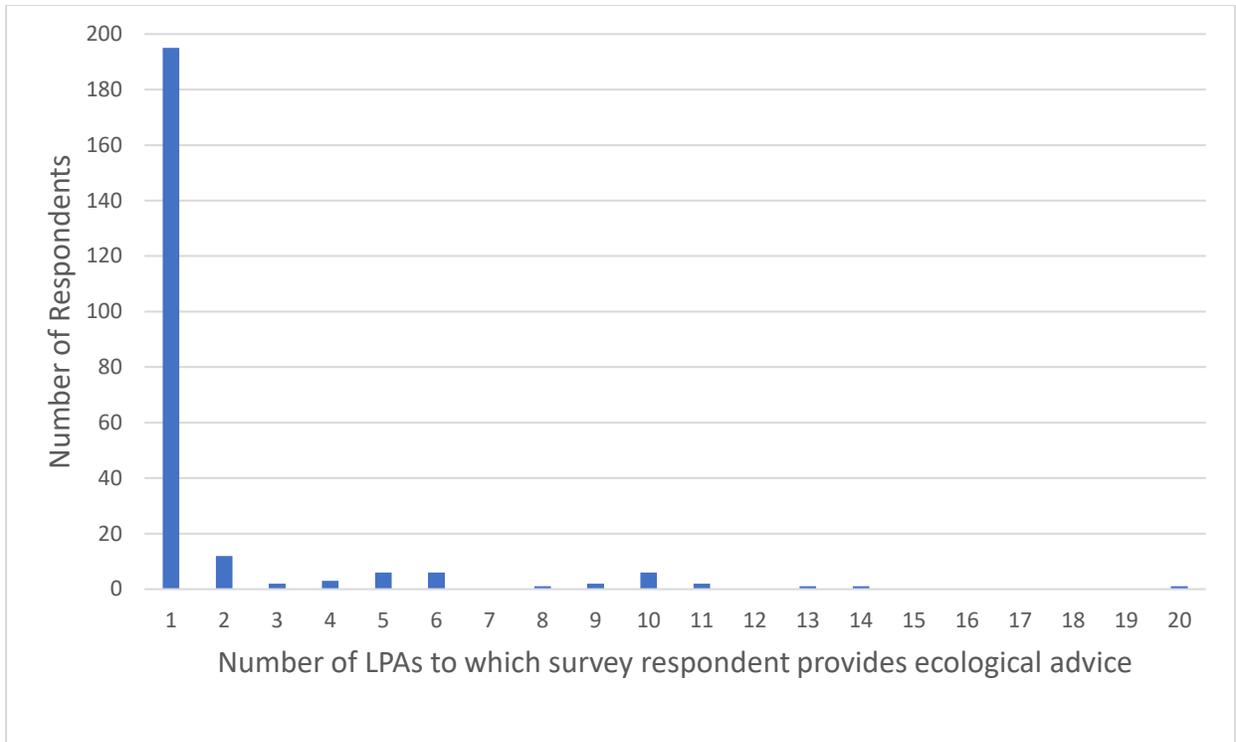
- The performance standards most frequently attached to BDO sites:
 - 0-10% net gain requirement
 - Secured for ~30 years
 - 53% of LPAs require BDO sites to be monitored
 - 52% of LPAs site BDOs with reference to habitat or species-specific plans, but only 29% do so with reference to a landscape plan.
- Section 106 agreements are the mechanism preferred by the vast majority (86%) of LPAs to secure BDO obligations from plan permission applicants.

Detailed Results Part 1: NNL/NG policy and metrics

1) Resourcing Ecological Input at the LPA level

It is well-known that most LPAs do not employ in-house ecologists, and the composition of survey respondents gives a picture of who, across English LPAs, is positioned to provide ecological input to LPA planning officers considering development applications. The vast majority of respondents (81.9%) provide advice to only one LPA. However, there are three situations in which advice is provided by a single source to more than one LPA, often on a contracted basis:

- County ecologists often provide ecological advice on planning applications to some or all of the LPAs within their boundaries – or in the case of Essex County Ecology, broadly across a region: Hertfordshire, Kent, Warwickshire, Northamptonshire, Essex, Norfolk, Hampshire, West Yorkshire, East Sussex, Staffordshire and Leicestershire Counties provide this service.
- A county's Wildlife Trust can contract with local LPAs to deliver ecological advice on planning applications: the Derbyshire, Surrey, Lincolnshire and Yorkshire Wildlife Trusts provide this service.
- A single well-resourced LPA that is not itself a County can contract its services to other LPAs. Tameside Metropolitan Borough, for example, hosts the Greater Manchester Ecological Unit which provides ecological input to 9 other LPAs throughout the Manchester region, as well as nearly all LPAs in Lancashire, for a total of 20 LPAs. Likewise, Sefton Metropolitan Borough hosts the Merseyside Environmental Advisory Service contracting with LPAs around Liverpool.



This means that, for the most part, biodiversity policy execution is maximally decentralised, and only moderately centralised in a small minority of cases. This has implications for the implementation of new biodiversity planning policies emanating from Government.

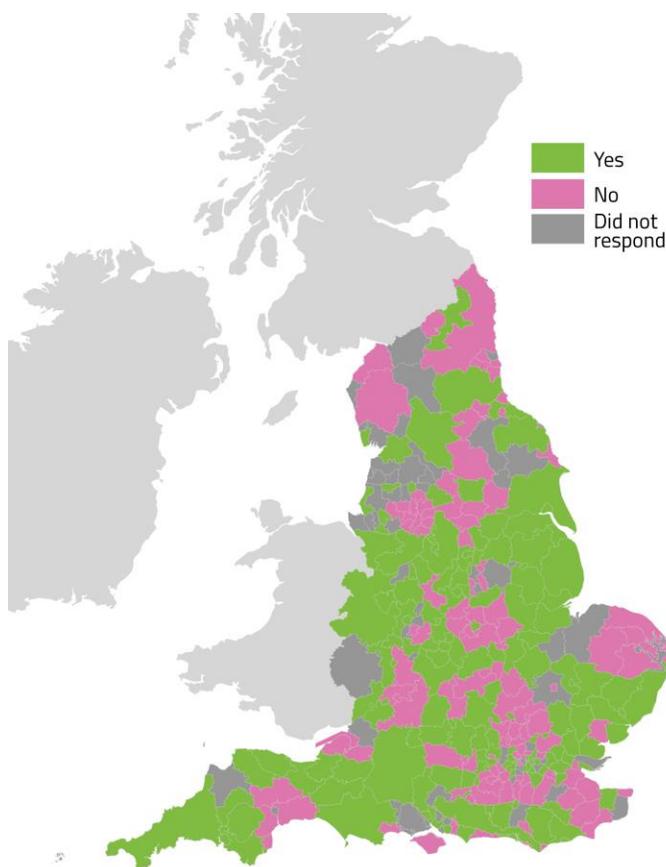
The job titles of respondents also give an idea of what kind of resourcing LPAs use to satisfy the need for ecological input. Almost 40% of respondents were in-house LPA ecologists, which tracks with numbers reported by the Association of Local Government Ecologists (ALGE) concerning the percentage of LPAs with in-house ecological expertise. For the remainder of LPAs, input was provided by an assortment of LPA planners, County ecologists, Wildlife Trust staff and private third-party contractors.

Category	Number of LPAs	%
LPA Biodiversity/Ecology/Countryside/Conservation Officer	127	39.0%
LPA Planning Officer	57	17.5%
County officer serving other LPAs	67	20.6%
Wildlife Trust ecologist	39	12.0%
Private outside contractor	5	1.5%
Non-County LPA serving other LPAs	14	4.3%
Other LPA Officer	8	2.5%
None given	8	2.5%
Number of responses (37 LPAs responded twice)	325	

2) Is it practical for LPAs to administer and deliver NNL/NG of biodiversity?

A question of primary interest for any policy on NNL/NG is whether LPAs view it as practical, not just possible, to administer and deliver it. Responses indicate that, for a bare majority of LPAs (56%), it is indeed practical to do so. However, a large minority, 38% of LPAs, responded that it was not. This indicates that shortfalls in resourcing and experience are obstructing the uptake of NNL/NG policy, and that many LPAs also await firmer steering from national planning policy.

Response	# of LPAs
Yes	167
No	112
Conflicting due to multiple responses	14
No answer/don't know	4



Is it practical to administer and deliver Net Gain of Biodiversity?

For those 112 LPAs reporting that it is not practical to administer and deliver NNL/NG, the reasons that it is not practical break down into three categories: Lack of Resourcing, Lack of Political Permission Structure, and Lack of Information and Experience:

If it is NOT practical, why not?	Responses	Percentage of LPAs indicating
<i>Lack of Resourcing</i>		69%
Insufficient land	7	6%
Lack of in-house ecologist	24	21%
Insufficient resourcing (does not mention ecologist)	46	41%
<i>Lack of political permission structure</i>		64%
Local/Regional policy does not require it	39	35%
NPPF does not require it	17	15%
Lack of Political will	4	4%
Planning balance and process	12	11%
<i>Lack of Information/Experience</i>		26%
Gain/Loss metric inadequate or lacking	8	7%
LPA is inexperienced with concept	14	13%
No strategy to identify appropriate sites	7	6%
Total reasons from 112 LPAs	178	

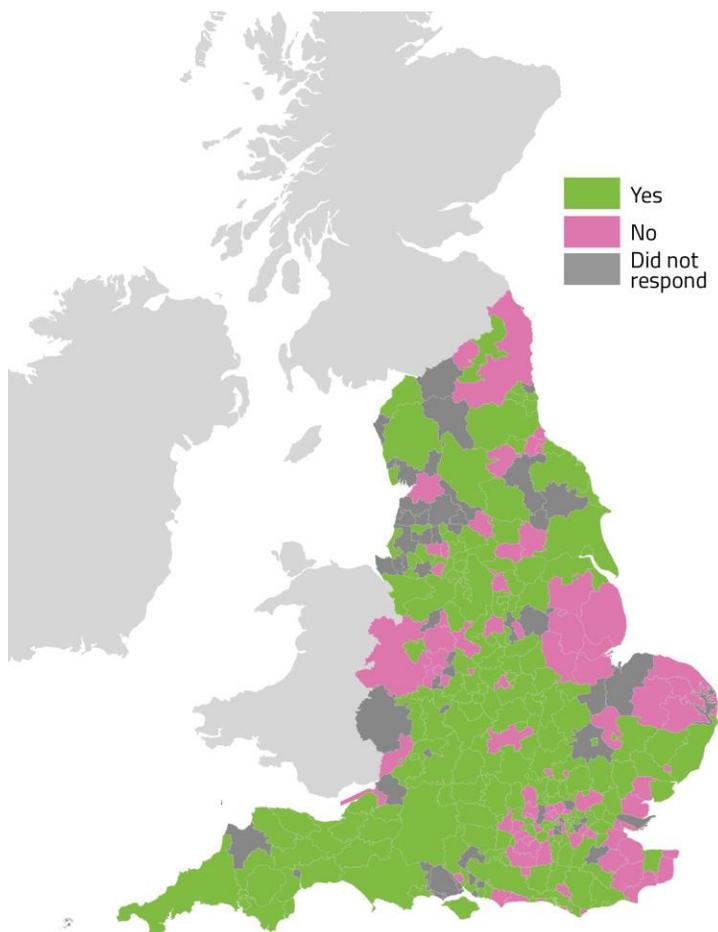
The lack of resourcing, especially the lack of in-house ecological expertise, is clearly a major obstacle to the practicality of NNL/NG. The lack of ‘political will’ or policies which require NNL/NG is equally important, but may dissipate as an obstacle with the passage of a national Net Gain mandate.

3) Local Plans that incorporate NNL/NG goals

The data suggest that a considerable number of LPAs have NNL/NG goals embedded in their Local Plans: 202 out of 306 responding LPAs (66%). Local Plans are always in development, and there is almost no time during which there is not a Local Plan in ‘draft’ form. Because of the flurry of policy activity around offsetting with Defra’s 2012 Pilot, many LPAs have had time to issue Local Plans since then that reference NNL/NG as a goal, and this is reflected in the data. Because this survey stretched over a year in order to reach the maximum number of LPAs, some LPAs which responded in the negative may have, since that time, begun to draft new Local Plans which include the NNL/NG goal.

Does this LPA have NNL/NG goals within an adopted or draft Local Plan?

Yes	194
No	96
Yes/No (conflicting multiple responses)	8

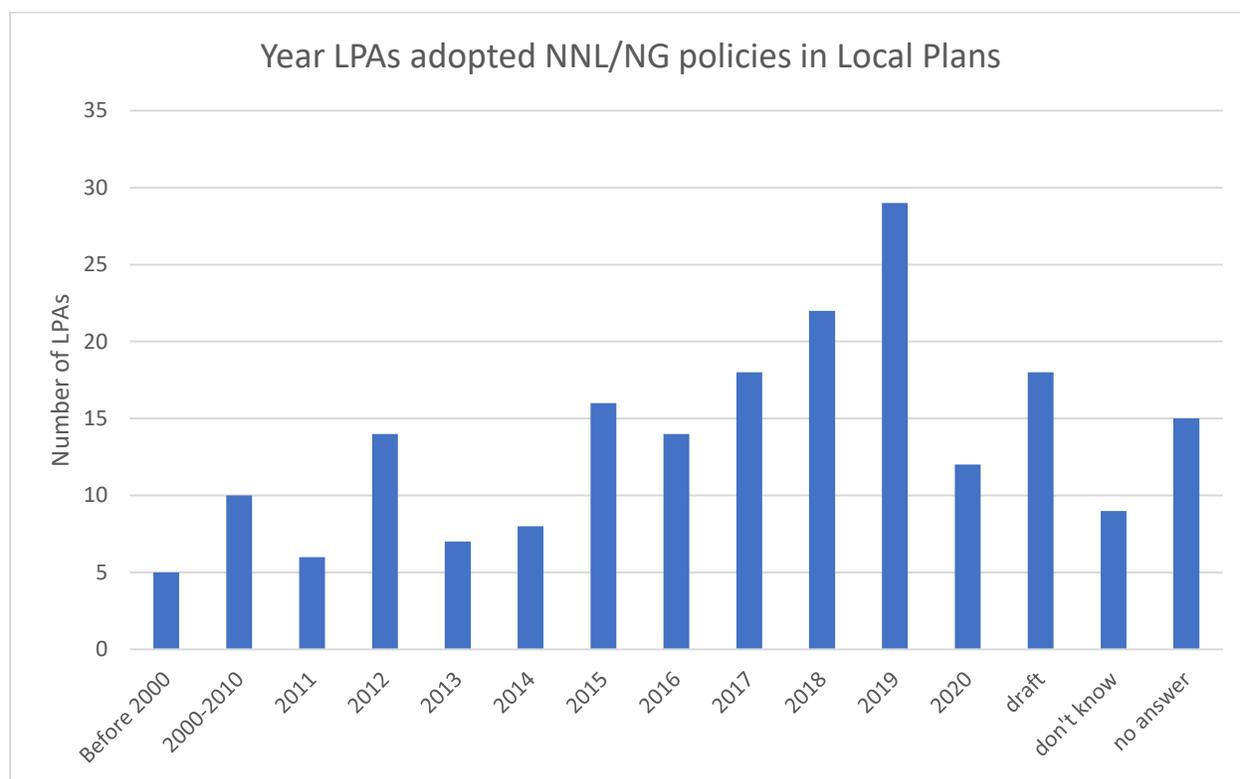


Does this LPA have NNL/NG goals within an adopted or draft Local Plan?

The existence of NNL/NG goals in a Local Plan, it should be said clearly, does not mean that NNL/NG is *mandatory* in that Plan (see Point 7). It is often stated an aspirational goal, or bracketed with “*where feasible*” or “*where possible*.” For example, the Local Plan for Staffordshire Moorlands District states that “*all development where possible seeks to deliver a net gain in biodiversity proportionate to the size and scale of the development.*” This is not unusual; “*where possible*”, “*seeks*”, and “*proportionate*” are all words allowing the planning officer to justify failure to achieve net gain as they consider the planning balance between many potential competing considerations.

4) How long have LPAs been implementing NNL/NG policy?

Of the 202 LPAs which have NNL/NG provisions in their Local Plans, more than 50% have adopted them since 2017 and there has been a clear acceleration since 2015. There was also, unsurprisingly, a peak in 2012 around the Defra Biodiversity Offsetting Pilot. A handful have had policy on NNL/NG for more than 20 years, which speaks to the fact that the concept of ‘no net loss’, which originated in the USA in 1984, has a long policy history pre-dating its current use by many decades. These few are worth mentioning here because of the length of their experience: City of Worcester (1992), Peak District National Park (1994), London Borough of Southwark (1995), Telford and Wrekin Council (1995), and Wealden District (1998).



5) What type and scale of development does the NNL/NG policy apply to?

Scale of application NNL/NG policy applied to	LPAs responding	Percent
All applications	87	41%
All applications for which an ecologist is consulted	10	5%
Applications at or greater than the Household scale	18	9%
Major and some Minor applications	14	7%
Major applications only	39	19%
Applications proposing significant impacts to designated/protected sites or biodiversity	13	6%
Other criteria	8	4%

Not specified in Plan	3	1%
No response	18	9%
<i>210 criteria provided from 202 LPAs with an NNL/NG provision in adopted or draft Local Plan</i>		

LPAs often define scales of development applications from “major” to “minor” to “householder” (the names vary), and then specify which are subject to what kinds of ecological input. For example, in the case of Milton Keynes Council, ecological input is triggered in cases where the development is “five or more dwellings or in excess of 5,000 m²”. However, in interviewing LPA planners and ecologists, these guidelines are loose and often honoured in the breach – ecological input can be provided on smaller applications, and (more rarely) may be missing from larger applications, than the LPA guidelines suggest. In Vale of White Horse District, the net gain goal applies to applications proposing “10 housing units or 10,000 m² of commercial property, but judgment can allow it to apply to smaller cases.”

Ultimately, the NNL/NG policy can only come into play where an ecologist provides input to the planning officer handling the case. In retrospect, a question could have been usefully added asking: “For what kinds of applications is ecological input solicited?” This is, in practice, somewhat different from the question of what scale the NNL/NG policy applies to: each LPA has a different set of practices concerning how and when ecological input is solicited, even where they have in-house ecologists (which, as the survey suggests, is about 40% of the time) – and of course a small number (8) stated directly that they solicit no ecological input at all. So an LPA respondent may say “NNL/NG applies to all development applications”, meaning, actually, all on which an ecologist is consulted. As one respondent, a Natural Environment Officer for a Southwestern unitary authority, put it: “The planning ecologist makes a judgement on those fractions of applications they are able to comment on.” A County Project Officer serving LPAs in an East Midlands county explained: “I’m trying to do it [apply NG] with all applications, however I only become involved in applications when requested by the authority so many get missed.”

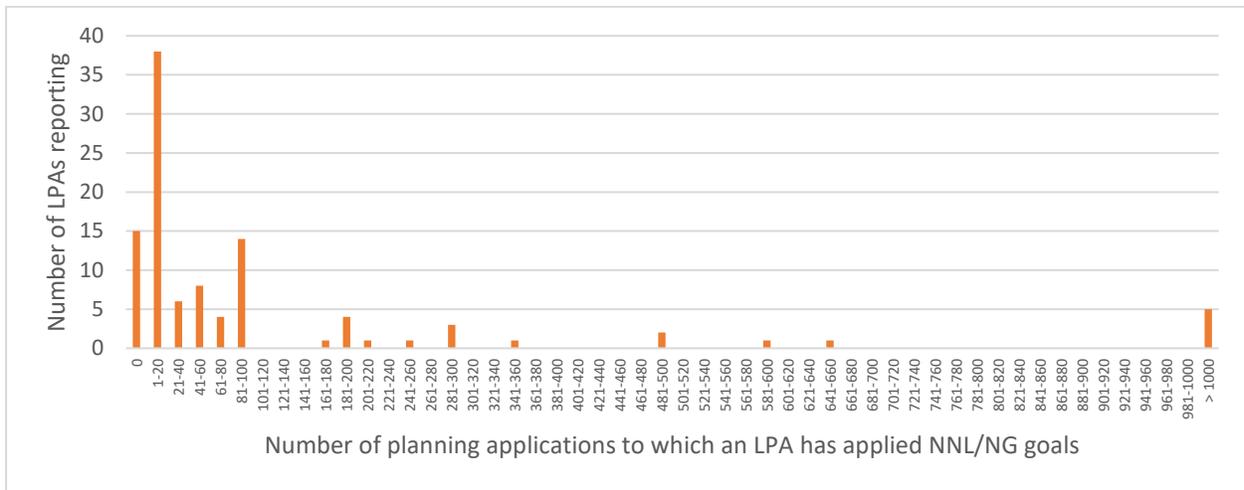
In several cases, respondents noted that although a Local Plan may call for “all applications” to be subject to a NNL/NG goal, in practice only the larger applications may be subject to it. As a Wildlife Trust ecologist in the Southeast put it, “this is largely down to the strength of the requirement under the various adopted policies currently in practice. What’s more, there is very little enforcement of agreed conditions if they become watered down or compromised, to the point where smaller insistencies for provision might just be quietly ignored.”

6) Depth of experience: How many projects has the NNL/NG requirement been applied to?

LPAs report applying the NNL/NG requirement to 17,712 planning applications. Responses to this query depended on the respondent’s ability to access a tally of planning applications, which many were not able to do. Of the 202 LPAs which have a NNL/NG policy, 98 of them (49%) did not reply to this query, replied that they did not know the answer, or replied unquantifiably (e.g. “all of them”). Of the 104 LPAs responding with usable estimates, the distribution is highly

uneven even among districts with relatively longstanding NNL/NG policies. St Albans (which established their NNL/NG goal in 2017) and South Ribble (2015) report applying the policy to fewer than 10 projects. At the other end of the spectrum, Uttlesford (2016) and Stroud (2015) report having applied NNL/NG to 1,660 and 5,000 projects, respectively. Of these 104 LPAs, 15 have not applied NNL/NG to any applications, 38 have applied NNL/NG to 20 or fewer applications, 37 of them have applied it to between 20 and 200, and only the remaining 15 have applied NNL/NG to more than 200 applications.

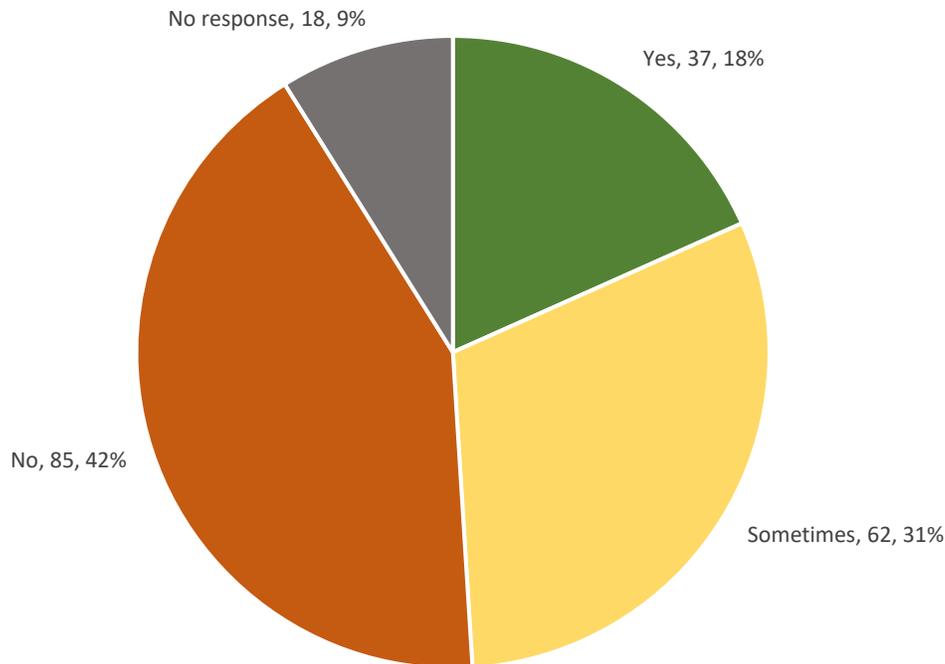
The reported total number of planning applications to which NNL/NG has been applied is certainly a massive undercount; the true number is much larger, and could be proportionally estimated at ~40,000 if the LPAs which did not respond to this question have applied NNL/NG to a similar proportion of planning applications. However, it does provide an absolute floor in estimating how wide and deep experience with applying NNL/NG is among English LPAs.



7) Have the NNL/NG goals in the Local Plan been treated mandatory on planning applications by the LPA?

Of the 202 LPAs which indicated having NNL/NG goals in their Local Plans, 181 responded to this question. It has been frequently said that very few LPAs treat the NNL/NG concept as mandatory, and that this practice is limited to “*the Warwickshire model*” and jurisdictions influenced by it. However, it is evident that a broad range of LPAs all over the country treat NNL/NG as mandatory in planning, with 37 considering it mandatory in all cases, and another 62 considering it mandatory for some types of planning applications or in some situations. There is, however, a spatial concentration to those LPAs considering it mandatory in all cases: most of the counties with more than one such LPA are counties generally recognised to be NNL/NG policy leaders: Warwickshire (6), Devon (4), Somerset (3), Oxfordshire (3), Greater London (3), and West Yorkshire (2).

Have the NNL/NG goals in the Local Plan been treated as **mandatory** on applications by the LPA?



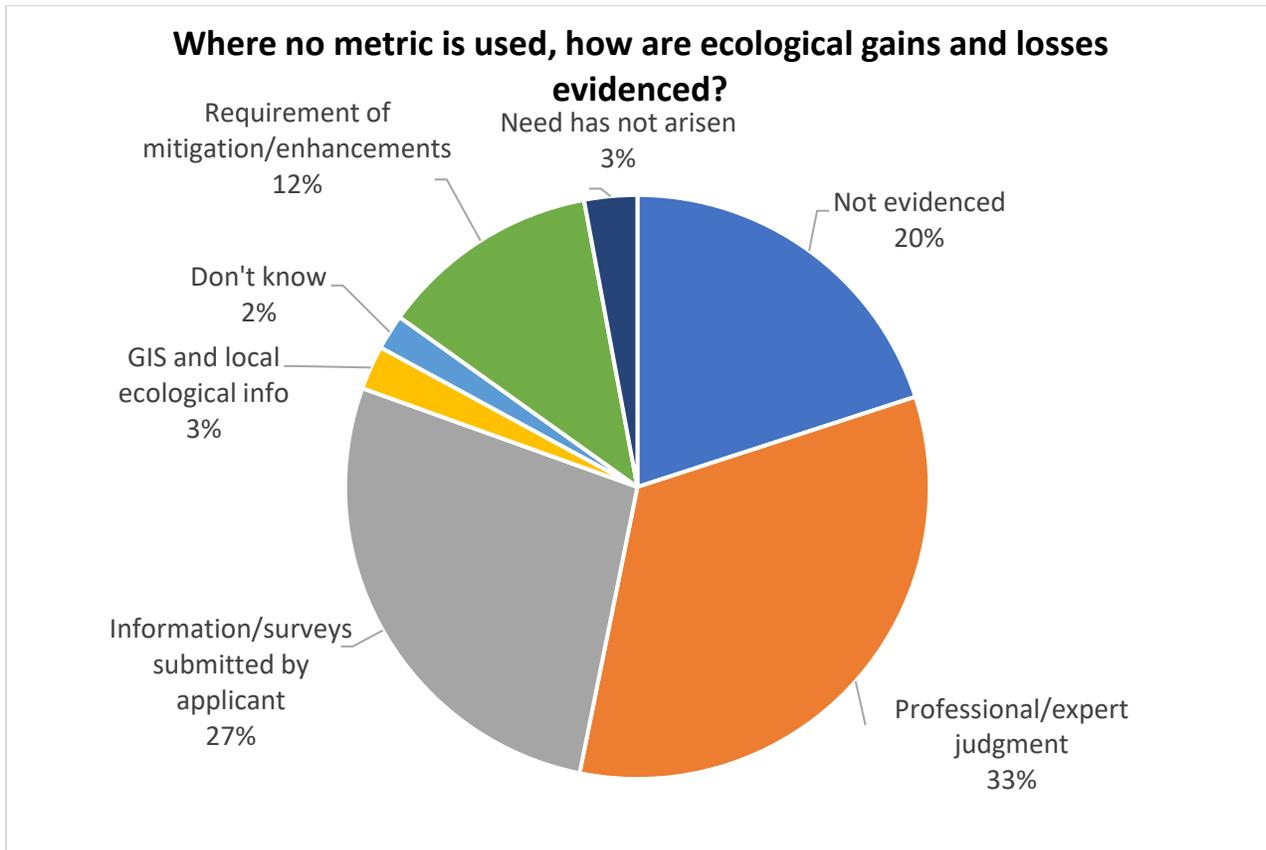
It is significant that nearly 100 of England's 352 LPAs already have experience in treating an NNL/NG goal as mandatory on some or all planning applications.

8) Metrics used by LPAs to quantify NNL/NG

Algorithms using rapidly-assessed field data to assess ecological condition, or 'metrics', are often used to measure biodiversity gains and losses and are frequently used to provide information to planning officers on the environmental impact of proposed developments. The numbers produced by such metrics are often used as the basis of net loss and net gain calculations. Many LPAs use metrics in assessing the ecological impact of development, whether or not there is a NNL/NG goal in their Local Plan. Of the 297 LPAs completing the survey, 102 (34%) used some kind of metric in considering the ecological impact of planning applications, while 184 (62%) did not.

Where LPAs did not use a metric to consider biodiversity losses and gains in planning applications, they used a variety of other means. In 20% of LPAs, losses and gains were not evidenced at all, in 33% of LPAs best professional judgement was used, and for 27% of LPAs the ecological surveys and information submitted by the applicant were considered sufficient

evidence. For 12% of LPAs, the completion of required mitigation or enhancements was considered adequate evidence of ecological gains.

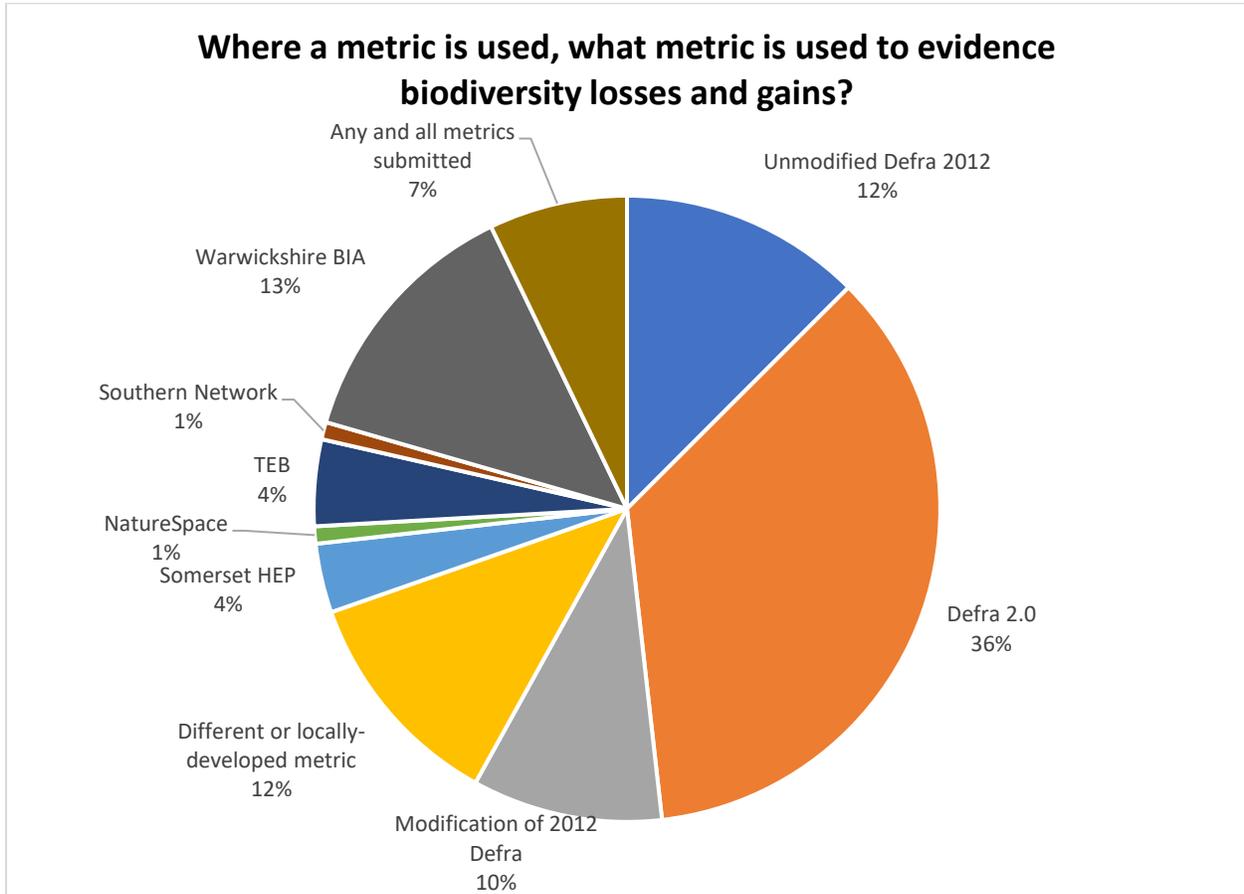


For the 184 LPAs not using a metric to evidence ecological gains and losses, best professional judgement remains the most important tool in assessing the impact of planning applications. Many respondents suggested the use of a metric would be desirable but was not yet practicable for the LPA, whereas professional experience and judgment was ready to hand: *“I suppose this comes from the personal experience of understanding & managing the Borough's ecology for over 30 years”* said a Landscape & Ecology Officer in the Southeast.

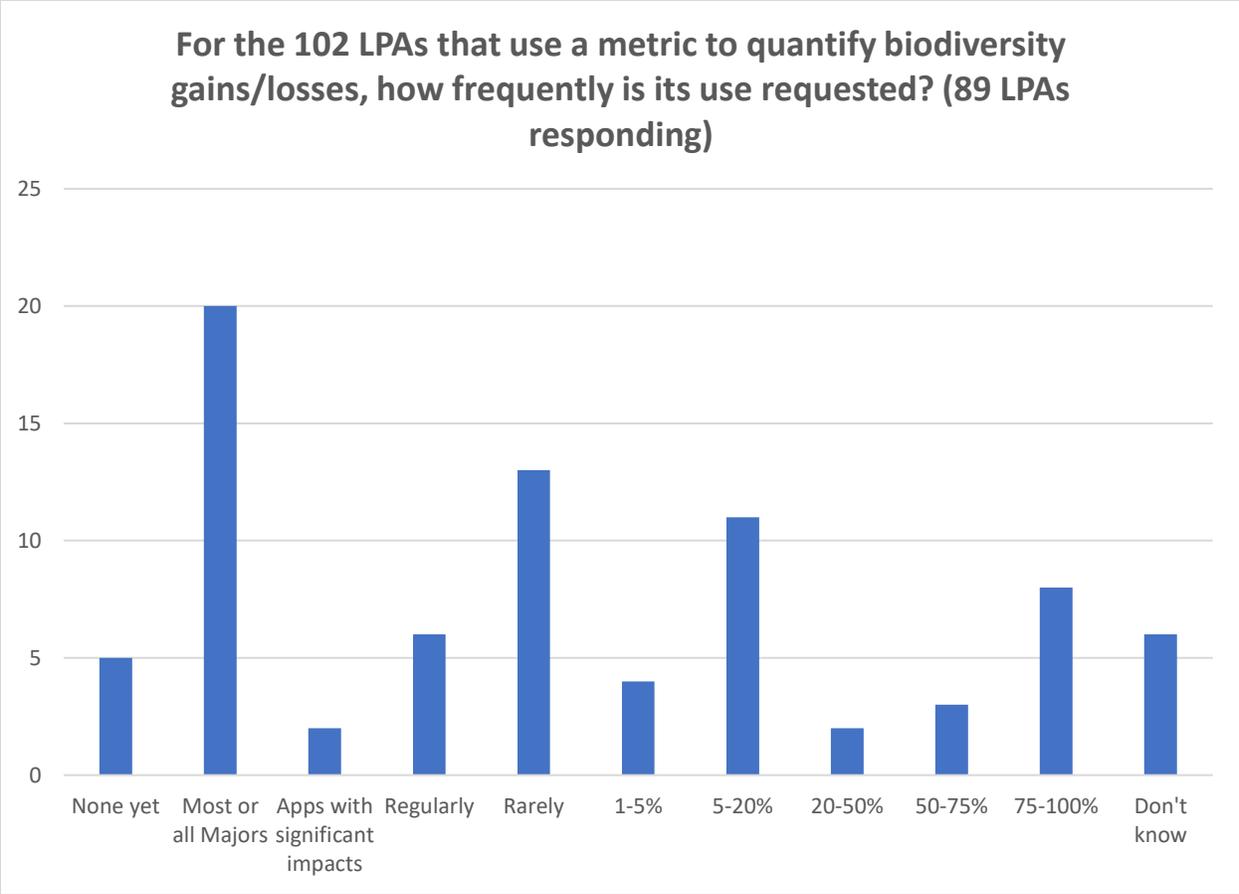
Of the 102 LPAs using a metric, 94 reported what metric they use. The 2012 Defra metric developed by Dr Jo Treweek in 2009⁴ was of course widely used in the past, but it is evidently being supplanted quickly by the Defra 2.0 metric released in 2019. The past 10 years has seen a proliferation of metrics, some adapted from Defra's 2012 metric and others invented from whole cloth. In the decentralised world of LPA ecological assessment, many continue to be used but few locally-developed metrics have spread beyond their site of origin. The Warwickshire Biodiversity Impact Assessment (BIA) is the most widely-known of these, referenced by 15 LPAs across the Midlands, Oxfordshire and Cambridgeshire. The Somerset Habitat Evaluation

⁴ Treweek, J. 2009. Scoping Study for the Design and Use of Biodiversity Offsets in an English Context. Contract NE 0801, Final Report, April 2009.

Procedure (HEP) is used only in Somerset County, and other privately-developed metrics such as those developed by The Environment Bank, NatureSpace and Southern Network only mentioned rarely. Several LPAs mentioned a willingness to consider data presented using any metric.



Although 102 LPAs reported using a metric to quantify biodiversity losses and gains, it is clear that they do not always request a metric to be used. Of the 89 LPAs to respond to this query, only 8 LPAs report requesting it for all applications – the plurality of LPAs using a metric request it only for “*major*” applications, and it is evident that overall the use of a metric is sporadic even in the minority of LPAs where it is seen as providing valuable information to the planning process. The nature of the use of metrics is still largely a ‘request’ rather than a ‘requirement’ on the part of ecologists in planning, and for applicants the consequences of refusing the request are variable and often minimal. Furthermore, the nature of the ‘request’ for metric use can be formal or informal, and usually is communicated by a non-ecologist planner: an in-house Conservation Officer at an East of England LPA explained, “*it’s difficult to be precise – some requests come from case officers directly, and I am not consulted on all applications.*”



Finally, one measure of how the use of metrics has spread and been taken up by the development community is how often respondents report that applicants submit metric calculations of biodiversity impact without being asked to. This is split evenly between the 112 LPAs responding to this question, with 57 reporting that this has not happened, and 55 reporting that it has. However, the LPAs reporting that they have received unsolicited biodiversity impact metric calculations are strongly clustered in the counties where biodiversity policy in planning has been stronger and implemented more thoroughly. 76% of those LPAs responding that they receive unsolicited metrics from applicants are in just 8 counties: Warwickshire, Devon, Somerset, Oxfordshire, Buckinghamshire, West Yorkshire, Leicestershire, and Hertfordshire. This suggests that the community of developers in those counties has learned to accept metric calculations as a normal part of doing business and not an extra imposition on the part of planners.

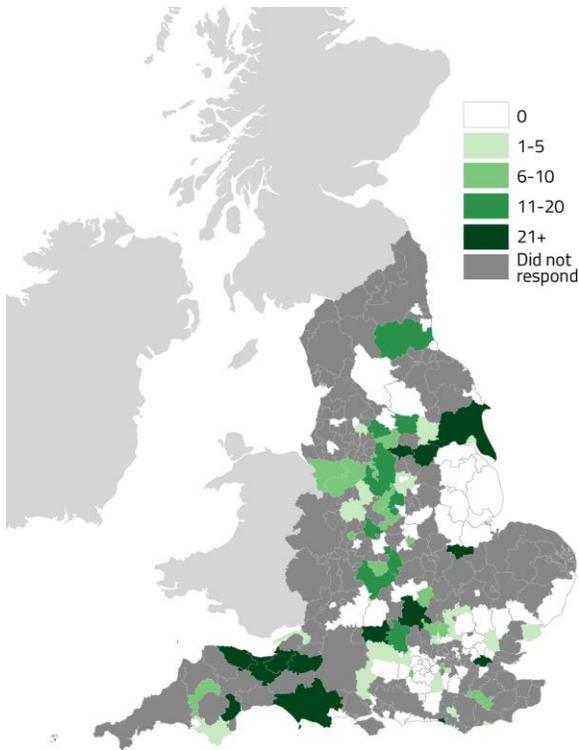
Detailed Results Part II: Biodiversity Offsetting in Practice

9) How much Biodiversity Offsetting has already occurred?

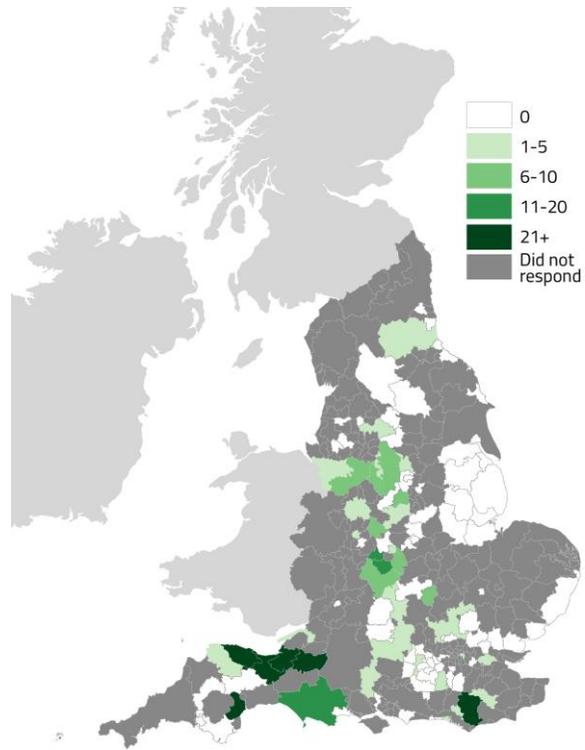
How many hectares of biodiversity offsets have been created? **150 LPAs responded to this question, with 70 having required the creation of a total of 1885.6 hectares of biodiversity offsets** in association with planning permissions. Due to the variable meaning of “*biodiversity offsetting*” used by respondents, this is certain to include some species-specific habitat measures as well as some projects that are not quantified using a biodiversity metric. It is likely that respondents interpreted the word “*created*” in different ways, and that not all hectares “*created*” had been fully secured and delivered. Therefore, a second question asked how many offset projects had been secured and delivered: **159 LPAs responded, showing 361 biodiversity offset projects delivered in 53 LPAs**. Responses to this were far less certain, with 19% responding that they didn’t know or that the question required further research: “*records not readily available*” (Southeastern LPA Natural Environment Team Leader) and “*don’t know, low numbers and with mixed outcomes many are unsatisfactory, no system at present to measure success*” (Southwestern LPA Ecologist). **These numbers are certainly an undercount**, especially with the large number of uncertain responses to the second question. Note the large number of LPAs that responded to the survey generally but did not respond to these questions; these are LPAs that indicated they have no NNL/NG and BDO policy, so it may be safe to assume they would report zero for both.

Hectares created	LPAs	
don't know	1	1%
0	79	53%
1-5	27	18%
6-10	17	11%
11-20	11	7%
>20	15	10%
LPAs responding	150	
LPAs not responding	148	

Projects delivered	LPAs	
don't know	31	20%
0	75	47%
1-5	36	23%
6-10	8	5%
11-20	3	2%
>20	6	4%
LPAs responding	159	
LPAs not responding	139	



How many hectares of BDO have been created?



How many BDO projects have been delivered?

LPAs reporting 20 or more hectares of BDO created:

Doncaster Borough	500
Thurrock Council	100
Exmoor National Park	100
Mendip District	100
Sedgemoor District	100
Somerset West and Taunton District	100
Barnsley Borough	100
Dorset County Council	56
Devon County	50
Aylesbury Vale District	50
East Riding of Yorkshire Council	50
Peterborough Council	50
Vale of White Horse District	40
Teignbridge District	30
Brighton and Hove, City of	25
Calderdale Borough	20
Durham Council	20

Nuneaton and Bedworth Borough	20
Derby, City of	20
South Oxfordshire District	20
Amber Valley Borough	20
Peak District National Park	20
Leeds, City of	20

LPAs reporting 5 or more BDO projects secured and delivered:

Wealden District	50
Exmoor National Park	25
Mendip District	25
Sedgemoor District	25
Somerset West and Taunton District	25
Teignbridge District	25
Warwick District	16
Solihull Metropolitan Borough	15
Dorset County Council	13
Peak District National Park	10
Stratford-on-Avon District	10
Milton Keynes Council	10
Lichfield District	8
Rugby Borough	8
Devon County	7
Amber Valley Borough	6
Cheshire East Council	6
Brighton and Hove, City of	5
South Derbyshire District	5
St. Albans, City and District of	5
Wolverhampton, City of	5

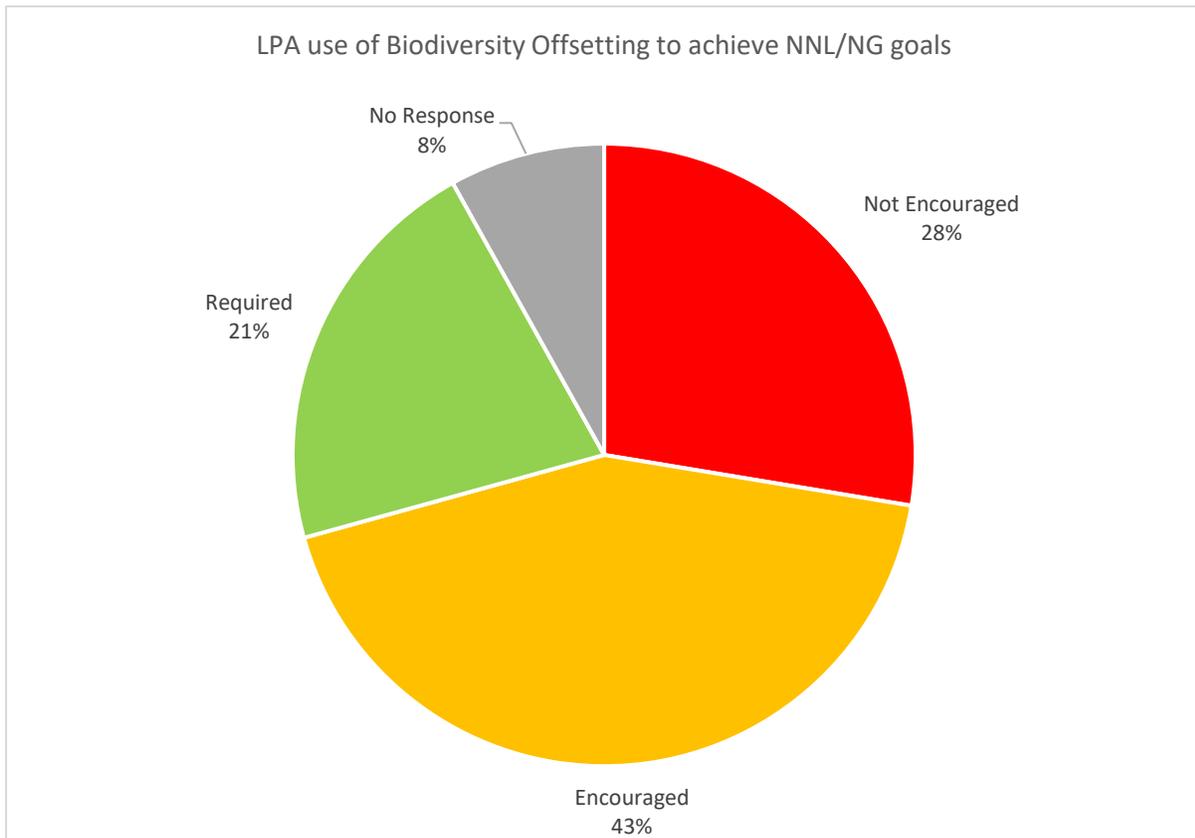
These numbers describe an overall national experience with BDO that is still in the early stages of experimentation. **Fewer than 2,000 hectares of BDO have been created in fewer than 400 delivered projects.** However, it is also true that the geography of experience with BDO extends far beyond the acknowledged hubs of expertise in Warwickshire and the Southwest.

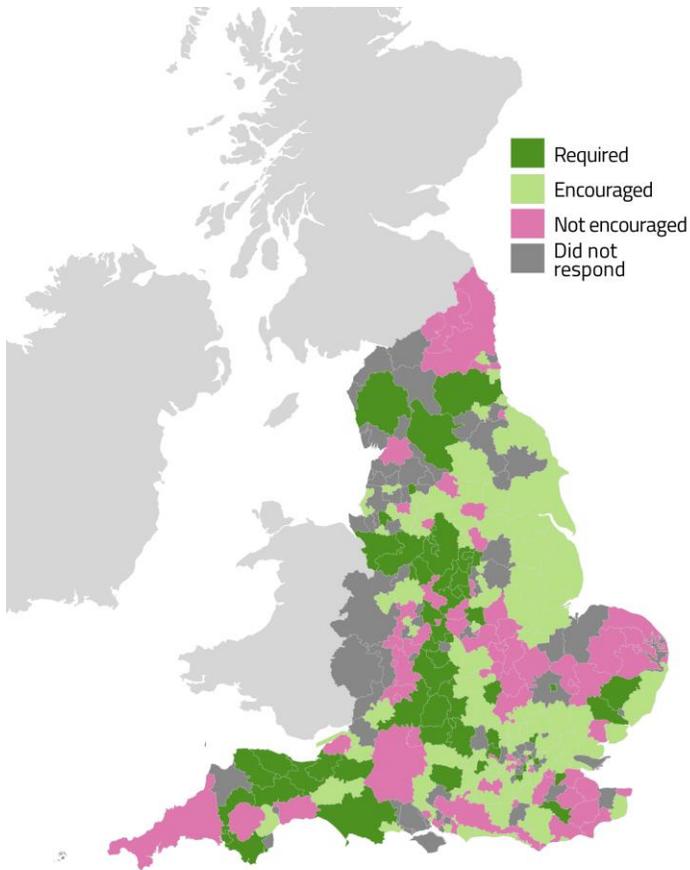
10) How widely is biodiversity offsetting used to meet LPA>NNL/NG goals?

The survey asked LPAs whether or not they used biodiversity offsetting (BDO) to meet their>NNL/NG goal, and a substantial majority said they “*encouraged*” or “*required*” it, although the fact that only three responses were allowed hides quite a bit of variability: many LPAs encouraged or required it only with regard to certain kinds of impacts or situations. Still, the

fact that only just over a quarter of LPAs reject the use of BDO out of hand suggests a high degree of penetration and legitimacy of the concept at the LPA level. Overall, 63 LPAs reported requiring BDO, while 128 encouraged its use in plan permissions.

One problem with survey design is that English LPA respondents don't have a unified idea or definition of what counts as 'biodiversity offsetting', and it was not possible to enforce one within the context of the survey. All agreed that BDO involves off-site ecological improvements. However, for some, financial contributions to off-site ecological work (perhaps through a Section 106 agreement) constitutes an offset. For others, habitat amendments offsite aimed at specific species, rather than "non-habitat biodiversity", counts as a biodiversity offset. For still others, off-site work can only be BDO if it is quantified through a standard metric; if it is not, it is merely "compensation". This last usage is closest to the Defra and NPPF concept of BDO, but to restrict the survey to such a narrow usage would prevent it from showing the broad use of off-site ecological improvements which are considered BDO by planners, ecologists and the development community.

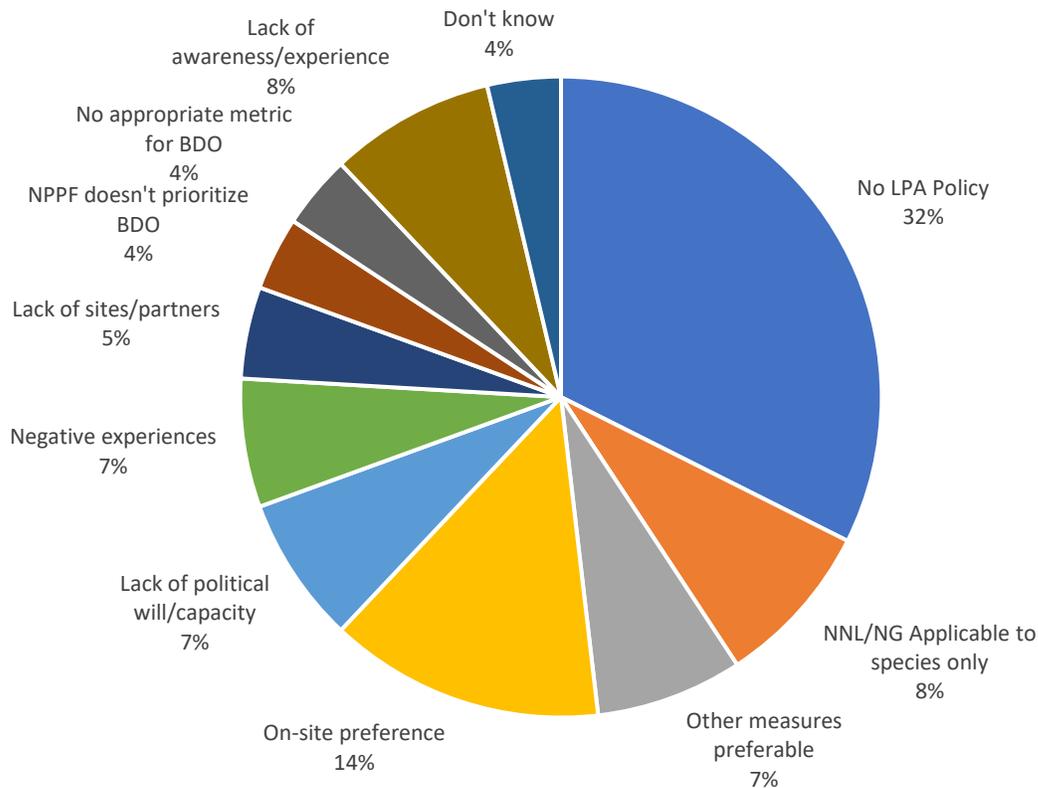




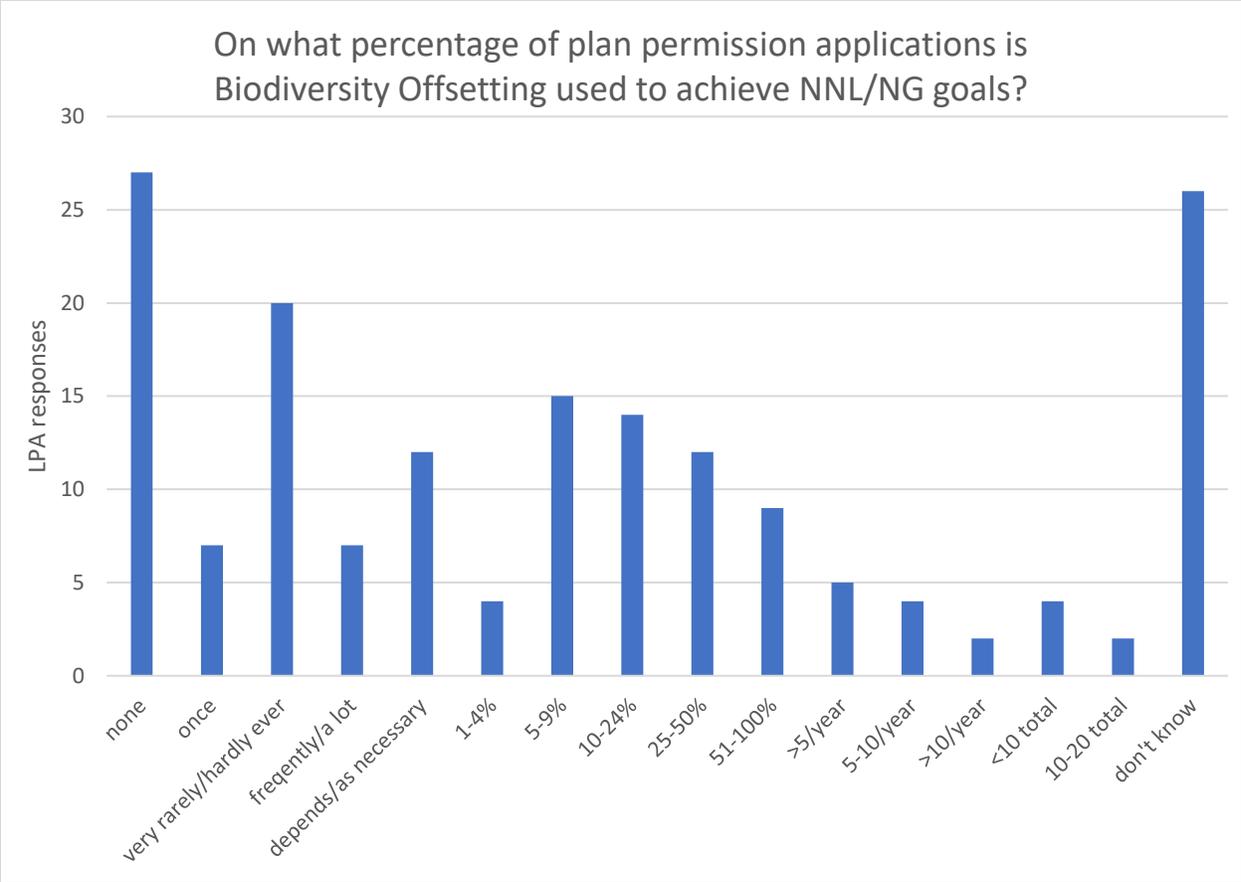
Does the LPA encourage or require the use of BDO where on-site compensation and mitigation is unable to achieve NNL/NG?

For those 82 LPAs that reported BDO is “*not encouraged*”, a wide variety of reasons were given for this reluctance. Nearly a third said that they could not encourage it because there was no provision for BDO in the Local Plan. The preference to compensate for all impacts on-site was the second most frequent answer. But overall the answers were varied and often dependent on local experience, local politics, and local development patterns.

Why do 82 LPAs "not encourage" Biodiversity Offsetting as a NNL/NG mechanism? (108 reasons given)



For those LPAs which do use BDO, the frequency with which they use it varies dramatically. A few report using it on more than 50% of plan permission applications, but most employ it in a very limited fashion, and the majority of responses are from LPAs which may approve the use of BDO in concept, but have used it only a handful of times or none at all. Of 170 responding LPAs, 88 reported using BDO less than 10 times in total, for fewer than 5% of applications, very rarely, or didn't know. The difference between BDO being recommended by an ecologist and being incorporated into a plan permission is also clear: one county ecologist replied "*Ecologist recommends 100%*". Often LPA experience is from only one or a few projects from which no general principles have been formulated: An LPA Biodiversity Officer from the Southeast replied: "*We haven't got a framework in place but we have negotiated one bespoke agreement.*" In a similar vein, a London Borough Planning Officer mentioned the unique nature of offsetting for the Cory Riverside Resource Recovery Limited (RRRL) project.



Of the 191 LPAs encouraging or requiring the use of BDO, only 53% (98 LPAs) report quantifying these offsets using the same metric applied to assess NNL/NG on all plan permission applications. 59 LPAs (32%) would quantify BDO using a different metric system, and 29 of them (16%) use no metric at all to quantify biodiversity offsets. As the graph above suggests, these responses are often not based on a great deal of practice, but it speaks to the variety of existing metrical practices around biodiversity. Of the 59 LPAs using a different system to quantify offsets, 32% used professional judgement, and a range of other metrics were used including the Agri-Environment Scheme metric, CAVAT (Capital Asset Value for Amenity Trees), or a locally-modified metric. The nature of ‘professional judgement’ varies considerably: one London Borough uses “GIS-based assessment models and consultation with record centres & other officers”, while a Southeastern county ecologist says of an LPA they advise, this is a “value judgement based on expert opinion.”

Metrics used to quantify BDO, where different from metrics used by an LPA to account for habitat and biodiversity impacts generally:

Expert judgement	17	32%
Costings	3	6%
Target species count	7	13%
Area or functional area	7	13%

11) How much does LPA in-house ecological expertise affect the uptake and use of BDO policy?

It is possible to extract evidence on the importance of having in-house ecological expertise in an LPA:

	Reporting ≥10 ha BDO	Reporting <10 ha BDO	Reportin g 0 ha BDO	No response to BDO query	Total
LPAs without ecological advice	2	5	9	38	54
LPAs without in-house ecological advice	17	12	38	50	117
LPAs with in-house ecological advice	19	15	32	60	126
Total	38	32	79	148	297

Of the LPAs that did not respond on BDO questions, meaning they have no BDO policy at all, 59% did not have in-house ecological expertise, while 41% did have in-house ecological expertise. The LPAs that did respond to BDO questions, but reported zero hectares of BDO required, reported the exact same percentages of in-house expertise. This means there was no expertise difference between those LPAs which did not have a BDO policy, and those LPAs which had one but did not use it.

Of the 70 LPAs that have required some hectareage of BDO, 51% did not have in-house ecological expertise, while 49% did have in-house ecological expertise. So in-house expertise is associated with the active use of BDO requirements.

The take-away message concerning in-house expertise is that it appears to matter marginally in the use of BDO as a requirement, as opposed to merely the adoption or consideration of BDO policy. However, many LPAs that report requiring BDO are in counties with strong county ecologists who work closely with LPAs that may not have in-house expertise; the lack of in-house expertise matters less in those situations. One would expect to see the largest challenges to uptake of BDO in counties where there is no in-house ecologist and a hands-off (or absent) county ecologist.

12) What performance standards to LPAs apply to biodiversity offsetting?

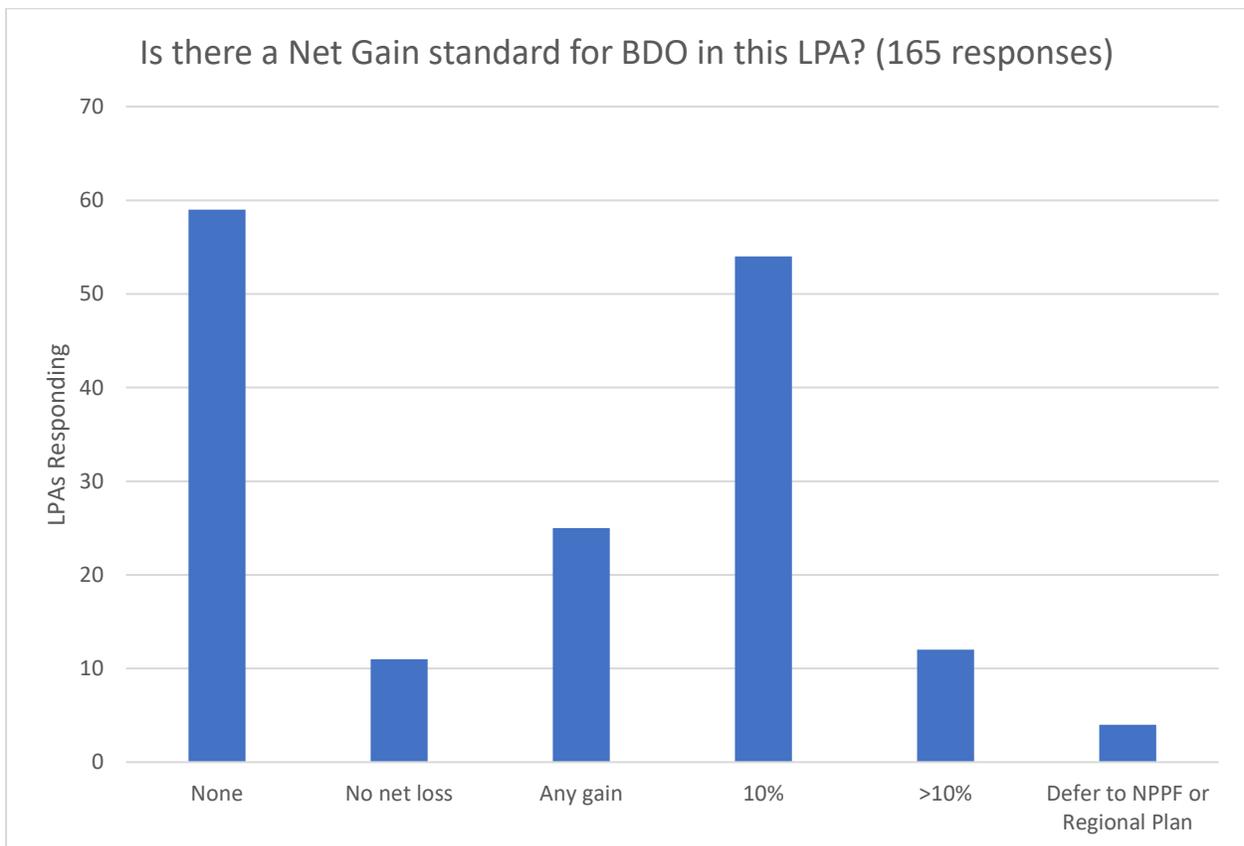
The survey asked about five kinds of performance standards attached to BDO:

- Is there a net gain requirement?
- How long must a BDO site be secured?

- Is there a monitoring requirement?
- Is BDO site selection guided by a landscape strategy?
- Is BDO site selection guided toward certain wildlife or habitat targets?

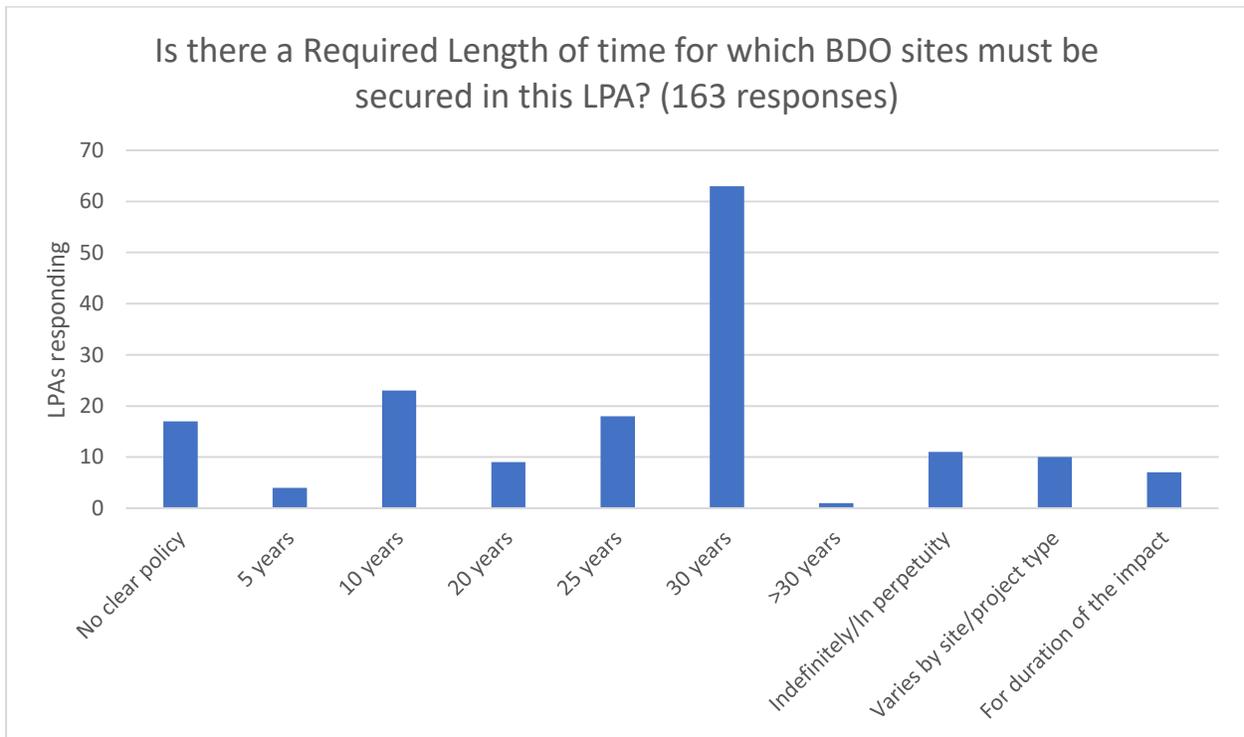
It is important to remember that many of these responses represent untested policy positions – BDO is still quite infrequently used and so these standards may be more or less theoretical or unimplemented policy.

Many LPAs responded that they had no policy on whether BDO needed to achieve Net Gain, or responded that they are already implementing the 10% requirement they anticipate will be incorporated into the next Environment Act. Only one LPA, the early-acting Lichfield District in Staffordshire, reported a general NG requirement over 10%, but LPAs in Lincolnshire are held to a standard of gain that increases past 10% the further away from the site of impact the offset is located. However, since there had only been four permits with BDO requirements in all of Lincolnshire at the time of the survey response, this policy had yet to be broadly implemented and tested.

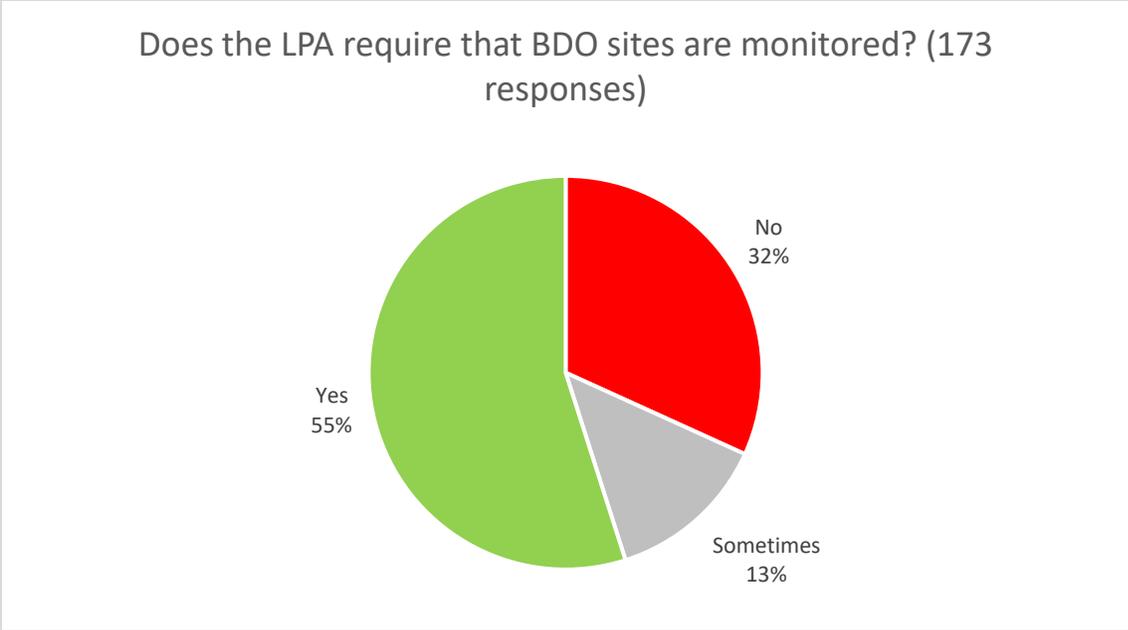


LPAs have formed a growing consensus that 30 years is the appropriate amount of time to secure BDO sites, again in line with their expectations for the Environment Act. However, only 39% of LPAs use the 30-year standard, while another 39% require being secured for 20 or fewer

years, or vary the period by type of impact or project. A few LPAs (11, or 7%) specify the securing of sites in perpetuity, but most of these LPAs note that these offset sites are on land owned by the Council, and considered to be secured in perpetuity by virtue of their public ownership. Thus, an LPA Planning Policy Manager in the West Midlands notes that offsets are “nearly always on Council-owned land, specific measures without maintenance costs, so no timescale attached.”



A slim majority, 55% of LPAs responding, require that BDO sites be monitored, although the frequency of that monitoring varies widely and several responses indicated that it is impossible to enforce. An LPA in the Southeast indicates that monitoring once every five years is sufficient, while a Merseyside LPA frankly says “Yes – though often not received”. Requiring monitoring by policy is clearly no guarantee that monitoring is performed, or that any further action is taken pursuant to monitoring reports received.



LPAs were asked if either landscape-scale or species/habitat-specific strategies were used to guide the location and siting of offsets. Clearly, many LPAs do, but the meaning of ‘landscape strategy’ is quite variable. Many consulted Habitat Network Plans for such purposes, but others had far more specific and prescriptive landscape strategies that had been issued as, for example, biodiversity Special Planning Documents or Green Infrastructure Plans. In the majority, however, as one Southwestern LPA Biodiversity Officer noted, *“biodiversity and landscape are addressed very separately.”*

Quite a few more LPAs report using habitat-specific strategies than formalised landscape plans in siting offsets. Biodiversity Action Plans were the most frequently mentioned, although in mentioning them several LPAs discredited them as either out-of-date or as *“essentially redundant since the Gov[ernmen]t withdrew all support for this process”* (Southeastern LPA Senior Biodiversity Officer). Another Home Counties LPA Senior Ecology Officer responded, backhandedly: *“Not as such, although the Biodiversity Action Plans still exist.”* Several more helpful initiatives were cited specifically in siting offsets, such as Surrey’s Natural Capital Investment Strategy, the Greater Lincolnshire Nature Strategy, Kent’s Biodiversity Opportunity Areas, the Liverpool City Region Ecological Network, mapping from the Hampshire Biodiversity Information Centre, and various county Local Ecological Networks and Habitat Opportunity Maps.

What kind of strategy is used in this LPA to guide the siting of offsets?

	Landscape Plan	Habitat/Species Strategy
No	125 (71%)	86 (48%)
Yes	51 (29%)	94 (52%)
Responses	176	180

13) How are BDO sites arranged for and secured?

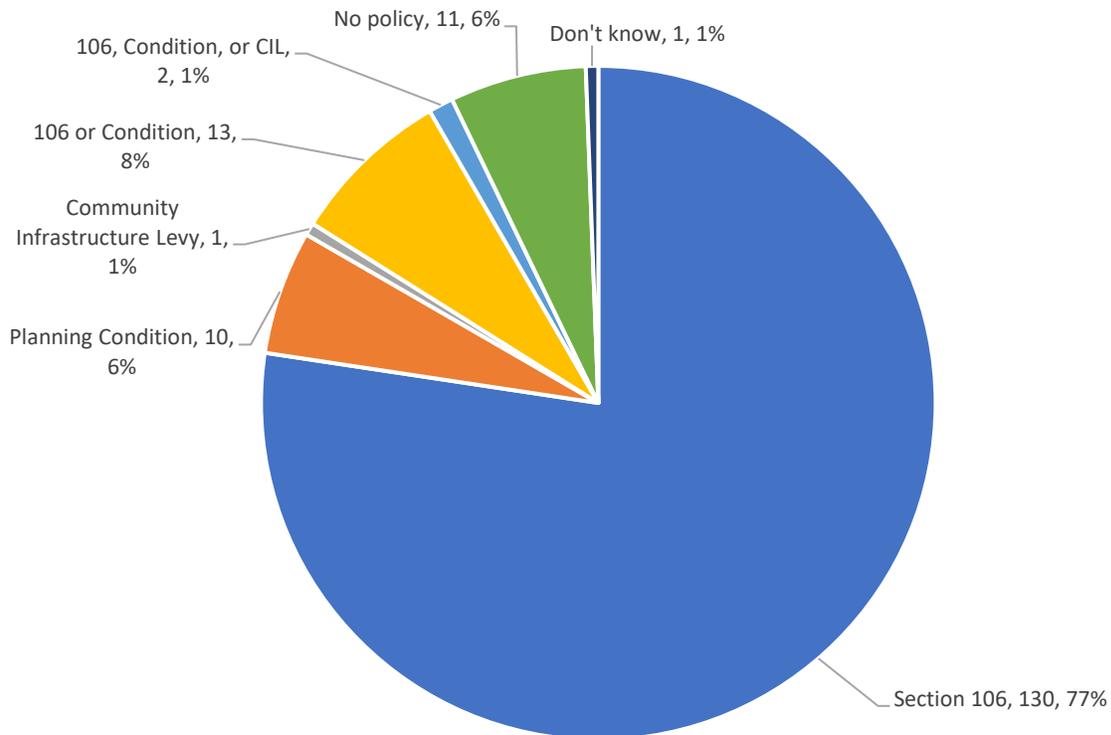
The work of spending the money to secure an offset site continues to be largely that of the LPAs themselves, with just over half of 155 responding LPAs saying that it is their own staff using developers' money to site offsets when they then own and manage. Developers are also known to secure and manage their own offset sites, and LPAs frequently turn to Wildlife Trusts, local committees, or special local NGOs such as the North Devon Biosphere Foundation to receive funds to establish offset sites. Thus far only 5% of LPAs report using a third-party broker such as The Environment Bank to arrange for offset siting.

Who arranges for and secures BDO sites using funds from the permit applicant?

	LPAs (155 responding)	Percent
LPA or County Staff	86	52%
Broker/private third party	9	5%
Developer	22	13%
Wildlife Trust or Conservation NGO	22	13%
Don't know	5	3%
No one	17	10%
Multiple unspecified	5	3%
Total responses	166	

Although it is possible to secure BDO obligations from a planning permission applicant by a number of mechanisms, LPAs overwhelmingly prefer to use Section 106 agreements creating a financial obligation to the LPA, or Section 106 unilateral undertakings to pay an obligation to which the LPA is not party. Section 106 agreements are the planning mechanism most able to impose financial obligations on applicants, and are used for a wide variety of obligations incurred by applicants. However, conditions attached to the planning permission itself are also used – these must necessarily be much shorter and less specific than Section 106 agreements, and are able to impose legal but not financial obligations directly. Finally, contributions to the Community Infrastructure Levy (CIL) – which can be used for a variety of infrastructural purposes – are used by only three LPAs, and used exclusively by only one LPA. When Counties act as LPAs, particularly on matters of transportation, they find themselves being both applicant and planner – in such cases it is not possible for them to enter a Section 106 agreement with themselves, and so they will create bespoke legal arrangements.

What mechanism is used to secure BDO obligations from plan permission applicants? (168 LPAs responding)



Conclusion

Use of NNL/NG and BDO have diffused widely across England, though expertise and familiarity is still spatially concentrated in the Southwest and West Midlands. While much of the national discussion has centered around Net Gain as a planning goal, in many areas LPAs are still reconciling themselves to No Net Loss goal articulated in the 2012 NPPF and wrestling with the policy and resourcing challenges it posed. At present, 56% of LPAs consider it “*practical*” to implement and deliver NNL/NG and 66% of LPAs have a NNL/NG provision of some kind in their draft or final Local Plan. However, the lack of adequate resourcing is a major barrier to implementation, with respondents citing lack of land, expertise, and political permission. The subset of planning applications to which NNL/NG applies, even in LPAs which consider it practical, varies widely, and it is clear that in most cases that NNL/NG is variously enforced and measured. Only a third of LPAs reported using a metric to measure NNL/NG. Only 39% of LPAs have in-house ecological expertise, about 82% of respondents provide advice to only one LPA, meaning that expertise is thin and decentralised.

The use of offsetting sites to achieve either NNL or NG has been a key part of the policy debate since the 2012 Defra pilot, and however controversial offsetting is, it remains central to most calculations considering how Net Gain can be achieved. Wherever offsetting becomes a common practice, its availability will exert pressure on the requirement to avoid and minimise impacts – the first two steps of the hierarchy by which the mitigation of environmental impacts are considered in the planning process. This was seen in the USA in the 1990s, and strong policy barriers are generally necessary to ensure that NNL/NG policies do not entirely rely on offsets.

The uptake of Biodiversity Offsetting has been uneven but has spread broadly from the initial centres of practice. At minimum, LPAs have required 1,886 hectares of biodiversity offsets and fully delivered 361 BDO projects. BDO seems to have a relatively high degree of legitimacy and implementation, at least in concept: 63 LPAs reported requiring BDO, while 128 encouraged its use in plan permissions, and Section 106 agreements are widely agreed to be the best tool for implementing them. Only a quarter of responding LPAs reject the use of BDO. However, acceptance is mainly theoretical at this point: only 15 LPAs report creating more than 20 hectares of BDO, and only 17 report the securing and delivery of more than 5 BDO projects. Awareness of BDO appears to be fairly broad, therefore, but actual use of it appears to be in the early stages of experimentation in most of the LPAs that have adopted it in concept. For BDO to be implemented with integrity, and in ways that meet the goals of Net Gain, a high degree of support for ecology in planning will be required to ensure that planning officers can benefit from the experiences of their peers across England and that the lessons learned in different landscapes can become a generalised set of principles grounded in the implementation of real offset projects show to achieve planning goals.

Contact

Please contact me with any further questions concerning this data and research at mmrobertson@wisc.edu. I am happy to work with LPAs and agencies to develop further specific results from these data. I cannot divulge the names, titles or contact information of survey respondents to any party. However, survey data concern public policy enacted by public servants, and is therefore otherwise freely available.

Acknowledgements

I would like to express my deep gratitude to the hundreds of LPA and Wildlife Trust staff all over England who took the time to fill out the survey and often to speak with me personally about this research. Thank you for sharing your time and expertise. Staff from The Environment Bank provided essential advice in designing and writing the survey. This work was supported by National Science Foundation grant NSF-BCS-1461746, and by my co-grantees Dr Rebecca Lave of Indiana University and Dr Esteve Corbera of the University of Barcelona.

Appendix A – Non-Responding LPAs

Ashfield District	Knowsley Metropolitan Borough
Barking and Dagenham London Borough	Liverpool, City of
Blackburn with Darwen Borough	Merton London Borough
Blackpool Council	New Forest National Park
Burnley Borough	Newcastle-under-Lyme Borough
Cannock Chase District	North Tyneside Council
Carlisle, City of	Nottingham City Council
Chorley Borough	Preston, City of
City of London, City and County of	Redditch Borough
Copeland Borough	Ribble Valley Borough
Craven District	Ryedale District
Cumbria County	South Cambridgeshire District
Dudley Metropolitan Borough	South Gloucestershire Council
Eden District	The Broads Authority
Enfield London Borough	Torridge District
Fenland District	Walsall Borough
Fylde Borough	Wandsworth London Borough
Gosport Borough	Warrington Council
Greenwich, Royal Borough of	West Lancashire Borough
Hambleton District	Winchester, City of
Hampshire County	Wirral Borough
Hillingdon London Borough	Wyre Borough
King's Lynn and West Norfolk Borough	York Council