

Biodiversity Net Gain Technical Advice Note

June 2021



Kirklees Council

Biodiversity Net Gain in Kirklees

Technical advice note on Biodiversity Net Gain requirements for developments within Kirklees

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1. Introduction

1.1 Biodiversity and Development

1.1.1 The natural environment provides vital benefits for our health, society and economy, known as 'ecosystem services'. The strength of these beneficial services is determined by the quality of the natural world and the biodiversity of the ecosystems within it. Biodiversity is defined as the variety of plant and animals living within an area or habitat, with different habitats contributing different functions or services for our environment. However, the UK has suffered a considerable decline in biodiversity over recent years, in turn causing a reduction in ecosystem service provision.

1.1.2 In order to conserve our remaining biodiversity and reverse the recorded decline, the UK as a whole is moving towards enshrining a measurable Biodiversity Net Gain throughout the planning process. The Government intends to mandate a requirement for all new development to deliver Biodiversity Net Gains through the introduction of the new forthcoming Environment Bill (currently a draft bill). This will ensure important ecosystem services are maintained and improved, as future developments look to not only conserve valuable habitats and species but enhance biodiversity via demonstratable measurable net gains.

1.2 Purpose of the Technical Advice Note

1.2.1 The purpose of this technical advice note is to provide guidance on how Biodiversity Net Gain should be achieved by development within Kirklees in accordance with Local Plan policy LP30 (Biodiversity and Geodiversity) in the intervening time prior to the introduction of the Environment Bill. Policy LP30 of the Kirklees Local Plan requires development proposals to "provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation".

1.2.2 This Technical Note is split into two main sections:

- Section A: General Guidance for Developers
An explanation of how the Biodiversity Net Gain Process is integrated into the planning process including an overview of how to utilise the Biodiversity Metric 2.0, the situations it will be required and options to achieve a Biodiversity Net Gain post-development.
- Section B: Guidance for Ecologists
An explanation for the application of the metric within Kirklees including how strategic significance is to be scored, the level of information required and realistic goals for biodiversity enhancements.

1.2.3 The intention is that this guidance will be periodically reviewed in light of legislative and national policy drivers to ensure no conflict with future legislation and that this guidance remains consistent with policy.

1.3 National Planning Policy and Legislative Context

- 1.3.1 Paragraph 175 of the [National Planning Policy Framework 2019](#) (NPPF) requires development to secure measurable net gains for biodiversity (Ministry of Housing, Communities & Local Government, 2019a). Paragraph 22 of the National Planning Practice Guidance (NPPG) on the natural environment confirms the definition of Biodiversity Net Gain as an approach that “*delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development*” (Ministry of Housing, Communities & Local Government, 2019b). Paragraph 25 of the same guidance also identifies the use of a biodiversity metric as a pragmatic way to calculate changes in biodiversity value.
- 1.3.2 Following the Department for Environment, Food & Rural Affairs (Defra) Consultation Response, proposals to mandate most developments to demonstrate a 10% net gain for biodiversity were announced in July 2019 (Department for Environment, Food & Rural Affairs, 2019). The intention to use the (currently draft) Environment Bill to enact this change was included in the latest Queen’s speech (Prime Minister’s Office, 2019). In order to measure Net Gain for Biodiversity through development, the use of a Biodiversity Metric (the latest version of the Biodiversity Metric) will be required. The Biodiversity Metric 2.0 is the successor to the metric published by Defra in 2012 and has been co-developed with the input of industry, environmental non-governmental organisations, planners and land managers and therefore is regularly updated and reviewed in line with relevant practice. Its use provides a national standard by which biodiversity gains and losses may be calculated.
- 1.3.3 Paragraphs 22 to 27 of the NPPG on the [Natural Environment](#) (Reference ID: 8-022-20190721 to 8-027-20190721) provide further information on Biodiversity Net Gain.
- 1.3.4 NPPG states that net gain is an approach to development that leaves the natural environment in a measurably better state than it was beforehand. It notes that using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved.

1.4 Local Policy

- 1.4.1 All development in Kirklees will be expected to avoid significant loss or harm to biodiversity through protection, mitigation and compensatory measures and seek opportunities to enhance biodiversity value and ecological links. As set out in Local Plan policy LP30, development proposals should provide biodiversity net gains through good design including specific habitat creation and biodiversity enhancements. As per LP30 development proposals will be required to (see Appendix 1 for an extract of the full policy from Kirklees Local Plan):
- (i) result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;
 - (ii) minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;
 - (iii) safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its

functional role within the network can be fully maintained or compensated for in the long term;

- (iv) establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and
- (v) incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone

1.4.2 Regard will need to be given to the relevant Biodiversity Opportunity Zone in which the proposed development is located, and biodiversity enhancement measures will be sought which reflect the priority habitats and species identified for each zone. The purpose of the Biodiversity Opportunity Zones and associated tables of species is to guide developers in providing appropriate compensation and enhancements of maximum benefit for nature conservation. The Biodiversity Opportunity Zones within Kirklees map and associated tables can be viewed within the [Other Policies and Strategies section on the council's website under Biodiversity](#). The UK Habitats of Principal Importance relevant to Kirklees are included in Table 1 which identifies their associated Biodiversity Opportunity Zone. Habitats included within this table are considered of higher local ecological value and should be considered for retainment, enhancement or creation within developments located in the associated Biodiversity Opportunity Zone.

Table 1 Habitats of Principal Importance within Kirklees and their respective Biodiversity Opportunity Zone.

UK Biodiversity Action Plan Habitat	Key geographical areas in Kirklees (biodiversity opportunity map category)					
	Uplands	Mid-Altitudinal Grasslands	Valley Slopes	Floodplain and Riverine Corridors	Pennine Foothills	Urban Areas
Arable Field Margins						
Blanket Bog						
Hedgerows						
Inland Rock Outcrop and Scree Habitats	Quarries in any area			Quarries in any area		
Lowland Dry Acid Grassland						
Hay Meadows						
Lowland Mixed Deciduous Woodland						

Open Mosaic Habitats on Previously Developed Land						
Ponds	Relevant to occurrence of protected species (white clawed crayfish, great crested newt, water vole, <i>L. natans</i>)					
Reedbeds						
Rivers						
Traditional Orchards						
Upland Flushes, Fens and Swamps						
Upland heathland						
Upland Mixed Ashwoods						
Upland Oakwoodland						
Wet Woodland						
Wood-Pasture and Parkland						
Local Biodiversity Action Plan Habitat						
Scrub						
Other semi-natural grassland						
Riverine						

1.4.2.1 In addition to Biodiversity Opportunity Zones, the NPPF requires local planning authorities to identify local ecological networks, which in Kirklees is undertaken through mapping of the Kirklees Wildlife Habitat Network. In order to safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network, the council will also seek to ensure that development proposals do not result in the fragmentation of the network and provide improved ecological links, particularly to the Kirklees Wildlife Habitat Network, where opportunities exist. Enhancement of ecological networks should be a priority within development schemes to repair and re-connect habitats, buffer sensitive sites and aid biodiversity resilience to development and climate change pressures.

Section A: Guidance for Developers

2. Biodiversity Net Gain Approach

2.1 The Biodiversity Metric 2.0

2.1.1 The Biodiversity Metric 2.0 is a means of calculating losses and gains resulting from a proposed development, or other land use changes. The metric is based on habitats and incorporates separate modules for habitats measured in area (such as woodland and grassland) and linear habitats measured in length (such as hedgerows and rivers). In addition to area or length, the metric uses a function of distinctiveness, condition, strategic significance and connectivity to calculate value. The metric is based on the UK Habitat Classification system however a conversion tool allows translation from Phase 1 JNCC habitats. The metric is accompanied by a user guide that describes in detail how each of the attributes is determined and can be accessed at the [Natural England Publications Website](#).

2.1.2 The outcome of these value calculations is expressed as ‘biodiversity units’ which, by measuring the number of baseline units on the site pre-development, can be used to determine the net loss or net gain in biodiversity units post-development. The change in biodiversity value is determined by subtracting the value before development from the value after development. A Biodiversity Net Gain will be achieved where a positive change occurs. If a positive change cannot be achieved within the application area, the net gain approach requires developers to secure off-site compensation. Habitat creation and enhancement also takes into account the difficulty, time and ‘spatial risk’ (i.e. the geographical risk associated with off-site compensation). A simplified guide to how the Biodiversity Metric 2.0 calculations are made is provided below, in **Figure 1**. For an in-depth explanation of the metric see the Biodiversity Metric 2.0 User Guide (Currently beta version).

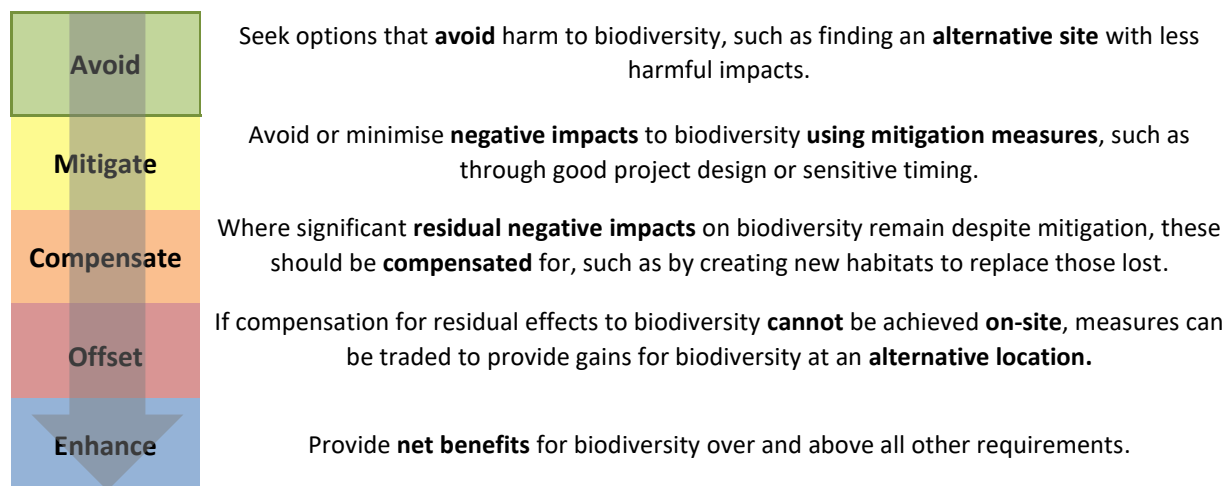
Figure 1. Example of calculations using the Biodiversity Metric 2.0

Size of habitat parcel	X	Habitat Distinctiveness	X	Habitat Condition	X	Strategic location	X	Connectivity	=	Baseline Biodiversity Units
Size of habitat parcel	X	Habitat Distinctiveness	X	Habitat Condition	X	Strategic location	X	Connectivity	X	
Difficulty	X	Time to target condition	X	Spatial risk	=	Future Biodiversity Units				
Future Biodiversity Units	-	Baseline Biodiversity Units	=	Biodiversity Net Gain (+) or loss (-)						

2.2 The Mitigation Hierarchy

2.2.1 The use of the Biodiversity Metric 2.0 does not remove the requirement to follow the mitigation hierarchy. The NPPF and policy LP30 both require development proposals to apply the ecological mitigation hierarchy in order to result in no significant ecological harm. Through the hierarchy, significant harm should be avoided in the first instance, mitigated where impacts cannot be avoided and compensated for only as a last resort. The mitigation hierarchy is outlined below in **Figure 2**.

Figure 2. Applying the Mitigation Hierarchy



2.2.2 The mitigation hierarchy complements and works with the metric and a Biodiversity Net Gain will be easier to achieve following its application.

2.3 Exceptions

2.3.1 This Biodiversity Net Gain approach does not replace existing protection for habitats and species that exists within planning policy and legislation. This includes the legal protections afforded to species and sites, which are separate from the planning process, and the policy requirements that relate to priority habitats and species, irreplaceable habitats and protected sites, whether these be through direct or indirect impacts. If present within or near to a development, impacts to these features will continue to be considered in accordance with the policy requirements, and in line with the legal responsibilities of the Local Planning Authority.

2.3.2 Losses to irreplaceable habitats, including habitats within Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA), Special Areas of Conservation (SAC) or Local Wildlife Site (LWS, Ancient Semi-natural woodland, Plantations on Ancient Woodland sites and other habitats considered to be of high distinctiveness (such as blanket bogs, upland hay meadows, etc.) cannot be accounted for within the metric and in all such cases the requirement for bespoke compensation will need to be discussed with all relevant bodies, including the Local Planning Authority.

3. Kirklees Approach

3.1 Objective

3.1.1 Within Kirklees, development inside the scope of this guidance will be expected to deliver a measurable biodiversity net gain. At this time, in the absence of legislation, a minimum of 10% net gain in biodiversity is required. A net gain of 10% is the proportion of increase proposed by central government, following the introduction of the Environment Bill (Likely to be late 2020). The change in biodiversity value will be calculated and demonstrated using the Biodiversity Metric 2.0 and must apply to both baseline habitat and linear feature units on the site.

3.2 Scope

3.2.1 The following approach to demonstrating a biodiversity net gain will be applied to all 'major development' as defined in The Town and Country Planning (Development Management Procedure) (England) Order 2015.

3.2.2 Major development (includes minor majors) within Kirklees can be defined as the following:

- Residential developments of 10+ dwellings or over 0.5ha in size;
- Office/light industry of +1,000 sqm or over 1ha in size;
- Retail of +1,000 sqm or over 1ha in size;
- All other small-scale major or major developments.

3.2.3 Minor developments are still subject to the mitigation hierarchy outlined within Chapter 2.2 and will still be required to demonstrate a net gain for biodiversity, however under current guidance this will not normally need to be quantified via the use of the Biodiversity Metric 2.0. Further clarifications for biodiversity net gains by minor developments are provided within Chapter 4.3.

3.3 Guidance

3.3.1 The application of the mitigation hierarchy and the integration of Biodiversity Net Gain will require consideration from an early stage of the development. Ideally an ecological consultant should be engaged at the earliest opportunity, prior to the design phase of the development, this will ensure sites selected are suitable for development and that a net gain on the site is feasible.

3.3.2 In order to demonstrate a Biodiversity net Gain, planning applications within the scope of this guidance will need to be supported by appropriate information. The current validation checklist at the time of writing requires all major applications to be supported by an Ecological Impact Assessment (EclA) produced in accordance with national good practice guidance (CIEEM, 2018). In addition to drawings showing the existing habitats and those to be created, the EclA should include an accurate summary of the Biodiversity Net Gain calculation to demonstrate how the policy requirements are met. However, in all cases, the calculation spreadsheet and any GIS files of habitat maps should also be supplied to enable the Local Planning Authority to verify the calculations. Survey data used to populate the metric will need to be up-to-date, with time limits to be in accordance with relevant guidance (CIEEM, 2019). For further detail of the level of information required to support applications see the Biodiversity Validation Guidelines.

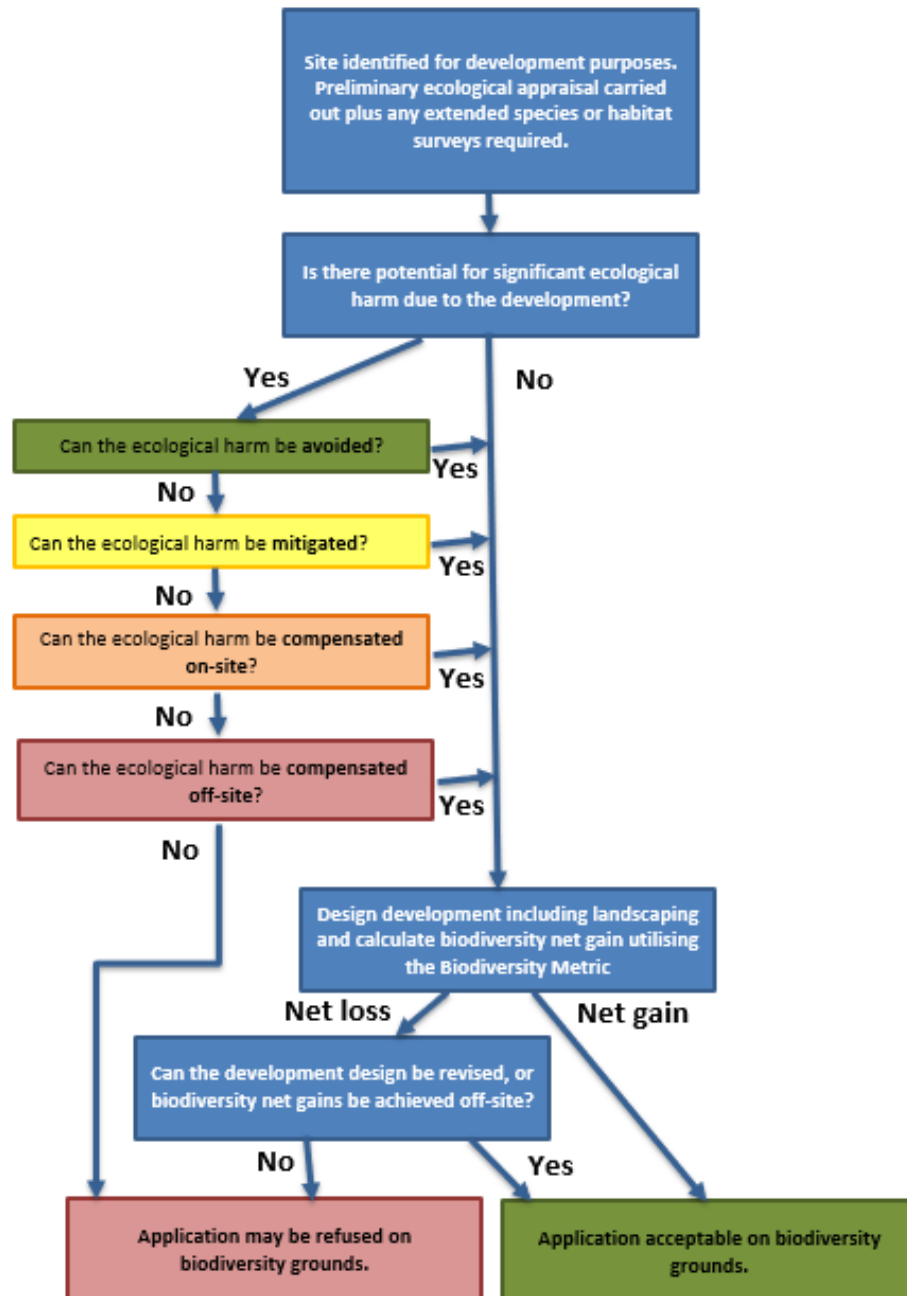
3.3.3 The following stages to be followed by major developments in the application process are outlined below, in **Table 2**.

Table 2: Stages of submitting major development applications within Kirklees

Stage 1:	Site Baseline Pre-development
	<ol style="list-style-type: none">1. Assess the selected site for the level of potential ecological harm (desk-based feasibility surveys may be used to establish this see Section B of this document for guidance on Biodiversity Net Gain within Kirklees for Ecological Consultants).2. Undertake ecological surveys starting with a Preliminary Ecological Appraisal (PEA) using UKHab to classify habitats, followed by any required extended surveys for habitats and protected species.3. Establish the site's baseline biodiversity value utilising the Biodiversity Metric 2.0
Stage 2:	Development design
	<ol style="list-style-type: none">4. Use the information collected during baseline surveys to design the site layout, applying the mitigation hierarchy (avoid, mitigate, compensate)5. Use the Biodiversity Metric 2.0 to explore a variety of options considering how these impact upon biodiversity on the site.6. Design the development, including a landscaping plan, based on the opportunities for habitat retention, enhancement and creation.
Stage 3:	Masterplan and Ecological Impact Assessment
	<ol style="list-style-type: none">7. Produce a master plan and calculate final results of the Biodiversity Net gain metric (see Appendix 2 for a worked example).8. Undertake Ecological Impact Assessment (EclA) based on results of previous surveys and include an accurate summary of the biodiversity net gain calculation to demonstrate how the policy requirements are met.9. If sufficient measurable Biodiversity Net Gain cannot be achieved on-site, provide evidence and determine best option to achieve Biodiversity Net Gain off-site (See Paragraph 3.4.5).
Stage 4:	Submit for validation
	<ol style="list-style-type: none">10. Submit application along with all ecological survey data, ecological impact assessment and stand-alone Biodiversity Metric 2.0 calculation excel spreadsheet and GIS layer of habitat maps to LPA.11. Planning application will be determined with conditions based on submitted evidence of net gain (see Figure 3. for determination process by Local Planning Authority).
Stage 5:	Discharge of Conditions and Post-Development Monitoring
	<ol style="list-style-type: none">12. Formulate Construction Environmental Management Plan (CEMP) and Landscape & Ecology Management Plan (LEMP) in accordance with conditions.13. Monitor on-site and off-site biodiversity net gain features to ensure habitats are managed effectively and achieve target condition for a minimum 30-year period from the date they are created, or development works completed. Monitoring reports will need to be submitted to the organisation responsible for the Local Biodiversity Recovery Strategy and any changes in management required to meet the agreed biodiversity unit value agreed in writing.

3.3.4 The process followed by the Local Planning Authority to determine applications based on submitted ecological evidence is illustrated below in **Figure 3**.

Figure 3: Validation process when determining applications relating to biodiversity matters



3.4 Offsetting Biodiversity Net Gain

- 3.4.1 A Biodiversity Net Gain achieved within the development site is the preferred option within Kirklees. The method of achieving a biodiversity net gain should be integrated early into the design process and the mitigation hierarchy followed to assist in this.
- 3.4.2 In exceptional circumstances, where it can be demonstrated that on-site compensation methods have been exhausted, it will be necessary to secure Biodiversity Net Gain off-site. In these circumstances, applicants will need to demonstrate that sufficient offsite habitat creation or enhancement has been secured to achieve a minimum 10% Biodiversity Net Gain. Details of off-site compensation must also be demonstrated in a measurable way, following the same methodology as for onsite creation and enhancement.
- 3.4.3 Off-site compensation will need to be secured through an appropriate legal agreement for a minimum period of 30 years, or for the lifetime of the development.
- 3.4.4 Off-site compensation schemes that involve land allocated for development within the Kirklees Local Plan, including safeguarded land, or within protected sites will not be considered appropriate compensation for development impacts occurring within the district.
- 3.4.5 Off-site compensation can be secured through one, or a combination of, the following.
- Management of land within the control of the developer;
 - Purchase of the required compensation value from a Habitat Bank;
 - Payment of a commuted sum to the Local Planning Authority; or
 - A combination of all or some of the above.
- 3.4.6 Applicants are encouraged firstly to source and bring forward appropriate sites on which their biodiversity offsetting can occur. These should be reasonably close to the development site and have the potential to establish or enhance in-kind habitats to those due to be lost. If the applicant is unable to secure a site where adequate biodiversity offsetting can occur then a financial payment to Kirklees Council, for use to enhance biodiversity on council managed land, will be required.
- 3.4.7 Payment of a commuted sum is likely to be the costliest option as, in order to demonstrate a Biodiversity Net Gain, Kirklees Council will charge a precautionary cost that enables suitable land to be identified, secured and managed in perpetuity.
- 3.4.8 The final sum will also include a 15% admin fee on top of the calculated financial contribution to cover the cost of habitat survey, calculation using the metric, monitoring and reporting, whether this is undertaken by council staff or an external consultant.

3.5 Ongoing Management, Maintenance and Monitoring

- 3.5.1 Habitat creation and enhancement measures that are included in the metric calculation as compensation, whether on-site or off-site, will need to be secured for a period of at least 30 years. This is in line with central government's proposals for a mandatory net gain approach and is to ensure that the compensation is provided for a sufficiently long-term period to permit habitats to mature and contribute to the maintenance of biodiversity. Therefore, any proposed

habitat creation or enhancement which is predicted by the metric to take longer than 30 years to reach the target condition will not usually be accepted for Biodiversity Net Gain purposes.

- 3.5.2 The metric calculation, whether undertaken for on-site or off-site areas, will specify a habitat type and target condition for each habitat 'parcel'. In order to ensure these targets are met, and that a genuine net gain is achieved, periodic monitoring and reporting will be necessary. This reporting will be secured through a section 106 Agreement for on-site and off-site areas.
- 3.5.3 Reporting will be undertaken every 5 years up to and including year 30 and will include a survey of the relevant areas using the UK Hab classification, together with an assessment of the condition of all habitat parcels entered into the metric calculation for the post development site. Condition will be defined with reference to the technical guidance supporting the Biodiversity Metric 2.0. The monitoring of sites should utilise the same version of the metric as accompanied the planning application
- 3.5.4 Reports will be submitted to Kirklees planning department at specified intervals and, remedial measures will be required where reports show that required targets are not being met else appropriate enforcement action may be taken. Revisions may be required to original management accompanying the planning application in this instance and this should be accompanied by adequate evidence and justification for the proposed changes.

4. Other Clarifications

4.1 Outline and Reserved Matters

- 4.1.1 Outline applications, where layout is not to be decided, will need to be supported by a full description of the ecological baseline of the site, which will include a calculation of the pre-development biodiversity value using the Biodiversity Metric 2.0. Outline applications where layout is to be decided, will need to be supported by a full calculation using the metric, assuming a worst-case scenario, unless the landscaping details are also to be decided.
- 4.1.2 Please note that any reserved matters applications pertaining to outline applications which were approved prior to 1st January 2020 will not be subject to evaluation utilising the Biodiversity Metric 2.0. However, these applications must still demonstrate a biodiversity net gain in accordance with the NPPF and Kirklees Local Plan Policy LP30.

4.2 Baseline Values

- 4.2.1 It is hoped that developers and landowners will engage positively with the biodiversity net gain approach, and Kirklees Council anticipates that this will be the case in the vast majority of cases. However, it is recognised that there are instances where activities undertaken within a proposed development site, such as tree felling or soil stripping, could artificially reduce the baseline biodiversity value of the site. Using an artificially low baseline could otherwise result in calculations indicating a false net gain.
- 4.2.2 To reverse any incentive to deliberately damage habitats and counteract any additional negative effects where damage has occurred, any damaging actions will be disregarded unless it can be satisfactorily demonstrated that this was necessary in connection with a legitimate prior land use.
- 4.2.3 The baseline for calculating Biodiversity Net Gain will normally be the date at which planning permission is applied for. However, in cases of apparent deliberate damage the available evidence will be used to predict the habitat types previously present as of 1st January 2020. In such cases the condition of the affected habitats will be assumed to be 'good'. All other attribute values will be determined as per the Biodiversity Metric 2.0 guidelines.

4.3 Minor Planning Applications

- 4.3.1 In the absence of legislation, applications defined as minor development will not normally be required to demonstrate a biodiversity net gain with the use of the Biodiversity Metric 2.0. Exceptions to this may include applications located in sensitive locations, such as entirely within the Kirklees Wildlife Habitat Network. This guidance is subject to change following the release of a simplified Biodiversity Metric currently under production by Natural England and DEFRA (expected December 2020) and will be updated accordingly.
- 4.3.2 As with all major developments, minor developments will still be expected to provide adequate ecological information, apply the mitigation hierarchy and demonstrate a Biodiversity Net Gain in accordance with the NPPF and Kirklees Local Plan Policy LP30.

Section B: Guidance for Ecological Consultants

5. Introduction

5.1 The Biodiversity Metric within Kirklees

5.1.1 The application and utilisation of the Biodiversity Metric 2.0, including methods to determine habitat distinctiveness, condition and connectivity scores, should follow the associated guidance (The Biodiversity Metric 2.0 – User Guide & The Biodiversity Metric 2.0 – Technical Supplement). Although the guidance accompanying the metric and the methods above are consistent throughout different local authority areas, Section B of this guidance is intended to consolidate expectations in terms of the level and extent of information required for planning applications within Kirklees.

5.1.2 The Kirklees local development documents, including the Local Plan, have not been developed with the specific aim of facilitating the biodiversity net gain approach described in this guidance. The net gain approach has been given greater emphasis in national planning policy subsequent to publication of the Kirklees Local Plan. For development within Kirklees, and in the absence of clear guidance elsewhere, the following definitions should be used to determine the strategic significance scores used in the metric calculation.

- High strategic significance
Any habitat parcel within a statutory designated wildlife site, a Local Wildlife Site or the Kirklees Wildlife Habitat Network. Any Habitat of Principal Importance within Kirklees located within the associated Biodiversity Opportunity Zone (As seen within Table 1).
- Medium strategic significance
Any habitat parcel not designated as above but directly adjoining such a habitat.
- Low Strategic Significance
Habitat parcels not within or adjacent to a statutory designated wildlife site, a Local Wildlife Site or the Kirklees Wildlife Habitat Network.

5.2 Relevant Guidance

5.2.1 The following guidance is of relevance in delivering Biodiversity Net Gain through development and should be utilised when applying the principals of biodiversity net gain to development proposals:

- [Biodiversity Metric 2.0, and associated guidance](#) (Natural England, 2019).
- [Biodiversity net gain: Good practice principles for development](#) (CIEEM, et al., 2016).
- [Biodiversity Net Gain: Good practice principles for development](#) – A practical guide (CIEEM, et al., 2019a).
- [Biodiversity Net Gain: Good practice principles for development – Case studies](#) (CIEEM, et al., 2019b).
- BS 42020:2013 Biodiversity. Code of practice for planning and development (BSI, 2013).

6. Level of Information Required

6.1 Desk Based Study

6.1.1 Prior to undertaking a full ecological assessment, evidence may be collected to assess the feasibility of achieving Biodiversity Net Gain on the project. This stage is particularly valuable for large scale developments or developments located in ecologically sensitive areas, when considerations for biodiversity will require inclusion within the Design and Access Statement at a pre-planning stage. This high-level assessment involves carrying out a desk-based study utilising reliable resources including but not limited to:

- Existing habitat or species survey data
For example: designated site data, previous consultancy reports for the site or neighbouring areas, data from the Local Environmental Records Centre and records from the local wildlife protection groups;
- The UK government's MAGIC website;
- Aerial imagery or street view data;
- OS maps or other topographical mapping services.

6.1.2 The above resources will allow information to be gathered as far as possible, prior to detailed ecological surveys, and enable the risks and opportunities of achieving a Biodiversity Net Gain to be assessed. Establishing high-level constraints at this stage will reduce the risk a project will become unfeasible at a later stage due to biodiversity and demonstrate that the mitigation hierarchy has been applied from the start.

6.1.3 Utilisation of desk-based feasibility studies will also illustrate where habitat degradation has occurred prior to development (See Chapter 4.2) and will establish the true biodiversity value of the site to be inputted into the metric.

6.1.4 Access and usage of all ecological data sources should follow Guidelines for Accessing and Using Biodiversity Data in the UK (CIEEM, 2020).

6.2 Ecological Assessment Reporting

6.2.1 It is currently expected that the majority of applications will be supported by an Ecological Impact Assessment (EclA) as outlined within the current validation check list. The standardised content and format of an EclA is defined in guidance by CIEEM (2018), and if followed will provide sufficient information to enable planning officers to understand if the proposals are in line with biodiversity policies. Exceptions to this are on sites determined to have very low ecological value during the Preliminary Ecological Appraisal (PEA) and where it can be determined that the proposals would have no significant ecological effects, no mitigation is required, and no further surveys are necessary. In this case a Preliminary Ecological Appraisal Report (PEAR) is likely to provide sufficient information to enable planning officers to assess the proposals against the biodiversity policy (CIEEM, 2017a). In all other cases, particularly when referring to major applications, submission of a PEAR in support of an application is likely to be insufficient.

- 6.2.2 As direct effects on protected species and indirect effects on habitats and species are not considered within the Biodiversity Metric, full assessment of the potential impacts of the proposed development will still need to be addressed as part of the EclA. Bespoke compensation or mitigation required for impacts to designated sites and irreplaceable habitats must be determined prior to application of the metric, which is considered to be additional.
- 6.2.3 Final Biodiversity Metric 2.0 calculations are to be included within the EclA report. Evidence should be clearly presented to demonstrate how each of the habitats on-site have been assessed utilising the metric, including justification for assessments of condition, connectivity and strategic significance. This will require each habitat 'parcel' on the site as assessed by the metric to be clearly labelled on scaled maps of the site both pre and post development to allow identification of the distribution of habitat units. In all cases survey data used to populate the metric will need to be in accordance with time limits set out in relevant guidance (CIEEM, 2019).
- 6.2.4 Habitat type identification during ecological surveys should be completed through the use of UK Habitat Classification System to allow direct input into the metric. This removes the need to translate habitats from alternative habitat recording systems such as Phase 1 JNCC, which may not be directly comparable, and ensures data is directly comparable on a national scale.
- 6.2.5 To facilitate future on-going monitoring and strategic biodiversity enhancement plans, all data used to populate the metric should be lodged with the Local Ecological Records Centre and made freely available.

7. Habitat Creation and Enhancement

7.1 Realistic Goals and New Habitat Creation

- 7.1.1 As set out by Rule 3 of the Biodiversity Metric 2.0 User Guide, habitats lost from the development site must not be traded down when replacement habitats are proposed post-development. For example, an area of neutral grassland with moderate distinctiveness should not be traded down for modified or amenity grassland with low distinctiveness. In addition, where trading up, sound justification and evidence that significant changes upwards (i.e. increases of over one category) can be achieved will be required and will require discussion with Local Planning Authority prior to agreement.
- 7.1.2 As highlighted by Principal 5 of the Biodiversity Metric 2.0 User Guide “*The metric design aims to encourage enhancement, not transformation of the natural world*”. Therefore, where new habitats are to be created to compensate for a loss of habitat these should be ‘in-kind’. For example, a loss of plantation woodland could be replaced with semi-natural broadleaved woodland but not with a new wildflower meadow. The exception to this is where the accelerated succession is to be used to facilitate natural regeneration of grassland to woodland or where sound justification for an ‘out of kind’ habitat is provided.
- 7.1.3 New proposed habitats and target conditions of habitats post development must be realistic and achievable, for example it is unlikely that an upland hay meadow of good condition could be established at the edges of a proposed sports field in a suburban location however, with a good management regime, it may be feasible to create a neutral grassland wildflower meadow of moderate condition in the same location. Significant increases in condition of retained habitats via ecological enhancement and management regimes (i.e., increases of over one category) will also need to be justified with evidence based on the habitat condition assessments provided alongside the Biodiversity Metric 2.0 and will also require discussion with the Local Planning Authority prior to agreement.
- 7.1.4 In addition to a 10% biodiversity net gain overall on the site (in both habitat units and linear features, depending on the ecological baseline of the site), a 10% gain should be achieved in each broad habitat type identified on the site with a distinctiveness of medium or above.
- 7.1.5 Where temporary habitat losses are set to occur as a result of the proposals, these must be classed as permanent and any reinstated habitats recorded as newly created within the metric. This is to account for the time taken for habitats to re-establish following damage and the risk of failure.

7.2 Woodland Cover

- 7.2.1 When facilitating biodiversity net gain on a development site via biodiversity units, the final scheme should also achieve no losses in the extent of woodland cover. Where areas of woodland are to be lost due to development, in the first instance the creation of new woodland of the same size (whether on- or off-site) is the priority. Where new woodland creation is

unfeasible on-site, net gains may then be achieved by enhancing existing or retained areas of woodland.

7.3 Garden Curtilages

7.3.1 Retained habitats or habitats created to contribute to biodiversity net gains should not be included within the curtilage of residential gardens. Although it is encouraged that new private gardens be designed to be “wildlife friendly”, due to the uncertainty of future management it is not acceptable for any habitats included within a residential garden to be classified as anything other than “Urban – Amenity Grassland” or “Urban- Vegetated Garden”. If any habitat enhancements within domestic curtilages are to be included, these will require methods to ensure long term monitoring and management which is legally enforceable by the planning authority.

7.4 Linear Habitat Features

7.4.1 As per Rule 4 the Biodiversity Metric 2.0 guidance, linear habitats, including hedgerows and rivers, are to be calculated differently to area habitats and these values cannot be summed together or exchanged in order to achieve a Biodiversity Net Gain on the site. Similarly, the metrics used to calculate hedgerow or river units also need to be accounted for individually. In addition, a 10% net gain must be achieved in each individual habitat type contributing to the baseline value of the site.

7.5 Ecological Function

7.5.1 The Biodiversity Metric 2.0 only considers the biodiversity unit value of habitats and does not assess the functional role these habitats play on the site and in the context of the local landscape. Therefore, it will be expected that the ecological functions of habitats on-site be assessed pre-development and maintained post-development. A loss in a critical ecological function of a site is unlikely to be acceptable even when a 10% Biodiversity Net Gain has been demonstrated through the metric. The following sets an example of how a functional role may be presented by a habitat on a site:

7.5.2 *“A residential development is proposed on the site of an old factory in a suburban neighbourhood. The factory buildings were demolished circa 10 years ago, and the site has since been colonised by immature saplings and dense bramble scrub. The site is constrained by residential developments to the east, west and north. To the south boundary of the site, is the edge of a semi-natural woodland and to the north a significant corridor of mature trees connects to the site between the residential dwellings. Initially a net gain utilising the Biodiversity Metric 2.0 is proposed by replanting an area of trees to the south of the site with a buffer zone of native mixed scrub. However, the habitats on-site currently function as a steppingstone for the local bat population to cross from the corridor of trees to the north to forage in the woodland to the south. Therefore, although a numerical Biodiversity Net Gain may be achieved by replanting trees and scrub towards the south boundary, the ecological function of the site as a steppingstone for bats is diminished and the application is likely to be refused on biodiversity grounds”*

7.6 References

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Biodiversity & Geodiversity

The council will seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network.

South Pennine Moors

Proposals which may directly or indirectly compromise achieving the conservation objectives of a designated or candidate European protected site will not be permitted unless the proposal meets the conditions specified in Article 6 (3) - (4) of the Habitats Directive.

Statutory Designated Sites

Statutory designated sites, including the South Pennine Moors Special Protection Area (SPA) and Special Area for Conservation (SAC) and Sites of Special Scientific Interest, are already highly protected through existing laws and legislation. In accordance with legislation, the Council will seek to ensure that harmful impacts to these areas as a result of development proposals are avoided. Development proposed within or outside a designated Site of Special Scientific Interest, likely to have an adverse effect on the site's special nature conservation features, will not normally be permitted. Exceptionally development will be allowed where the benefits of the development clearly outweigh the impacts on the site's special conservation features and measures are provided to mitigate harmful impacts.

The Dark Peak Nature Improvement Area

Proposals that contribute to the aims and objectives of the Dark Peak Nature Improvement Area will in principle be supported, subject to other policies in this plan. Development likely to have an adverse impact on the aims and objectives of the NIA will not be permitted.

Local Designated Sites & Important Local Ecological Features

Proposals having a direct or indirect adverse effect on a Local Wildlife Site or Local Geological Site, Ancient Woodland, Veteran Tree or other important tree, will not be permitted unless the benefits of the development can be clearly shown to outweigh the need to safeguard the local conservation value of the site or feature and there is no alternative means to deliver the proposal. In all cases, full compensatory measures would be required and secured in the long term.

Habitats and Species of Principal Importance

Proposals will be required to protect Habitats and Species of Principal Importance unless the benefits of the development clearly outweigh the importance of the biodiversity interest, in which case long term compensatory measures will need to be secured.

Biodiversity and Development

Development proposals will be required to:

- (i) result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;
- (ii) minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;
- (iii) safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;
- (iv) establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and
- (iv) incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.

Appendix 2: Worked example of a development proposal utilising the Biodiversity Metric 2.0 to demonstrate achievement of a measurable biodiversity net gain on a site.

Please note that this example has been simplified and is purely for demonstrative purposes to give clarity on how the metric may be applied. Each application will need the input of a qualified ecologist and will be determined on a case by case basis based on the individual merits and constraints particular to the site

An application for a residential development is proposed on an 8ha area of land which currently consists of:

- 1ha of broadleaved woodland (a habitat of principal importance),
- 4ha of agricultural cropland,
- 3ha of modified grassland,
- a species poor hedgerow 0.6km in length dividing the two fields.

When these are inputted into the Biodiversity Metric 2.0 (as shown in Figure 1 below) the site has a total site baseline of 18.40 Habitat Units plus 1.20 Hedgerow Units.

Figure 1: Extract of Habitat Baselines from the Biodiversity Metric 2.0

Ref	Habitats and areas			Suggested action to address habitat losses	Ecological baseline
	Broad Habitat	Habitat type	Area (hectares)		Total habitat units
1	Woodland and forest	Woodland and forest - Other woodland; broadleaved	1	Same broad habitat or a higher distinctiveness habitat required	4.40
2	Cropland	Cropland - Cereal crops	4	Same distinctiveness or better habitat required	8.00
3	Grassland	Grassland - Modified grassland	3	Same distinctiveness or better habitat required	6.00
4					
5					
6					
7					
8					
Total site area ha			8.00	Total Site baseline	18.40

Following application of the mitigation hierarchy, the woodland and majority of the hedgerow are to be retained post-development, with a section of hedgerow requiring removal to facilitate access into the site. Therefore, post-development the site will be composed of 4.4ha of developed land and residential gardens, 2.6 ha of amenity grassland included for open space, 1ha of retained woodland and 0.4km of retained hedgerow. The overall habitat units delivered post-development are 14.05 plus 0.8 Hedgerow Units (as shown in Figure 2 and 3). This results in a negative net change of biodiversity of -23.64% habitat units and -35.48% in hedgerow units (as shown by the headline results in Figure 3).

Figure 2. The proposed new habitats to be created on-site post development

Proposed habitat	Area (hectares)	Habitat units delivered
Urban - Vegetated garden	2.4	4.63
Urban - Amenity grassland	2.6	5.02
Urban - Developed land; sealed surface	2	0.00
Totals	7.00	9.65

Figure 3. Headline results of the development as calculated with the metric

On-site baseline	<i>Habitat units</i>	18.40
	<i>Hedgerow units</i>	1.24
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	14.05
	<i>Hedgerow units</i>	0.80
	<i>River units</i>	0.00
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	<i>Habitat units</i>	-4.35
	<i>Hedgerow units</i>	-0.44
	<i>River units</i>	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	<i>Habitat units</i>	-23.64%
	<i>Hedgerow units</i>	-35.48%
	<i>River units</i>	0.00%

As the development is required to achieve a minimum of 10% gain in biodiversity to accord with national and local policy, the plans are revised. The revisions include a new pond which also functions as a sustainable drainage system (SuDS), areas of wildflower meadow to complement the open space, a new length of species rich hedgehog at the boundary of the site and 25 street trees. Following the revision of the design layout, the site provides a total of 20.89 Habitat Units and 1.70 Hedgerow Units. This totals a percentage biodiversity net gain of 13.54% in Habitat Units and 36.86% in Hedgerow units (as shown below in Figure 4). The development is now in accordance with national and local policy in terms of providing a net gain, provided the new features are managed appropriately for a minimum of 30 years.

Figure 4: Headline results of the development as calculated with the metric following revision of the site layout

On-site baseline	<i>Habitat units</i>	18.40
	<i>Hedgerow units</i>	1.24
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	20.89
	<i>Hedgerow units</i>	1.70
	<i>River units</i>	0.00
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	<i>Habitat units</i>	2.49
	<i>Hedgerow units</i>	0.46
	<i>River units</i>	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	<i>Habitat units</i>	13.54%
	<i>Hedgerow units</i>	36.86%
	<i>River units</i>	0.00%

