CIEEM

Biodiversity Net Gain Report & Audit Templates

Version 1
July 2021

Acknowledgements

CIEEM would like to thank the following and their organisations:

- **Bob Edmonds CEnv MCIEEM (SLR Consulting Ltd) – Lead Author**
- **Mike Dean CEcol FCIEEM (MD Ecology)**
- **Melanie Dodd (Biodiversity Officer for West Oxfordshire District Council and Cotswold District Council and ALGE committee member)**

We would also like to thank other members of CIEEM's Professional Standards Committee and the Association of Local Government Ecologists for commenting on the draft text:

How to Reference this Document

This guidance should be referenced as:

CIEEM (2021). Biodiversity Net Gain Report and Audit Templates Chartered Institute of Ecology and Environmental Management, Winchester, UK.

Contents

CONTENTS

1. Introduction

This document is intended to provide a framework for writing reports for projects that are aiming to achieve Biodiversity Net Gain (BNG). BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. In order to achieve BNG, a project must be able to demonstrate that it has followed all 10 of the Principles of Biodiversity Net Gain[1].

Biodiversity is the variability among living organisms, including the diversity within species, between species and of ecosystems. Because of the complexities associated with measuring biodiversity in a meaningful way, habitats are typically used as a proxy. In England, a single habitat-based metric[2] has been mandated to ensure a consistency of approach. CIEEM recommends that whatever tool is used to quantify BNG outcomes, the proposed mitigation, compensation and enhancements for habitats and species should be included within BNG reports. This will enable decision-makers and other stakeholders to clearly identify the net gain element of the proposal.

Projects that aim to deliver BNG should usually make the commitment early in the project design stages and therefore CIEEM has developed three templates:

1) BNG Feasibility Report

This report would be aimed at a client or design team to inform them of the feasibility of delivering a net gain. It may be contained within, or be supplementary to, a Preliminary Ecological Appraisal (PEA) Report.

2) BNG Design Stage Report

This report would be typically aimed at decision-makers, e.g., a local planning authority, at the design consent stage of a project (i.e., to form part of a planning application submission alongside an Ecological Impact Assessment Report).

3) BNG Audit Report

This report provides an audit checklist confirming the delivery of BNG at project completion.

The templates provided in this document set out a suggested structure and content for reports specifically produced in relation to BNG assessments. The templates have been designed for development projects but can be adapted for other land use change projects and appraisals. These templates should be used in conjunction with other BNG guidance, sources of further guidance are provided in Appendix 1.

General advice on report writing, including the need for robust Quality Assurance processes, are provided in CIEEM's Guidelines on Ecological Report Writing. Where a report is required to meet specific planning or legislative requirements covering BNG, additional information may also be required. CIEEM advises that, in addition to these templates, any planning authority or government guidance is reviewed to inform a report structure.

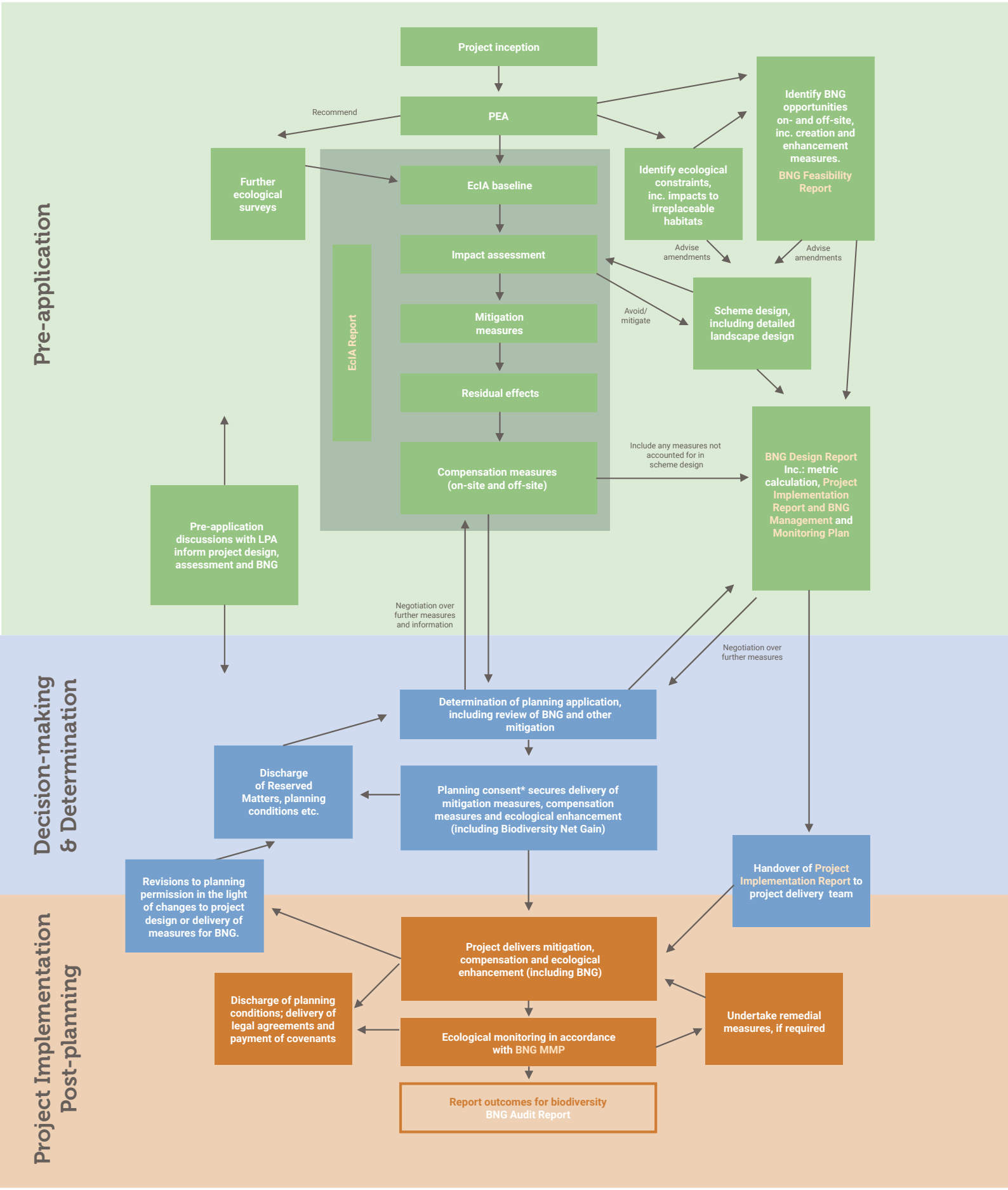
Irrespective of project scale, reporting on project activities that aim to achieve a BNG are not intended in any way to replace the requirements of the ecological impact assessment process. However, as is the case with EcIA, the level of detail required will inevitably be proportionate to the scale of the development, the complexity of its potential impacts and the complexities of the proposed mitigation measures.

The flowchart (Figure 1) illustrates the integration of BNG and EcIA processes in typical development projects and highlights the points where reports would typically be produced.

[1] CIEEM-CIRIA-IEMA (2016) Biodiversity Net Gain – Good Practice Principles for Development

[2] The Biodiversity Metric 3.0 (JP039: July 2021) http://publications.naturalengland.org.uk/publication/6049804846366720?cache=1625651299.57

BIODIVERSITY NET GAIN AND ECOLOGICAL IMPACT ASSESSMENT PROCESS IN DEVELOPMENT PROJECTS



2. Biodiversity Net Gain Feasibility Report

BNG feasibility should be undertaken early on in a project before designs are fixed. The BNG Feasibility Report may include an appraisal of different options and describe the predicted outcomes for biodiversity for each option appraised. The target audience for this report are the organisations involved in designing a project. Feasibility reports are not intended to form part of a planning application submission but may be useful in pre-application discussions or option appraisals.

As a minimum, this type of report should include:

- An assessment at the project feasibility stage as to whether the project can deliver BNG or not for the options being considered;
- Advice for the project to maximise its ability to deliver BNG considering factors such as location, design, construction methods and programme (where relevant);
- Consideration of the potential for on-site or off-site delivery of BNG, either securing land in close proximity to the project site or other alternatives, including more distant land under direct control, a brokered agreement or through the purchase of statutory biodiversity credits[3] ; and
- Where, following a review of the BNG Principles, the delivery of project-wide BNG as an outcome is not considered possible (e.g., as a result of impacts to irreplaceable habitats[4] or other site constraints), a record of the reasons and a clear commitment to delivering biodiversity gains elsewhere through the project should be made.

The detail reported at this stage should be proportionate to the scale of the project. For some projects this information should be set out in a stand-alone BNG Feasibility Report. In other cases, it may be appropriate to provide the information as a specific 'BNG Feasibility' section within a PEA Report if one is produced.

Projects that aim to follow the British Standard 8683: *A process for designing and implementing BNG* are required to document a project's commitment to delivering BNG. This commitment may be made publicly in the BNG Feasibility Report (or equivalent section in a PEA Report). Where a BNG Feasibility Report is produced, this should include a clear commitment to deliver a measurable target for net gain, i.e., the delivery of additional biodiversity above baseline conditions, after impacts have occurred.

The BNG Feasibility Report may be useful to engage with stakeholders during project design. For example, through pre-application discussions or to accompany a Scoping Report submission to an LPA or decision-maker as part of the Environmental Impact Assessment (EIA) process. A feasibility report would not contain sufficient information to support a planning application.

At the feasibility stage, it is highly unlikely that there would be sufficient information relating to both the baseline conditions and the project proposals to complete a final and verifiable measure of biodiversity gains and losses. However, preliminary calculations using an appropriate tool for measuring biodiversity should be included in the report.

[3] For projects in England, where "Biodiversity Gain" will become mandatory under the Draft Environment Bill 2021, biodiversity credits will need to be purchased in accordance with the provisions of the legislation.

[4] Potential loss of irreplaceable habitat should be highlighted. Unless the project is re-designed, BNG may not be possible. The project should be re-designed through the EcIA process to avoid or minimise impact in the first instance, i.e., by applying the mitigation hierarchy.

Table 1. Biodiversity Net Gain Feasibility Report Template

No	Section Heading	Contents
	Summary	Non-technical summary of key points from report, i.e., is BNG feasible? Are there any irreplaceable habitats present? Has the client committed to following the process set out in BS 8683, BNG Principles and the delivery of a minimum Net Gain above baseline conditions? What actions/activities are required to deliver on the BNG commitment? Where different options are appraised, justification for the preferred option should be provided.
1.0	Introduction	To include the following information: • Commissioning client, site name and purpose of report • Background to project • Brief site description (including baseline land uses and previously developed areas) • Proposed development description or options • Aims/Objectives/Scope of Study • Relevant Policy & Legislation (including both local and national planning policy, biodiversity policy, biodiversity strategies and legislation.)
2.0	Methods	To include the following information: • Desk study and field survey methods, including details of dates of survey, personnel involved, and specific methods followed. *NB – This section may refer to desk and field work described in full elsewhere, e.g., a PEA Report or EcIA Report, and project documents, e.g., Landscape Masterplans* • Approach to BNG, e.g., *BNG Principles, BS8683 - which metrics have been used and specific details of their application* • Evidence of technical competence and experience[5] • Limitations • Detailed methods (such that the approach taken is transparent and could be repeated)
3.0	Baseline Conditions	Brief description of the current land uses, or the baseline situation used for the study. Baseline information to include, but not necessarily be limited to: • Potential for important ecological features and their influence on the feasibility of BNG[6] , e.g., designated sites, protected and priority habitats and species[7] and the ecosystem services provided[8] • Quantitative summary of baseline, using repeatable proxy measurements • Evidence justifying the baseline date selected, especially where different from survey date • Maps and figures to illustrate broad land uses, habitat types and extent • Limitations

[5] A 'competent person' is a person who can demonstrate they have acquired through training, qualifications or experience, or a combination of these, the knowledge and skills enabling that person to perform a specified task. CIEEM provides a competency framework to assist it's members.

No	Section Heading	Contents
4.0	Feasibility of Biodiversity Net Gain	The feasibility of the chosen design or options to deliver BNG, including any requirement for 3rd party land or the purchase of biodiversity credits, should be clearly stated and include the following information: • Commitment to Mitigation Hierarchy and evidence of its application • Statement on likely impacts to irreplaceable habitats and/or other important ecological features • Assessment of feasibility of BNG design, including compensation proposals and offsets • Recommendations for design and management to maximise benefits to biodiversity, with reference to relevant national or local biodiversity strategies • Consideration of additionality • Description of stakeholder engagement • Evidence of budgetary consideration for BNG delivery • Confirmation of verification and audit process
5.0	Next steps	The report should provide a statement that BNG will be considered in each stage of the project lifecycle. A project timeline that relates to BNG project stages could also be provided, for example, this may include a summary of requirements to achieve BNG and who is responsible for delivering against these activities.
6.0	Conclusion	The report should conclude how BNG can be achieved, and the measures needed to maximise the likelihood of success, or a clear statement that it cannot with the reasons for this provided.

Approach where BNG is not considered possible

Where BNG is not feasible on site or not feasible in any circumstances, this must be clearly stated in the feasibility report. Where BNG is not deliverable because of losses of irreplaceable habitats, a commitment to quantifiable compensation for impacts that can be mitigated is strongly recommended and are likely to be necessary to demonstrate compliance with national and local planning policies. Even in circumstances where BNG is not considered possible, there is still merit (and there may be a policy or legislative requirement) to follow a process that details and quantifies the biodiversity compensation offered by the project.

Small-scale projects with low biodiversity impacts

Delivery of BNG off-site through a brokered agreement or through the purchase of statutory biodiversity credits or through other *in lieu* fees to cover biodiversity losses for smaller sites with low biodiversity impacts, would typically mean that less detail is needed at the feasibility and subsequent reporting stages. A proportionate assessment of likely impacts, e.g., in accordance with CIEEM's EcIA Guidelines, should still be provided.

[6] Note that it is not the intention to repeat assessment provided in a PEA or EcIA, but sufficient detail should be provided to put the approach to BNG in its local biodiversity context.

[7] *'Protected and Priority Habitats and Species'* are defined in Guidelines for Preliminary Ecological Appraisal. Second Edition (CIEEM, 2017)

[8] Guidelines for Ecological Impact Assessment (CIEEM, 2018) paras 4.25-4.26 outlines an approach that can be used to consider ecosystem services in the context of EcIA. It is relevant here to consider people's uses and values of biodiversity and how this may be affected by the proposed BNG design.

3. Biodiversity Net Gain Design Stage Report

Note that where a feasibility report has not been provided at an earlier stage, it may be necessary to adapt the structure provided in Table 2 to include key information from the feasibility stage (as set out in Table 1). The following notes should be taken into consideration when preparing the BNG Design Stage Report.

Outline vs Detailed Planning Applications, Planning Conditions and Reserved Matters

Outline applications, local development orders and other projects that do not have a finalised layout represent a challenge for BNG assessment. These projects usually include a parameters plan and/or illustrative masterplan or landscape scheme, which can be used as a base for the proposed habitats plan. For projects aiming to achieve BNG, sufficient detail must be provided at the design stage to determine what areas or proportion of the project footprint are available for biodiversity restoration, creation and/or enhancement. The project should also provide sufficient detail for biodiversity gains that can realistically be delivered within the site framework. It is also important that other land uses within the development are considered at this stage (e.g., the requirement for allotments, sports pitches, play areas etc.), and included in the post-development net gain calculations as these will have implications for land use budgets.

Outline planning applications, local development orders and other strategic development plans should be supported by a BNG Strategy. This strategy should show how individual plots or phases deliver a predetermined proportion or percentage of the habitat provision for BNG based on detailed design.

It is expected that the majority of strategic or phased developments would require re-submission of a BNG Design Stage Report with the subsequent Reserved Matters Application(s) (for each development plot or phase, where there are multiple Reserved Matters Applications), unless no significant changes to the original design are proposed, or commitments made in an approved strategy submitted at the outline stage have been clearly met. This would include an updated BNG calculation using an appropriate metric to demonstrate that the previously approved level of net gain in the outline application can still be achieved.

It is possible that more detailed operational aspects of the BNG Design Stage Report, i.e., those parts required for project delivery, are completed following project consent, e.g., through planning conditions. The information required for the Project Implementation and Construction Plan and BNG Management and Monitoring Plan may also be included in project Landscape and Ecological Management Plans or Construction Environmental Management Plans, in which case the relevant sections should be cross-referenced.

Data Standards

It is expected that all BNG reports are supported by high quality spatial data for the baseline and proposed designs. All biodiversity data should have consistent attributes recorded, e.g., location, taxon name, recorder name and date, to ensure it can be properly evaluated. Data should be provided in accessible machine-readable formats and survey metadata should be included. Habitat data should be provided in a standard classification system, e.g. The UK Habitat Classification. Habitat condition assessment data should also be provided in full for each land parcel assessed, with any deviations from standard methods fully justified.

Assumptions on Future Habitat Delivery

It will be necessary to make assumptions about the condition and distinctiveness of created habitats to complete a metric and create a BNG balance sheet for a project at the design stage. Habitat creation and enhancement metrics should be based on a reasonable worst-case scenario. Deviations from standard risk multipliers should be avoided. Where deviations from risk multipliers are proposed, these should be transparent and clearly justified.

Feasibility of BNG

Where BNG is not feasible, e.g., as a result of impacts to irreplaceable biodiversity[9] or insufficient habitat creation and enhancement, this must be clearly stated in the document. A metric can still be used to quantify the gains for biodiversity that is not irreplaceable, and compensation provided for irreplaceable biodiversity impacted, but a project-wide net gain cannot be claimed, nor should net gain for the non-irreplaceable elements of the project be claimed without transparently stating the losses that cannot be replaced.

[9] An irreplaceability assessment should consider all biodiversity, *inter alia* species populations (including endemic sub-species or races), habitats, ecosystems and ecosystem processes.

BNG Through Purchase of Biodiversity Credits or In Lieu Fees

If a project is paying an in *lieu*[10] fee to compensate for the losses of biodiversity within a project site and there is no habitat creation or enhancement directly associated with the project, then the design stage report would not necessarily need to include an Implementation Plan and BNG Management and Monitoring Plan (Section 8.0 and 9.0 below). However, documents detailing habitat creation and enhancement carried out by a 3rd party on behalf of the project and copies of any agreements relating to the delivery of off-site compensation should be provided to decision-makers.

Table 2. Biodiversity Net Gain Design Stage Report

No	Section Heading	Contents
	Summary	Non-technical summary of key points from the report, i.e., does the project expect to deliver BNG[11] ? Are irreplaceable habitats protected from project impacts? What additional actions and activities are required to deliver on BNG commitments.
1.0	Introduction	To include the following information: 1. Commissioning client, site name and purpose of report 2. Background to project 3. Brief project site description, including baseline land uses 4. Proposed project description 5. Planning status of project, certainty of design and assumptions made 6. Aims/Objectives/Scope of Study 7. Relevant Policy & Legislation (including both local and national planning policy, biodiversity policy, biodiversity strategies and legislation.)
2.0	Methods	Detailed methods shall be described such that the approach taken at each step is transparent and could be repeated. This section should include the following information: • Desk study and field survey methods, including details of dates of survey, personnel involved, and specific methods followed. NB – *This section may refer to desk and field work described in full elsewhere, e.g., a PEA Report or EcIA Report, and project documents, e.g., Landscape Masterplans* • Approach to BNG, *e.g., BNG Principles, BS8683 - which metrics have been used and specific details of their application* • Evidence of Technical Competence and Experience. *Suitably qualified person – definition in BS8683:2020* • Limitations
3.0	Baseline Conditions	Brief description of the current conditions on site, or the baseline situation used for the study. Baseline information to include: 1. Important ecological features and their influence on the deliverability of BNG[12] , e.g., designated sites, protected and priority habitats and species[13] and the ecosystem services provided[14] 2. Baseline metric calculations, including all built and previously developed land, within the site, e.g., planning application boundary 3. Evidence justifying the baseline date selected, especially where different from survey date

[10] An *"in lieu"* fee is typically where an LPA or other statutory body, or other 3rd party implements a biodiversity enhancement scheme based on agreed biodiversity actions and priorities. In England, under the Draft Environment Bill 2021, statutory *in lieu* fees are referred to as "Biodiversity Credits". The use of in *lieu fees* in isolation is usually only appropriate for smaller scale projects where biodiversity impacts are low and there is no potential for landscape or biodiversity enhancement within the site.

[11] In England, there will be a statutory requirement to provide a minimum of 10% biodiversity credits above baseline conditions through the Draft Environment Bill 2021.

[12] Note that it is not the intention to repeat assessment provided in an EcIA, but sufficient detail should be provided to put the approach to BNG in its local biodiversity context.

[13] *'Protected and Priority Habitats and Species'* are defined in Guidelines for Preliminary Ecological Appraisal. Second Edition (CIEEM, 2017)

[14] Guidelines for Ecological Impact Assessment (CIEEM, 2018) paras 4.25-4.26 outlines an approach that can be used to consider ecosystem services in the context of EcIA. It is relevant here to consider people's uses and values of biodiversity and how this may be affected by the proposed BNG design.

No	Section Heading	Contents
		This section must include a Habitat Baseline Plan, preferably using the UK Habitat Classification[15]. This may be produced using the information from the PEA Report or EcIA Report. It should clearly show the areas covered by each of the existing habitat types and the area and length of each habitat type (or for each habitat parcel, as some habitats may be scattered throughout the site). A reference number for each habitat parcel to cross-reference to the metric may be useful for more complex sites. Baseline maps showing linear features, e.g., hedgerows, rivers and streams, are also required. Wherever possible, baseline maps should be provided in spatially accurate digital drawings, e.g., using GIS.
4.0	BNG Good Practice Principles for Development	Full justification of how each of the BNG Principles has been applied as part of the net gain assessment. It is suggested that this section of the report lists the BNG Principles and makes a clear statement about how each has been considered. The evidence supporting the appraisal of the project against the BNG Principles may be included as an appendix to the BNG Design Stage Report or in separate reports.
5.0	Proposed Design	This section should clearly describe the proposed design and how it has been informed by relevant local and national biodiversity strategies. It can be based upon the site layout plan, illustrative masterplan, green infrastructure plan or landscape plans (if they are available). The design details must be supported by a Proposed Habitats Plan, using or translated into the UK Habitat Classification (to allow comparison with the baseline situation). This plan should clearly show what existing habitat types are being retained and enhanced, and what new habitat types will be created, with each habitat type easily identifiable. The area (ha.) or length (km.) of each habitat type should be quantified with maps provided as spatially accurate digital drawings. Other proposed biodiversity enhancements should also be described in this section and shown on appropriately scaled plans, e.g., bird and bat boxes, and hedgehog highways.
6.0	BNG Metric	The information provided in a metric should be directly related to the Habitat Baseline Plan and the Proposed Habitats Plan. The completed metric spreadsheet, including the full calculations that lead to the final biodiversity unit scores should be submitted. Summary results or extracts of any metric calculations would not be sufficient alone. Where appropriate, detailed justifications for the choice of habitat types, distinctiveness and condition should be added to the comments column or provided separately in the BNG Design Stage Report. Different habitat parcels should be individually referenced and identifiable on the appropriate drawing in order that these can be cross-referenced within the metric calculator, particularly for large and complex sites. All assumptions made in the calculations should be clearly identifiable.
7.0	Project Implementation and Construction Plan	An Implementation Plan is required that takes the design concepts into a position to be deliverable on the ground. An implementation plan should include drawings (e.g., detailed landscape planting schedules), management proposals, a construction handover checklist, and a timetable for implementation, and should specify those responsible for activities. The Implementation Plan should be closely aligned with the BNG MMP (Section 9.0).

15 The UK Habitat Classification v1.1 (UKHab Ltd, 2020). Available from www.ukhab.org

No	Section Heading	Contents
8.0	Biodiversity Net Gain Management and Monitoring Plan	The BNG MMP is a document that focuses on the delivery of long-term management and monitoring of created or enhanced features. For example, a BNG MMP plan would typically provide detailed management and maintenance information for years 1 – 5[16] and with broader management aims for the lifetime of the BNG commitment, e.g., the lifetime of the project impacts or 30 years). • Plans shall be concise, proportionate and SMART. i.e., each target set is Specific to a feature that can be Measured accurately, Reasonably achievable within the project scope and Time-bounded. • Proposals for monitoring, including methods, frequency and timing should be included, as well as setting out the reporting procedures and options for remedial works, if needed. • The roles, responsibilities and competency requirements of those involved in implementing the BNG MMP should be clearly stated and secured. • Legal, financial and other resource requirements for delivery of the BNG MMP should be detailed. • Maps and drawings should be provided in spatially accurate digital drawings, e.g., using GIS to allow accurate monitoring.

4. Biodiversity Net Gain – Audit Report Template

BNG is the outcome of a process that follows a set of over-arching principles – *The BNG Good Practice Principles* (CIRIA-CIEEM-IEMA, 2016). All projects that claim BNG should be open to an independent audit of the process and outcomes for the project. Appropriate times for audit would be:

- where there are changes to project design post-consent, significant changes may require a full review of earlier stages of the process;
- immediately following project implementation, e.g. completion of construction or at the end of a landscape establishment phase; and
- when the majority of created habitats are expected to have reached their target condition.

Audits should be proportionate to the requirements of the design-stage BNG commitments and the timeframe for audits should be set out in the BNG Design Stage Report. As a minimum, an audit should review the design stage metric with 'as built' calculations; review delivery and success of other biodiversity commitments, including those undertaken for species, at the end of construction and at the end of a 5-year aftercare period for new landscape planting and habitat creation. It would be good practice to review the project against each of the BNG Good Practice Principles. A set of indicators that may be used as an audit benchmark are provided in Table 4.

It is expected that decisionmakers would require an audit of BNG commitments at the end of construction, for example as a condition of planning consent. This audit should be undertaken by a competent person and evidence should be provided that all relevant activities from the BNG Design Stage Report have been completed.

[16] Initial aftercare within the BNG MMP may overlap with requirements under a landscape maintenance plans, e.g., a Landscape Environmental Management Plan (LEMP). Where possible, these documents should be combined to ensure consistency

Table 3. Biodiversity Net Gain Audit Reporting Template

No	Section Heading	Contents
	Summary	Non-technical summary of key points from report, i.e., does the 'as built' project deliver on the commitments of the Design Stage Report. Any deviations or alterations should be highlighted. Confirm the final biodiversity units delivered and whether this meets the projected biodiversity units and the stated minimum above baseline conditions. Have all irreplaceable habitats and other protected features been protected from project impacts? What additional actions and activities are required to deliver on BNG commitments.
1.0	Introduction	To include following information: 1. Commissioning client, site name and purpose of report 2. Background and timeline for project 3. Project description, as built 4. Aims/Objectives/Scope of Study 5. Reference to the original aims and monitoring proposals set out in the BNG Design Stage Report
2.0	Methods	Detailed methods shall be described such that the approach taken to monitor outcomes could be repeated. This section should include the following information: 1. Survey methods, including details of dates of survey, personnel involved, and specific methods followed, and how these relate to the monitoring proposals set out in the BNG Design Stage Report 2. Evidence of Technical Competence and Experience[17] . 3. Limitations - a clear statement of any limitation of the methods used and how these may influence the outcomes and conclusions of the report.
3.0	Project Conditions	Brief description of the current conditions on site. This section must include an As-Built Habitat Plan, based upon the specific conditions at the time of the audit (not proposed or predicted conditions). It should clearly show the areas covered by each of the existing habitat types and the area in hectares of each habitat type (or for each habitat parcel, as some habitats may be scattered throughout the site). The as-built plan should use the same habitat classification as the Habitat Baseline Plan. A reference number for each habitat parcel to cross-reference to the metric may be useful for more complex sites. Linear features should also be accurately mapped.

[17] A *'competent person'* is a person who can demonstrate they have acquired through training, qualifications or experience, or a combination of these, the knowledge and skills enabling that person to perform a specified task. CIEEM provides a competency framework to assist it's members.

No	Section Heading	Contents

4.0	Audit Report, including BNG Metric	The information in the "as built" metric should be compared to the original Habitat Baseline Plan, the Proposed Habitat Plan (from the original Design Report) and the "as built" Habitat Plan. Where the "as built" Habitat Plan differs from the original designs, more detailed information may be required, to ensure transparency about what has been delivered.
		
		Where differences occur, a copy of the same metric version, e.g., a completed spreadsheet including the full calculations that lead to the final biodiversity unit scores should be submitted. Summary results of metric calculations would not be sufficient. Where appropriate, detailed justifications for the choice of habitat types, distinctiveness and condition should be added to the comments column or provided separately in a report.
		
		Different habitat parcels should be individually referenced and identifiable on the appropriate drawing in order that these can be cross-referenced within the metric calculator.
		
		All assumptions made in the calculations should be clearly identifiable.
		This section should include:
		
		a) area/length and type(s) of habitats retained;
		b) area/length and type(s) of habitat enhanced;
		c) area/length and type(s) of habitat permanently cleared;
		d) area/length and type(s) of habitat temporarily cleared;
		e) area/length and type(s) of habitat created;
		f) installations of built features for wildlife; and
		g) review of management and monitoring requirements and amend as necessary.

5.0	Compliance with BNG Principles	Detailed evaluation of the project's compliance with each of the BNG Good Practice Principles. An example approach, with illustrative indicators for each principle is shown in Table 4
6.0	Conclusion	Clear statement to confirm the final biodiversity units delivered and whether this meets the projected units and the stated minimum above baseline conditions[18]. Clear statement on whether all indicators relating to the BNG Principles have been met. Clear statement as to whether any remedial measures are required to deliver on BNG commitments and how these will be implemented and reported.

[18] In England, under the Draft Environment Bill 2021, a minimum increase of 10% above baseline is proposed.

Table 4. The BNG Good Practice Principles and Indicators for Audit Reporting

An example of how an "as built" project may demonstrate compliance with the BNG Good Practice Principles is shown in Table 4 below. Indicators can be classified as 'met' or 'not met' for all projects and decisions should be supported by evidence. The evidence required by an auditor to meet each indicator should be proportionate to scale of project.

BNG Principle	Indicators
Principle 1. Apply the Mitigation Hierarchy	Measures to avoid and minimise biodiversity loss and to rehabilitate/restore biodiversity affected by the project are: 1) defined and documented, 2) implemented and monitored; and 3) managed for the duration of the project's impacts. For example, maintain records of the consideration of alternatives as evidence of avoidance measures implemented.
Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere	Project documents describe any impacts to irreplaceable and vulnerable biodiversity resources, e.g., permanent loss or damage to semi-natural ancient woodland, ancient climax vegetation communities, veteran trees, endemic and internationally rare species that cannot be replaced within reasonable timeframes. Projects with impacts on irreplaceable habitats cannot achieve BNG. These projects should demonstrate where biodiversity compensation has been provided but cannot claim project-wide achievement of BNG. These projects should transparently and comprehensively refer to the impacts on irreplaceable habitats in communications and reports.
Principle 3. Be inclusive and equitable	Evidence of input from and consultation with nature conservation bodies, the local community, the local planning authority and other relevant stakeholders. (NB: For smaller scale projects, this may be part of the planning consultation process). Terms of Reference for any Stakeholder Partnerships are agreed and published, with the roles and responsibilities of members clearly defined.
Principle 4. Address risks	Evidence that BNG has been achieved within the project. Sources of risk and uncertainty in design and implementation of mitigation are documented. Identify risks that may present themselves during the 30-year management period and how these should be dealt with.
Principle 5. Make a measurable Net Gain	Suitable metric is used for all habitat impacts quantified relative to the 'pre-project' condition of each habitat. Gains anticipated from habitat creation, enhancement and positive management are quantified relative to the predicted condition in the absence of BNG activities.
Principle 6. Achieve the best outcomes for biodiversity	Evidence is provided that BNG commitments contribute (now or in the future) to regional and national conservation goals, e.g., Local Nature Recovery Strategies. Provide evidence that the BNG design has considered where it is possible to contribute to supporting priority species populations. Provide evidence to show where additionality has been proven within the built environment and what gains are achieved.

BNG Principle	Indicators
Principle 7. Be additional	Evidence is provided that the conservation gains were caused by project activities and would not have occurred in other circumstances.
Principle 8. Create a Net Gain legacy	Evidence is provided that those responsible for implementing project biodiversity management have the requisite management and technical capacity for their specified roles. Key Performance Indicators are set for biodiversity features affected by the project and specific, measurable and time-bounded targets for indicating conservation success are clearly stated. Evidence is provided that any reasonably foreseeable future developments that might affect long-term commitments to biodiversity, including developments by third parties, have been considered. Evidence that legal and financial mechanisms are in place to guarantee the financial and institutional viability of all biodiversity management for a minimum 30 years or at least the duration of the project's impacts. Evidence is provided that management is adapted, where necessary, throughout implementation to deliver the agreed conservation outcomes and monitoring is in place to identify risks to achieving specified outcomes. Evidence that the design has considered where it is possible to create features for species, in particular, priority species.
Principle 9. Optimise sustainability	Evidence provided that the project prioritises BNG targets, but then seeks opportunities for gains for the wider environment, the community and the economy.
Principle 10. Be transparent	The commitment to BNG is stated by the project developer in a publicly available document. Results of project audits are publicly available where claims of BNG are made at relevant project stages, including project closure and any deviations from original design specifications are clearly stated. Evidence that the best available scientific knowledge and methods have been used in BNG design and implementation and knowledge is transferred back to the scientific community.

Appendix 1

Sources of Good Practice Guidance relevant to Projects Seeking to Achieve BNG

CIEEM, CIRIA, IEMA (2016) Biodiversity net gain. Good practice principles for development.

CIEEM, CIRIA, IEMA (2019) Biodiversity net gain. Good practice principles for development. A practical guide. CIRIA C776a. London, 2019.

CIEEM (2018), Guidelines for ecological impact assessment in the UK and Ireland. September 2019 Update 1.1.

BS 8683 - Process for designing and implementing Biodiversity Net Gain – Specification. The British Standards Institution 2021

Natural England (2021) The Biodiversity Metric 3.0 (JP039)

APPENDIX

GLOSSARY

Preliminary Ecological Appraisal (PEA)

A rapid assessment of the ecological features present, or potentially present, within a site or the surrounding area (within the Zone of Influence for a proposed project). It normally comprises a desk study and a walkover survey, such as an Extended Phase 1 Habitat Survey. A PEA can be undertaken in a variety of contexts, often as a preliminary assessment of likely impacts of a development project. It can help the project proposer and planning authority in scoping the subsequent EcIA or in concluding that ecological issues will not be significant in determining the application and no further survey work is required (see CIEEM's Guidelines on Preliminary Ecological Appraisal). The results of the PEA can be provided in a **PEA Repor**t (PEAR).

In Northern Ireland this can link with the NI Biodiversity Checklist.

Ecological Impact Assessment (EcIA)

An assessment of the likely significant ecological effects of a project, irrespective of the scale or type of the project. The subsequent report is termed an EcIA Report (see CIEEM's Guidelines for Ecological Impact Assessment https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/

An EcIA may form the ecological component of an **Environmental Impact Assessment** (EIA), in which case the subsequent report will be termed an EIA Report, or Environmental Statement or Environmental Impact Statement.

Environmental Impact Assessment (EIA)

Environmental Impact Assessment (EIA) is the process used to assess the effects of certain public and private projects on the environment to meet the requirements of Council Directive 85/337/EEC as amended by Council Directives 97/11/EC, 2003/35/EC and 2009/31/EC and redrafted in a codified version Directive 2011/92/EU. The amended Environmental Impact Assessment (EIA) Directive 2014/52/EU entered into force in 2014 to simplify the rules for assessing the potential effects of projects on the environment.

Irreplaceable Habitat

Habitat that cannot be recreated within a specified time frame, e.g., 30-40 years, because it would be technically very difficult or impossible to recreate taking into account age, uniqueness, species diversity, rarity and environmental or historical context. In the UK, there is currently no definitive list of irreplaceable habitats. The full range of factors affecting irreplaceability should be taken into account when determining the status of a particular example of a habitat.

Biodiversity Net Gain

BNG is a specific, quantifiable outcome of project activities that deliver demonstrable benefits for biodiversity compared to the baseline situation. In order to achieve BNG, a project has to follow the mitigation hierarchy and be able to demonstrate that it has followed Good Practice Principles for BNG (CIEEM, CIRIA, IEMA, 2016)

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CIEEM Chartered Institute of Ecology and Environmental Management

Chartered Institute of Ecology and Environmental Management

Grosvenor Court, Ampfield Hill, Ampfield, Romsey, SO51 9BD
t: 01962 868626
enquiries@cieem.net | www.cieem.net
Company Number: RC000861, Registered Charity Number (England and Wales): 1189915