Outer Dowsing Offshore Wind

Biodiversity Net Gain Principles and Approach

Date: June 2023

Outer Dowsing Document No: 8.3
Internal Reference: PP1-ODOW-DEV-CS-REP-0084

Rev: V1.0

OUTER DOWSING OFFSHORE WIND

Company:	**Outer Dowsing Offshore Wind Ltd**	Asset:	**Whole Asset**
Project:	**Whole Wind Farm**	Sub Project/Package:	Whole Asset
Document Title or Description:	Biodiversity and Marine Net Gain Principles and Approach		
Document Number:	8.3	3rd Party Doc No (If applicable):	N/A

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Rev No.	Date	Status/Reason for Issue	Author	Checked by	Reviewed by	Approved by
V1.0	June 2023	Final	SLR	GoBe	Shepherd and Wedderburn	Outer Dowsing Offshore Wind

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Abbreviations

Acronym	Expanded name
BAP	Biodiversity Action Plan
BNG	Biodiversity Net Gain
BU	Biodiversity Unit
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
DCO	Development Consent Order
DEFRA	Department for Environment Food and Rural Affairs
EIA	Environmental Impact Assessment
ES	Environmental Statement
GLNP	Greater Lincolnshire Nature Partnership
GT R4 Ltd	The Applicant. The special project vehicle created in partnership between Corio Generation (a wholly owned Green Investment Group portfolio company), Gulf Energy Development and TotalEnergies
IDB	Internal Drainage Board
IEMA	Institute of Environmental Management and Assessment
LEDPP	Landscape and Ecology Design Principles Plan
LEMS	Landscape and Ecology Management Strategy
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MCIEEM	Full Member of the Chartered Institute of Ecology and Environmental Management
MNG	Marine Net Gain
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
ODOW	Outer Dowsing Offshore Wind, trading name of GT R4 Limited
ONSS	Onshore Substation
PEIR	Preliminary Environmental Information Report
RSPB	Royal Society for the Protection of Birds
SMP	Shoreline Management Plan
SAC	Special Area of Conservation
SPA	Special Protected Area
SSSI	Site of Special Scientific Interest
UKHab	UK Habitat Classification
VHDH	Very High Distinctiveness Habitats

Terminology

Term	Definition
Baseline	The status of the environment at the time of assessment without the development in place.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS) for Department for Energy Security and Net Zero (DESNZ).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of an impact with the sensitivity of a receptor, in accordance with defined significance criteria.
Environmental Statement (ES)	The suite of documents that detail the processes and results of the Environmental Impact Assessment (EIA).
Impact	An impact to the receiving environment is defined as any change to its baseline condition, either adverse or beneficial.
Landfall	The location at the land-sea interface where the offshore export cable will come ashore.
Mitigation	Mitigation measures, or commitments, are commitments made by the Project to reduce and/or eliminate the potential for significant effects to arise as a result of the Project. Mitigation measures can be embedded (part of the project design) or secondarily added to reduce impacts in the case of potentially significant effects.
National Policy Statement (NPS)	A document setting out national policy against which proposals for Nationally Significant Infrastructure Projects (NSIPs) will be assessed and decided upon.
Onshore Export Cable Corridor (ECC)	The Onshore Export Cable Corridor (Onshore ECC) is the area within which the export cable running from the landfall to the onshore substation will be situated.
Onshore substation (OnSS)	The Project's onshore substation, containing electrical equipment to enable connection to the National Grid.
Preliminary Environmental Information Report (PEIR)	The PEIR is written in the style of a draft Environmental Statement (ES) and forms the basis of statutory consultation process in the pre-application phase. Following that consultation, the PEIR documentation will be updated into the Project's ES that will accompany the application for the Development Consent Order (DCO).
PEIR Boundary	The PEIR Boundary is outlined in Figure 3.1 of Volume 1, Chapter 3: Project Description, and comprises the extent of the land and/or seabed for which the PEIR assessments are based upon.
The Applicant	GT R4 Ltd. The Applicant making the application for a DCO. The Applicant is GT R4 Limited (a joint venture between Corio Generation, TotalEnergies and Gulf Energy Development (GULF)), trading as Outer Dowsing Offshore Wind. The project is being developed by Corio Generation (a wholly owned Green Investment Group portfolio company), TotalEnergies and GULF.

The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
The Project	Outer Dowsing Offshore Wind (ODOW) including proposed onshore and offshore infrastructure.
Transition Joint Bay (TJBs)	The offshore and onshore cable circuits are jointed on the landward side of the sea defences/beach in a Transition Joint Bay (TJB). The TJB is an underground chamber constructed of reinforced concrete which provides a secure and stable environment for the cable.
Trenchless technique	Trenchless technology is an underground construction method of installing, repairing and renewing underground pipes, ducts and cables using techniques which minimize or eliminate the need for excavation. Trenchless technologies involve methods of new pipe installation with minimum surface and environmental disruptions. These techniques may include Horizontal Directional Drilling (HDD), thrust boring, auger boring, and pipe ramming, which allow ducts to be installed under an obstruction without breaking open the ground and digging a trench.

1 Biodiversity Net Gain

1.1 Introduction

1.1.1 A Biodiversity Net Gain (BNG) Principles and Approach Document has been prepared for the onshore elements of Outer Dowsing Offshore Wind (ODOW) (the Project) which sets out an approach to the evaluation of biodiversity performance and the production of a BNG Plan.

1.1.2 Defra[1] describes BNG as *"…an approach to development which means that habitats for wildlife must be left in a measurably better state than they were in before the development"*. The Environment Act 2021 (the Environment Act) gained Royal Assent on 9 November 2021 and is now enshrined within UK law. While the Environment Act is now part of UK law, some of its provisions have not yet been brought into force. There remains a range of preparatory actions that need to be undertaken before further implementation of the wider legal framework (through the introduction of secondary legislation) is due to take place.

1.1.3 Part 6 of the Environment Act sets out provisions for 'Biodiversity gain as condition of planning permission'. Once enacted, amendments to the Planning Act 2008 will, from the target date of November 2025, require Nationally Significant Infrastructure Projects (NSIPs) to deliver biodiversity net gain. Although not currently a mandatory requirement, Outer Dowsing is voluntarily taking steps to explore BNG opportunities to ahead of this change.

1.1.4 The 2023 Defra Policy Paper: Nationally Significant Infrastructure: action plan for reforms to the planning process[2] states in Section 4.7 that:

"We will incorporate biodiversity net gain (BNG) requirements for all (terrestrial) NSIP projects from November 2025 and develop an approach for marine net gain (MNG). The biodiversity net gain requirement for NSIPs is to achieve at least 10% measurable net gain on all terrestrial and intertidal development, which is to be secured for at least 30-years. Defra is developing a draft biodiversity gain statement, which will set out the detail of the biodiversity net gain requirement for NSIPs. Defra plans to consult on this draft statement in early 2023".

1.1.5 The National Policy Statements (NPSs) provide the main policy tests in relation to the Project. The NPSs were reviewed, and draft versions were published for consultation earlier in 2023. BNG is referenced in the updated draft NPSs and has been requested by stakeholders; consideration of potential implications for the Project is therefore required.

1.1.6 This document has been drafted to provide initial consideration of whether an assessment of BNG is needed for the onshore[3] aspects of the Project, including a short summary of the relevant legal and policy background and relevant stakeholder requirements. It then goes on to briefly summarise the key aspects of a BNG assessment and the proposed approach to undertaking an assessment, along with an initial outline of potential timings.

[1] DEFRA (2022). Consultation on Biodiversity Net Gain Regulations and Implementation.

[2] DEFRA (2023) Nationally Significant Infrastructure: action plan for reforms to the planning process. Available at https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-nsip-reforms-action-plan/nationally-significant-infrastructure-action-plan-for-reforms-to-the-planning-process

[3] Projects, or components of projects, in the marine environment are not currently included within the scope of the mandatory requirements for biodiversity net gain, however marine net gain is considered within section 2.

1.1.7 Marine Net Gain (MNG), the implementation of BNG into the marine environment, was provided for within the Environment Act. At the time of writing (May 2023), it is not a legislative requirement and no guidance is available as to what MNG may comprise or how to calculate the quantum to be delivered, however, developers are being encouraged to voluntarily provide MNG in advance of it becoming mandatory (see section 2).

1.1.8 Discussions are currently ongoing through industry forums as to the mechanism by which the extent of MNG that a project must deliver is determined, with a recent consultation from Defra regarding potential measures which could be delivered under MNG. The consultation was held in September 2022, and it is understood Defra are considering responses.

1.2 Commitment

1.2.1 The Applicant is committed to Environmental Stewardship and, on top of mitigating adverse impacts on the environment as much as possible, is intent on leaving the environment in a measurably better state than before. The Project is exploring opportunities to deliver on the future requirements for NSIPs to provide 10% BNG and is actively engaging with organisations and environmental bodies local to the Project's footprint to identify potential collaboration opportunities. Once a grid connection for the Project is confirmed, the Project will look to pursue these opportunities with a view to including these as part of their DCO Application.

1.3 Purpose of This Report

1.3.1 This report seeks to:

- Clearly set out the proposed approach to provide BNG;
- Establish and agree key assumptions that would be used:
  - To deliver BNG; and
  - When employing the Defra Metric 4.0 (or its successor); and
- Identify and justify any proposed deviations from the standard method of applying Defra Metric 4.0 (or its successor).

1.3.2 The proposed approach to provide BNG and Defra Metric 4.0 calculations will be undertaken post Preliminary Environmental Information Report (PEIR) for submission with the Environmental Statement (ES) once the Project has been refined further prior to Development Consent Order (DCO) submission. Therefore, throughout this report, the boundary to be considered makes reference to the PEIR boundary.

Legal and Policy Requirement for an Assessment for Biodiversity Net Gain

1.3.3 Section 99 and Schedule 15 of the Environment Act set out provisions for 'Biodiversity gain in nationally significant infrastructure projects' which, subject to enactment through subsequent regulations, makes provision for amendment to sections of the Planning Act 2008 including sections 37, 104, 120 and 232 amongst others.

1.3.4 The amendments to the Planning Act 2008 states that if the project is subject to an NPS and that NPS includes a "biodiversity gain statement" or if such a "biodiversity gain statement" otherwise applies to the project, the Secretary of State must decide the application in accordance with the biodiversity gain statement. The biodiversity gain statement is required to set the level of biodiversity gain to be achieved by NSIPs. The level of biodiversity gains that NSIPs will be expected to achieve is 10%.

1.3.5 The 2023 Defra[2] policy paper set out that at least 10% measurable net gain will be required and must be secured for at least 30-years. Provision will therefore need to be made for maintenance of those areas of habitats that are considered essential to the delivery of the project, including its biodiversity performance.

1.3.6 As noted above, sections of the Environment Act 2021 relating to biodiversity net gain obligations, and the associated amendments to the Planning Act, are not yet in force, with the Government not expected to implement the parts relating to NSIPs before November 2025.

1.3.7 Neither of the existing NPSs relevant to the Project, NPS EN-1 (the Overarching National Policy Statement for Energy) and NPS EN-3 (the National Policy Statement for Renewable Energy Infrastructure) make specific reference to BNG. NPS EN-1 does however state in paragraph 5.4.35 that the applicant should demonstrate that *"...opportunities will be taken to enhance existing habitats rather than replace them, and where practicable, create new habitats of value..."*

1.3.8 Revised versions of NPS EN-1 and NPS EN-3 are currently under re-consultation which will close in May 2023. The revised draft of NPS EN-1 includes several references to BNG and paragraph 4.5.5 states "*In England applicants for onshore elements of any development are encouraged to use the most current version of the Defra biodiversity metric to calculate their biodiversity baseline and present planned biodiversity net gain outcomes. This calculation data should be presented in full as part of their application."* The revised draft of NPS EN-3 also refers to BNG but simply refers to where BNG is addressed within Section 4.5 of NPS EN-1.

1.4 Approach to Delivering Biodiversity Net Gain

Overview

1.4.1 BNG is an approach to development activities that leaves the natural environment in a measurably better state than it was before. BNG works with and does not replace the mitigation hierarchy. It does not replace existing legal requirements (e.g., in relation to protected species) and it should not be applied to compensate for impacts on irreplaceable habitats. The Project has voluntarily committed to having regard to the good practice in respect of BNG[4,5,6,7], and will align where possible with the ten principles developed by CIEEM, IEMA and CIRIA summarised below.

[4] Biodiversity Net Gain: Good practice principles for development CIEEM, CIRIA, IEMA, 2016

[5] Baker, J., Hoskin, R., Butterworth, T. Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide (2019) CIRIA C776a

[6] BS 8683:2021: Process for designing and implementing Biodiversity Net Gain. Specification (2021)

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

- **Principle 1. Apply the Mitigation Hierarchy:** Avoid and then minimise impacts on biodiversity. As a last resort, and in agreement with stakeholders and decision-makers, compensate for losses that cannot be avoided;
- **Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere:** Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset;
- **Principle 3. Be inclusive and equitable:** Engage stakeholders in designing, implementing, monitoring and evaluating the approach to Net Gain. Share the benefits fairly among stakeholders;
- **Principle 4. Address risks:** Mitigate difficulty and/ or uncertainty using well-accepted ways to add contingency when calculating biodiversity losses and gains;
- **Principle 5. Make a measurable Net Gain contribution:** Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities;
- **Principle 6. Achieve the best outcomes for biodiversity:** Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge;
- **Principle 7. Be additional:** Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e., do not deliver something that would occur anyway);
- **Principle 8. Create a Net Gain legacy:** Ensure Net Gain generates long-term benefits;
- **Principle 9. Optimise sustainability:** Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy; and
- **Principle 10. Be transparent:** Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

1.4.2 In respect of Principle 5, the Project would use the Defra Metric 4.0 (or its successor) to demonstrate measurable Net Gain contribution. Application of the Metric is described in 'Approach to Delivering Biodiversity Net Gain' and 'Application of the Defra Metric' sections of this report. It is however worth highlighting here that since the metric is a proxy, it does not account for species-specific mitigation, compensation or enhancement. Loss/ gains in this respect will be measured against monitoring targets set out within the relevant European Protected Species Licence(s) (if applicable) and Outline Landscape and Ecological Management Strategy (OLEMS), or similar document, that will be submitted alongside the ES.

1.4.3 The Metric User Guide[8] states in Section 1.5.3 that:

"The metric can be used throughout all stages of a project, from site selection and detailed design to delivery. The earlier it is applied, the greater the opportunity to design for biodiversity and wider ecological benefits."

[8] Natural England (2023) The Biodiversity Metric 4.0: User Guide. Natural England Joint Publication JP039. Available at http://publications.naturalengland.org.uk/publication/6049804846366720

Assessment Using the Defra Metric

1.4.4 The metric which is currently accepted for use in England is the Defra Biodiversity Metric 4.0 (henceforth 'the metric'). Natural England advise that the metric *"can be used or specified by any development project, consenting body or landowner that needs to calculate biodiversity losses and gains for terrestrial and/or intertidal habitats."*[9] The metric uses a comparison of habitats as a proxy for biodiversity and describes these habitats using standard units referred to as biodiversity units (BUs). BUs are calculated using the size of a parcel of habitat and its quality.

1.4.5 Under the metric there are three distinct types of BU and these are not of equivalence or interchangeable. They are:

- Habitat BUs – which describe areas of habitat based on measurement in hectares;
- Linear BUs – which describe hedgerows and lines of trees measured in kilometres; and
- Riparian BUs – which describe rivers and streams measured again in kilometres.

1.4.6 The overall calculation of the change in biodiversity resulting from a project or development is made by subtracting the value of pre-project or 'baseline' BUs of an area of land from the number of post-project units. Post-project units incorporate temporary and permanent losses resulting from the Project, along with the value of any mitigation, compensation and enhancement proposals included as part of the Project.

1.4.7 The results are influenced by:

- Habitat area/ length;
- Distinctiveness (an indication of value);
- Condition – an indication of quality; and
- Multipliers or risk factors – that take account of the contribution to local priorities, the difficulty of habitat creation/ management, the time it takes to deliver and variation in the location of habitat delivery.

Principles and Rules for Using the Metric

1.4.8 Natural England advise that the metric is a tool that helps inform plans and decisions, by using habitats as a proxy for measuring biodiversity value, but that any assessment must be undertaken with awareness of its limitations[10]. The metric specifically requires interpretation and ecological expertise to provide evidence of the appropriateness of proposed approaches to BNG and sets out a series of key principles and rules that help to support an understanding of whether proposals support wider considerations than a calculation output.

1.4.9 The Metric User Guide indicates that assessments should be conducted regarding the following principles, and these would be applied to the assessment for the Project:

[9] https://nepubprod.appspot.com/publication/6049804846366720
[10] Biodiversity Metric 3.1 User Guide, https://publications.naturalengland.org.uk/file/4711800952848384

- **Principle 1**: The metric does not change existing biodiversity protections, statutory obligations, or policy requirements. The use of this metric does not override the ecological mitigation hierarchy and other requirements (such as consenting or licensing processes, for example woodlands);
- **Principle 2**: The metric should be used in accordance with established good practice guidance and professional codes;
- **Principle 3**: The metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice;
- **Principle 4**: Biodiversity units are a proxy for biodiversity and should be treated as relative values;
- **Principle 5**: The metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance;
- **Principle 6**: Habitat interventions need to be realistic and deliverable within a relevant project timeframe;
- **Principle 7**: Created and enhanced habitats should seek, where practical and reasonable, to be local to any impact and deliver strategically important outcomes for nature conservation;
- **Principle 8**: The metric does not enforce a minimum habitat size ration for compensation losses. However, proposals should aim to:
  - Maintain habitat extent (supporting more, bigger, better and more joined up ecological networks); and
  - Ensure that proposed or retained habitat parcels are of sufficient size for ecological function.

1.4.10 In addition to these principles, the Metric also sets out a series of rules that should be followed when undertaking a BNG calculation and these would also be applied where possible to the assessment for the Project. These are:

- **Rule 1**: Competency requirements must be complied with;
- **Rule 2**: Biodiversity unit outputs are unique to this metric. The results of other metrics, including previous versions of this metric, are not comparable to those of this metric. The three types of biodiversity units generated by this metric (area, hedgerow and watercourse) cannot be summed, traded or converted between modules; and
- **Rule 3**: The trading rules of the metric (Table 1) must be followed;
- **Rule 4**: Losses and deterioration of irreplaceable or very high distinctiveness habitat cannot be accounted for through this metric; and
- **Rule 5**: In exceptional ecological circumstances, deviation from this metric methodology may be permitted by the relevant consenting body or planning authority. Any deviation must be fully justified and evidenced.

Table 1: Trading Rules to Compensate for Losses

Baseline Habitat Distinctiveness	Area Module (area units)	Hedgerow Module	Watercourse Module (Watercourse Units)
Very High	Losses are not permitted within this metric AND bespoke assessment and compensation are required.	Losses must be preplaced with hedgerow units of the same habitat type.	Losses are not permitted within this metric AND bespoke assessment and compensation are required.
High	Losses must be replaced with area units of the same habitat type.	Losses must be replaced with hedgerow units of the same habitat type or of a higher distinctiveness band.	Losses must be replaced with watercourse units of the same habitat type.
Medium	Losses must be replaced by area units of either: Medium distinctiveness habitats within the same broad habitat type OR Any habitat from a higher distinctiveness band (from any broad habitat type)	Losses must be replaced with hedgerow units of the same or higher distinctiveness band.	Losses must be replaced with watercourse units of the same habitat type.
Low	Losses must be replaced with area units of the same or higher distinctiveness band.	Losses must be replaced with hedgerow units of the same or higher distinctiveness band.	Losses must be replaced with watercourse units of a higher distinctiveness band.
Very Low	Not applicable	Losses must be replaced with hedgerow units of the same or higher distinctiveness band	Not applicable

1.4.11 The Biodiversity Metric 4.0 user guide confirms:

- **Irreplaceable habitats** – Rule 4 outlines that losses and deterioration of irreplaceable habitats cannot be accounted for through the metric and instead, separate consideration should be given to relevant policy and legislation. All irreplaceable habitats must be recorded within the metric. If no losses or deterioration will occur, enhancement of these habitats can contribute towards the calculation of BUs;

- **Very high distinctiveness habitats (VHDH)** – as per paragraph 3.5.5 of the guide states that VHDH are a *'metric-specific classification of highly threatened, internationally scarce habitats which require conservation action'* which require bespoke compensation to be agreed on a case-by-case basis with the determining body or planning authority;
- **Ancient woodland** – Ancient woodland is a finite and irreplaceable resource and is protected by existing policy and legislation. However, ancient woodland is not a discrete habitat type and, as such, is not listed in Biodiversity Metric 4.0:
  - Ancient semi-natural woodlands, plantations on ancient woodland sites and ancient wood-pasture and parkland may fit a range of metric woodland habitat types and should be checked against the Ancient Woodland Inventory Database[11]. For woodlands less than 2ha in area, criteria within the Ancient Woodland Inventory Handbook[12] must be referenced; and
- **Ancient and Veteran Trees** – *'Wherever ancient and veteran trees occur they should be considered and recorded as irreplaceable habitat.'*

1.5 Application of the Defra Metric

Defining "On-Site" and "Off-Site"

1.5.1 Natural England consider that *"Biodiversity Metric 4.0 can be used or specified by any development project, consenting body or landowner that needs to calculate biodiversity losses and gains for terrestrial and/or intertidal habitats"*[9] and provide definitions of the terms 'on-site' and 'off-site' for use in considering all scales of development project except for very small residential developments. The User Guide[8] defines these terms as follows:

- On-site: In a planning context, this usually means within a red line boundary; and
- Off-site: land outside of the on-site boundary, regardless of proximity or ownership.

1.5.2 These definitions bring with them specific challenges when, for example, consideration is given to approaches such as the 'Rochdale Envelope' as described within the Planning Inspectorate Advice Note 9[13]. This approach is to incorporate flexibility within applications for development consent in order to address uncertainty. Where this becomes particularly relevant to the evaluation of a project's biodiversity performance is when the Rochdale Envelope is relied upon to present options that relate to location and therefore baseline habitat.

1.5.3 In such cases it is likely to be necessary to complete more than one Metric calculation to represent the range of performance that might be achieved from the Project.

[11] Ancient Woodland Inventory Database. Available at https://naturalengland-defra.opendata.arcgis.com/datasets/a14064ca50e242c4a92d020764a6d9df_0/explore?location=52.865418%2C-2.004678%2C7.17

[12] Sansum, P. & Bannister, N.R. 2018. A Handbook for updating the Ancient Woodland Inventory for England. Natural England Commissioned Reports NECR248.

[13] Planning Inspectorate (2018). Advice Note Nine: Rochdale Envelope.

1.5.4 As the Metric evaluates biodiversity performance against an understanding of the baseline habitat value, changes in the Project boundary in either extent or location influence:

- The 'On-site baseline' including the number and potentially type of BUs;
- What is achievable or appropriate to deliver in the 'On-site post-intervention';
- The 'Total net unit change' required;
- The reported 'Total on-site net % change plus off-site surplus'; and
- Whether Trading Rules can be satisfied.

1.5.5 In this instance, the boundary presented within the PEIR will be larger than the anticipated Project footprint, as a result of a need to allow for some design flexibility and due to the presence of trenchless techniques for the landfall and parts of the onshore export cable corridor (ECC). Therefore, the PEIR boundary is not considered an appropriate baseline against which to measure, as the PEIR boundary is significantly larger than the area which will ultimately be used to deliver the Project.

1.5.6 Subject to discussion and agreement with key stakeholders, the following is proposed:

- The boundary (i.e., "on-site") for the purpose of applying the Defra Metric at planning stage shall be the indicative onshore Project footprint as provided within the ES (i.e., above Mean High Water Springs and including the final cable corridor and OnSS areas, plus areas needed for mitigation, compensation, or enhancement). This will be updated post consent – refer to Paragraphs 1.5.28 and 1.5.29; and
- "Off-site" relates to all other areas.

Defining Strategic Significance

1.5.7 All habitat parcels (both baseline and post-intervention) must be assigned a strategic significance score as follows:

- High – Where the location has been identified within a local plan, strategy or policy as being ecologically important for the specific habitat type or where that habitat has been identified as being locally ecologically important.;
- Medium – Where there is no relevant plan, strategy or policy in place, professional judgement may be used to justify the use of the medium strategic significance category. This judgement should consider the importance of that habitat in providing a linkage between other strategic locations.; or
- Low – If the habitat is not included in local plans, strategy or policy, and there is no evidence to suggest that the habitat is of medium strategic significance.

1.5.8 The definition of "Strategic Significance" represents an area open to interpretation and includes areas and/or habitat identified in (for example) Local Nature Recovery Strategies, Local Biodiversity Plans, National Character Area objectives, Local Planning Authority Local Ecological Networks, Shoreline Management Plans (SMP), estuary strategies and green infrastructure strategies. The following documents have been referenced in this regard:

- South East Lincolnshire Local Plan 2011-2036;

- East Lindsey Core Strategy;
- Lincolnshire Nature Strategy 2011;
- Lincolnshire Biodiversity Action Plan (BAP) (2011-2020);
- Black Sluice Drainage Board BAP May 2014;
- Lindsey Marsh Drainage Board BAP March 2010;
- Welland and Deepings IDB BAP 2020;
- Witham Fourth IDB BAP 2022;
- National Character Area 42: Lincolnshire Coast and Marshes;
- National Character Area 46: The Fens;
- Humber Estuary to Gibraltar Point SMP;
- The Wash SMP Plan 2: Gibraltar to Old Hunstanton; and
- Natural England's habitat network mapping data[14].

1.5.9 At the time of writing, the Project are not aware of any Local Ecological Networks for the area. The Greater Lincolnshire Nature Partnership has confirmed that a Local Nature Recovery Strategy for Greater Lincolnshire has received seed funding, although at the time of publishing of this report, the Strategy is still in its infancy[15].

1.5.10 Following review of the above documents, Table 2 below sets out the areas identified and how their strategic significance is proposed to be assessed.

Table 2: Assessment of Strategic Significance

Significance	Habitats Identified
High	Specific areas of habitats identified in the above bullet points, namely: ▪ The Local Plans identify SSSIs, SACs and SPAs, LNR and LWS as being important for nature conservation and are strategically significant elements of the green infrastructure. ▪ The East Lindsey Core Strategy (SP23) also includes Ramsar sites and lists ancient woodland and veteran trees as '*irreplaceable habitats*'. ▪ The South East Lincolnshire Local Plan includes the two RSPB reserves – Freiston Shore and Frampton Marshes.

[14] Habitat Networks (England) - data.gov.uk

[15] Greater Lincolnshire Nature Partnership (2020) Developing a Local Nature Recovery Strategy. Available at https://glnp.org.uk/images/uploads/services/nature-strategy/Nature%20Strategy%202020.pdf

Significance	Habitats Identified
Medium	Areas immediately adjacent to the above sites for nature conservation, with potential to support the features of interest of the site or buffer impacts (unrelated to (the Project) to it/ them. Areas which meet local LWS selection criteria but are not designated as such. Green Infrastructure which, within the East Lindsey Core Strategy (SP24 and SP25) is taken to include (but by no means exclusively) *'woodland, parks, green lanes, public rights of way, churchyards, sports facilities, water courses, beaches and dunes.'* Green Infrastructure is also identified in the South East Lincolnshire Local Plan – Policy 28. Within Policy 28, it is stated that Nature Improvements Areas will create *'joined up and resilient ecological networks at the landscape scale'* in the future. Areas of land identified in Natural England's habitat network mapping data including information on habitat restoration-creation, restorable habitat, plus fragmentation action, and network enhancement and expansion zones.
Low	All remaining habitats not included in the above.

Collection of Baseline Data

1.5.11 Collection of baseline habitat survey began in November 2022 and will be completed by Summer 2023. Data comprise:

- Classification of habitats using UKHab v2.0[16]; and
- Habitat Condition Assessment, undertaken in accordance with the Metric 4.0, at each polygon or line of mapped habitat. The Metric requires values for a specific set of criteria to be recorded (this varies depending on habitat type) in order to determine the habitat condition score for each polygon/ line.

1.5.12 The following baseline data will be held within a GIS for each mapped line or polygon of habitat within the ES boundary:

- UKHab type; and
- Condition Assessment details including score per criterion, and overall.

[16] Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2023) The UKHab Classification User Manual Version 2.0 at http://www.ukhab.org

Calculation of Baseline Values

1.5.13 Calculation of baseline values can only be completed once habitat survey and condition data have been collected and reported, the "strategic significance" (see previous section) of each determined and boundaries agreed with consultees. It is therefore anticipated that the baseline calculation will initially be undertaken in summer 2023, with subsequent updates as required, noting that baseline calculations are likely to change as indicative Project footprints evolve. No reporting in respect of biodiversity net gain assessment will be included at PEIR.

Key Assumptions

1.5.14 Metric 4.0 requires that hedgerows are mapped as linear features and that adjacent habitats are mapped to the centre line of the hedgerow[17]. This may be at odds with the method of mapping used to record habitats in the first instance (e.g., where hedges are mapped as polygons if over 1m wide, in accordance with UKHab v.2.0 and a 5m x 5m Minimum Mapping Unit). In such cases, these hedges will be converted to lines. This follows the approach set out in the Metric which recommends such areas be converted to the next adjacent habitat.

1.5.15 Whilst the Metric uses UKHab habitat classification as a basis, there are instances where the Metric habitat options are specific to the Metric and are a poor fit or are missing UKHab types. Where this is the case, the chosen alternatives will be explained.

1.5.16 The baseline calculation will be made on the indicative Project footprint, which will differ from the ES boundary, as described previously.

1.5.17 The baseline score of the site as submitted at ES will be updated once a final design is determined (i.e., there will be a pre-construction update, refer to Paragraph 1.5.28 and 1.5.29).

Calculation of Post-Project Values

Supporting evidence for the post Project evaluation will be held in a GIS database, and will include for each mapped line or polygon of proposed habitat within the project Order Limits:

- UKHab type; and
- Condition Assessment overall score.

Key Assumptions

1.5.18 It is recognised that the precise scheme design may change as the detailed project design is developed further post-consent and therefore the values may be subject to change between iterations:

- The construction footprint will be deemed to comprise:
  - The onshore substation (OnSS) compound, temporary construction compounds, onshore ECC and OnSS access zones; areas not directly impacted will be omitted;

[17] Section 3.12 Step 2e of the Biodiversity Metric 4.0.

- The proposed landscaping and ecological enhancement at the OnSS as will be set out in the Landscape and Ecology Design and Principles Plan (LEDPP) (document reference: 8.7); and
- Visibility splays will be trimmed such that only areas supporting hedgerows, trees or scrub (i.e., visually intrusive vegetation) are lost, adjacent non-visually intrusive habitat is unaffected. Hedges at visibility splays would be replaced but further into the adjacent fields.

- The operational footprint (i.e., where permanent habitat loss will occur) has been deemed to comprise:
  - OnSS compound;
  - Transition Joint Bay (TJB) manhole access;
  - Link boxes manhole access; and
  - Operational access to enable maintenance along the onshore ECC has been excluded on the basis that it follows existing routes and will require no vegetation removal.
- Mitigation/ compensation for permanent impacts has yet to be determined but is anticipated to be included at the OnSS area and potentially discrete areas elsewhere along the onshore ECC;
- Mitigation/ compensation at all other locations within the corridor to include:
  - All hedges returned to species rich hedgerows with trees (and with ditches, where originally present);
  - All other habitats (primarily c1 cropland and g grassland) to be returned to current condition; and
  - Exceptions to the above may apply where additional mitigation/ compensation is implemented along the onshore ECC (for example for protected species).
- Timescales:
  - Indicative Construction Timescales, as follows:
    - In respect of cropland (as defined by UKHab, i.e., regularly or recently cultivated agricultural, horticultural and domestic habitats) that is to be returned to its original use, the impacts are considered to be temporary loss[18] and cropland will be recorded as retained within the metric tool;
    - For all other habitats, the time delay between construction starting and habitat being re-instated to its baseline condition is likely to be at least two-years for both the onshore ECC and the OnSS area so will be considered as lost within the metric tool;

[18] As defined in Section 7.3.6 of the BNG Metric 4.0 User Guide. Section 7.3.6 goes on to clarify that this option is only available for disturbed habitats that can be restored in full to their baseline condition within two-years from the date of impact.

- A minimum 30-year monitoring and management plan will be implemented at habitat enhancement areas under the developer's control such as around the substation, or other mitigation/compensation areas;
- After reinstatement, cropland will be subject to no monitoring or management; and
- Hedgerows will be subject to post re-instatement visits to ensure successful establishment of habitat up to five-years after scheme completion. Thereafter, it will be assumed that the landowner shall continue to maintain/ use the area as they deem fit. These areas will be specifically excluded from the 30-year monitoring and management plan.

Off-Site Offsets (if relevant)

Off-site Habitat Creation/ Enhancement

1.5.19 In accordance with the mitigation hierarchy BNG should ideally be delivered on-site, near to where negative impacts occur, wherever possible. Providing BNG on-site may also enable BNG to be constructively added to other mitigation proposals, such as habitat-based mitigation for protected species. However, land ownership constraints may limit the scope to provide sufficient enhancement to meet a sufficient net gain target within the ES boundary.

1.5.20 If relevant, indicative offset locations/ mechanisms will be identified off-site, if sufficient gain cannot be achieved within the ES boundary. Possible locations will be identified in 2023 to enable further work to establish their potential feasibility to be completed. In many cases this is likely to involve the completion of habitat surveys and condition assessment to establish the baseline value of any areas to be enhanced.

1.5.21 Offset areas located off-site would also be subject to a minimum 30-year monitoring and management plan.

Purchase of Biodiversity Credits

1.5.22 The BNG consultation[19] indicated that:

"Nationally Significant Infrastructure Project (NSIP) providers will have a range of options available to deliver biodiversity net gain, including avoidance of impact through options appraisal and design, on-site mitigation, purchase of biodiversity units on the market, other delivery of off-site gains, and the purchase of statutory biodiversity credits."

[19] https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/supporting_documents/Consultation%20on%20Biodiversity%20Net%20Gain%20Regulations%20and%20Implementation_January2022.pdf

1.5.23 If net gains cannot be delivered on or off-site, this may alternatively be able to be achieved through the purchase of market and/ or statutory biodiversity credits. However, the option of buying statutory biodiversity credits is only likely to be available as a last resort, where developers can demonstrate that they are unable to achieve BNG through the available on-site and off-site options. It is understood that statutory biodiversity credits will become available for purchase, where needed, in advance of the introduction of mandatory BNG. It is not clear at this stage however whether credits will be available to the Project within the timescale required and there is currently no indication of the likely cost per unit for developments, such as the Project.

Deliverables

1.5.24 All documents relating to the BNG assessment will be prepared in accordance with good practice guidance[7]. Further description of each stage of the process is described in the subsections below and presented in the flowchart in Figure 1.1.

PEIR Stage

1.5.25 No BNG assessment has been submitted as part of the PEIR consultation as there is insufficient detail to provide one. This is because the collection of habitat condition assessment data is still ongoing, there is not yet an indicative project footprint (i.e., refined corridor, single OnSS location etc) and as a result compensation/ enhancement proposals have yet to be determined.

Application Stage (Development Consent Order (DCO) Submission)

1.5.26 Key deliverables that are intended to be submitted within the BNG Indicative Design Stage Report as part of the Development Consent Order (DCO) application process will include:

- Baseline Plans (i.e. pre-development): A Defra Metric Habitat Plan (noting that this may differ from the habitat plan in the Habitat Survey report for the reasons stated in Paragraphs 1.5.14 to 1.5.17), a Condition Assessment plan and a Strategic Significance Plan;
- Post-Project (i.e., after development, including all proposed mitigation, compensation, and enhancement): A Defra Metric Proposed Habitat Plan, a proposed Condition Assessment Plan and a Strategic Significance Plan; and
- Completed BNG Metric 4.0 spreadsheet.

1.5.27 The requirements for auditing against the BNG objectives will be set out within an appendix to the LEDPP (document reference 8.7).

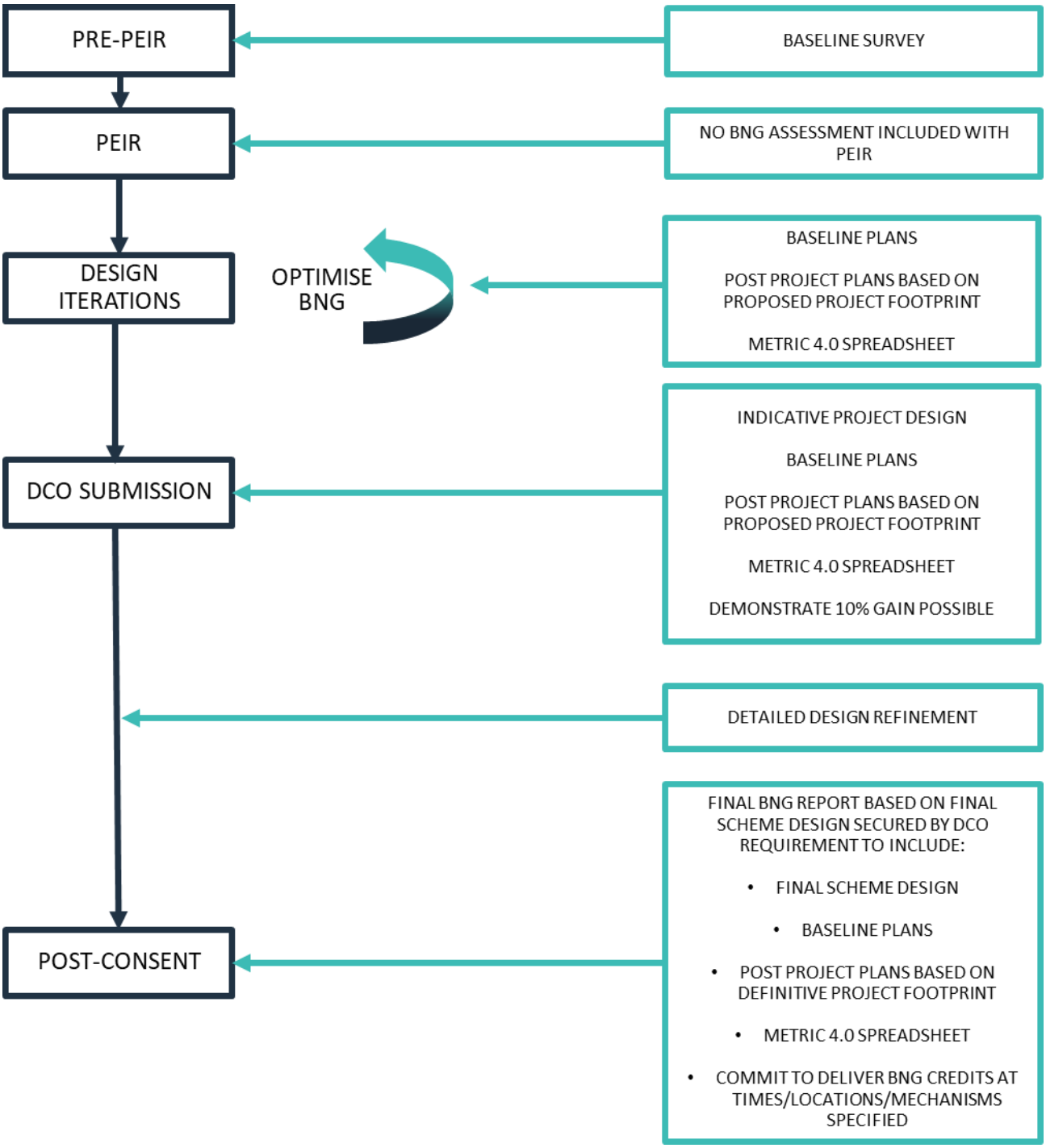
Post DCO Consent

1.5.28 To account for potential changes to the detailed scheme design, once detailed design is known, the current (at the time of detailed design) version of the Metric will be re-run, and the Biodiversity Net Gain Final Design Report shall be prepared. It is envisaged that this would be the subject of a DCO Requirement, and that the Project will seek to align with the 10% BNG requirement if possible. Deliverables would be the same as above, i.e.:

- Baseline Plans (i.e., pre-development): A Defra Metric Habitat Plan, a Condition Assessment plan and a Strategic Significance Plan;
- Post-Project (i.e., after development, including all proposed mitigation, compensation, and enhancement): A Defra Metric Habitat Plan, a Condition Assessment Plan and a Strategic Significance Plan; and
- Completed BNG Metric 4.0 spreadsheet.

1.5.29 The detailed final Landscape and Ecological Management Strategy (or similar document), to be produced post-consent, will include the final requirements for auditing on-site areas against the BNG objectives set out in the Metric assessment, and any associated management actions. It is envisaged that audit and management requirements for off-site areas (if needed) would be dealt with separately.

Figure 1.1: BNG Approach Flowchart



2 Marine Net Gain

2.1 Introduction

2.1.1 The concept of MNG was developed in response to the UK government consultation in 2018 in making BNG mandatory for new development on land, and it was then suggested by respondents that this be extended to marine developments. In 2019 the UK government responded that more work would be needed to define an approach that was appropriate for MNG. In 2022 Defra started consultation, setting out the aims of MNG and the interaction with developments.

2.1.2 MNG activities will be an important tool in helping meet the targets for net zero and the environment, contributing to ocean recovery. It will operate alongside existing planning policy and practice to ensure that current environmental standards, including the conservation objectives for habitats, species and designated sites, are maintained and implemented.

2.1.3 It is planned that MNG will be achieved by first applying the mitigation hierarchy. MNG will then be an additional tool to offset any impacts that cannot be avoided, minimised or mitigated. Any requirement to provide compensatory measures under relevant Marine Protected Areas (MPA) regulations will remain unaffected by the introduction of MNG.

2.2 Consultation

2.2.1 Consultation on MNG was held by Defra from the 7th June 2022 to the 30th August 2022. The consultation was designed to inform how to best introduce a net gain approach to infrastructure and projects in the marine environment.

2.2.2 The consultation proposed a strategic approach to MNG, to aid in the delivery of measurable gains for nature and facilitating collaborative opportunities, rather than a fragmented or disjointed approach where the sum of the parts may be less than a strategic approach.

2.2.3 Formal consultation was also undertaken on the biodiversity metric that will be used in mandatory BNG assessments. The applicability of a metric for the purposes of MNG is currently unclear and is being investigated.

2.2.4 From the consultation there were 92 responses. Overall, there was support for MNG, with most responses in favour of it being a mandatory requirement for projects and for species and habitats to be considered.

2.3 Aims of Net Gain

2.3.1 The UK government's 25 Year Environment Plan[20] is driving to implement net gain in England for both terrestrial and marine environments. It pledges to *'reversing the loss of marine biodiversity and, where practicable, restore it'*. MNG was set up to provide the tools and framework for the policy.

[20] https://www.gov.uk/government/publications/25-year-environment-plan/25-year-environment-plan-our-targets-at-a-glance

2.3.2 The aims for MNG set out in the consultation were:

- To secure positive outcomes for the environment by contributing to halting and reversing the longer-term trend of biodiversity decline through the restoration and creation of healthy and high-quality marine and coastal habitats, and protection of species;
- Deliver lasting improvements, contributing to ocean recovery, and supporting efforts in climate change mitigation, resilience, and adaptation;
- Enable the responsible and sustainable growth of marine industries and development activities, recognising their essential contribution to meeting the UK government's climate change commitments, whilst ensuring the protection of our marine environment; and
- Define strategic objectives and goals, increasing the potential for relatively small interventions to make a more significant collective contribution to improvements in the overall status of the marine environment.

2.4 Marine Net Gain Timelines

2.4.1 At present, there is no identified date at which MNG will become mandatory, however, it is likely that this will after the expected consenting timescales for current offshore wind projects. In the meantime, the Government are encouraging developers to voluntarily explore MNG.

2.4.2 The Applicant will consider the potential for MNG to be developed as part of the Project; further information on this will be provided alongside the ES.

2.5 Marine Recovery Fund

2.5.1 Subject to the outcome of the Energy Bill, which is currently being scrutinised by Parliament, the Marine Recovery Fund (MRF) will be a fund that will consist of amounts paid in respect of offshore wind infrastructure projects (and other developments in the future), where payments will be made to contribute to deliver measures which will compensate for adverse environmental effects. It is intended to be an optional framework in which projects will financially contribute to compensate for adverse environmental effects that cannot be avoided or mitigated. This will enable Government, or a delegated authority, to deliver approved Strategic Compensatory Measures. As identified within the recent Government consultation on MNG[21], it is expected that MRF will also be open to contributions for MNG.

[21] Available at: https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-the-principles-of-marine-net-gain/supporting_documents/Consultation%20on%20the%20Principles%20of%20Marine%20Net%20Gain.pdf [accessed May 2023].

2.5.2 Commercial, competition and other project management information sensitivities can limit opportunities for developers to easily deliver strategic compensatory measures in collaboration with other developers, in additional a number of possible compensation measures may only be implemented by Government. The MRF is intended to be an optional route for windfarm developers to pay into, to discharge their compensation (or MNG) obligations, should appropriate measures be available to fulfil their mandatory requirement to compensate for negative effects that cannot be avoided.

2.5.3 The MRF is currently expected to be industry-funded and it is understood that it will likely be operational and able to receive payments from late 2023 (subject to the progress of the relevant legislation through Parliament and development of necessary secondary legislation).

3 References

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