NAVIGATING THE IMPLEMENTATION CHALLENGES OF BIODIVERSITY NET GAIN: A STAKEHOLDER-BASED POLICY ANALYSIS

ROWENA SHIVAM

BSC, SUSTAINABLE BUILT ENVIRONMENTS, ENERGY AND RESOURCES
UCL, BARTLETT SCHOOL OF ENVIRONMENT, ENERGY AND RESOURCES

DR. RICCI YUE

LECTURER IN SUSTAINABLE RESOURCE POLICY, BARTLETT SCHOOL ENV, ENERGY & RESOURCES

SEPTEMEBER 2025

1. Introduction

England is pioneering a legally mandated Biodiversity Net Gain (BNG) policy under the Environment Act 2021, aiming to embed biodiversity enhancement into the planning system. With BNG becoming mandatory for large-scale developments from February 2024, and for smaller sites from April 2024, the policy is set to transform land-use planning. However, implementing BNG at scale presents substantial challenges related to governance, capacity, and monitoring. One year on, there is a strong need to review the implementation challenges of this law. This research does so by using a combined literature review and stakeholder focus group methodology framed by SWOT (Strengths, Weaknesses, Opportunities and Threats) and ROAMEF (Rationale, Objectives, Appraisal, Monitoring, Evaluation and Feedback) analytical models.

2. Research Objectives and Methodology

This study aims to identify key issues in the implementation of BNG by drawing insights from academic literature and stakeholder experiences. The objectives are:

- To review existing evidence on BNG implementation challenges;
- To identify and analyse practical barriers and enablers through multi-stakeholder workshops;
- To develop recommendations to support effective BNG delivery.

2.1 Phase 1: Literature Review

A structured review of peer-reviewed articles, government guidance, consultancy reports, and grey literature was undertaken. Key themes discovered included legislative foundations, ecological integrity, monitoring practices, and market-based conservation mechanisms. These themes informed the creation of prompt questions for the stakeholder focus groups and interviews (Figure 2).

2.2 Phase 2.1: Stakeholder Recruitment

Potential focus group participants were identified through snowballing sampling using LinkedIn search, based on their involvement with BNG and their roles in either LPAs, legal sector, developers, academia or government. Most were formally invited by email and all who agreed to take part signed an official UCL consent form. In this form, participants were also able to indicate preferred times and dates – this flexibility ensured maximum participation. Participants were then grouped by job role (Developers and Legal; LPAs and Academics) and those who could not make their group's time were reallocated or invited to an individual interview.

2.3 Phase 2.2: Stakeholder Focus Groups

Two focus group workshops and four supplementary expert interviews were conducted (Figure 1). The 11 participants represented a cross-section of stakeholder groups: academic researchers, planning authorities, developers, and environmental consultants. Using a shared Miro board with a structured SWOT framework, participants identified and discussed key strengths, weaknesses, opportunities, and threats in BNG implementation. The participants were asked to freely discuss strengths for 10 minutes, then weakness etc but in some cases, prompt questions were required to stimulate discussion. This technique was used more often in the individual interviews, where the prompts were displayed on screen throughout. The prompts were all derived from my literature review (Figure 2).

	Focus Group 1	Focus Group 2	Interviews	*Total*
Developer	1		2	*3*
LPA/Gov		2	1	*3*
Academic		2		*2*
Legal	2		1	*3*
Total	*3*	*4*	*4*	***11***

Figure 1 shows the distribution of stakeholder types across focus groups and interviews.

2.3 Analysis Framework

Recording transcripts and Miro board inputs (Figure 3) were coded using the ROAMEF policy framework and the SWOT framework. This enabled a linear evaluation of policy lifecycle elements as well as SWOT themes not captured in the MIRO boards.

3. Summary of Literature Review

The introduction of Biodiversity Net Gain (BNG) in England under the Environment Act 2021 represents a pivotal shift in environmental governance and land-use planning. From 2024, all major and minor developments must deliver a minimum 10% measurable improvement in biodiversity compared to pre-development baselines (Gov.uk, 2024).

Strengths

BNG's legal enforceability provides consistency across England's planning system. The 10% threshold, while modest, offers a clear and uniform target (Gov.uk, 2024). The DEFRA biodiversity metric strengthens scientific credibility by integrating factors such as habitat distinctiveness, condition, and strategic significance (DEFRA, 2023).

The framework allows compliance through both on-site improvements and off-site habitat banking, where biodiversity units are purchased from accredited landowners or conservation organisations. This flexibility has driven innovation and the growth of habitat banks, such as those in Hartlepool (Webster et al, 2023).

Internationally, England's metric-based model is considered pioneering. Alignment with Local Nature Recovery Strategies (LNRS) further localises outcomes by prioritising ecologically

valuable areas (Natural England, 2024a). Government guidance, including FAQs and evolving best practice, has also supported adoption (Gov.uk, 2024).

Weaknesses

Implementation challenges are significant, particularly around enforcement. Studies suggest up to 25% of biodiversity units are not adequately monitored post-development, revealing oversight gaps (Leith Ecology, 2025). The absence of a unified digital registry fragments monitoring and undermines transparency (Natural England Evaluation Plan, 2024).

Local Planning Authorities (LPAs) face chronic under-resourcing. Many councils lack ecological expertise, creating inconsistent metric application and limited scrutiny of submissions. The DEFRA metric's complexity allows opportunities for manipulation, such as overstating baseline degradation (Lambert, R, 2024).

The Small Sites Metric has been criticised for oversimplifying ecological conditions, potentially masking biodiversity losses in site-specific contexts (Lambert, R, 2024). The 30-year maintenance requirement may also prove inadequate for long-developing ecosystems like woodlands, with unclear responsibility for management beyond this period (Webster et al, 2023).

Other weaknesses include risks of ecological homogenisation, as market incentives may steer landowners toward cheaper, uniform habitats that meet thresholds but lack diversity. Exemptions for small developments are equally concerning, potentially resulting in the loss of 500–1,500 hectares of potential habitat gain annually.

Opportunities

BNG aligns strongly with climate adaptation strategies, including urban cooling, flood mitigation, and carbon offsetting, positioning it as a versatile resilience tool (Cleveland-Peck, P, 2024). Expansion of habitat banking and credit trading could provide developers with greater flexibility while generating revenue for conservation landowners (Webster et al, 2023).

Financial opportunities include biodiversity credits, conservation bonds, and risk insurance products (Gov.UK, 2024). Lessons from international models, such as U.S. wetland mitigation banking, could refine UK governance and markets (Natural England Evaluation Plan, 2024).

Threats

Habitat delivery shortfalls present a major risk, with estimates suggesting only half of required habitat may be delivered due to land constraints and operational issues. DEFRA and LPA budget limitations further weaken monitoring and enforcement. Landowner hesitancy, particularly among farmers facing low returns or unclear obligations, could restrict off-site biodiversity projects (Cleveland-Peck, P, 2024).

The metric's complexity and reporting burden may deter smaller developers or lead to submission errors (Leith Ecology, 2025). Political instability poses additional threats. In times of economic or electoral change, BNG could be deprioritised or diluted, undermining enforcement (Middleton K, 2024). Finally, the ecological lag between interventions and measurable outcomes complicates evaluation and public confidence, particularly in the absence of visible results.

Discussion section	Literature review theme	Prompt questions
Strengths	**Legal mandate**	What aspects of the BNG policy design do you think are working well?
	Habitat banks	Have you observed any examples where BNG implementation has been particularly effective?
	LNRS	How well do you think BNG aligns with other environmental or planning policies?
Weaknesses	**Resources**	What are the biggest gaps in the implementation of BNG so far?
	Enforcement	Is there clarity on the roles and responsibilities of different stakeholders?
	Metric	What policy or legislative ambiguities have caused confusion or delay?
Opportunities	**International law**	Is there potential for global scalability?
	Integration	Are there any synergies with climate adaptation, nature recovery networks, or green infrastructure?
	Fintech market	What role do you think technology (e.g., AI, GIS, remote sensing) could play?
Threats	**Political instability**	What systemic risks (e.g., policy misalignment, political shifts) could derail BNG implementation?
	Greenwashing	Do you see any risk of gaming or misuse of biodiversity credits?
	Monitoring	Do you think BNG could lose momentum if early results are poor or slow?

Figure 2 summarises the key themes from the literature review and shows how the corresponding prompt questions for the focus groups/interviews were developed.

4. SWOT Analysis: Insights from stakeholder focus groups and interviews

Strengths

"BNG is the best thing since sliced bread!" – One participant creatively summarised how innovative and powerful this new policy is. Others concurred:

1. **Integration of Biodiversity and Cross-Disciplinary Collaboration**

Biodiversity Net Gain (BNG) has successfully shifted biodiversity considerations to the early stages of the development process. This change has encouraged cross-disciplinary collaboration between planners, ecologists, architects, and legal professionals, with one interviewee stating: *"Biodiversity Net Gain is a team sport…everyone's on team BNG".*

By embedding ecological thinking from the outset, BNG enables more holistic design and decision-making, ensuring that biodiversity is treated as a foundational element of project planning rather than a late-stage consideration.

The policy fosters a shared language and understanding between different professional groups, promoting mutual respect and improved coordination. This collaboration is reflected in more ecologically informed development outcomes and increased awareness of biodiversity across the planning and construction sectors.

2. **Strong Policy and Legal Frameworks**

The legal framework underpinning BNG - including the use of a statutory biodiversity metric - has been recognised as a key strength. The formalisation of biodiversity valuation lends clarity and authority to ecological assessments and creates a more consistent foundation for planning decisions. This has also enhanced the confidence of insurers, investors, and planning professionals by providing structured, enforceable nature-based interventions.

BNG's legal status reinforces long-term accountability and establishes biodiversity as a non-negotiable element of the planning process. It has also improved the legal sector's engagement with environmental matters, supporting a broader cultural shift toward ecological

awareness within land use regulation. As one focus group participant aptly put it: *"BNG is a nationwide set of regulations that affects the largest companies in the world".*

3. Market Development and Economic Impact

The BNG policy has stimulated the growth of a new economic sector focused on biodiversity enhancement, with many focus group participants agreeing with one's simple statement: *"It's creating a value in nature…"* Habitat banking, biodiversity credits, and nature-based investments are becoming more prevalent, providing new revenue streams for landowners and developers. BNG has contributed to a shift in land values, reflecting the economic importance of biodiversity.

This market-driven conservation model encourages land stewardship, promotes innovation in habitat creation, and positions biodiversity as a viable asset class. It has also created employment opportunities and professional pathways in ecology, planning, and environmental consultancy.

Weaknesses

"They threw it out into the regulatory environment before it was 100% ready - because if it was 100% ready, it would never have happened." – This participant clearly explains why BNG implementation has many flaws. Others expanded on these:

1. **LPA Resourcing and Capacity Gaps**

A consistent concern across stakeholder groups is the limited ecologist's expertise within local planning authorities (LPAs), with many agreeing with this participant's statement: *"Resourcing is the biggest weakness… many LPAs simply don't have the ecological expertise to review submissions properly."* This shows that LPAs lack in-house ecologists or the resources to properly assess and monitor BNG submissions. This results in delays, inconsistent decision-making, and under-enforcement of long-term biodiversity commitments. The shortage of trained professionals also increases the burden on external consultants and limits local authorities' ability to respond efficiently to developer submissions.

2. **Complexity, Ambiguity, and Communication Breakdown**

The current BNG guidance framework is fragmented and complex. Overlapping responsibilities between agencies, evolving legal interpretations, and shifting policy timelines have created confusion among developers, landowners, consultants, and LPAs. When one focus group attendee stated *"There is still ambiguity in the law and guidance, so people end up debating what it means."* the conversation expanded to cover the lack of a centralised, easily accessible guidance document contributing to miscommunication, inconsistent metric applications, and legal disputes. Additionally, variation in consultant interpretations of habitat quality and classification has further compounded uncertainty in planning decisions.

3. Metric Limitations and Operational Challenges

While the biodiversity metric is a core strength of BNG, its current format - typically delivered as a complex Excel tool - poses usability challenges. Stakeholders have raised concerns about inconsistent application, steep learning curves, and a lack of intuitive functionality.

Conversely, one participant argued that the metric is not too complex but instead "*oversimplifies and risks missing important local detail."*

Additional barriers discussed include difficulties with trading rule interpretation, limited access to offsite units (especially in early stages), and unclear exemption categories. These challenges contribute to bottlenecks in the planning system and reduce overall confidence in BNG as a streamlined process.

Opportunities

"This is a fantastic way to ensure there is an uplift in nature." – Many participants, including this one, expressed hope for the future of BNG:

1. **Technological Enablement and AI Integration**

There is significant potential to harness digital tools and artificial intelligence to enhance the delivery and monitoring of BNG, with one participant highlighting that *"AI has a really positive potential role to play in BNG."* Fellow participants then noted that AI-powered tools can automate site screening, validate metric submissions, and flag anomalies in habitat classification. Remote sensing and satellite imagery can support cost-effective long-term monitoring and improve transparency.

Digital innovation can also reduce LPA workload, improve consistency, and provide accessible data for stakeholders and researchers. A national dashboard or regional "BNG scoreboards" could further support accountability and public engagement.

2. Market Expansion and Capital Attraction

BNG is emerging as a mechanism for attracting private capital to fund nature recovery. There are opportunities to integrate biodiversity credits with other environmental markets, such as carbon, water, and natural capital, creating diversified income streams, as explained enthusiastically by an interviewee: *"The ability to stack BNG credits with carbon and resilience credits makes it a whole different game."*

Financial innovation - including habitat insurance and conservation-based lending - could accelerate investment while spreading risk. There is also scope to develop new legal tools and frameworks to support complex multi-party agreements in habitat provision and management.

3. **Integration with Broader Environmental Policy**

BNG has the potential to act as a unifying policy tool across different environmental agendas. By aligning with Local Nature Recovery Strategies (LNRSs), climate adaptation planning, and urban greening frameworks, BNG can deliver synergistic benefits for biodiversity, flood resilience, and public health.

Embedding BNG at the plan-making stage, rather than only through development control, can improve spatial targeting and ensure that net gain contributes meaningfully to wider environmental goals. Many focus group attendees agreed with the participant who said: *"If we integrate BNG with local nature recovery strategies, we could drive real change at scale."*

Threats

"We get a planning application on Tuesday and they want an answer by Friday!" – This participant articulated the time-sensitive nature of BNG, making it vulnerable to these threats:

1. **Political Instability and De-Prioritisation Risk**

BNG is vulnerable to political shifts, particularly where development pressure or anti-regulation sentiment leads to attempts to scale back environmental obligations. There is a risk that future administrations may deprioritise BNG or weaken enforcement mechanisms, especially for small-scale developers. Policy volatility could also reduce private investment in habitat markets and diminish trust among stakeholders. Put simply by one participant: "*U-turns worry me a lot."* Fellow attendees agreed, citing recent Planning Bill reforms as sources of anxiety.

2. **Weak Enforcement and Monitoring Failure**

Despite the 30-year maintenance requirement, enforcement remains underdeveloped. Many LPAs lack the capacity to monitor compliance over the long term, and current systems for tracking delivery are patchy or reactive. Without sustained oversight, BNG may fail to deliver genuine ecological uplift, reducing its credibility and effectiveness. One attendee was very clear, saying, *"There needs to be some sort of ombudsman or check and balance to pull people to account."*

3. **Market Exploitation and Quality Control**

There is concern that commercial interest in BNG could outpace ecological integrity. Without proper standards and accreditation for habitat banks and consultants, there is a risk of low-quality or greenwashed projects being approved and funded. When discussing greenwashing, one attendee claimed *"Developers might treat it as a tick-box exercise, doing the bare minimum."* Others noted that this kind of lack of oversight in credit trading or habitat management could erode public trust and damage the reputation of BNG as a serious conservation tool.

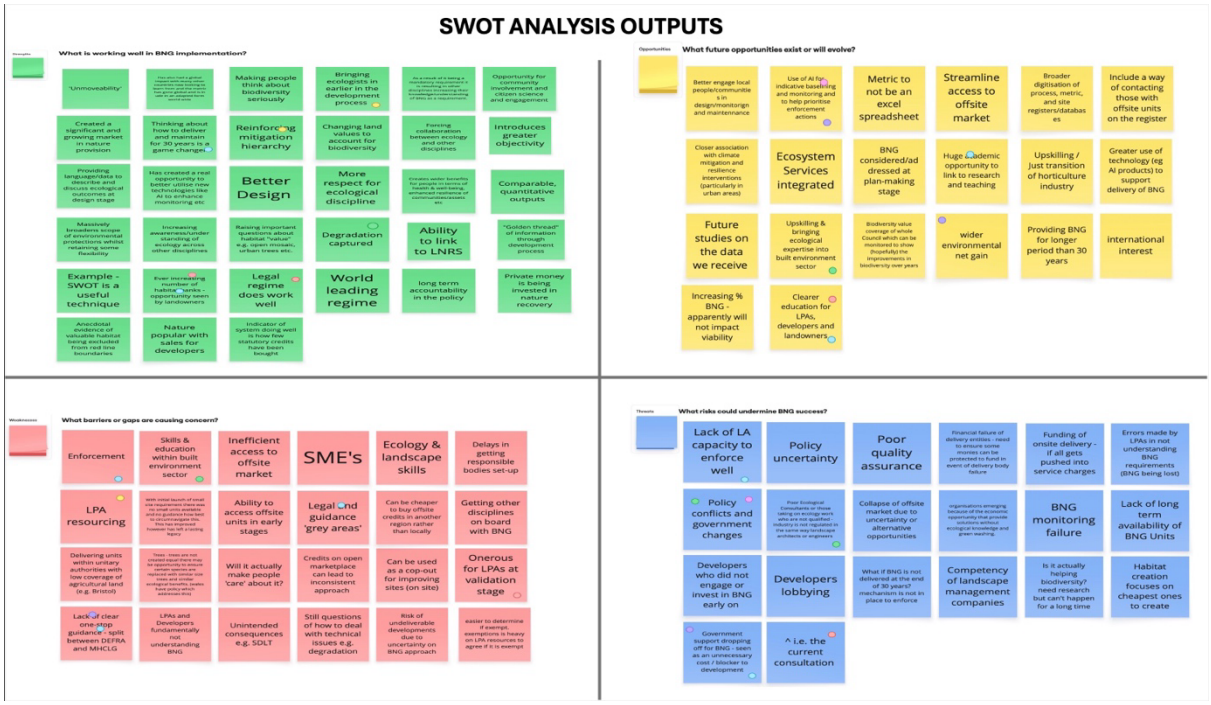

Figure 3 shows the combined results of both focus group Miro Boards. Coloured dots indicate the points which attendees considered the most significant or most in need of attention. More detailed explanations can be found in Appendix 1.

5. Policy Analysis using ROAMEF Framework

By combining the SWOT analysis with the ROAMEF policy analysis framework of the stakeholder discussions and inputs we can see that BNG has a strong rationale and clearly stated objectives, but issues emerge during appraisal, monitoring, evaluation and feedback stages (Figure 4). The government objective of delivering a legally mandated approach to enhancing biodiversity and yet not blocking housing development has been set in motion. However weaknesses in funding, data integration, and skills availability limit the effectiveness of the later stages of policy implementation. Importantly, the feedback mechanisms necessary for adaptive policy refinement remain underdeveloped. The government is in the process of consultation and seeking revisions to the policy on small sites metrics and BNG metrics for NSIPs. While these indicate the commitment to seeking feedback and evaluating the policy for improvements it has also created uncertainty in the BNG credits market.

The stakeholders were agreed on the strategic potential of BNG but also highlighted operational bottlenecks. Enhancing mid- and long-term policy delivery phases, particularly monitoring and evaluation, will be key to achieving the intended biodiversity outcomes.

ROAMEF Stage	Strengths & Opportunities	Weaknesses & Threats
Rationale	Mandated by law, aligns with UK/global biodiversity goals; potential to link with ESG, urban greening, and climate adaptation.	Confusing guidance, legal ambiguities, and misuse as a tick-box exercise risk undermining credibility.
Objectives	Targets 30+ years of biodiversity gain; scope to raise % targets, extend duration, and embed social/ecosystem benefits.	Weak enforcement, poor ecological understanding, and risk of metric-only compliance.
Appraisal	DEFRA metric enables structured, data-driven valuation; scope for AI, automation, and web-based tools.	Over-complex metric, inconsistent use, undervaluation of habitats, and skills gaps.
Monitoring	Emerging LPA tools and ecologist monitoring; potential for AI, citizen science, and national dashboards.	Limited capacity, no national standards, and weak tracking risking undetected biodiversity loss.
Evaluation	Quantitative tracking possible; potential for academic partnerships and national impact reports.	Inconsistent criteria, lack of independent verification, and short-term focus over long-term outcomes.
Feedback	Growing cross-sector collaboration; market interest; opportunity for shared learning networks.	No formal feedback loop, poor integration into policy, and fragmentation between sectors.

Figure 4 shows the detailed results of the combined SWOT and ROAMEF analysis.

6. Consolidated Recommendations from Stakeholders

The key expert-driven recommendations to improve BNG implementation are:

1. **Consolidate National Guidance**: Publish a single, authoritative BNG manual integrating legal, ecological, and procedural content.
2. **Strengthen LPA Capacity**: Fund and train in-house ecologists, especially in under-resourced councils.
3. **Digitise BNG Processes**: Move metric tools to cloud platforms; introduce AI-assisted validation and public dashboards.
4. **Improve Monitoring Systems**: Establish national and regional oversight frameworks from the outset of development projects.
5. **Facilitate Offsite Delivery**: Create a digital BNG credit marketplace with LPA-brokered solutions.
6. **Integrate BNG with Broader Policy**: Align with climate adaptation, carbon markets, and urban greening initiatives.
7. **Stabilise Policy Cycles**: Avoid premature revisions; instead, schedule major updates every five years.

7. Conclusion

Using a combination of literature review and stakeholder analysis, this research has identified key strengths, weaknesses, opportunities and threats in implementing BNG policy into law. By combining the SWOT analysis with the ROAMEF framework of policy implementation analysis we could draw out clearly the gaps in policy implementation and monitoring.

Biodiversity Net Gain marks a landmark transition in UK environmental policy, moving from mitigation to restoration. Its legally mandated approach, measurable targets, and evolving guidance have created a platform for innovative conservation finance and ecological accountability. However, implementation success hinges on addressing deep-rooted capacity, governance, and monitoring issues.

This research highlights that BNG, while visionary, is at risk of under-delivery unless early structural weaknesses are tackled. Policy coherence, stakeholder collaboration, and digital transformation are critical levers for change. If supported with targeted investment and iterative refinement, BNG can become a model for embedding ecological resilience into national planning frameworks.

8. Reflections and Lessons Learned

Conducting this research as part of the Laidlaw Scholarship provided invaluable lessons in both policy research and stakeholder engagement.

1. Navigating Expert Availability: One of the main challenges was securing participation from senior experts. Although platforms like LinkedIn were effective for outreach, many potential contributors were too in-demand to engage with a junior researcher. Some were happy to be interviewed one-to-one but did not want to discuss in focus groups. In the end, I was fortunate to secure a high-quality, diverse expert group representing all the stakeholder categories I sought: policymakers, ecologists, developers, and academics.

2. Policy in Flux: A recurring difficulty was the dynamic nature of BNG law and guidance, with reviews and changes happening even as my research was underway. Key documents were updated, exemptions shifted, and new metrics were introduced during the study period. This required constant vigilance and adaptability to ensure relevance and accuracy.

3. Ethics Approval Delays: I significantly underestimated the time needed to secure ethical clearance for stakeholder participation. Although ultimately approved, the delay affected initial timelines and focus group planning.

4. Effective Online Collaboration Tools: The use of Microsoft Teams and Miro proved unexpectedly powerful. Despite assumptions about digital literacy gaps, even senior professionals engaged easily and enthusiastically with the tools. The Miro board, in particular, enabled a collaborative and transparent way to synthesise ideas in real time.

5. Survey Expansion Constraints: While the focus group format yielded rich insights, a broader survey to reach additional stakeholders would have added quantitative validation. Time constraints, however, limited this possibility. If extended, the project would benefit from a wider stakeholder survey and cross-sectoral benchmarking.

6. The Value of Networking: Engaging with professionals through networking platforms not only broadened the participant pool but also enhanced my confidence in reaching out, managing meetings, and synthesising diverse perspectives.

9. Acknowledgements

- The Laidlaw Foundation
- Dr Ricci Yue, University College London
- Natural England
- Mott MacDonald
- BNP Paribas
- Future Homes Hub
- Warwickshire County Council
- Bristol City Council
- Oxford County Council
- University of Surrey
- University of Leeds
- University of Exeter
- Shoosmiths LLP
- Broadfields Law
- DWF

10. References

Chrichton, S. (2024). Comment: Our future depends on biodiversity, we must invest in it urgently. *Reuters*. [online] 3 Dec. Available at: https://www.reuters.com/sustainability/sustainable-finance-reporting/comment-our-future-depends-biodiversity-we-must-invest-it-urgently-2024-12-03/.

Cleveland-Peck, P. (2024). *Global Environmentalists Find Seeds of Hope in English Nature Credits*. [online] WSJ. Available at: https://www.wsj.com/articles/global-environmentalists-find-seeds-of-hope-in-english-nature-credits-fb4a7835.

DEFRA (2023). *Statutory biodiversity metric tools and guides*. [online] GOV.UK. Available at: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides.

GOV.UK (2024). *Biodiversity net gain*. [online] GOV.UK. Available at: https://www.gov.uk/guidance/biodiversity-net-gain.

Lambert, R. (2024). *Arbtech*. [online] Arbtech. Available at: https://arbtech.co.uk/the-false-gods-of-bng-tales-of-the-small-sites-metric/.

Leith Ecology Consulting (2025). *BNG 2025: One Year On - Policy Updates and Lessons Learned*. [online] Leith Ecology Consulting. Available at: https://leithecology.co.uk/blog/f/bng-2025-one-year-on---policy-updates-and-lessons-learned [Accessed 20 Jun. 2025].

Middleton, K. and Cox, L. (2024). *Labor's stalled environmental agenda under pressure from left and right*. [online] the Guardian. Available at: https://www.theguardian.com/australia-news/2024/sep/13/labor-stalled-environmental-agenda-under-pressure-left-right-albanese-plibersek-epa.

Natural England (2024a). *International use of England's biodiversity metric having global impact*. [online] Blog.gov.uk. Available at: https://naturalengland.blog.gov.uk/2024/11/08/international-use-of-englands-biodiversity-metric-having-global-impact/.

Natural England (2024b). *Natural England Action Plan 2024 to 2025*. [online] GOV.UK. Available at: https://www.gov.uk/government/publications/natural-england-action-plan-2024-to-2025/natural-england-action-plan-2024-to-2025.

Webster , V., Papworth, S. and Siggery, B. (2023). *Search | Surrey Wildlife Trust*. [online] Surreywildlifetrust.org. Available at: https://www.surreywildlifetrust.org/sites/default/files/2024-08/Webster%2C%20V.%2C%20Papworth%2C%20S.%2C%20Siggery%2C%20B.%2C%20Thomas%2C%20R.%20and%20Waite%2C%20M.%20%282023%29.%20What%20are%20the%20opportunities%20and%20challenges%20of%20Biodiversity%20Net%20Gain%20in%20Surrey%20.%20pp.1 [Accessed 20 Jun. 2025].

11. Appendix

STRENGTHS			
SWOT Theme	**SWOT Sub-themes**	**SWOT Points**	**Explanations**
Policy & Legal Framework	Clear regulatory basis	Strong legal mandate	Legal requirements ensure BNG is mandatory and enforceable.
	Defined outcomes	Clear 10% gain target	A quantifiable target helps standardize expectations and enforce compliance.
Scientific Rigor	Robust metric foundation	Science-based metric	Use of ecological data enhances credibility and tracking of net gain.
Implementation Mechanisms	Market-based instruments	Off-site habitat banking	Facilitates flexible delivery and supports habitat creation at scale.
Global Influence	Global leadership potential	Global leadership	UK's BNG model is seen as pioneering and could set international precedents.
Strategic Integration	Spatial policy alignment	Linked to Local Nature Recovery Strategies (LNRS)	Helps align local planning with national biodiversity goals.
Transparency & Clarity	Clear process and expectations	Transparent guidance	Provides certainty to developers and stakeholders.
Finance Mobilization	Private investment incentives	Encouraging private finance	Mobilizes external funding for biodiversity projects.
Ecosystem Services	Nature-based benefits	Supports ecosystem services	Promotes resilience, carbon capture, flood control, and other co-benefits.
Policy Evolution	Adaptive framework	Evolving policy	Continuous refinement based on learning and stakeholder feedback.
WEAKNESSES			
SWOT Theme	**SWOT Sub-themes**	**SWOT Points**	**Explanations**
Institutional Capacity	Gaps in oversight	Governance gaps	Ambiguity in responsibilities between agencies/LPA creates implementation risks.
Metric Challenges	Technical and practical issues	Metric weakness & delay	Initial iterations lacked full accuracy or had delayed implementation.
Resource Constraints	Local Authority under-resourcing	LPA under-resourcing	Many LPAs lack staff and technical capacity to assess and enforce BNG.
Monitoring and Enforcement	Inadequate infrastructure	Lack of monitoring infrastructure	Limited systems to track long-term delivery and outcomes of net gain.
Metric Manipulation Risk	Gaming the system	Metric manipulability	Developers could potentially exploit loopholes or flaws in calculations.
Site Size Issues	Small site applicability	Small-site metric issues	BNG can be harder to apply to minor developments or urban infill.
Long-Term Stewardship	Duration of obligations	Short maintenance timelines	Current rules may not ensure ecological sustainability beyond minimum years.
Ecological Homogenization	Lack of landscape diversity	Potential local homogenisation	Risk of similar, low-complexity habitats replacing diverse local systems.
Policy Loopholes	Partial exemptions	Exemptions for minor developments	Could lead to cumulative biodiversity loss despite the broader mandate.
Data & Evidence Gaps	Insufficient ecological baselines	Data gaps	Incomplete data affects assessments and planning for BNG interventions.
OPPORTUNITIES			
SWOT Theme	**SWOT Sub-themes**	**SWOT Points**	**Explanations**
Ecosystem Synergies	Nature-based co-benefits	Ecosystem co-benefits	BNG can support carbon sequestration, water management, health, etc.
Market Expansion	Scaling up market solutions	Scaling habitat banks	Larger, well-managed habitat banks could increase supply and drive innovation.
Financing & Investment	Blended finance models	Pulling private & philanthropic finance	New financial flows can be unlocked for nature restoration.
Insurance Integration	Risk mitigation tools	Insurance & risk transfer	Potential to develop green insurance products and risk-sharing models.
International Positioning	Soft power & collaboration	International best practice	BNG can be exported as a best practice model.
Policy Innovation	Iterative refinements	Policy refinements	Opportunities to address current weaknesses through stakeholder input.
Strategic Planning Synergy	Integration with local strategies	LNRS & spatial planning alignment	LNRS could guide site selection and optimize ecological connectivity.
Thought Leadership	Research and academia	Thought leadership & research	Academic sector engagement can improve tools, methods, and evidence.
Global Environmental Agenda	Nature-positive shift	Nature-positive agenda	Aligns with global momentum toward reversing biodiversity loss.
Diplomacy & Visibility	Multilateral influence	COP and global collaborations	BNG can support the UK's position in international climate and nature negotiations.
THREATS			
SWOT Theme	**SWOT Sub-themes**	**SWOT Points**	**Explanations**
Implementation Shortfalls	Delivery and quality risk	Habitat delivery shortfalls	Risk that promised habitats are delayed, poor quality, or not delivered at all.
Policy Erosion	Exemptions undermining scope	Exemptions eroding gains	Wide exemptions could result in net biodiversity loss despite overall goals.
Financial Constraints	Budgetary cuts	Reduced government funding	Cuts could impact monitoring, training, and habitat management.
Stakeholder Resistance	Landholder concerns	Farmers hesitating	Farmer buy-in is crucial for off-site habitats but remains uncertain.
Greenwashing Risk	Perception and credibility	Greenwashing risk	Poor implementation may undermine trust and legitimacy.
Political Instability	Reversal of progress	Policy rollback temptation	Political shifts may lead to weakening or removal of the BNG mandate.
Administrative Complexity	Barriers to entry	Complexity barrier	Small developers or landowners may find the system too hard to navigate.
Ecological Time Lag	Time gap between intervention and result	Ecological lag	Habitats take time to mature, delaying actual biodiversity gains.
Transparency Concerns	Lack of clarity in results	Data transparency deficits	Inadequate public access to BNG results could reduce accountability.
Offset Market Misuse	Unsustainable credit use	Emerging corporate offsets	Corporations may use BNG credits without ensuring real biodiversity benefit.

Appendix 1 provides more detailed explanations of the 40 most common points made across both focus groups and all interviews.

ROWENA SHIVAM

BSC/MENG SUSTAINABLE BUILT ENVIRONMENTS, ENERGY AND RESOURCES
UCL, BARTLETT SCHOOL OF ENVIRONMENT, ENERGY AND RESOURCES

ROWENASHIVAM@GMAIL.COM

Research project website:
https://preview--laidlawresearchscholarship-86.lovable.app