



Chartered Institute of Ecology and Environmental Management

# Briefing Paper: Environmental Net Gain

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# 1. Introduction

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This is CIEEM's briefing paper on Environmental Net Gain (ENG). It aims to provide a practical definition of the term and provide the legislative, policy and strategic context within which ENG can be delivered. It also aims to highlight how CIEEM members can apply these concepts, during development (which includes retrofitting and redevelopment), in land management and when formulating strategies. By taking a holistic approach, significant gains in environmental benefits can be achieved.

## 2. What is Environmental Net Gain

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'Environmental Net Gain' is a term that covers multiple environmental benefits. Whilst ENG does not yet have a single agreed definition, in Defra's public consultation on Biodiversity Net Gain (BNG) it was defined as: *"In short, this means improving all aspects of environmental quality through a scheme or project. Achieving environmental net gain means achieving biodiversity net gain first, and going further to achieve increases in the capacity of affected natural capital to deliver ecosystem services and make a scheme's wider impacts on natural capital positive."* – Defra, 2018<sup>1</sup>.

In 2020, the Environmental Industry Commission's Natural Capital Taskforce stated that: *"Environmental net gain is an approach for improving the condition of, and ecosystems services that flow from, our natural assets in the context of development"* (EIC 2020)<sup>2</sup>.

## 3. Using Biodiversity Net Gain to Deliver Environmental Net Gain

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Biodiversity Net Gain (BNG) is an approach (soon to be legislated in England) to development that leaves biodiversity in a better state than before. BNG still relies on the application of the mitigation hierarchy for any project or plan to avoid, mitigate or compensate for biodiversity losses.

Interventions that help deliver BNG can also deliver wider environmental benefits. For example, wetland habitat creation or smaller rain gardens can deliver flood attenuation and enhanced water quality; woodland habitat creation can deliver noise attenuation, visual screening and carbon sequestration but also provides an educational and recreational resource that improves the health and wellbeing of the local population. Mechanisms for measuring and demonstrating environmental benefits are advocated through a natural capital or ecosystem service approach that is underpinned by biodiversity and frames these benefits which derive from natural capital or ecosystem assets. How we perceive the value of these benefits often in turn affects how these assets are managed or exploited (see Image 1).

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<sup>1</sup> Defra (2018). Net Gain Consultation Proposals. [online] Available at: [https://consult.defra.gov.uk/land-use/net-gain/supporting\\_documents/netgainconsultationdocument.pdf](https://consult.defra.gov.uk/land-use/net-gain/supporting_documents/netgainconsultationdocument.pdf)

<sup>2</sup> Delivering environmental net gain: an EIC position paper (EIC 2020) [online] Available at: <http://eic-uk.co.uk/wp-content/uploads/2020/02/EIC-Report-Delivering-environmental-net-gain-2019.pdf>

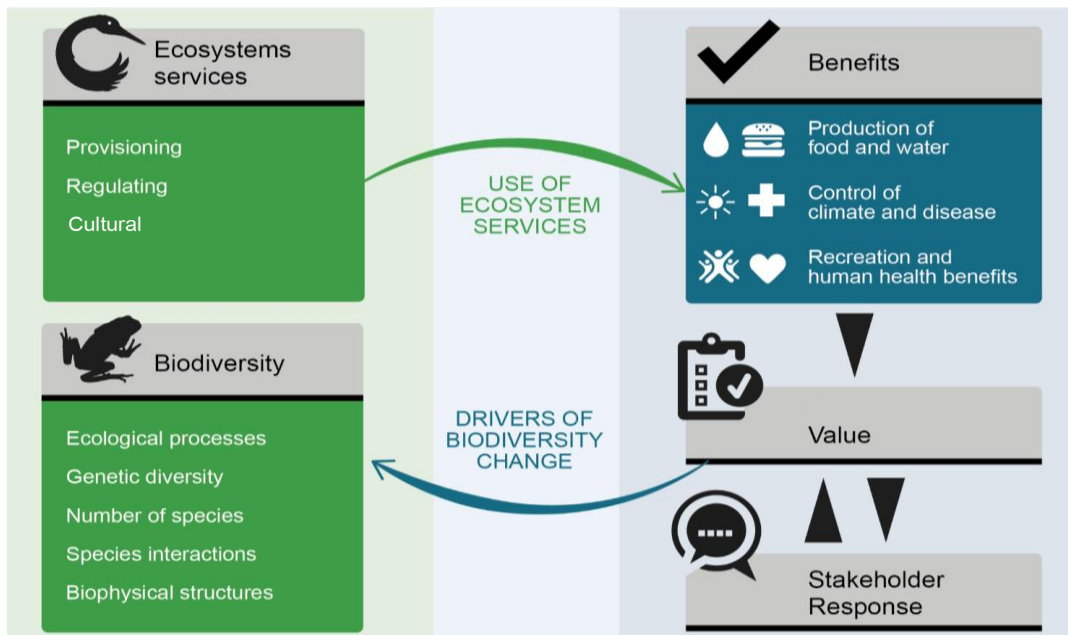


Image 1. The natural capital approach (from Business and Biodiversity Risk JNCC<sup>3</sup>)

## 4. Environmental Net Gain in Legislation, Policy and Strategy

### a. Legislation

The upcoming 2021 Environment Bill<sup>4</sup> introduces a *mandatory* requirement for BNG for projects consented under the Town and Country Planning Act in England (to be set at a minimum of 10%) for new developments (with some exceptions) to halt the loss in biodiversity, calculated using the Biodiversity Metric 2.0 methodology and tool<sup>5</sup>. A further iteration of the Biodiversity Metric 2.0 is proposed which is likely to be launched in spring 2021.

There are few legislative drivers yet for delivering ENG in most of the UK. However, the Natural Capital Committee (NCC) has called for BNG requirements to be expanded to ENG. The NCC argues that a broader scope will help businesses avoid unintended negative consequences of BNG and to ensure that their positive impact lasts. Their report also asks for interim targets to be set in law to map out the road to long-term legally-binding targets<sup>6</sup>.

<sup>3</sup> Biodiversity Risk - Integrating Business and Biodiversity in the Tertiary Sector 2018 <https://hub.incc.gov.uk/assets/7cac352f-1b21-420e-9e0a-c0860f4da556>

<sup>4</sup> The Environment Bill <https://www.gov.uk/government/publications/environment-bill-2020>

<sup>5</sup> The Biodiversity Metric 2.0 <http://publications.naturalengland.org.uk/publication/5850908674228224>

<sup>6</sup> NCC End of Term Report (November 2020)

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/931695/ncc-end-of-term-report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/931695/ncc-end-of-term-report.pdf)

There is also existing legislation that may be used to advocate for ENG. For example, the Public Services (Social Value) Act 2012<sup>7</sup> requires “*public authorities to have regard to economic, social and environmental well-being in connection with public services contracts; and for connected purposes.*”

In Wales, the Environment (Wales) Act 2016<sup>8</sup> under Section 6 Part 1 requires that “[a] public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems.” Wider benefits are also legislated for under the Well-being of Future Generations (Wales) Act (2015) which recognises that “[a] nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).”

The Agriculture Act 2020<sup>9</sup> encourages farmers in England to deliver ENG via Environmental Land Management schemes (ELMs) which will replace current public funding (planned from 2024-2027) This proposes a single scheme with three tiers<sup>10</sup>:

- Tier 1 – payment to adopt environmentally sustainable farming and forestry practices, paid for actions rather than delivering outcomes.
- Tier 2 – This would encourage all land managers with specialist knowledge to deliver locally targeted environmental outcomes, for example payments for ecosystem services such as tree planting, flood mitigation and habitat creation, restoration or management.
- Tier 3 – This would pay land managers who undertake transformational landscape-scale projects, such as restoring peatland.

## **b. Policy**

The National Planning Framework (NPF) (2014) in Scotland highlights that a natural, resilient environment is key for economic and social health<sup>11</sup>.

Building upon the increasingly established concept of BNG, the Natural Capital Committee (NCC) advised, and were successful in, incorporating the concept of ENG as a key policy principle for development within the Government’s 25 Year Environment Plan 2018<sup>12</sup>.

The National Planning Policy Framework (NPPF, 2019) for England includes the requirement for development to “*demonstrate how the plan has addressed relevant economic, social and environmental objectives (including opportunities for net gains)*”<sup>13</sup>.

While the Strategic Planning Policy Statement for Northern Ireland (SPPS 2015)<sup>14</sup> aims to “[f]acilitate development that contributes to a more socially, economically and environmentally sustainable

<sup>7</sup> The Public Services (Social Value) Act 2012 <https://www.legislation.gov.uk/ukpga/2012/3/enacted>

<sup>8</sup> The Environment Wales Act (2016) <https://www.legislation.gov.uk/anaw/2016/3/contents/enacted>

<sup>9</sup> The Agriculture Act 2020 <https://bills.parliament.uk/bills/2551/publications>

<sup>10</sup> Environmental Land Management Scheme: Policy discussion <https://consult.defra.gov.uk/elm/elmpolicyconsultation/>

<sup>11</sup> The National Planning Framework 2014 <https://www.gov.scot/publications/national-planning-framework-3/pages/5/>

<sup>12</sup> 25 Year Environment Plan (2018) <https://www.gov.uk/government/publications/25-year-environment-plan>

<sup>13</sup> The National Planning Policy Framework (NPPF, 2019)

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810197/NPPF\\_Feb\\_2019\\_revised.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf)

<sup>14</sup> The Strategic Planning Policy Statement for Northern Ireland (SPPS 2015)

[https://www.planningni.gov.uk/index/policy/spps\\_28\\_september\\_2015-3.pdf](https://www.planningni.gov.uk/index/policy/spps_28_september_2015-3.pdf)

Northern Ireland” that “should deliver on all three pillars of sustainable development” which includes “protecting and enhancing the built and natural environment (including our heritage assets, landscape and seascape character)”.

Project Ireland 2040 National Planning Framework (2019) sets out in the National Policy Objective 52: “The planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation and the sustainable management of our natural capital”<sup>15</sup>.

The primary objective of Planning Policy Wales 11 (PPW11, 2021)<sup>16</sup> is to “to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties such as the Socio-economic Duty. A well functioning planning system is fundamental for sustainable development and achieving sustainable places.”

### c. Strategy

Increasingly, strategies are being prepared for projects and plans for government, NGOs and business which include overarching visions, targets and goals delivered by action plans and using metrics and indicators to demonstrate the environmental benefits delivered. These are often underpinned at a global level by the United Nations’ Sustainable Development Goals (see Image 2)<sup>17</sup>.



Image 2. UN Sustainable Development Goals

At a national level for England, for example, the 25 Year Plan for the Environment includes 10 goals (see Image 3) which are measured via outcome indicators and progress is being reported annually<sup>18</sup>.

<sup>15</sup> Project Ireland 2040 National Planning Framework <http://npf.ie/wp-content/uploads/Project-Ireland-2040-NPF.pdf>

<sup>16</sup> <https://gov.wales/planning-policy-wales>

<sup>17</sup> UN SDGs <https://sdgs.un.org/goals>

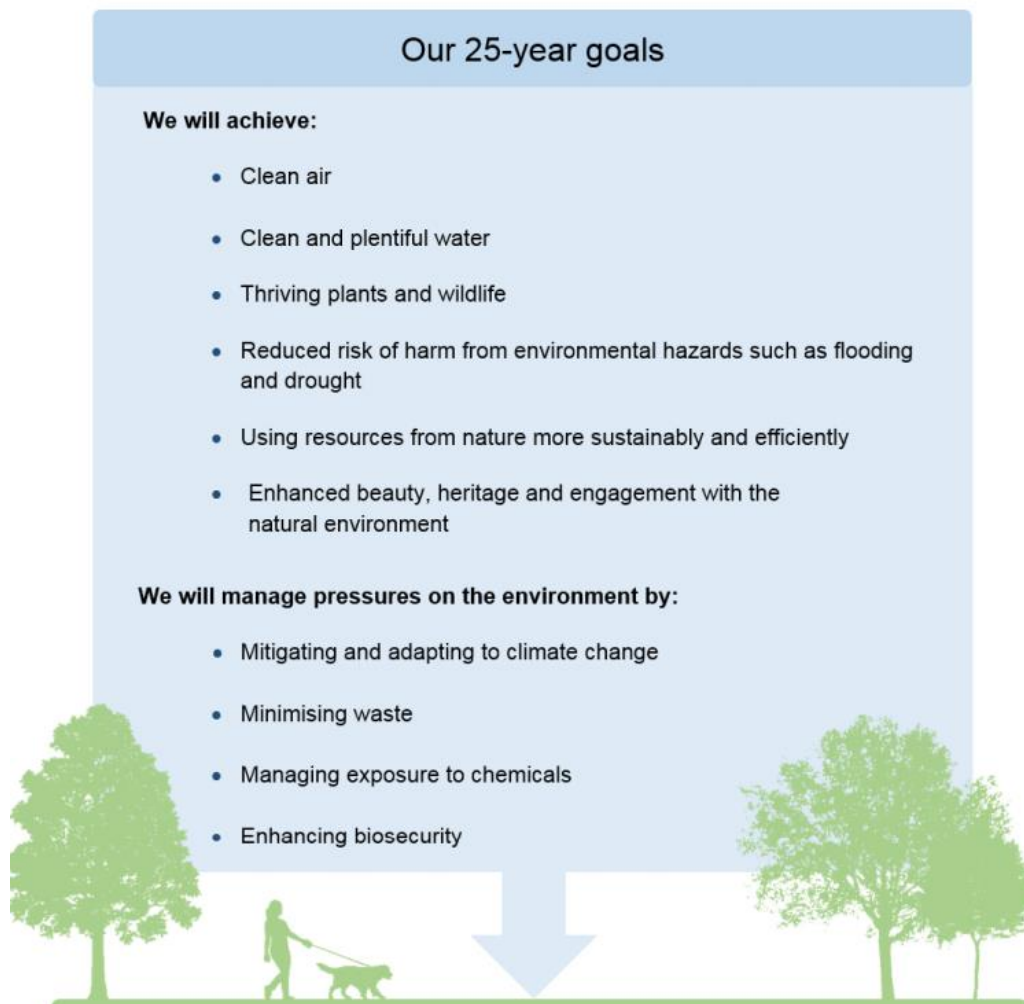
<sup>18</sup> 25 Year Plan Goals Progress Report

([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/891783/25yep-progress-report-2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891783/25yep-progress-report-2020.pdf))

Scotland's Biodiversity Strategy (2018) applies an ecosystem and health and wellbeing approach linked to sustainable economic growth<sup>19</sup>. The goals, metrics and indicators used to demonstrate delivery will vary between projects and plans. These should always be agreed at the outset of any venture and are a useful focus point for assessing that the aims of any venture are being met.

#### **d. Metrics**

There are many different tools, methods, frameworks and initiatives that have been developed to understand impacts on the environment and the potential to capture benefits. They are led and produced by a range of private and public sector organisations, academic institutions, non-profit organisations around the world. An overview of the landscape that supports biodiversity and environmental decision-making is presented in Image 4. Tools are discussed further in the delivery section.



*Image 3. Defra's 25 Year Plan for the Environment goals*

<sup>19</sup> Scotland's Biodiversity Strategy (2018) <https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/ecosystem-approach>

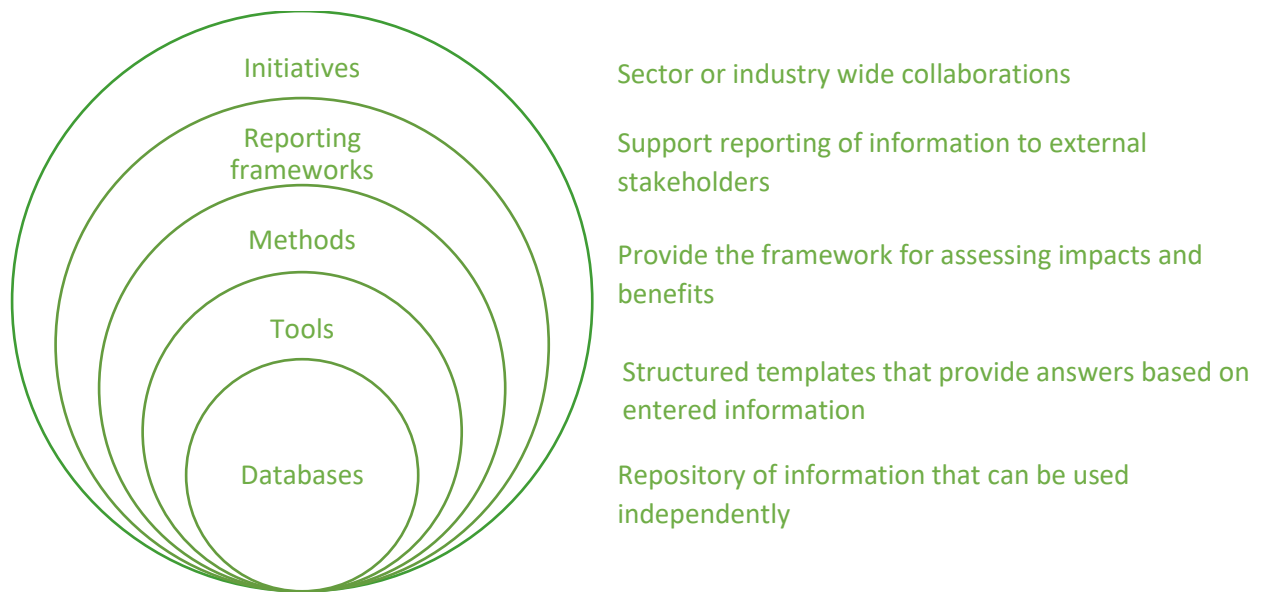


Image 4. Measurement and demonstration mechanisms (from *Business and Biodiversity Risk*, JNCC<sup>20</sup>)

The form of approach and assessment that is required will depend on the sector, the project or plan and the stakeholders involved.

## 5. Delivering Environmental Net Gain Benefits

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The NCC were disappointed that ENG was not mandated in addition to BNG, their advice for delivering ENG was strongly against providing a “*netted off figure*” and that the approach “*should include an assessment of the losses of all the benefits provided by the natural environment and should present the individual benefits and losses*”<sup>21</sup>. Three stages to moving from BNG to ENG, were summarised by CIWEM (2018)<sup>22</sup> and are illustrated in Image 5.

- 1) Consulting on and consolidating BNG, considering the impacts of habitat change for wildlife.
- 2) Developing natural capital (stocks) net gain, considering the impacts of habitat change for people in addition to wildlife (presently being developed using a range of new metrics and approaches to mapping).
- 3) Developing ENG approaches to consider wider, indirect environmental impacts of habitat change.

<sup>20</sup> Biodiversity Risk - Integrating Business and Biodiversity in the Tertiary Sector 2018 <https://hub.jncc.gov.uk/assets/7cac352f-1b21-420e-9e0a-c0860f4da556>

<sup>21</sup> NCC [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/909269/ncc-advice-net-environmental-gain.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/909269/ncc-advice-net-environmental-gain.pdf)

<sup>22</sup> CIWEM Environmental Net Gain Measurement, Delivery and Application Findings of the CIWEM conference, October 2018 <https://www.ciwem.org/assets/pdf/Policy/Reports/Environmental%20Net%20Gain%20CIWEM%20October%202018%20conference%20summary.pdf>

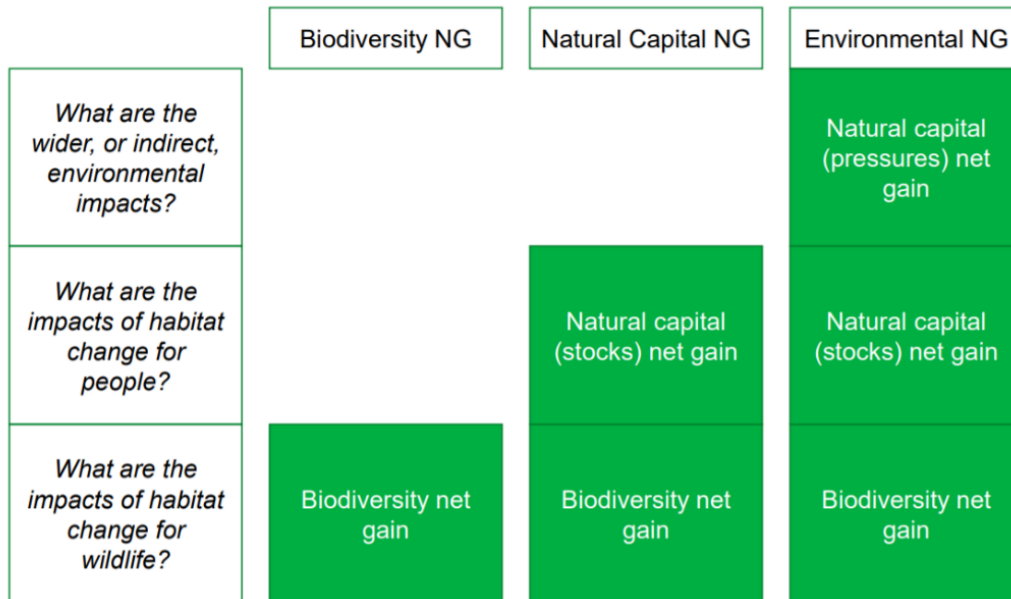


Image 5. Defra: what environmental net gain means<sup>23</sup>

To achieve ENG, we agree that BNG is first achieved and that the mitigation hierarchy is followed<sup>24</sup>. There are many ways of approaching ENG benefits capture. Co-benefits can be derived through partnership working, such as:

- Natural England Uplands Ecosystem Service Pilots<sup>25</sup>
- The South West Partnership for Environment & Economic Prosperity (SWEEP)<sup>26</sup>
- Bespoke community and private partnerships
- Nature Improvement Areas<sup>27</sup>
- Natural Capital Investment Strategies<sup>28</sup>

These can be achieved in the development and management cycles such as:

- The production of a vision or strategy for local authorities and businesses, for example Berkley Homes the Nine Concepts<sup>29</sup>
- New development with associated planning processes including BNG metrics, for example NW Bicester Eco-Town<sup>30</sup>
- Retrofitting existing development with nature-based solutions, for example in existing road schemes<sup>31</sup>

<sup>23</sup> Embedding Environmental net gain Defra at the CIEEM 2019 Spring Conference <https://cieem.net/wp-content/uploads/2019/04/1.-Max-Heaver.pdf>

<sup>24</sup> <https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf>

<sup>25</sup> <http://publications.naturalengland.org.uk/publication/4915928315985920>

<sup>26</sup> <https://sweep.ac.uk/>

<sup>27</sup> <https://www.gov.uk/government/publications/nature-improvement-areas-improved-ecological-networks/nature-improvement-areas-about-the-programme>

<sup>28</sup> Dorset Local nature Partnership NCIV <https://dorsetlnp.org.uk/a-natural-capital-investment-strategy-for-dorset/#:~:text=The%20Natural%20Capital%20Investment%20Strategy,plan%20for%20business%20and%20investors.>

<sup>29</sup> [https://www.berkeleygroup.co.uk/media/pdf/0/k/The\\_Nine\\_Concepts\\_-\\_Making\\_space\\_for\\_nature\\_and\\_beauty.pdf](https://www.berkeleygroup.co.uk/media/pdf/0/k/The_Nine_Concepts_-_Making_space_for_nature_and_beauty.pdf)

<sup>30</sup> <https://www.ukgbc.org/ukgbc-work/case-study-elsbrook/>

<sup>31</sup> [https://www.susdrain.org/case-studies/case\\_studies/central\\_hill\\_highway\\_retrofit\\_london.html](https://www.susdrain.org/case-studies/case_studies/central_hill_highway_retrofit_london.html)



- Improving land management at the local community scale through the adoption of orphaned land or enhanced management of the soft estate, for example TreeHouse School ecotherapy garden<sup>32</sup>
- Improving land management at rural catchment scale through adapted farming, watershed management, woodland management etc. for example slowing the flow at Pickering<sup>33</sup>

As well as maximising the value of any strategy, project or plan, this approach can generate additional funding via payments for ecosystem services and can generate additional benefits through collaboration. There are direct funding opportunities for some of these benefits such as:

- Woodland Carbon Fund<sup>34</sup>
- Countryside Stewardship Scheme<sup>35</sup> Environmental Stewardship – ELS and HLS (and later ELMs)
- Environment Agency Grant in Aid<sup>36</sup>
- English Woodland Grants Scheme
- Water utility companies<sup>37</sup>
- Carbon tax credits<sup>38</sup>
- Corporate natural capital accounts and purchase of natural capital credits

Funding can also be realised for interventions through collaboration where there are secondary benefits from primary goals, for example where a water company or local planning authority is funding compliance driven water quality or flood resilience improvements, there are likely to be opportunities to maximise the benefits of this funding to deliver wider ENG including biodiversity<sup>39</sup>. This approach can be embedded by implementing exemplar design principles which can become best practice<sup>40</sup>. There are also opportunities for revenue generation from a scheme that delivers net gain, for example solar parks<sup>41</sup>.

There are a variety of tools and frameworks to support the delivery of ENG which can be considered at three levels of detail: qualification, quantification, and monetisation of environmental benefits.

1. **Qualification** of ecosystem service benefits and natural capital assets (i.e. identification as to which ecosystem service benefits and natural capital assets are derived from nature (e.g. health and wellbeing, recreation and tourism, carbon sequestration provided by trees, water features etc.) that are impacted upon or depended upon by a client, project, plan or community (i.e. the beneficiaries).
2. **Quantification** of benefits whereby one measures these values in, for example, units of carbon sequestered or degrees of thermal attenuation and therefore energy reduction or a proxy value to represent this.

<sup>32</sup> TreeHouse School Eco-Therapy Gardens <https://www.bigchallenge.info/2019-winners>

<sup>33</sup> <https://www.ice.org.uk/knowledge-and-resources/case-studies/slowing-the-flow-at-pickering>

<sup>34</sup> <https://www.gov.uk/guidance/woodland-carbon-fund>

<sup>35</sup> <https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management>

<sup>36</sup> <https://www.gov.uk/government/publications/capital-grants-for-local-authorities-and-internal-drainage-boards>

<sup>37</sup> <https://www.waterbriefing.org/home/company-news/item/15713-thames-water-will-fund-%C2%A360m-of-green-infrastructure-to-tackle-climate-change-and-flood-risk>

<sup>38</sup> <https://www.woodlandcarboncode.org.uk/about/context>

<sup>39</sup> Delivering Natural Flood Management Schemes <https://committees.parliament.uk/writtenevidence/10513/html/>

<sup>40</sup> Landsec Places for people and nature [https://landsec.com/sites/default/files/2020-03/Landsec%20Biodiversity%20Brief\\_0.pdf](https://landsec.com/sites/default/files/2020-03/Landsec%20Biodiversity%20Brief_0.pdf)

<sup>41</sup> <https://www.iema.net/resources/event-reports/2019/11/25/solar-parks-the-potential-for-biodiversity-and-ecosystem-net-gain>

3. **Monetisation** of benefits for cost-benefit analysis and fund generation which could involve putting a tangible monetary value on the asset or a wider monetary value to be accompanied by a funding mechanism to deliver returns on the asset moving towards natural capital accounting.

Depending on the client, the sector and the project one may start with qualification and move through to quantification and, potentially monetisation, or in some instances qualification may be sufficient to ensure that environmental benefits have been considered.

It is not only how many benefits are being delivered but to whom they are being delivered that should be considered. It is important to ensure that there is an equity to who or what is receiving benefits and that any impacts from a scheme are not disproportionate to certain groups. Where there is already an inequality in benefits provision this should be addressed by the process.

Equally, one may have significant gains in some environmental benefits, but a trade off in others. For example, developing on agricultural land can provide benefits for biodiversity, recreation and tourism, and even carbon sequestration in the long term. But one is losing the finite resource of soil and increasing food insecurity as a nation.

There are also emerging opportunities in the marine environment, for example, sea grass restoration, seaweed farming, intertidal mudflat, saltmarsh and offshore shelf sea sediments creation and restoration<sup>42</sup>. The marine environment may provide benefits at scale in areas with lower competing uses than that for terrestrial habitats and potentially with fewer stakeholder groups to negotiate with. In coastal areas this may still be complex but the benefits could be higher in terms of services, like mitigation of coastal squeeze and flood defences.

By applying these ENG processes, the benefits and impacts on people and the environment become more tangible and thus assist in strategic decision-making at national and local levels.

There are a host of excellent guidance documents to support the tools for measurement, including the *Enabling a Natural Capital Approach* website<sup>43</sup>. While a 'one tool fits all' solution would be the ideal, in reality, one is likely to need to use the right tool for the question. For development design and planning, Natural England's Ecometric<sup>44</sup> is emerging as a useful addition to the Biodiversity Metric 2.0. For cost-benefit analysis, the CIRIA B<sup>EST</sup><sup>45</sup> tool, while initially designed for benefits of SuDS, has been broadened out to incorporate all blue-green infrastructure.

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<sup>42</sup> Delivering Marine Environmental Net Gain <https://www.omreg.net/resources/>

<sup>43</sup> <https://www.gov.uk/government/publications/enca-featured-tools-for-assessing-natural-capital-and-environmental-valuation/enabling-a-natural-capital-approach-tool-summaries>

<sup>44</sup> Natural England's Ecometric <https://ecosystemsknowledge.net/ecometric>

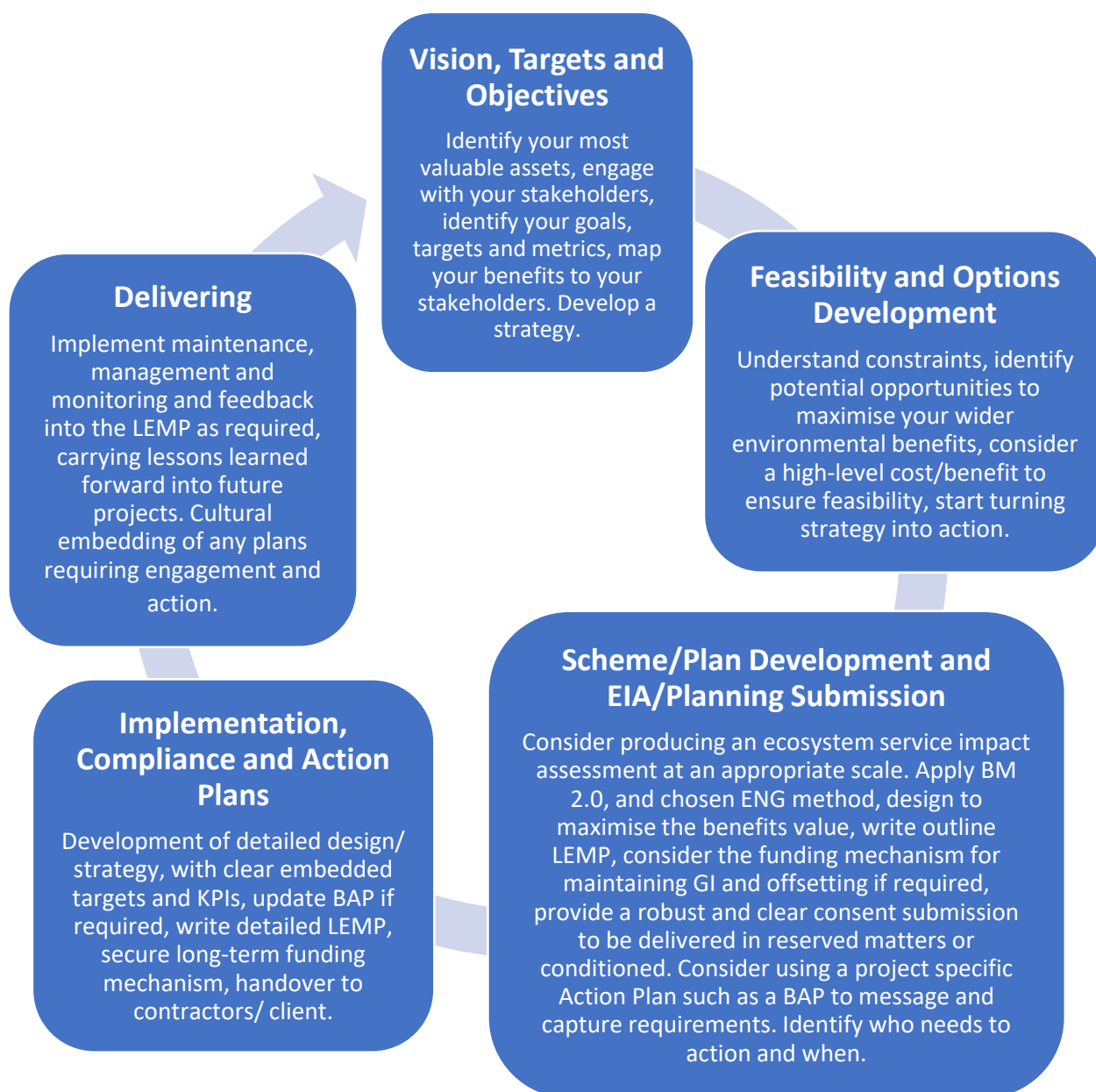
<sup>45</sup> CIRIA B<sup>EST</sup> Tool

<https://www.ciria.org/ItemDetail?iProductCode=W047AF&Category=FREEPUBS#:~:text=B%C2%A3ST%20is%20a,performance%20of%20the%20chosen%20intervention>

## 6. Application

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Delivering ENG requires the interaction and support not only of the client but also of numerous technical specialists and stakeholders. These approaches can be applied throughout the lifecycle of a project or a plan, as shown in Image 6.



*Image 6. Delivering Environmental Net Gain*

As well as application throughout the lifecycle of a project or a plan, this approach can be applied at any of the levels of detail.

A strategy or action plan can be applied to a project or a plan, and by introducing the concept and some broad targets at the beginning of a venture this is more likely to drive success and inspire the wider team.

A simple checklist embedded within a Preliminary Ecology Appraisal (PEA) to list out the ecosystem services likely to be delivered by a site, accompanied by some risks and opportunities to those services, can trigger discussion amongst the project team.

Ideally an ecosystem service impact assessment chapter would be produced to support an Environmental Impact Assessment (EIA) which would ensure a holistic approach to design and mitigation and facilitate maximum ENG.

As previously discussed, highlighting groups that may benefit, and potential collaborators that have a shared goal, can introduce new funding and maintenance opportunities that could increase the feasibility of implementing nature-based solutions and/or efficient offsetting which could widen benefits and/or remove pressures.

A Biodiversity Action Plan for a project or a plan can be expanded to incorporate wider environmental benefits, by citing the ecosystem services provided by each habitat type, listing the stakeholders that benefit and linking to a legacy management strategy such as a LEMP.

Incorporating any goals or targets and citing the required metrics to demonstrate benefits can lead to greater scope for ENG consideration. Accreditations and awards for enhanced environmental performance can significantly add to a consultant or client's reputational value, which can lead to additional work and increased revenue. Enhanced environmental performance can also reduce overall costs by reducing the planning process or sharing costs amongst wider beneficiaries or by replacing single function grey infrastructure with multifunctional natural-based solutions.

## 7. Legacy

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To deliver ENG, maintenance of those benefits should be planned for at least 30 years. This can be secured through a condition, obligation, conservation agreement (similar to a Conservation Bank Agreement for BNG), or conservation covenant. The new Environment Bill will introduce conservation covenants in England which are *“a private, voluntary agreement between a landowner and a ‘responsible’ body, such as a conservation charity, government body or a local authority. It delivers lasting conservation benefit for the public good. A covenant sets out obligations in respect of the land which will be legally binding not only on the landowner but on subsequent owners of the land.”*<sup>46</sup> Businesses may voluntarily commit to obligations or these may be placed upon them, for example Ofwat, who reviews the water utility sector commitments on a five-yearly cycle. CIEEM's proposed OfEnv would serve this purpose for the Environment Bill.

Any additional funding, collaboration or revenue generating opportunities will increase the security of this legacy.

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<sup>46</sup> Conservation Covenants <https://consult.defra.gov.uk/wildlife-management/conservation-covenants/>

## 8. Summary

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ENG is a global, national and local necessity to attenuate climate change, reverse damage to ecosystem services and secure our future quality of life. Ecologists and environmental managers are critical to the inspiration, application and implementation of this approach. ENG should not be an add-on to our interactions and commissions but integral to our thinking. It cannot be achieved by ecologists working in isolation, we need the support of clients, multiple technical specialists and stakeholders to embed this into our profession. We can however all be the champion that the environment deserves.

## 9. Glossary

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|                           |  |
|---------------------------|--|
| <b>Attribute</b>          | An environmental property.   |
| <b>Benefit</b>            | The benefits to people that are obtained from ecosystem services or their wider environment.   |
| <b>Biodiversity</b>       | Biodiversity is defined by the UN Convention on Biological Diversity (CBD) as the variability among living organisms from all sources including, <i>inter alia</i> , terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of their functions (i.e. ecosystem function). |
| <b>Dependencies</b>       | Refers to irreplaceable ecosystem services that are a critical to enabling, enhancing or influencing successful business performance.  |
| <b>Ecosystem</b>          | A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.   |
| <b>Ecosystem asset</b>    | The stock of nature which provides ecosystem services and benefits to people. In this report broad habitats are used to define the ecosystem assets. Geodiversity is also considered as a natural asset supporting abiotic and ecosystem services.   |
| <b>Ecosystem services</b> | The flow of benefits that people obtain from ecosystems, which includes timber, fibre, crop pollination, water regulation, climate regulation, recreation, and physical health.  |
| <b>Flow</b>               | The links and provision from ecosystem assets to ecosystem services, benefits and value.   |

|                        |  |
|------------------------|--|
| <b>GI</b>              | Green infrastructure or blue-green infrastructure is a network providing the 'ingredients' for solving urban and climatic challenges by building with nature.  |
| <b>Impacts</b>         | Arise when a company's or project's operations significantly affect ecosystem function quantity or quality.  |
| <b>Indicator</b>       | A non-quantitative measure of an environmental property.   |
| <b>LEMP</b>            | Landscape and Ecological Management Plan which ensures that the value of the designed GI is retained and enhanced throughout the operational phase of the development.   |
| <b>Material risk</b>   | A financial, operational, reputational or regulatory risk deemed to be significant enough to affect decision making.   |
| <b>Metric</b>          | Quantitative measure of an indicator, including the units used.  |
| <b>Natural Capital</b> | The stock of renewable and non-renewable natural resources on earth (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits or 'services' to people. These flows can be ecosystem services or goods and benefits, which provide value to business and wider society.                   |
| <b>Net gain</b>        | Following completion of a project the biodiversity, natural capital or ecosystem services associated with the project is greater than the previous baseline values.  |
| <b>SuDS</b>            | Sustainable drainage systems are a collection of water management practices that aim to align modern drainage systems with natural water processes. SuDS efforts make urban drainage systems more compatible with components of the natural water cycle such as storm surge overflows, soil percolation, and bio-filtration. |
| <b>Value</b>           | The value that people place on the well-being benefits obtained from ecosystem services, which can be expressed in both monetary and non-monetary terms.   |

## **10. Acknowledgements**

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## **11. Contact**

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