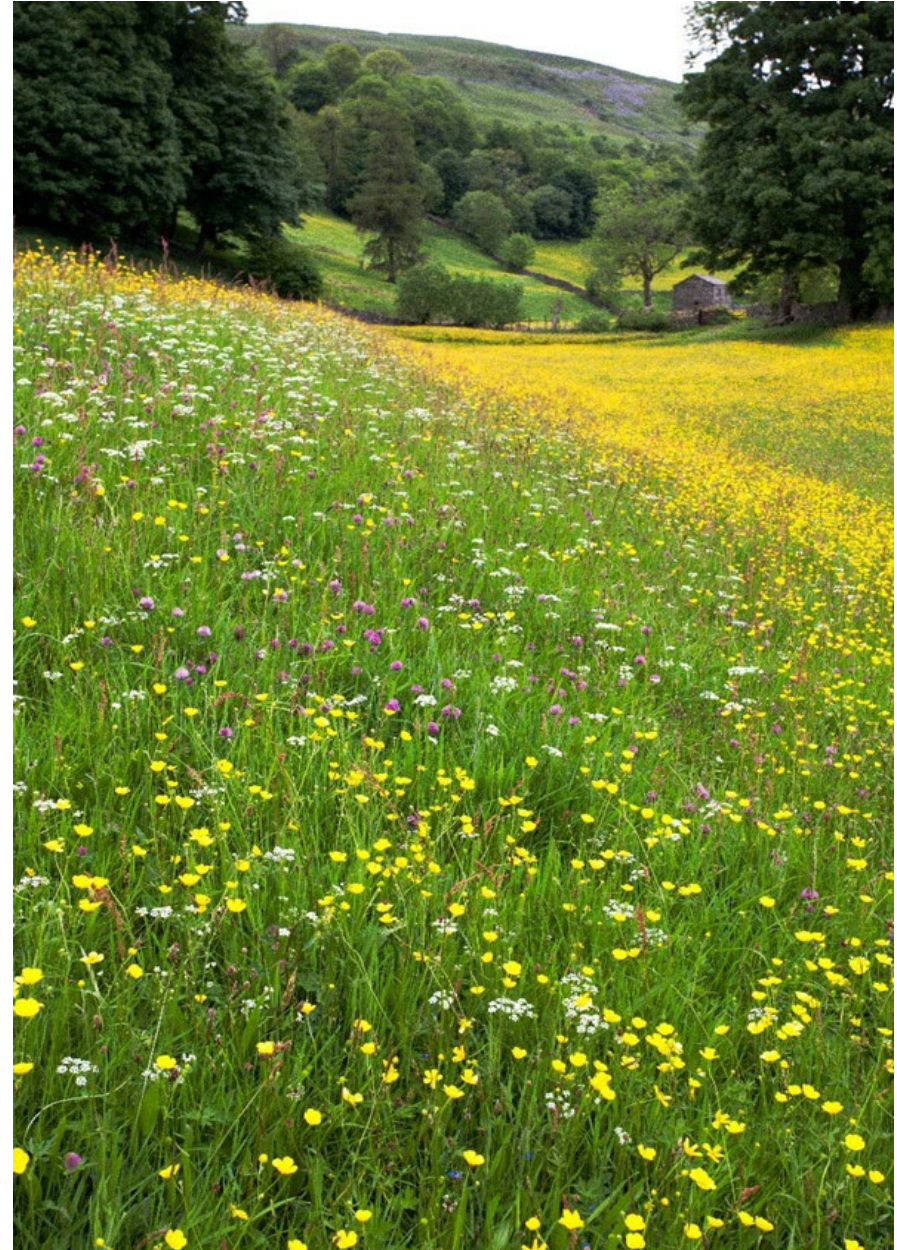


Biodiversity Net Gain *What does the future hold?*

Bristol Planning Law and Policy Conference
31st March 2022

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Technical Director – National Ecology Lead



Biodiversity Net Gain:

What does the future hold?

1. How did we get here?
2. What is BNG and how can it be achieved – *jargon busting*
3. Bristol and BNG
4. Environment Regulations Consultation
5. Challenges and Opportunities

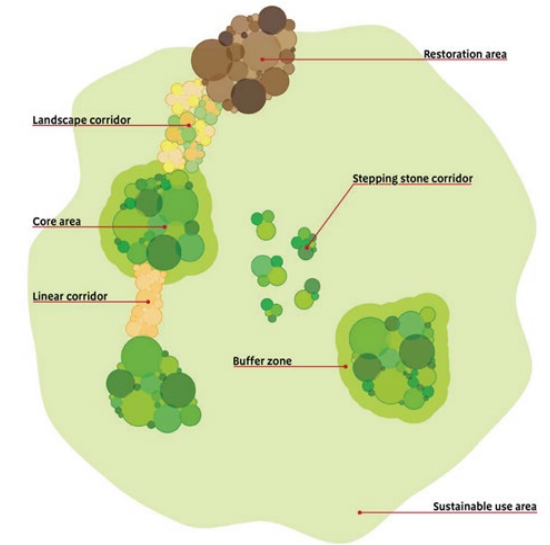
What is BNG: How did we get here?

An approach to **development (in England)** that leaves biodiversity in a better state than before. It applies to all involved in development or land/estate management.

Mandatory min 10% BNG

BNG is consistent, objective and quantifiable

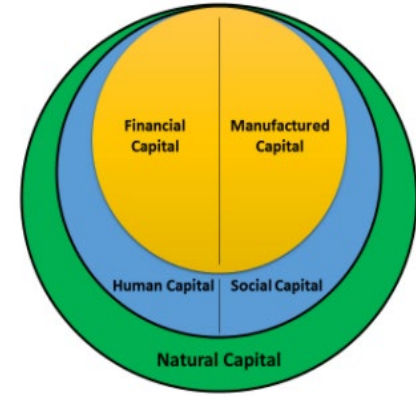
PAST (No Mandatory BNG)	PRESENT (policy driven BNG)
First Convention on Biological Diversity (1992)	COP 15 (Biodiversity) COP 26 (Climate)
Lawton's Report – Making Space for Nature (2010). <i>A Repair Manual: Landscape scale: more, bigger, better and joined</i>	NPPF 2021 and emerging regional and local planning policy The Dasgupta Review – <i>we require 1.6 Earths to maintain the world's current standard of living.</i>
Early versions of the BNG Metric, Environment Bank, Company Metrics.	Biodiversity Metric 3.0 BS 8683
State of the Natural Environment (2008) State of Nature Reports identifying alarming declines in UK's biodiversity	25 Year Environment Plan (2018): 30 by 30 The Environment Act 2021: statutory targets for recovery of the natural world. Reverse the decline in species abundance by 2030



Jargon Busting

We need a common language to understand the issues

- Natural capital: world's stocks of natural assets including geology, soils, air, water, all living things
- Ecosystem services (18): free goods and services that flow from natural capital to support people (food production, pollination, carbon sequestration, protection from flooding).
- Nature Positive/ No Net Loss
- Biodiversity Net Gain/Environmental Net Gain
- Nature-based solutions
- National Recovery Network/Local Nature Recovery Strategies
- Green and Blue infrastructure



Source: NCC 2019



\$44 trillion of economic value generation (>50% of the global GDP) is moderately or highly dependent on nature

BNG – The Basics

- Ten Principles of BNG (1: Mitigation hierarchy, 3: Be inclusive and equitable, 8: Create a net gain legacy of 30 years)
- Biodiversity is measured as units based on habitat **size** and **quality**
- Metric Calculator is populated: baseline and post-development

Habitat size:

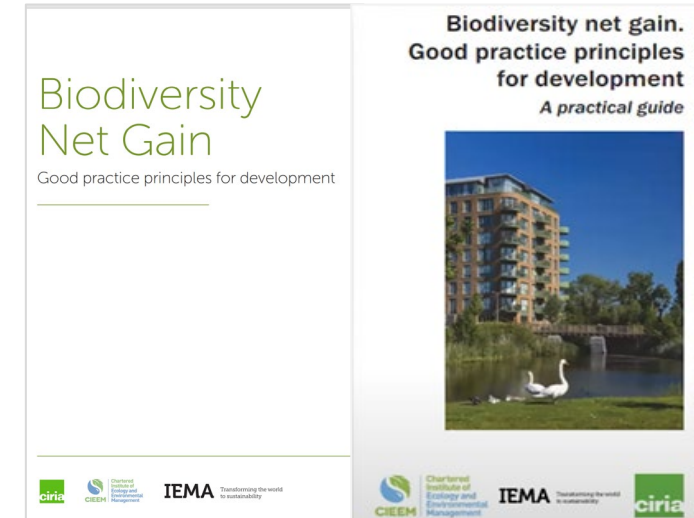
1. Area habitats (hectares)
2. Linear habitats (kilometres)(hedgerows and watercourses)

BASELINE Habitat Biodiversity Units (HBUs) calculated:

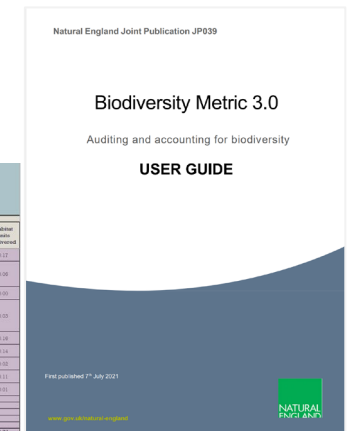
- Distinctiveness (auto generated based on habitat)
- Condition (assessed in the field against criteria per habitat)
- Strategic significance (High, Medium or Low)

POST INTERVENTION HBUs calculated:

- Difficulty to establish
- Time to reach target condition
- Spatial risk



A-2 Site Habitat Creation									
Location / River Labels		Location / River Notes							
Main Menu		Instructions							
Post development post intervention habitats									
Baseline Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal analysis		Likelihood of delivery of creation	Net gain (hectares)
			Distinctiveness	Condition		Standard or adjusted time to target condition	Final time to target condition (years)		
Urban	Urban Tree	0.000	Medium	Medium	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Urban	Ground level planters	0.000	Low	Low	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Urban	Developed land, sealed surface	0.000	Low	Low	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Urban	Extensive green roof	0.000	Low	Low	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Urban	Vegetated garden	0.000	Low	Low	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Urban	Sensitive green roof	0.000	Low	Low	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Urban	Ground based green wall	0.000	Low	Low	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Greenfield	Other natural grassland	0.000	Medium	Medium	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
Urban	Introduced shrub	0.000	Low	Low	Area compensation set to local strategy (see local strategy)	Standard time to target condition applied	1	Low	0.00
		</							



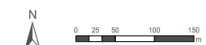
Habitat Mapping and the Metric

Baseline mapping and HBUs



waterman

- Site Boundary - 29.01ha
- Buildings (v105) - 0.26ha
- Other Developed Land (v106) - 0.68ha
- Bramble Scrub (h34) - 0.12ha
- Hawthorn Scrub (h25) - 0.24ha
- Broadleaved Woodland (w1g) - 0.26ha
- Lowland Beech and Yew Woodland (w1c) - 4.49ha
- Modified Grassland (g4) - 22.96ha
- Line of Trees (t1g5) - 741m
- Hedge - 693m
- Scattered Trees (SC11)
- Fence - 460m
- Biodiversity Net Gain Area - 2.58ha
- Proposed Hedgerows - 880m



Project Details | WE15569-101: Little Chalfont

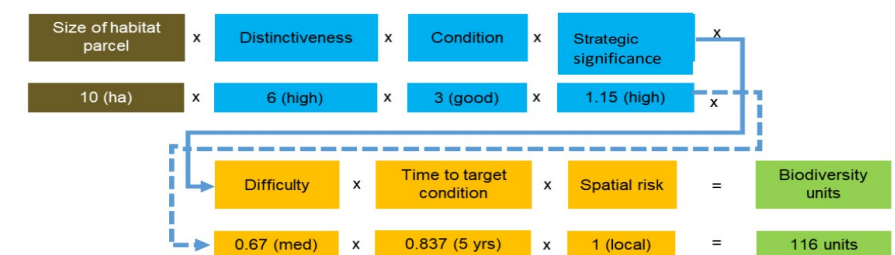
Size of habitat parcel	x	Distinctiveness	x	Condition	x	Strategic significance	=	Biodiversity units
10 (ha)	x	6 (high)	x	1 (poor)	x	1.15 (high)	=	69 units

Post-intervention Landscape Masterplan and HBUs

waterman

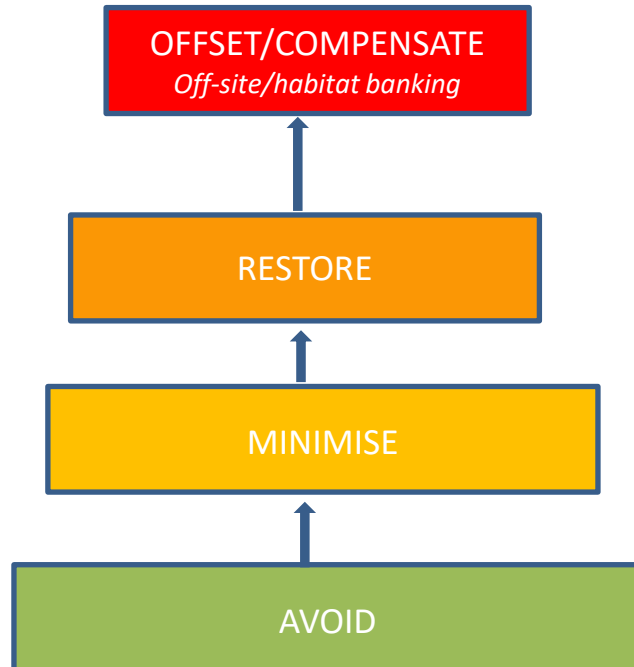


Project Details | WE15569-101: Little Chalfont
Figure Title | Figure 2: Illustrative Landscape Plan (Post-Intervention Habitats)



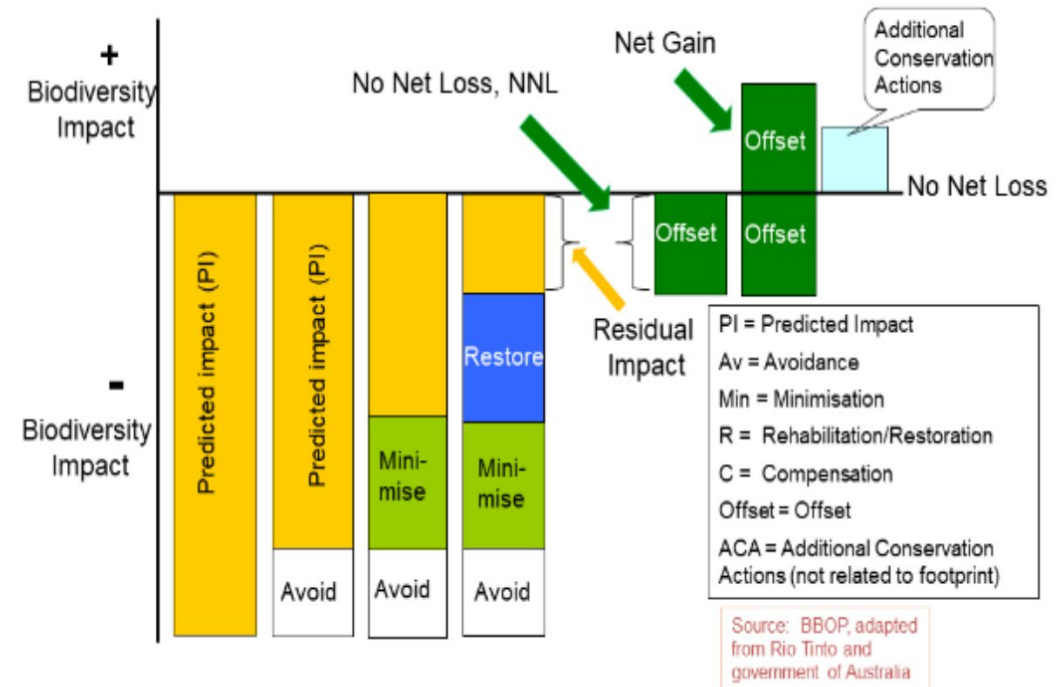
Meaningful BNG

Mitigation Hierarchy to be applied sequentially



Achieving Net Gain for Biodiversity

Avoid and minimise impacts in accordance with mitigation hierarchy, then restore damaged habitats in Development Sites. If residual impacts remain – offsets must be provided off-site. BNG relies on a fully integrated approach.



How can BNG be achieved

Measures taken to enhance biodiversity **do not have to be expensive**, require a lot of time to create or require large amounts of land, but they do need to be planned into the **earliest stages of development**.

Nature-based solutions including:

- Planting orchards and urban gardens/allotments (food provisioning for people and wildlife)
- Creating native species-rich hedgerows and treelines, which increases habitat connectivity, vital for viable plant and animal populations
- Green and blue roofs; green walls (protection from flooding and amelioration of air pollution)
- Wildflower-rich grassland creation (low mowing frequency as compared to amenity grass)
- Sustainable Drainage Systems: creating ponds and wetlands (support a site's drainage strategy)



Bristol's Biodiversity

Bristol is one of the greenest cities in the country, with more green space than most other major UK cities. It also supports a huge wealth of biodiversity.

Bristol is the Largest geographical area in the SW with the lowest population and the longest coastline

Nature is collapsing at an alarming and unprecedented rate.

Globally we have lost 60% of wild invertebrates and up to 76% of insects since 1970.

In the UK there are 30 million fewer hedgehogs than in 1950.

In Bristol, numbers of once common songbirds like swifts and starlings have dropped by more than 96%.

The One City Plan (2020) includes a target that all new developments should achieve the highest standards for wildlife, water and wellbeing by 2036. We need to bring that target forward to 2030 at the latest



BRISTOL
ONE CITY

Delivering in partnership with the Sustainable Development Goals

VISION: work together as a city to ensure that 30% of Bristol's land is managed for nature.

A strategy for an ecologically resilient, wildlife-rich Bristol by 2030



Table 1: UK BAP broad and priority habitat found within Bristol

UK BAP BROAD HABITAT	UK BAP PRIORITY HABITAT
Broad-leaved, mixed and yew	Lowland beech and yew woodland Upland mixed ash woods Mixed deciduous woodland Wet woodland Lowland wood pasture and parkland woodland
Boundary and Linear Features	Hedgerows
Calcareous grassland	Lowland calcareous grassland
Acid grassland	Lowland dry acidic grassland
Neutral grassland	Lowland meadows
Dwarf shrub heath	Lowland heathland
Improved grassland	Coastal and floodplain grazing marsh
Fens, marsh and swamp	Reedbeds
Standing Open Water and Canals	Eutrophic standing water Ponds
Rivers and streams	Rivers
Littoral Rock	Sublittoral alveolata reefs
Littoral Sediment	Seagrass beds Coastal saltmarsh Mudflats
Inshore Sublittoral Sediment	Seagrass beds
Urban	Open Mosaic Habitats on previously developed land



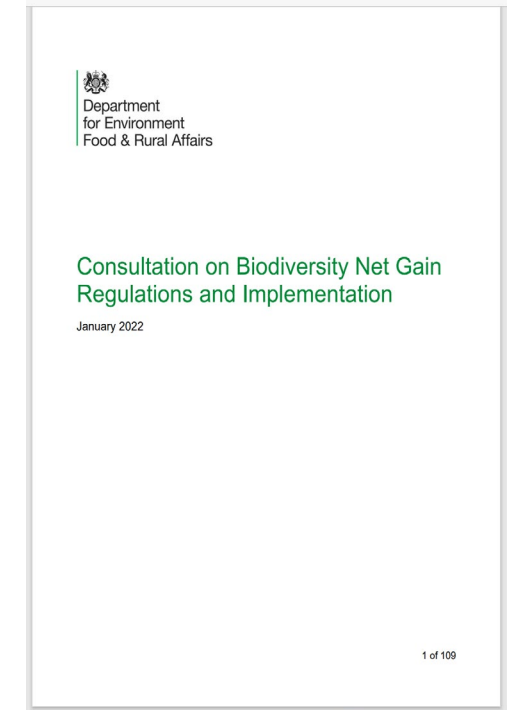
The Environment Act (2021)

The Act is now law and a material consideration, but it has not been immediately enacted.

BNG requirements are expected to come into force in November 2023; but NSIPs in November 2025

Consultation ends on 5th April to shape this secondary legislation:

1. Defining **the scope** of BNG: Town and Country Planning Act 1990 development and NSIPs under the Planning Act 2008
2. Application to different **types of development**
3. **How will BNG requirement work** for Town and Country Planning Act 1990 development



BNG Scope – Part 1

All land including:

- Brownfield sites
- Land subject to temporary applications
- Statutory designated sites (SSSIs, LNRs) - *but there is no mention of non-statutory sites through the consultation document.*
- *Concept of additionality:* Enhancements to statutory sites – should the Regulations allow BNG units to accrue as a result of enhancement of the non-designated features?

Current Exemptions

1. Permitted Development
2. Urgent Crown development
3. House holder extensions incl self-build/custom build
4. Change of use
5. Small sites 'de minimis' developments
6. Irreplaceable habitats: *ancient woodland, lowland fen, blanket bog, limestone pavement, sand dunes, ancient and veteran trees – technically very difficult to recreate or take a very significant time*

BNG Types of development – Part 2

Town and Country Planning Act 1990: Outline applications, multi-phase/plot, RMAs, variation applications, mineral permissions – *BNG plan prior to commencement of each phase, front loading of BNG, period between phases and risks of BNG failure or degradation of plots*

Small Site metric (sites < 0.5ha or <10 residential units)

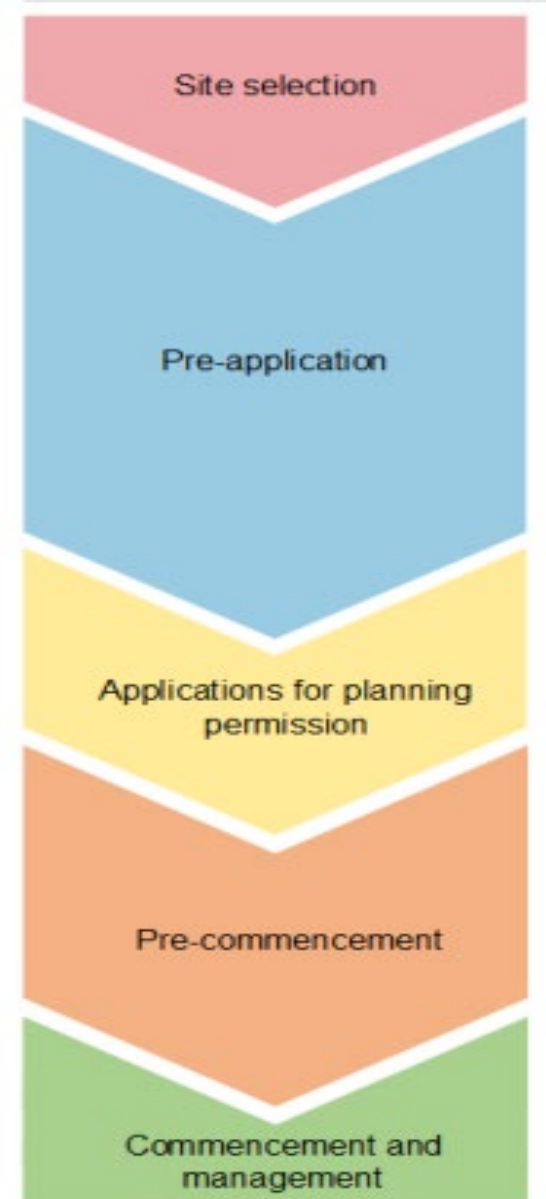
Planning Act 2008: NSIPs

Nationally Significant Infrastructure Projects

1. Deliver a lower % of BNG
2. Longer transition period – November 2025
3. Should the same BNG Register be used for NSIPs – *use a lighter-touch registration process for organisations with large landholdings and NSIPs (National Highways, Network Rail, National Grid)*
4. Min 30 years to secure off-site BNG for NSIPs

BNG What's the process – Part 3

- Consider biodiversity at the earliest stages and apply mitigation hierarchy. Avoid impacts on habitats of high distinctiveness and condition. *Trading Rules: right habitat, right place*
- Agree BNG documentation requirements with the LPA at the pre-application stage to align with planning strategy. Consistent templates (incl in consultation). Agree % BNG (can be uplifts). Core requirements mandated in the Regs. Agree extent of additionality.
- BNGA plus copy of the Metric 3.0 calculator to be provided at planning submission stage.
- Provision of further information and pre-commencement conditions: *off-site biodiversity gains are secured and registered; any statutory biodiversity credits are purchased. Conservation Covenants agreed. Agreement to Stacking*
- Implement, habitat management and monitoring Plan (HMMP) for a min period of 30 years

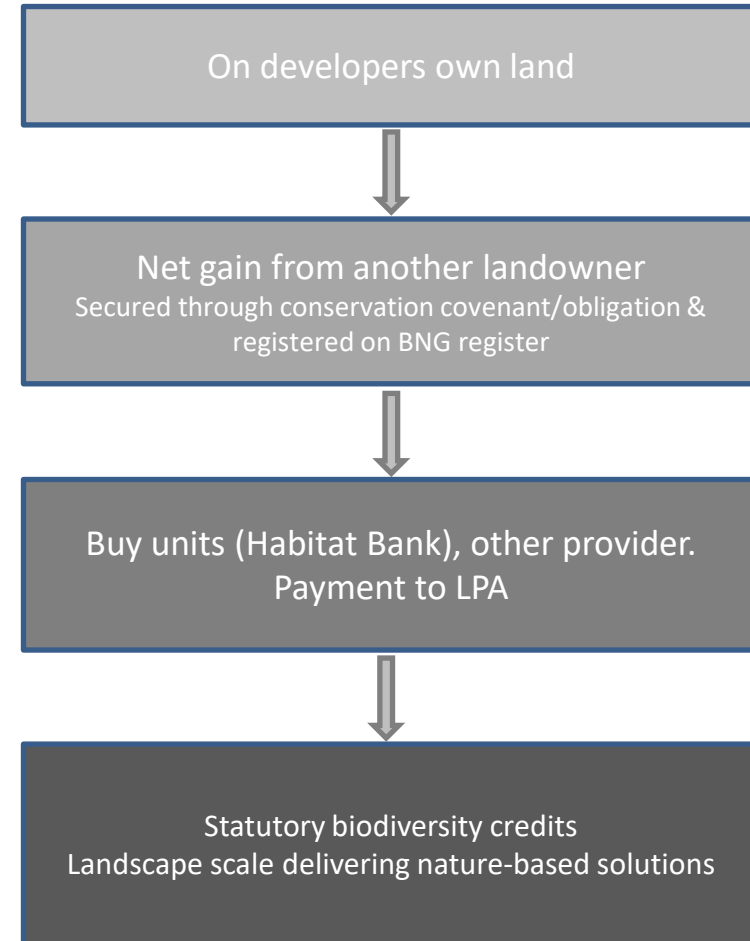


BNG What's the process – Part 3

Shortfall of BNG on-site

1. Secure and register off-site habitat on other land holdings or from the market – *incentivised by a spatial risk multiplier to deliver locally: the strategic significance score*
2. Landowners can create/enhance habitat and sell to developers or use brokers to facilitate transaction – *market analysis estimates approx. 6200 off-site units will be available (~£135M at £20/25k per unit). On-line application to the BNG Register – keep a track even if land is sold to avoid double counting*
3. Last option: Purchase UK government-provided statutory credits

Off-setting Hierarchy



BNG Specific requirements – Part 3

Excess of BNG on-site

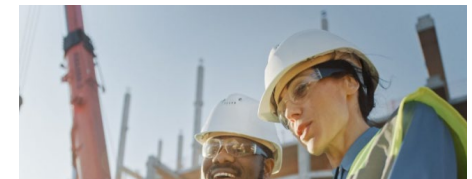
1. If an excess of BNG is secured on-site – consultation is considering whether these units can be sold on (would need to be on the **BNG Register**) or used by the same developer for a shortfall on another site.
2. Combining or ‘Stacking’ of payments for other environmental services on the same land parcel. *Carbon credits or nutrient credits or other financial contribution measures (improvements to address recreational pressures)*

Habitat Banking

1. Habitat created or enhanced after 30 Jan 2020 will be eligible for registration and sale
2. The land parcel needs to record/have evidence of suitable monitoring data to demonstrate the works were completed by a certain date to be able to use “habitat created in advance’ function in the calculator
3. The land that is sold to a developer needs to be secured by legal agreement and registered prior to approval of the BNG Plan

BNG Challenges

- It's a challenge to meet no net loss; BNG metric is *more than just a number* and its not a substitute for expert ecological advice
- Other requirements for the same land: carbon credits, nutrient credits; SUDs; protected species mitigation – extent of additionality
- Increased workload for everyone involved in development: local planning authorities, consultants, legal advisors (Yr. ending Sept 2021, over 370,000 planning apps granted; 19% increase on Yr. ending 2020)
- CIEEM crisis in the sector: has the UK got the skills for the job
- Guidance is needed for all elements of BNG, including long term management and monitoring; how to address different planning strategies (outline, reserved matters etc)
- Changes: The 3.0 Calculator will be subject to its own consultation and revisions; additional scope likely to be added: Species BNG



A Crisis in our Sector

On 3rd November 2021



BNG Opportunities

- Significant change in approach to how biodiversity is measured and impacts are assessed. Brings a transparency to biodiversity decline and how to halt it.
- Habitat banking opportunities
- Diversifying business with habitat creation and existing operations
- Nature-based solutions to address multiple environmental impacts. LNRs prioritise offset locations providing certainty of delivering local benefits
- Secure and long term management of land is incentivised with adaptive management measures being key to its success (HMMP) – conservation covenants
- Environmental Net Gain
- Environmental Benefits for Nature Tool (EBNT) – link to ESG, sustainability visions, making claims, sustainable finance.....

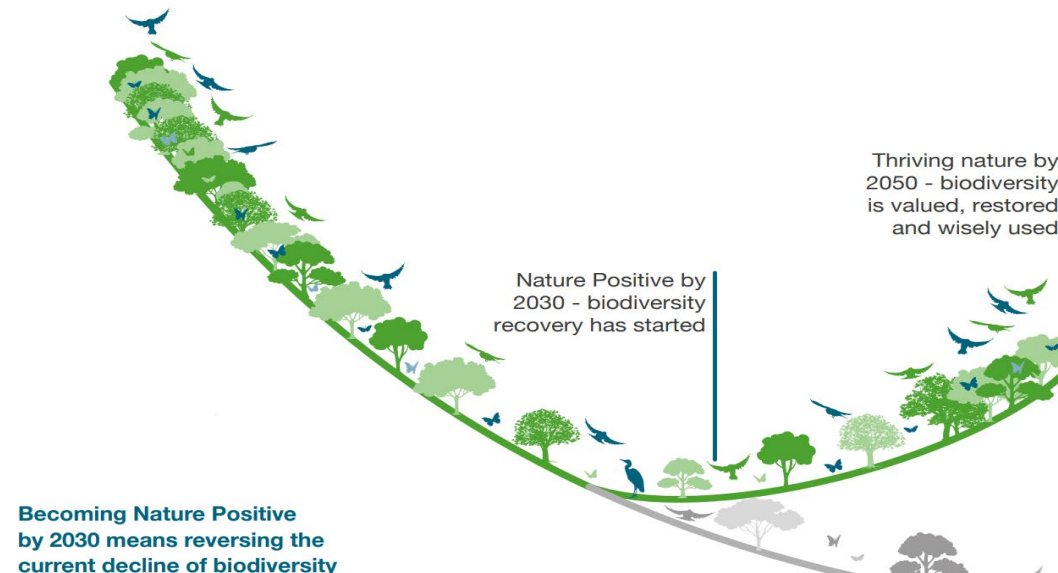


Select area of interest:	1 year	10 year	30 year	Confidence
Whole area				
Food production	↓	↓	↓	●
Wood production	→	→	→	●
Fish production	→	→	→	●
Water supply	↓	↓	↓	●
Flood regulation	↓	↓	→	●
Erosion protection	→	→	→	●
Water quality regulation	→	→	→	●
Carbon storage	↓	↓	→	●
Air quality regulation	↓	→	→	●
Cooling and shading	↓	→	→	●
Noise reduction	→	→	→	●
Pollination	↓	→	→	●
Pest control	↓	→	→	●
Recreation	↑	↑	↑	●
Aesthetic value	↓	→	→	●
Education	→	→	→	●
Interaction with nature	→	→	→	●
Sense of place	↓	→	→	●

BNG - Take Home Message

If we don't measure it, we can't improve or manage it.

If the challenges are met and opportunities are realised, the ambitious targets set by the 25 Year Environment Plan could be achieved for full nature recovery.



NATURE POSITIVE 2030 / SUMMARY REPORT

Biodiversity Net Gain

What does the future hold?

THANK YOU

Q & A

