

Biodiversity Net Gain – An Introduction

Carly Goodman-Smith



01285 831 804
info@tylergrange.co.uk

Birmingham ▪ Cotswolds ▪
Exeter ▪ London ▪ Manchester



Carly Goodman-Smith
MBiolSci MCIEEM
Partner
(Ecology)

c.goodman-smith@tylergrange.co.uk
07885704302
01285 831804



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Content:

- What is Biodiversity Net Gain?
- Context and the drive behind BNG
 - ✓ The NPPF 2019
 - ✓ Local policy
 - ✓ Industry commitment
 - ✓ Spring Statement 2019
 - ✓ Environment Bill
- Measuring BNG - use of metrics
- Example
- Delivering BNG – some unknowns
- Conclusion

Background – What is Biodiversity Net Gain and why is it needed?

“An approach to development that aims to leave the natural environment in a measurably better state than beforehand”

- Biodiversity 2020 - A strategy for England’s wildlife and ecosystem services:
 - the planning system is not adequately addressing biodiversity
 - Continuing to lose species – 40% priority habitats 30% priority species declining
 - ‘No net loss’ isn’t working
- Local Planning Authorities are continually under resourced
- Developers want a clear, streamlined process – lengthy negotiations cost time and money
- Keen landowners are not getting the funding needed to be able to deliver

Context – Biodiversity Net Gain

NPPF

2012 NPPF which stated development should “*seek biodiversity net gains where possible*”

Now NPPF 2019:

- Paragraph 170 (d) states that policies and decisions should deliver environmental enhancement by:
 - “ *minimising impacts on and provide net gains for biodiversity*”
- Paragraph 174 (b) states that plans should:
 - “*identify and pursue opportunities for securing measurable net gains for biodiversity*”
- Paragraph 175 (d) states that when determining planning applications LPAs should encourage improvement to biodiversity in/around development especially where it secures
 - “*measurable net gains for biodiversity*”

Context – Biodiversity Net Gain

Local Planning Policy

West of England Joint Spatial Plan – Publication Document 2017

Policy Principle 4 states new development will:

“be expected to contribute towards a net gain of the sub-region’s diverse and high quality natural environment and biodiversity”

Warwickshire, Coventry and Solihull

- Implement a system to ensure no net loss through application of their metric - set out in LPA policy and within the county-wide Green Infrastructure Strategy. This applies the principle of Biodiversity offsetting to target strategic biodiversity enhancement

Greater Manchester

- The Greater Manchester Spatial Framework - provides context for local plans, including a measurable net gain in biodiversity value through new development
- Developing guidance for delivering biodiversity net gain at a city-region level
- Will use the Defra metric **at first** to be superseded by a more locally-specific metric, which will be adopted as supplementary guidance to the GMSF

Context – Biodiversity Net Gain

Industry

There's a growing momentum within the development and construction industry to implement BNG

- Housing developers commitments e.g. Barratt Homes, Berkeley Group and Redrow Homes
- Infrastructure commitments e.g. Crossrail, East-West Rail Alliance
- Utilities and land managers e.g. National Grid, Thames Water and Yorkshire Water increasingly seeking to incorporate BNG
- Professional and industry bodies like the Chartered Institute of Ecology and Environmental Management (CIEEM) are publishing guidance for the sector
- New BREEAM incorporates the Defra metric – aiming to include BNG in BRE Global's CEEQUAL QA scheme for infrastructure.
- British Standard for BNG due in 2019/20

Context – Biodiversity Net Gain

Political Will

25 Year Environment Plan 2018

- Government committed to leaving the environment in a better state than it was inherited.

BNG Consultation 2018

- DEFRA / Ministry of Housing, Communities and Local Government and Michael Gove consulted on whether BNG should be mandatory
- Awaiting detailed results of consultation but....

Spring Statement - March 2019

- Philip Hammond confirmed BNG will be mandatory for development in England in the upcoming Environment Bill

Environment Bill – 2019/20?

Will need to answer a lot of questions on BNG...

Measuring Biodiversity Net Gain - Metrics

Applying a tangible value to biodiversity - units

Still relies on a need for ecological knowledge and professional judgement to apply accurately

Imperfect – will require continuing refinement in the future

But which metric?

- Defra 2012 and now Defra 2.0
- Warwickshire, Coventry and Solihull
- Network Rail – Bespoke tool
- There are others...!

Example of Metric Outcomes:

PROJECT-WIDE		NWR	Defra 2012	WCS BIA
Biodiversity impact accounting	Area	Units	Units	Impact score
Before works	240.79	2221	2221	2034
Gross biodiversity loss		2221	2221	2034
After works	312.06	1318	1285	1099
Trading down correction				-338
Biodiversity offsetting	104.95	471	255	290
Net biodiversity balance	0.00	-432	-681	-984

Measuring Biodiversity Units

Habitat value (units) is assigned based on:

Distinctiveness:

- Species richness, diversity, rarity (local, regional, national and international scales)
- Priority habitats – Defra 2.0 always high
- Previously considered ‘negligible importance’ habitats (e.g. arable, improved grassland) now considered to carry some (albeit low) distinctiveness

Condition:

- How well it fits to the definition of a good example of the habitat type
- Defra 2.0 will allow for greater refinement – 5 instead of 3 scores

Strategic Significance (new emphasis in Defra 2.0)

- Areas scored higher if fall within predefined strategically targeted for enhancement e.g. strategic GI

Habitat Connectivity

- Relationship to the wider landscape

Risk factors then applied to habitat creation:

- Time take to achieve target condition
- Difficulty to create
- Spatial risk (e.g. habitats created that are distant to those lost)

Example of the implications of using a metric:

Alderley Park:



Isolated woodland block, high levels of disturbance historically – low species diversity – **site ecological importance**

0.4ha - high distinctiveness habitat, moderate condition in a non-strategic area = 8.44ha of replacement woodland.

Example of implications of using a metric:

Alderley Park:

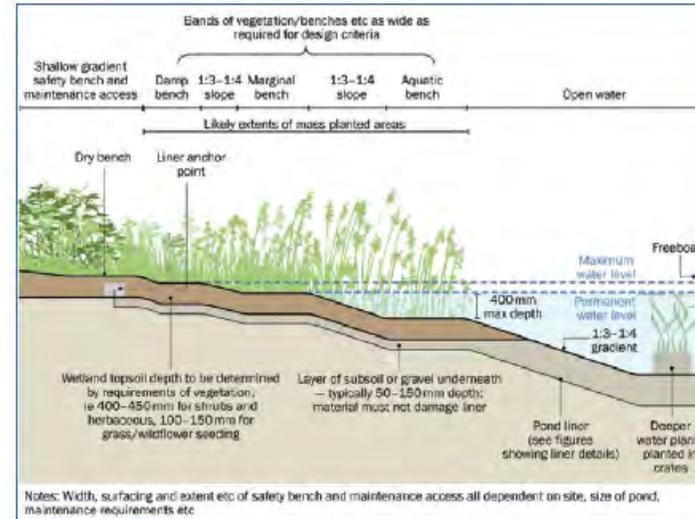
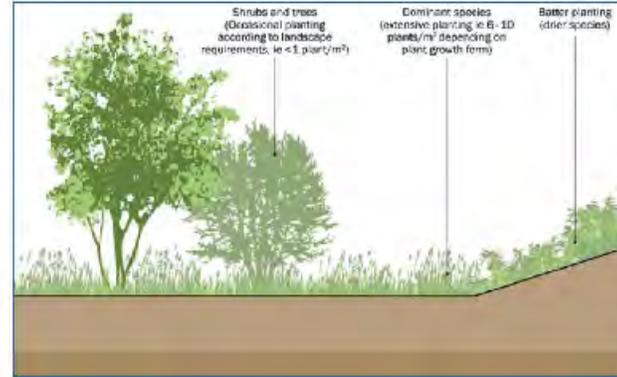
Through negotiation with the LPA ecologist we agreed:

- Site could be considered a strategic site (large allocation with specific GI and management plan with connectivity to the wider landscape);
- Requirement for replacement fell by half to **4.22ha**
- **Realistic delivery negotiated down to $\frac{3}{4}$ of this – potentially even $\frac{1}{2}$**

Delivering BNG on-site – a great opportunity for multifunctional GI

Advice:

- Avoid uniform overly engineered steep slopes – they are not easy to establish meaningful planting and they can be visually unsightly and barren.
- Variable side slopes add amenity interest and planting opportunities but can be space-hungry.
- Shallow side slopes ≤ 1 in 4 and benching to allow vegetation to colonise and stabilise soils and allow safe access for maintenance.
- Design for maintenance access.
- Side slopes should be no steeper than 1 in 3 gradient.
- Maximum permanent pool depth (2m).
- Minimum depth for open water areas (1.2m).
- Use natural forms rather than engineering solutions.
- Plant to enhance biodiversity. Profile of woodland, shrub, fringing, emergent, floating, submerged. (Introduce adjacent vegetation native to area).
- Avoid dense planting to allow natural colonisation.
- Plant to allow visibility of water's edge especially in amenity areas.
- Allow planting to connect to the wider landscape context for greater impact.
- Consider sensitive design of inlet and outlet structures if required using a soft approach.



Examples of appropriate plant species.

Left column top to bottom:
 - Yellow flag iris
 - Viburnum opulus
 - Bulrush
 - Meadowsweet

Right column top to bottom:
 - Yellow flag iris in situ
 - Viburnum opulus flower
 - Loosestrife
 - Viburnum opulus berry
 - Bulrush in situ
 - Grey willow
 - Grey willow bud
 - Field rose



Dr
 Dr



Delivering BNG on-site - a great opportunity for placemaking



Some questions that need answering:

Exclusions:

- Possibly small sites, permitted development, National infrastructure – unconfirmed

What is the minimum requirement for BNG if it is to be mandatory?

- How much gain is acceptable? Who determines this? LPA – plan policy or SPDs? Natural England? National policy – revise NPPF?
- What metric to use?

Delivering BNG

- On site / offsite / tariffs (how and when can they be applied – what scale sites?) – exclusive or all three?
- How are tariffs collected and how will it be spent?
- How do we avoid local degradation and distancing of people from nature through implementation of strategic enhancements

Some questions that need answering:

Responsibilities for future management, monitoring

- Developer? Land manager? Local Authority? Natural England?

Validating BNG

- How do you know it has worked? How is it enforced and by who?
- At what stage do you determine this – pre-planning / post-planning / once development is operational / all?

Environmental Net Gain

- How will BNG tie in to this?
- How do we avoid ‘trading off’ different environmental disciplines against one another?

Answers..... Consultation results, British Standard and The Environment Bill??

Hint and Tips

Engage with your ecological consultant in the early stages of a project

Consult with the LPA ecologist to determine local variances in how BNG is determined/applied and at what level

Make sure the Mitigation Hierarchy is applied:

Avoid → Mitigate → Compensate

Consider use of offsetting as last resort

Tyler Grange Ecology Services



Ecology services offered by Tyler Grange:

- From inception through to planning and post planning;
- Initial feasibility (ecological opportunities and constraints);
- Preliminary Ecological Appraisals (Phase I survey);
- Phase II surveys (protected species and habitat surveys);
- Design advice;
- Consultation with stakeholders (LPA, Wildlife Trust, Natural England, Environment Agency etc)
- Ecological Assessments including EclA and ES Chapters;
- Bespoke reports;
- Mitigation strategies and management plans;
- Protected species licensing;
- Expert Witness for Public Inquiry;
- Discharging planning conditions;
- Implementation of mitigation strategies, mitigation licences on site;
- Monitoring and reporting.

Birmingham
t. 0121 773 0770

Cotswolds
t. 01285 831 804

Exeter
t. 01392 447 588

Manchester
t. 0161 236 8367

London
t. 0203 934 9470

e. info@tylergrange.co.uk
w. tylergrange.co.uk

¹ Internal building searches for evidence of bats can be undertaken at any time; winter is the best time for assessing trees for roosting potential, with further work to confirm potential undertaken in spring / summer.

² The timing of detailed flora surveys is dependent on the specific habitat type to be investigated. Lower plants should be surveyed in winter.

³ Timing is dependent on target species/group.

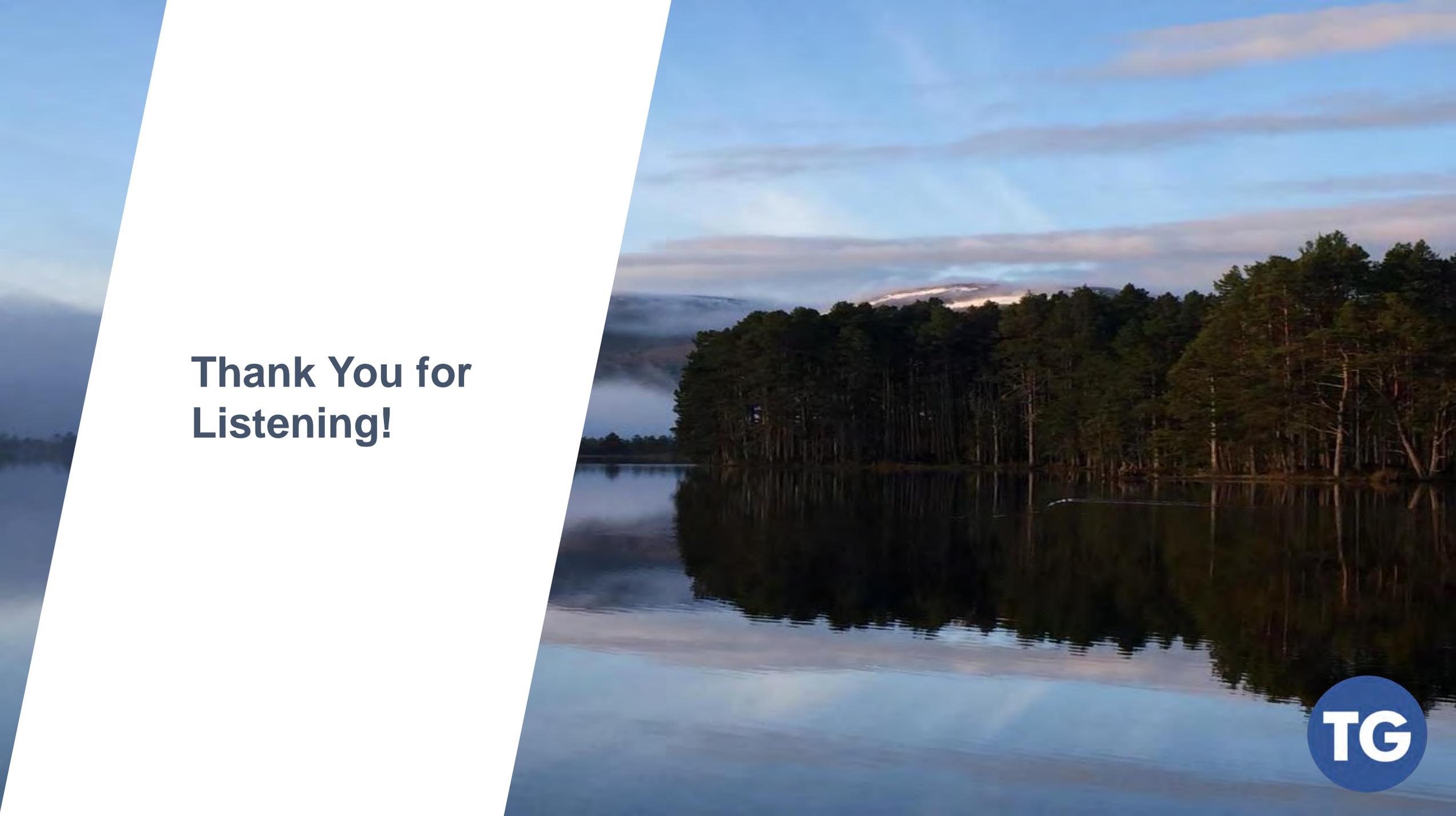
⁴ Surveys are required in both the early and late seasons.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Badgers	Sub-optimal											
Bats activity	Sub-optimal	Optimal	Optimal	Sub-optimal	Sub-optimal							
Bats ¹ roost identification	Sub-optimal											
Birds breeding	Sub-optimal											
Birds winter	Sub-optimal											
Crayfish	Sub-optimal											
Dormouse	Sub-optimal											
Great Crested Newts breeding ponds	Sub-optimal											
Habitats / Detailed Flora ²	Sub-optimal											
Hedgerows	Sub-optimal											
Otter	Sub-optimal											
Reptiles	Sub-optimal											
Terrestrial / Freshwater Invertebrates ³	Sub-optimal											
Water Voles ⁴	Sub-optimal											

Surveys optimal
 Surveys sub-optimal
 Surveys cannot be undertaken / results unreliable



**Thank You for
Listening!**



TG

**DELIVERING
BIODIVERSITY
NET GAIN**

Delivering BNG in the South West

Three talks covering:

an introduction to Biodiversity Net Gain (BNG); national policy context, Environment Bill, Measuring Net Gain, Delivering BNG.

an overview of the combined West of England Joint Spatial Plan; the emerging Bristol Local Plan; BCC's interpretation of BNG and the implications for development.

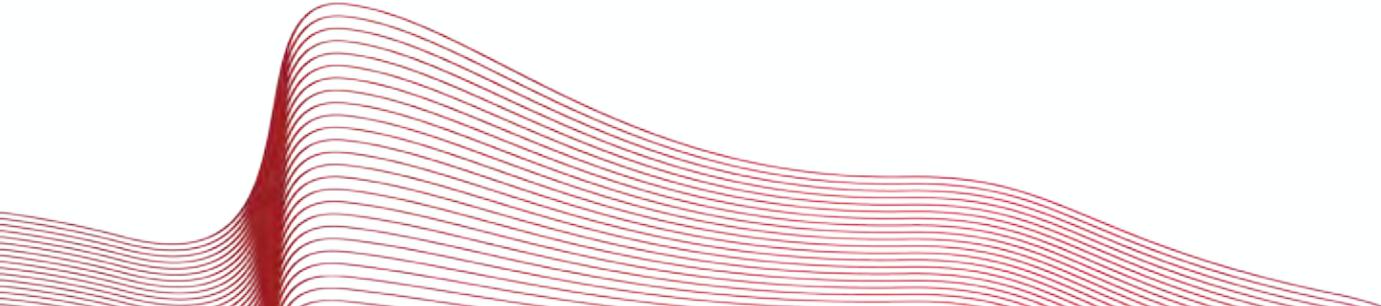
a presentation on the role of market-led approaches and new technologies in enabling cost-effective delivery of offsite BNG by developers.

Who am I?

- Alan Pearce – MRTPI BA Hons BTP
- Chartered Town Planning Director with over 20 years experience.
- Head the newly established Lambert Smith Hampton Planning and Development team for the South West and Wales.
- Previously worked for Stride Treglown, RPS and Alder King
- Worked closely with Tyler Grange on many planning applications

apearce@lsh.co.uk

0117 914 2021



Lambert
Smith
Hampton

PDC National Coverage

Planning

Development

Regeneration

Urban Design



SERVICES WE OFFER

Planning
Appraisals

Planning
Strategy /
Agency Support

Planning
Project / EIA
Management

Local Plan
Promotion

Consultation

Applications

Appeals

Expert Witness
/ Due Diligence

Enforcement

S106 / CIL
Advice

Content

- Policy Overview – National, Regional and Local level
 - LPAs Current Policy
 - WoE CA – JSP Policy
 - Emerging - Bristol Local Plan
- BNG - Implications for Development
- Closing Thoughts...



A Green Future: Our 25 Year Plan to
Improve the Environment



Biodiversity 2020:
A strategy for England's wildlife
and ecosystem services



Lambert
Smith
Hampton

POLICY OVERVIEW

NPPF (Feb 2019)

- Paragraph 8 – Environmental Objective
- Chapter 15 – Conserving and enhancing the natural environment
- Paragraphs 170a and d, 174 b and 175 d

170d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

174b) Plans shouldpursue opportunities for securing measurable net gains for biodiversity.

175d) In determinations...encourage improvements, especially where net gains..

Planning Practice Guidance

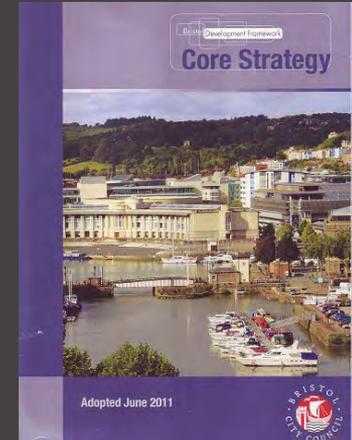
- Refers to Biodiversity Net Gain under “Natural Environment”
- *Is there a statutory basis for planning to seek to minimise impacts on biodiversity and provide net gains in biodiversity where possible? Yes!*
- Paragraph 007 – Section 40 of Natural Environment & Rural Communities Act 2006.
- *Places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. Helping to achieve Biodiversity 2020.*
- Paragraph 017 – Protection and enhancement of biodiversity

Local Policy Timelines

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
NPPF		MAR						JUL	FEB		
JSP					Issues	SS	Publ	Tech	Hear	Adopt	
BCC	CS			SADM	CAP				Rev / Publ	Adopt	
B&NES				CS			PMP	Issues	Cons	Publ / Hear	Adopt
SGC			CS				PSP	Cons	Publ	Hear	Adopt
NSC		CS	LC	LC	CS13	DMP	CS	SA	Publ / hear	Adopt	

Policy Framework - Bristol

- NPPF (and NPPG) – 2012 , July 2018, Feb 2019
- Joint Spatial Plan 2020 (in preparation since 2015)
- Bristol Local Plan – current policy 2011-2015
- Emerging Local Plan (2018-2020)
- Other guidance (e.g. TQSF, Urban Living SPD 2018)



CURRENT POLICY

Bristol Core Strategy

- BCS Objective 7
- BCS 1, 2, 5 – Growth Policies refer to Green Infrastructure
- BCS9 – Green Infrastructure
- BCS15 – Sustainable Design & Construction
- BCS23 – Pollution

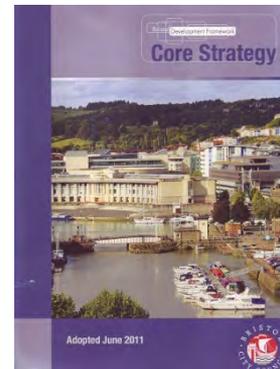
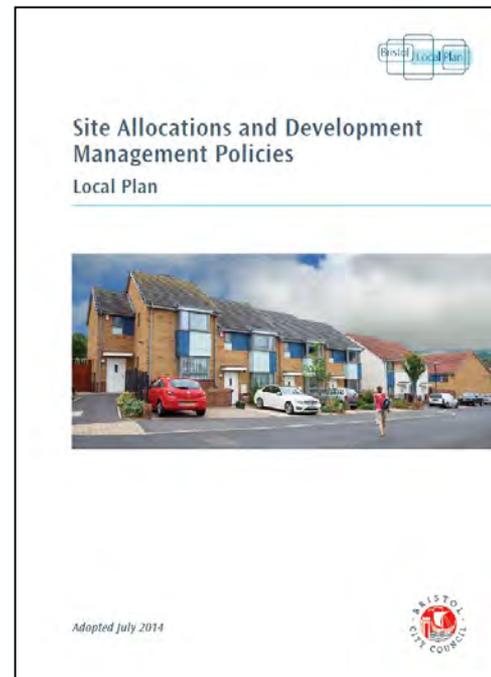


Diagram 4.9.1: Strategic Green Infrastructure Network



Bristol Local Plan - SADMP

- DM15 – Green Infrastructure Provision
- DM16 – Open Space for Recreation
- DM17 – Development Involving Existing GI
- DM19 – Development and Nature Conservation
- DM22 – Development adjacent to waterways
- DM26, 27 and 29 – Character and Design policies
- DM33 and DM35 – Pollution and Noise - mitigation



Bristol Local Plan - Central Area Plan

- BCAP22 – Habitat Preservation, enhancement
- *“The overall approach will be to create, protect, enhance and manage a network of multifunctional green infrastructure within central Bristol to support and strengthen the strategic green infrastructure network. This will happen through a series of interventions ranging from new green spaces to increased tree planting and building integrated solutions such as living walls and roofs.”*
- BCAP25 – GI in city centre developments...where possible.....



Bristol Biodiversity Action Plan - Aims

- Provide a strategic overview for biodiversity conservation in Bristol
- Highlight priority habitats and species that are of particular value in Bristol, both within the national and local context
- Highlight threats and issues affecting these priority habitats and species, together with objectives, targets and actions to address them
- Encourage a common approach to biodiversity conservation and sharing of best practice
- Encourage education and community action and involvement as a key part of the biodiversity process
- Promote biodiversity conservation as an essential element of sustainable development
- Promote the importance of Bristol's biodiversity at a local, regional and national level
- Develop Bristol as a centre of excellence for urban biodiversity conservation**
- The Bristol BAP proposes actions over an initial five year period, which will be reviewed and updated at the end of this period.



Bristol Temple Quarter Spatial Framework

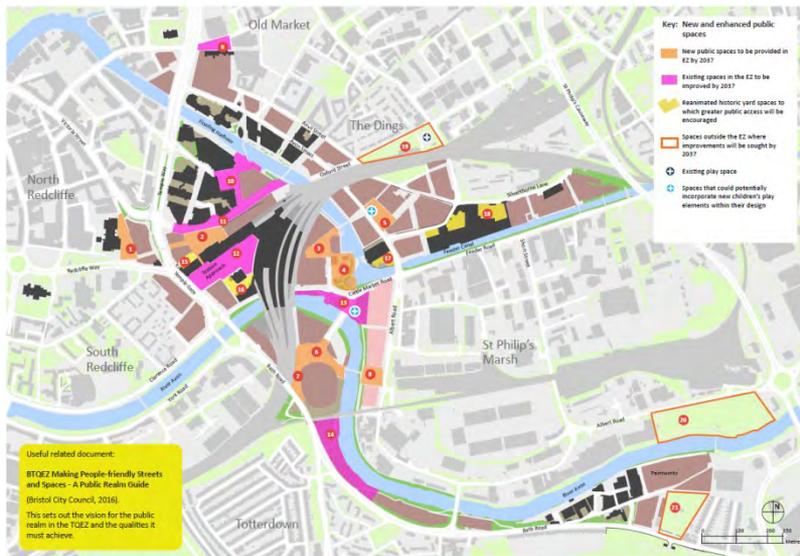


Fig 5: New and enhanced public spaces

Appendix

Appendix D: Design for flood risk and surface water management

- Vulnerable uses such as housing, schools and non-vulnerable uses such as shops (Pembroke Street).
- Riverside amphitheatre – a potential precedent for new spaces such as Temple Place.
- Water harvesting via a green roof – The Point, Bristol.
- New waterline wall-wart integrated into traditional flood defence measures.
- Green connections to the waterline exploited through new commercial developments, (previously Upland, Stockfish).
- New outdoor amenity space with high biodiversity which extends waterline location (Hanover Quay, Bristol).
- Water harvesting via a green roof – The Point, Bristol.
- New waterline wall-wart integrated into traditional flood defence measures.
- Green connections to the waterline exploited through new commercial developments, (previously Upland, Stockfish).



October 2018 - City Design Group

The Spatial Framework 2018 - Publication Version

111

Reference to Policy BCP22 - near waterways – preserve and enhance biodiversity e.g. Hanover Quay.

Appendix D – Flood Risk design to include biodiversity

Bristol Urban Living SPD - 2018

Part 1- Major development

1

Block and Street

Our buildings and streets set the backdrop to daily life for the people who live, work and visit the city. As the city continues to grow, development at higher densities offers the potential to repair and reinforce the existing block and street structure that characterises the city.

The AM's User Hierarchy - consider pedestrians needs first



"In streets and city spaces of poor quality, only the bare minimum of activity takes place. People hurry home. In a good environment, a completely different, broad spectrum of human activities is possible."

Jan Gehl, *Life Between Buildings: Using Public Space*

Q1.4 Does the scheme provide people-friendly streets and spaces?

We recommend

- a Acknowledging that as densities increase, the need to invest in a high quality public realm grows. Increasingly streets are not simply movement corridors but also the outdoor rooms of the city, and an expression of civic identity.
- b Designing streets and spaces where the needs of pedestrians, cyclists and public transport are given priority over the needs of through traffic and vehicular access.
- c Thinking about where connections can and should be made, and about how best the new development can integrate into the existing neighbourhood and potential future developments.
- d Remembering that the scheme occupants' and occupants of neighbouring buildings may want to walk through the development to go somewhere else, so carefully consider how a development can contribute towards creating a more walkable neighbourhood, connecting places where people want to go.
- e Thinking carefully before blocking or redirecting existing routes, particularly where these are well used.
- f Creating connections that are attractive, well lit, direct, easy to navigate, well overlooked and safe.
- g Ensuring that all streets and pedestrian/cycle only routes pass in front of buildings, rather than to the rear of them.
- h Adopting a comfortable scale of enclosure that is appropriate to the existing character and function of the street. Streets with a higher footfall, should have wider pavements. Streets that need to be wide to accommodate traffic could benefit from extensive tree planting to reduce the perceived scale of the street.
- i Providing regular building entrances to provide activity and visual interest along the street. The design of entrances should reflect their intensity of use – entrances with the most use should be the most legible in an elevation. High quality materials and architectural detailing are expected as this is the part of the built environment most intensively used.
- j Integrating green and blue infrastructure within the street to help improve the pedestrian environment and to support rainwater management through sustainable drainage, reduce exposure to air pollution, manage heat and increase biodiversity. Sufficient space should be allowed in the street for trees to thrive, providing sufficient soil depth and high quality growing material for planting.

"Integrate green and blue infrastructure within the street to help....increase biodiversity....leaving sufficient space for tree planting in the street"



EMERGING POLICY

Joint Spatial Plan

West of England Joint Spatial Plan –Publication Document 2017

- Policy Principle 4 states new development will:

“be expected to contribute towards a net gain of the sub-region’s diverse and high quality natural environment and biodiversity”

- Evidence base includes SD10 Habitat Regulations Assessment
- Policy Principle 8 / Policy 5 – Place Shaping Principles - GI

“in delivering Strategic Development Locations, policy requirements will incorporate provision for multi-functional green infrastructure as mapped in the Strategic Development Locations framework diagrams”



Bristol Local Plan Review – March 2019

- Includes reference to BNG

“10.2 Existing policies will continue to provide an effective framework for maintaining and enhancing the city’s green infrastructure network and for providing net gains for biodiversity.”

- Retains Policies BCS9, DM15-17, DM19-22 and BCAP22-25

“The policy sets out a comprehensive approach to green infrastructure and achieving net gains for biodiversity. It is consistent with the NPPF and the place shaping principles set out in the Joint Spatial Plan.” - BCS9

- No direct requirement for BNG in these policies?

Bristol Local Plan Review – March 2019

- **Policy CCS4: Resource efficient and low impact construction**

“Opportunities to incorporate measures which enhance the biodiversity value of development, such as green roofs.”

- **Policy CCS5: Renewable Energy Development**

“consider impacts on biodiversity”

- **Policy HW1: Pollution Control and Water Quality**

“unacceptable impact on environmental amenity, biodiversity ...will be expected to provide an appropriate scheme of mitigation.”

RECENT COMMENTARY

Spring Statement – March 2019

6. Developers in England will be required to show that projects have a positive impact on biodiversity to secure planning permission. The announcement follows a consultation paper published in December last year which proposed the biodiversity net gain requirement - with possible exemptions for permitted development and brownfield sites.

Chancellor Philip Hammond



Spring Statement: Government to adopt biodiversity net gain policy

13 March 2019 by Mark Willang

Developers in England will be required to show that projects have a positive impact on biodiversity to secure planning permission, the government has confirmed.



Spring statement: Developers will be required to show biodiversity 'net gain'

In a summary of the Spring Statement delivered today by chancellor Philip Hammond, the Treasury announced that "the government will mandate net gains for biodiversity on new developments in England to deliver an overall increase in biodiversity" in a bid "to ensure that wildlife isn't compromised in delivering necessary infrastructure and housing".

Spring Statement: 13 things you need to know

- The chancellor Philip Hammond's Spring Statement yesterday included a host of planning-related measures. Here are 13 key

How the need to show biodiversity benefit to get permission affects you

21 March 2019 by Joey Gardiner

The government has confirmed it will push ahead with plans for a new biodiversity net gain policy. But observers warn that the move could place extra burdens on both councils and developers.



Biodiversity: government to adopt net gain plan

Last week, chancellor Philip Hammond announced that the government will push ahead with a proposal, consulted upon in December, to use the planning system to mandate a net biodiversity gain from all new development. However, the consultation by the Department for the Environment, Food and Rural Affairs (Defra) left open numerous questions about how the scheme will work in practice which Hammond didn't answer, making the impact upon developers and local authorities hard to predict.

ENVIRONMENT

How biodiversity net gain could impact on planning

by Joey Gardiner

The government has confirmed it will push ahead with plans for a new policy requiring applicants to show biodiversity benefits to get permission. But observers warn that the move could place extra burdens on both councils and developers.

Last week, chancellor Philip Hammond announced that the government will push ahead with a proposal, consulted upon in December, to use the planning system to mandate a net biodiversity gain from all new development. However, the consultation by the Department for the Environment, Food and Rural Affairs (Defra) left open numerous questions about how the scheme will work in practice which Hammond didn't answer, making the impact upon developers and local authorities hard to predict.

Defra's consultation proposed mandating biodiversity net gain, as measured by Defra's biodiversity metric, on all schemes approved under the Town and Country Planning Act system. The metric, developed by Defra and government agency Natural England in 2012, allows practitioners to assess a habitat in terms

of its value to wildlife, condition and size, and thus calculate habitat losses and gains.

The National Planning Policy Framework (NPPF) already states that planning policies and decisions "should" enhance the environment by "minimising impacts on and providing net gains for biodiversity". Defra proposed making this mandatory by updating planning guidance and by putting a "clear duty in legislation".

A spokesman for Defra declined to provide further details in advance of its formal response to his consultation, which he said will be published "shortly". However, Tom Butterworth, technical director at consultant WSP, said he expected the legislation would come forward in the forthcoming Environment Bill which is scheduled to be published before the summer recess. Stephen Tromans, QC at 30 Essex Chambers, said it was also likely to require an update to the NPPF. "Something as significant as this would need to be reflected in national policy," he said.

Under the system, existing habitat protections will be maintained and a "mitigation hierarchy" will mean developers would have to first seek to avoid harm and then seek to mitigate any harm before being allowed to compensate for habitat loss if other measures are not sufficient. Defra's proposal is that, where compensation is required, developers either find credible ways to offset the loss locally, or pay into a tariff likely to be levied under the existing section 106 system. But there are a number of questions around the system that are still to be decided, including the amount of biodiversity net gain required and when it will be introduced (see panel, bottom left).

The experience of authorities such as Lichfield District Council in the West Midlands, which

mandated net gain through local policies in 2015, suggests the drive can work. It chose to insist upon 10 per cent net gain, but the district's ecology manager Justine Lloyd said it had actually delivered an average net gain of 60 per cent.

Nevertheless, there is also concern about the burden it will place upon authorities. Gavin Ward, director of ecology at consultant WYG, said: "Lots of authorities don't have in-house ecologists." He said it was important for councils to have such expertise to make sure developers do not take advantage of the policy to spoil habitats and then pay for it.

Another authority that has introduced net gain policies is South Cambridgeshire District Council. Dr Tami Hawkins, its cabinet member for planning, said the measures have worked well, but added: "It's not been easy. There's the effort of bringing parties together to find offsetting sites. Then developers always want to play trade-off games, and argue that [biodiversity provision] is not viable."

Developers, likewise, have concerns. Butterworth said, under the 2012 metric, a small development would typically pay £2,000 extra up front just to undertake the necessary biodiversity assessments. Ward added that some would "see it as a development tax". Brian Berry, chief executive of the Federation of Master Builders, which represents small builders, said: "This is the wrong time to be adding an extra burden."

However, some larger housebuilders, including Berkeley Group and Barratt, are embracing the potential to make green spaces on their developments which simultaneously address biodiversity and flood management and provide recreation. Butterworth said this can also help get schemes through planning and sell more quickly.

BIODIVERSITY NET GAIN: UNANSWERED QUESTIONS

What will the required level of net gain be?

The consultation suggested requiring developments to improve biodiversity by ten per cent, but the figure is not decided. Gavin Ward of consultancy WYG said five per cent would be more realistic. Simon Marsh, head of sustainable development at the RSPB, said ten per cent was "too low".

What exemptions will there be from the policy?

The consultation said Defra is considering making small schemes, brownfield schemes, and commercial and industrial schemes exempt from the net gain mandate. Marsh said this could stop the scheme working well. "The cumulative effect of all these exemptions could be significant."

How will the tariff be collected?

The consultation said local authorities' section 106 system is likely to be the best vehicle for collecting tariff monies, but nevertheless asks whether tariffs might be better collected nationally by central government.



Biodiversity: developers will have to monitor wildlife and habitat losses, under the new policy.

08/04/2019

Brookshire warns developers to protect local wildlife

Words: Huw Morris



Communities secretary James Brookshire has written to developers reminding them of their legal obligations to protect wildlife during building work.

The move follows increasing concerns over netting being placed in trees and hedgerows ahead of building work near housing developments.

In a letter to leading developers, Brookshire stressed that birds are protected under the Wildlife Countryside Act 1981, and that mitigation plans will need to show how developers will avoid or manage any negative effects on protected species during their work.

He reminded developers of recent planning reforms which state that policies and decisions should contribute to and enhance the natural and local environment by minimising the impacts on and providing net gains for biodiversity. "While building new homes is vital, we must take every care to avoid unnecessary loss of habitats that provide much-needed space for nature, including birds," Brookshire said.

"Developments should enhance natural environments, not destroy them. Netting trees and hedgerows is only likely to be appropriate where it is genuinely needed to protect birds from harm during development."

The Royal Society for the Protection of Birds (RSPB) said the planning system must play a vital role in not just reversing the decline in wildlife but helping nature to recover.

"Tree and hedge removal should be completed outside of nesting season. However, if there is absolutely no alternative, then netting must be used sparingly in line with the legal duties and responsibilities on developers, including regular checks to ensure wildlife isn't getting trapped, injured or worse," said RSPB director of conservation Martin Harper.

Lambert
Smith
Hampton

BNG IMPLICATIONS FOR DEVELOPMENT

Development Affected

- All new developments that result in loss or degradation of habitat, including buildings such as housing, offices, shops, business space and local infrastructure
- Developments that would result in negligible loss or degradation of habitat, for instance material change of use of or alterations to buildings and house extensions, would fall out of BNG scope
- Considering exemptions for developments by size, sector or site location.
- Permitted Development / Householder excluded
- Small and brownfield sites exempted

Ecohomes (2002-2006) / CSH 2008



EcoHomes 2006 – The environmental rating for homes

The Guidance – 2006 / Issue 1.2

April 2006

bre

BREEAM Office
BRE
Garston
Watford WD25 9XX
Tel: 01923 664462

E-mail: ecohomes@bre.co.uk
Web site: www.ecohomes.org

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Eco 4 Change of Ecological Value of Site

Credits available: 4

Aim

The aim of this credit is to reward steps taken to minimise reductions in ecological value and to encourage an improvement.

Credit Requirements

The development must meet the following criteria.

Credits	
1	For a change of ecological value of between -9 and -3 natural species.
2	For a change of ecological value of between -3 and +3 natural species.
3	For a change of ecological value of between +3 and +9 natural species.
4	For a change of ecological value of greater than +9 natural species.

Applicability

The same approach is taken for both new build and refurbishment.

The whole development must meet the requirements.

Main Information to be provided by the Developer

1. Plans of the site AND surrounding area, both before the proposed development, and the proposed layout. These should show natural and built features, and any proposed planting schemes.
2. The plans should be marked up according to the landscape and plot categories in the *Guidance* and *Supplementary Guidance*. Lists of areas will need to be calculated for the *Developer Sheets*.

Guidance

1. The change in the site's ecological value is calculated by comparing the estimated diversity of plant species before and after construction. The estimated ecological value of the site is expressed as an area-weighted average of plant species for the different vegetation plot-types of the site.
2. Details of the appropriate vegetation plot-types and average number of species per vegetation plot-type to be used in the calculations are provided in *Supplementary Guidance B and C*.
3. It is important to ensure the appropriate vegetation plot types for the site and their areas are correctly defined.
4. To calculate the Change of Ecological Value follow the methodology provided in the *Supplementary Guidance A-C*.
5. In table 2 (*Supplementary Guidance B*), 'garden planting (typical)' and 'wildlife garden planting' will always record a score of zero, unless a suitably qualified

Eco 1 Ecological
Value of Site

Eco 2 Ecological
Enhancement

Eco 3 Protection of
Ecological Features

Eco 4 Change of
Ecological Value of
Site

Eco 5 Building
Footprint

**Lambert
Smith
Hampton**

PPG – Enhancement Suggestions

How can development not only protect but also enhance biodiversity?

Biodiversity maintenance and enhancements through the planning system have the potential to make a significant contribution to the achievement of [Biodiversity 2020 targets](#).

Biodiversity enhancement in and around development should be led by a local understanding of ecological networks, and should seek to include:

- *habitat restoration, re-creation and expansion;*
- *improved links between existing sites;*
- *buffering of existing important sites;*
- *new biodiversity features within development; and*
- *securing management for long term enhancement.*

More than Brundtland (1987)....

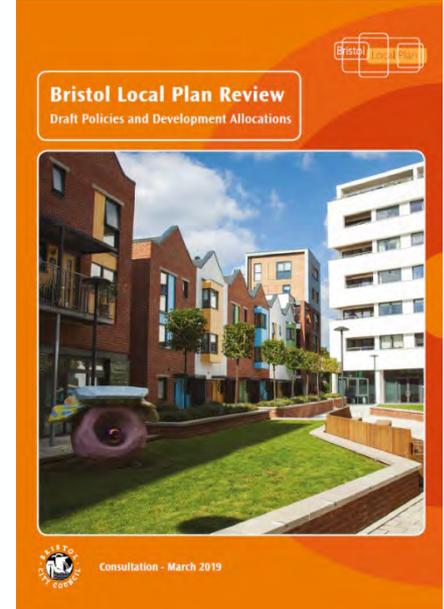


“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”

“An approach to development that aims to leave the natural environment in a measurably better state than beforehand”

Local Impact - Bristol

- Significant Urban Regeneration / Brownfield
- Starting point is low on some PDL sites
- Balance of housing growth / biodiversity gain
- Potentially simpler for some sites
- BCC resources / local variations



CLOSING THOUGHTS

Closing Thoughts

- Current Adopted policy implies enhancement but not mandatory
- Emerging Policy is not strong enough on BNG – modification?
- BCC net gain opportunities could be minimal
- Greenfield sites could be enhanced
- CIL or S106?
- Many questions still to be answered!



Biodiversity Net Gain: A market-led approach

Guy Thompson

Managing Director, EnTrade



Wessex Water
YTL GROUP



Problem



Farmers and land managers can't capture **value** from their natural capital.

Business and regulators don't know the **potential** of this natural capital.

No mechanism exists to join the two up.

Markets:

Expose **demand-side** needs and opportunities

Realise value for willing buyers and sellers

Make **better use of funding** – public and private

New technologies:

Reduce need to understand complex ecological systems

Reduce transaction costs for contract establishment and **verification**

Information:

Drives **efficient markets**

Turn interventions into **outcomes**

Reduce price asymmetries

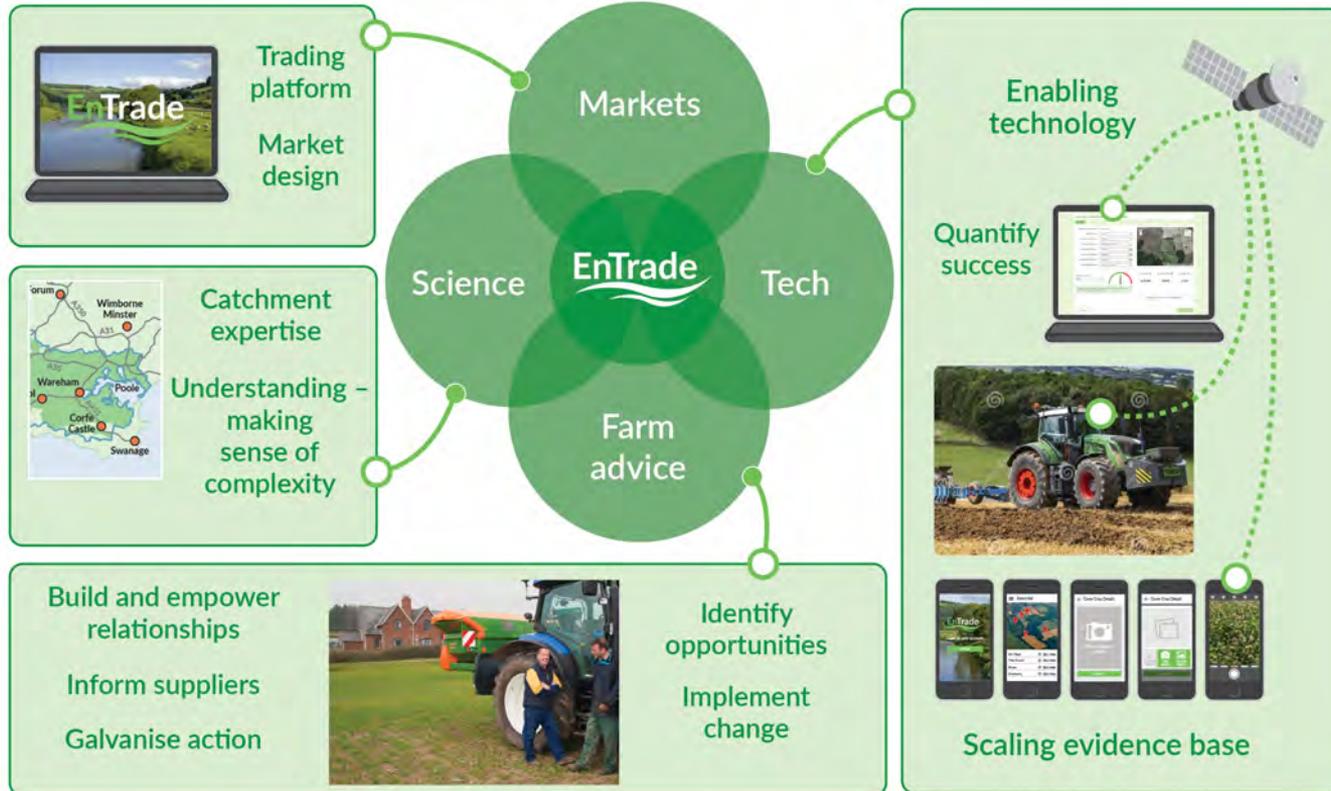
Expose **co-benefits** (move from piggy-backing to stacking)

Anyone who manages land can **grow natural capital**

Anyone who gains from improved natural capital could **pay for more to be grown**, including organisations who:

- Rely on land to produce their raw materials
- Have carbon or biodiversity offsetting obligations
- Are at risk from flood, drought or poor air quality; and
- Value biodiversity, recreation and naturally improved well-being

What is EnTrade?



- EnTrade has a track record of delivering environmental outcomes from farmers for the best price
- A full natural capital benefits auction will be delivered in Poole Harbour catchment this autumn for the first time



Who we've worked with



Wessex Water

YTL GROUP



Llywodraeth Cymru
Welsh Government



Nestlé



**United
Utilities**



CAMBRIDGE
WATER
COMPANY



NATURAL
ENGLAND



**NORTHUMBRIAN
WATER** *living water*



**National
Trust**

Heathrow

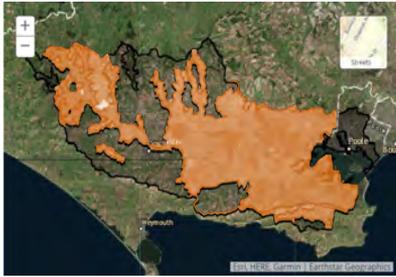


Arable reversion BAP grassland



Arable margins with nectar sources

Flood regulation



- Each measure will have a different impact according to the proposed location
- Natural capital will be measured according to five flows in the catchment (as well as Wessex Water benefits of nitrate reduction)

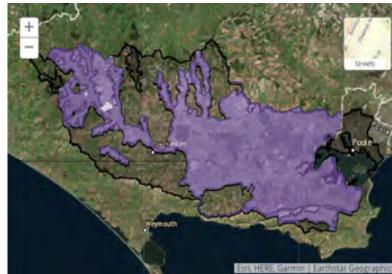
Carbon sequestration



Pollination



Biodiversity connectivity



Erosion protection



Enhancing natural capital stocks

- Farmer applies for arable reversion on a 1 ha field
 - This attracts £550 per ha basic amount for biodiversity and N benefit
 - Farmer can also get an additional **up to 20%** natural capital payment based on value to natural capital flows
 - This is based on location score of the field based on a relative scale scored out of 10.

Arable Reversion to Grassland –
basic rate £550



Flood regulation =
8,000m³/yr

Carbon
sequestration = 3.2
tonnes

Pollination = 5 units

Erosion protection =
200 m³/ yr

Biodiversity
connectivity= 8 units



Case study – Hants Avon

- Landscape-scale approach
- Demand-side perspective
- Start with one value chain
- Attract multiple buyers
- Co-benefits of measures



EnTrade is built to:

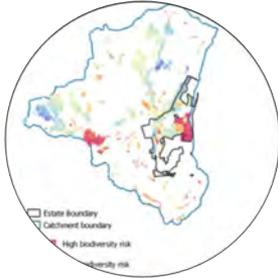
- Deliver any environmental outcome
- Over a distributed area
- For the best price

This strategic approach can:

- Reduce costs and uncertainty
- Increase resilience of biodiversity



Benefits to developers and planners



Robust verification to assure local planning authorities and regulators



Business certainty and a clean break from the planning system



Use of new technology and market instrument to reduce costs



info@entrade.co.uk

*Creating fair markets and trusted deals to
grow natural capital*

EnTrade


Wessex Water
YTL GROUP

