Stevenage Borough Council
The impact of development on Biodiversity SPD (March 2021)

1 Introduction

This Supplementary Planning Document (SPD) relates to policies concerning biodiversity net gain in the Stevenage Borough Local Plan and the National Planning and Policy Framework (NPPF). It applies to all categories of development for which planning permission is required and includes a framework for assessing impacts to biodiversity using a biodiversity accounting system (a metric). This guidance is intended as a transparent and auditable mechanism for assessing the impact of applications on biodiversity and meeting the requirements of NPPF to achieve measurable net gains to biodiversity through development.

This SPD outlines:

- How the Council will assess planning applications, which will have an impact on biodiversity.
- The information applicants will need to provide to enable the Council to apply the government metric to quantify and assess impacts.
- The standards expected for impact calculations and any offset delivery.

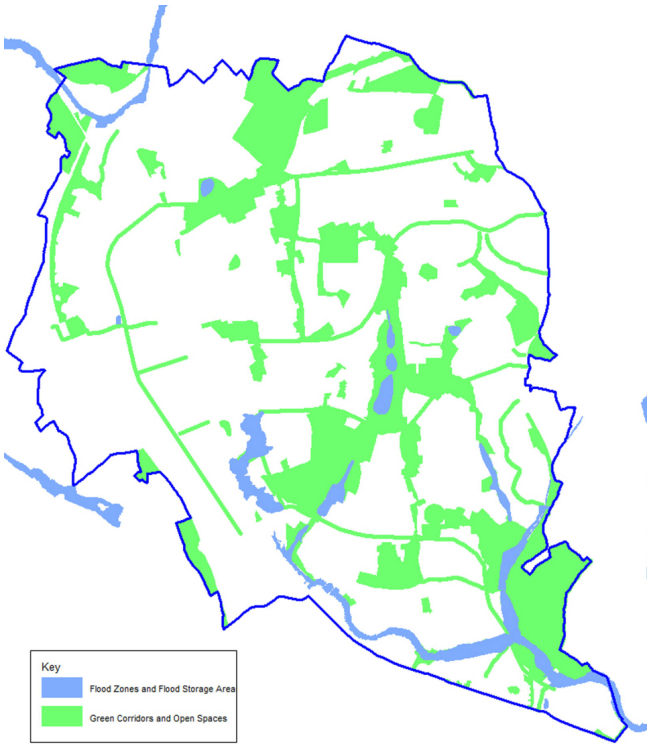
The UK government supports the use of SPD to set out detailed guidance on the way in which development plan policies will be applied in particular circumstances. The Government is also supportive of Local Planning Authorities introducing a biodiversity accounting system (using the government biodiversity metric) as a way of measuring impacts to biodiversity. SPD must be consistent with development plan policies and national planning policy guidance and may be taken into account as a material planning consideration in planning decisions.

Shephalbury Park

2 Policy Context

The policies and frameworks that support the introduction and application of a net gain compensation strategy using a biodiversity accounting system, or 'biodiversity offsetting' (the government metric) are:

Blue and Green Spaces in Stevenage



EU Biodiversity Strategy 2020;

NERC Act 2006;

Making Space for Nature 2010;

25 year Environment Plan 2018;

The Draft Environment Bill 2018;

National Planning Policy Framework 2019;

Biodiversity Net Gain. Good Practice principles for development 2019;

Planning Practice Guidance, Natural Environment, July 2019;

The Environment Bill 2019 (not yet approved)

For further details and context of these policies and guidance please see 16 'Appendix 7 - Planning policy, legislation and guidance references to measurable net gain'.

2.1 Other relevant guidance and standards

'The National Design Guide' (MHCLG 2019);

'British Standard for biodiversity in planning' (BS 42020:2013);

Guidelines for Ecological Impact Assessment in the UK and Ireland' (CIEEM 2018);

Stevenage Biodiversity Action Plan 2017 - 2022.

All these recommend this system of biodiversity accounting ('offsetting') as an appropriate mechanism for delivering biodiversity compensation.

This approach is supported within Stevenage Borough by The Herts and Middlesex Wildlife Trust, Natural England, Environment Agency and the RSPB.

2.2 Local Development Plan Policies

The Policy in the Stevenage Borough Local Plan relating to nature conservation and biodiversity is set out below.

Policy SP12: Green Infrastructure and the natural environment

The green infrastructure, natural environment and landscape of Stevenage will be protected, enhanced and managed, and we will positively acknowledge its influence on Knebworth Woods SSSI and Lea Valley SPA. We will:

a. Create, protect and enhance key areas of open space and biodiversity value including:

i. parks, recreation grounds, amenity spaces and woodlands which are integral to the open space structure of Stevenage as Principal Open Spaces. This will include Fairlands Valley Park;

ii. locally important wildlife sites; and

iii. a series of ten green links around the town. These will be collections of spaces that are worthy of protection for their connectivity and their recreation, amenity or wildlife value.

b. Preserve, create, protect and enhance locally important linear features including:

i. the historic lanes and hedgerows which pre-date the New Town; and

ii. structural green spaces along major routes within the town.

c. Create and protect multi-functional green space and sports facilities as an integral part of new developments in accordance with the latest standards and permit the creation of other new open spaces where they will meet an identified deficit;

d. Mitigate or, as a last resort, compensate for the loss of green infrastructure or assets of biodiversity importance resulting from development; and

e. Only grant planning permission if an adequate assessment of priority habitats and species has been undertaken. Any identified impact on these habitats and/or species will need to be avoided, mitigated or compensated.

- *5.146. Identifying and conserving a network of green spaces is a vital part of the planning process. Government guidance recognises the importance of providing access to high quality open spaces. It recognises that the planning system should contribute to and enhance the natural and local environment. We should plan positively for the creation, protection, enhancement and management of networks of biodiversity.*

- *5.152. New developments will be required to make reasonable provision of open space to cater for the additional demand they will create. The balance between on-site and off-site provision and contributions will be assessed on a site-by-site basis and will be commensurate with the size of the proposed development. Opportunities for biodiversity offsetting should be considered in determining the most appropriate green infrastructure strategy.*

Ridlins Wood

Figure 1 Ancient Lanes and Hedgerows in Stevenage

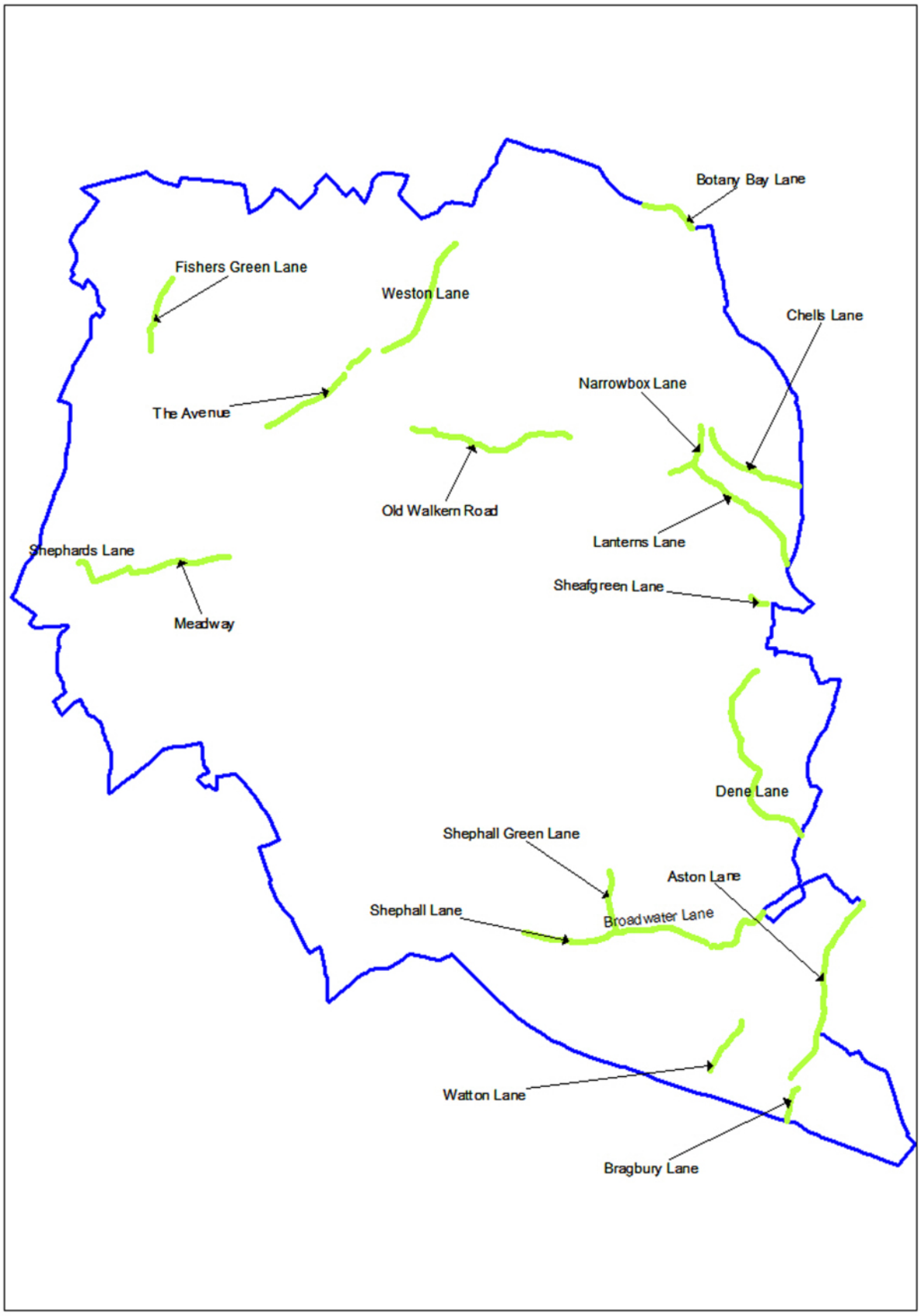


Figure 2 Wildlife Sites in Stevenage

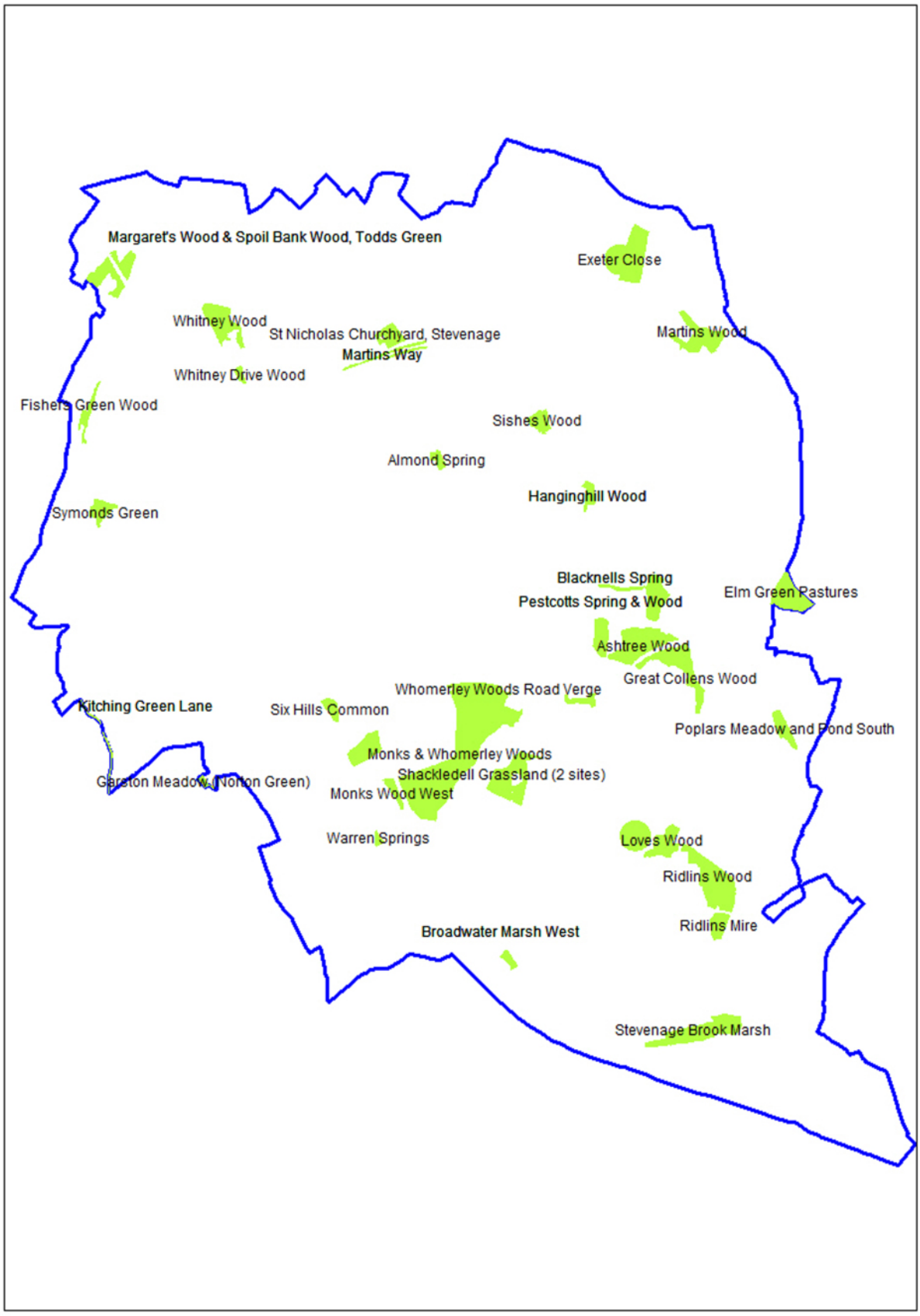
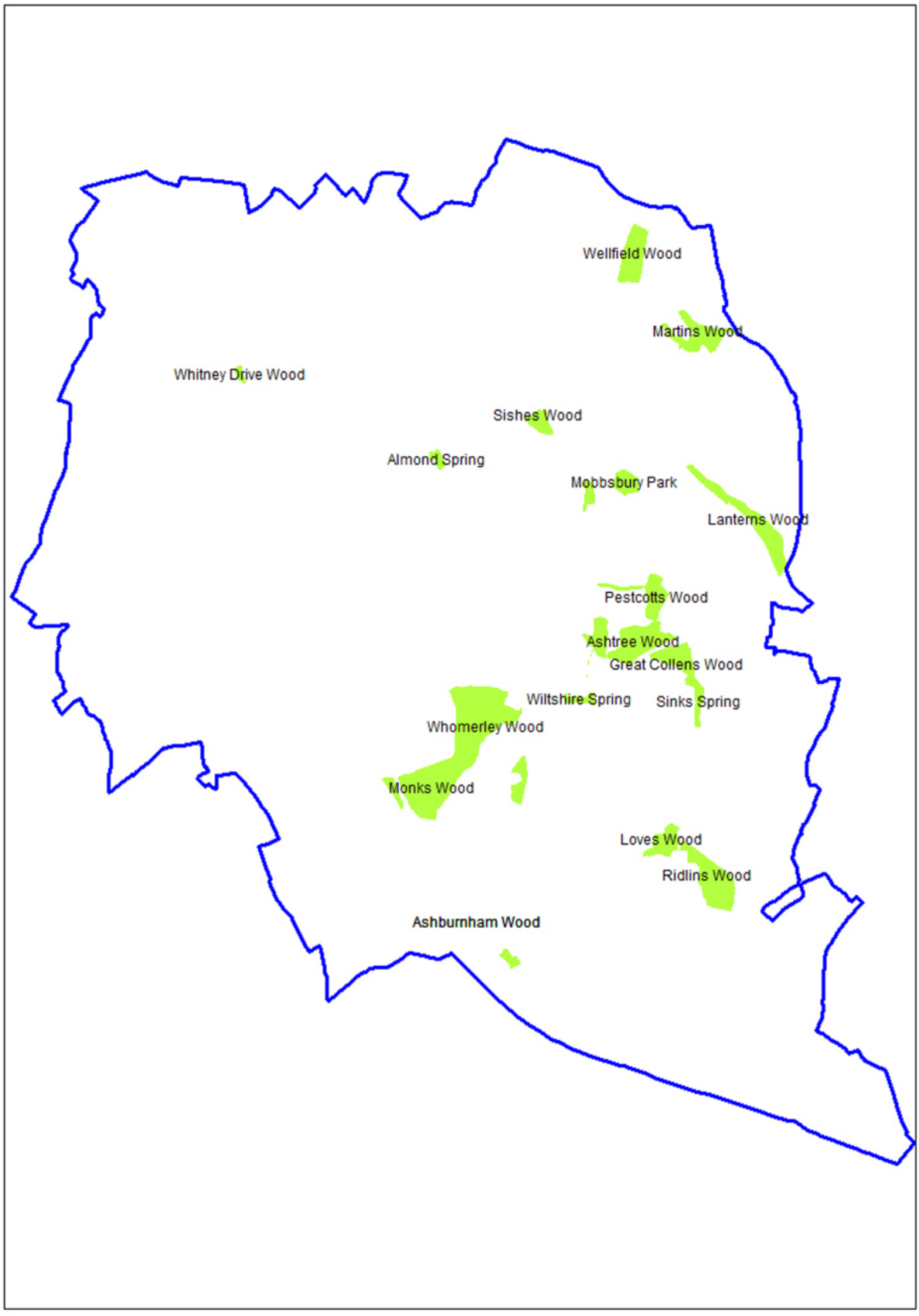


Figure 3 Woodlands in Stevenage



2.3 National Planning Policies

Policies in the National Planning and Policy Framework relating to net gain are:

8. Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

c) an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity

170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

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

174. To protect and enhance biodiversity and geodiversity, plans should:

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

175. When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

3 Climate Change and the benefits of biodiversity

3.0.1 The Councils Climate Strategy identifies biodiversity and its role in reducing carbon measures and ensure that we have a holistic approach to the wider sustainability impacts we as humans are having on our local ecology. Using natures way of addressing the human impact of climate change is the most effective method of taking action.

3.0.2 It is now widely recognised that climate change and biodiversity are interconnected. Biodiversity is affected by climate change, with negative consequences for human well-being, but biodiversity, through the ecosystem services it supports, also makes an important contribution to both climate-change mitigation and adaptation. Consequently, conserving and sustainably managing biodiversity is critical to addressing climate change.

3.0.3 Conserving natural terrestrial, freshwater and marine ecosystems and restoring degraded ecosystems (including their genetic and species diversity) is essential. Ecosystems play a key role in the global carbon cycle and in adapting to climate change, while also providing a wide range of ecosystem services that are essential for human well-being.

3.0.4 Biodiversity can support efforts to reduce the negative effects of climate change. Conserved or restored habitats can remove carbon dioxide from the atmosphere, thus helping to address climate change by storing carbon.

3.0.5 Stevenage Borough Council is extremely proud to have a longstanding commitment to preserving and enhancing biodiversity in the borough. The vision has always been to increase Stevenage's biodiversity by conserving, restoring, recreating and reconnecting wildlife habitats; to increase awareness and appreciation of Stevenage's wildlife; to encourage participation in conserving its biodiversity; and to ensure that nature is close to everyone's doorstep. The Council has worked closely with the Herts and Middlesex Wildlife trust for many years and continues to work in partnership with this organisation to improve our green spaces. As The Council looks to tackle the issues presented by the changing climate, there is an opportunity to continue to prioritise the towns natural environment, while being mindful of what species and ecosystems already exist, when considering projects such as tree planting.

3.0.6 A link to The Councils Biodiversity Action Plan 2017-2020 details actions being taken for wetlands, grasslands, woodlands, and ancient hedgerows. The woodland action plan, stressing the importance of the boroughs woodlands as a carbon dioxide store. The Council reaffirms its commitment to biodiversity in the town and will strive to protect and enhance woodlands.

4 Assessing impacts - biodiversity accounting

As required by the NPPF and accompanying Planning Practice Guidance, the Council must achieve measurable net gains in biodiversity at development sites and across the Borough. The relative weight given to biodiversity factors will depend on the particular circumstances of the site and proposal, but can be more easily assessed if impacts (losses) to biodiversity, along with any gains (via mitigation and enhancement) are quantified.

To do this, the DEFRA biodiversity metric 2.0 must be applied by to all minor and major planning applications when requested to do so (described further below).

The DEFRA biodiversity metric 2.0 (or as subsequently amended) allows efficient and standardised calculation of impacts. To enable a standardised approach in assessment, other calculators or tools will not be accepted.

To achieve a biodiversity net gain a development must deliver a minimum of 10% net gain post development, when compared with the pre-development baseline.

4.1 What triggers the use of the biodiversity metric?

Delivering biodiversity net gain will be mandated for proposed developments within the scope of the Town and Country Planning Act 1990. This includes buildings and structures for any use, including:

- commercial;
- industrial;
- institutional;
- leisure; and
- housing or other accommodation, where permission from local planning authorities is required.

This guidance document applies to all major and minor applications other than the following exemptions currently suggested by The Government:

- Permitted development;
- Householder development, including extensions;
- Nationally significant infrastructure, which falls within scope of the Planning Act 2008;
- Some brownfield sites with marginal viability and substantial constraints. It is expected that full details to be set out in secondary legislation, but considerations are likely to include where sites contain a high proportion of derelict land and buildings and only a small percentage of the site is undeveloped, land values are significantly lower than average, and the site does not contain any protected habitats; and
- Developments that would not result in measurable loss or degradation of habitat, for instance change of use of or alterations to building

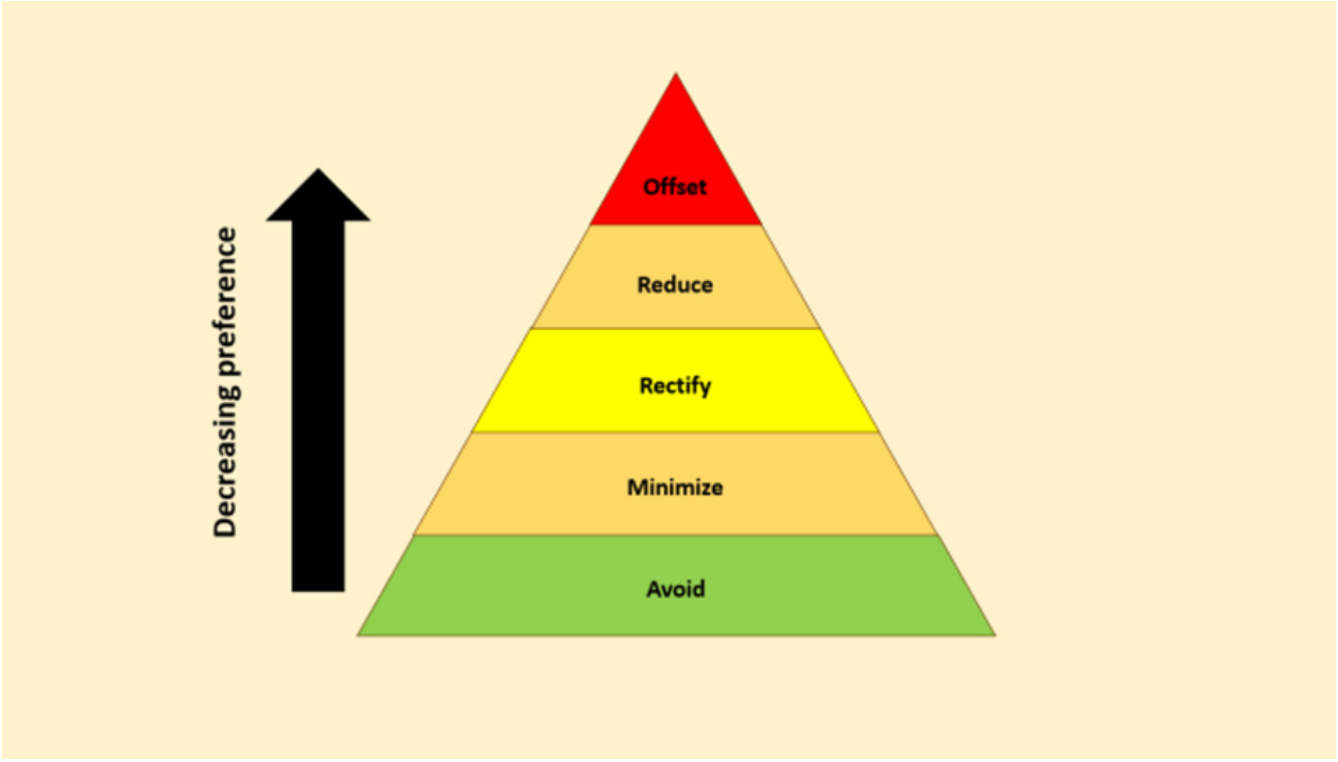
Stevenage Borough Council will follow these exemptions, until such time as exemptions are set out in primary or secondary legislation, at which point those exemptions will be followed.

The delivery of biodiversity net gain involves the use of the biodiversity metric, which is used to calculate the 'habitat units' of biodiversity gained or lost as a result of development on a site. **SBC or their ecological advisors should be contacted to assess whether a biodiversity metric assessment is required on a development proposal. It is recommended that this advice is sought at the pre-application stage.**

4.2 The mitigation hierarchy

Planning applicants must demonstrate the following mitigation hierarchy has been followed;

- impacts to biodiversity have been avoided, then,
- minimised, before,
- any compensation is considered; first onsite and then offsite.



National and local planning policy contains strong direction that development should not be permitted on statutory and non-statutorily designated sites for biodiversity (e.g. SSSI, LWS), unless there are exceptional circumstances present. Similarly, impacts on species and habitats of principle importance for nature conservation are strictly discouraged. Impacts on habitats falling within these categories should always be avoided if possible. If impacts cannot be avoided or mitigated then they must be compensated in a measurable way to achieve net gain.

Biodiversity is not limited to designated sites or priority habitats. In fact most of our biodiversity occurs on non-priority habitat. NPPF requires that planning delivers a measurable net gain to all biodiversity. In order to achieve this, a standard method of measuring impacts on all habitats (not just priority habitat) must be applied to planning decisions.

The metric is not designed to measure impacts on species. Separate species surveys will be required where appropriate. The results of these surveys will have a material influence on habitat provision because the habitat requirements of the species revealed must be reflected in the mitigation or compensation proposals.

The metric described below will be used by the Council in consideration of adherence to the mitigation hierarchy, and to inform compensation on all habitats.

4.3 The biodiversity metric

The biodiversity metric was designed by Natural England and introduced by Defra in 2012 as the main component in Government pilot schemes set up to test 'biodiversity offsetting' delivery systems. Following the review of the pilots the metric was reviewed and version 2 was released in 2019, to support the aims of the Governments 25 year environment plan for measurable net gain.

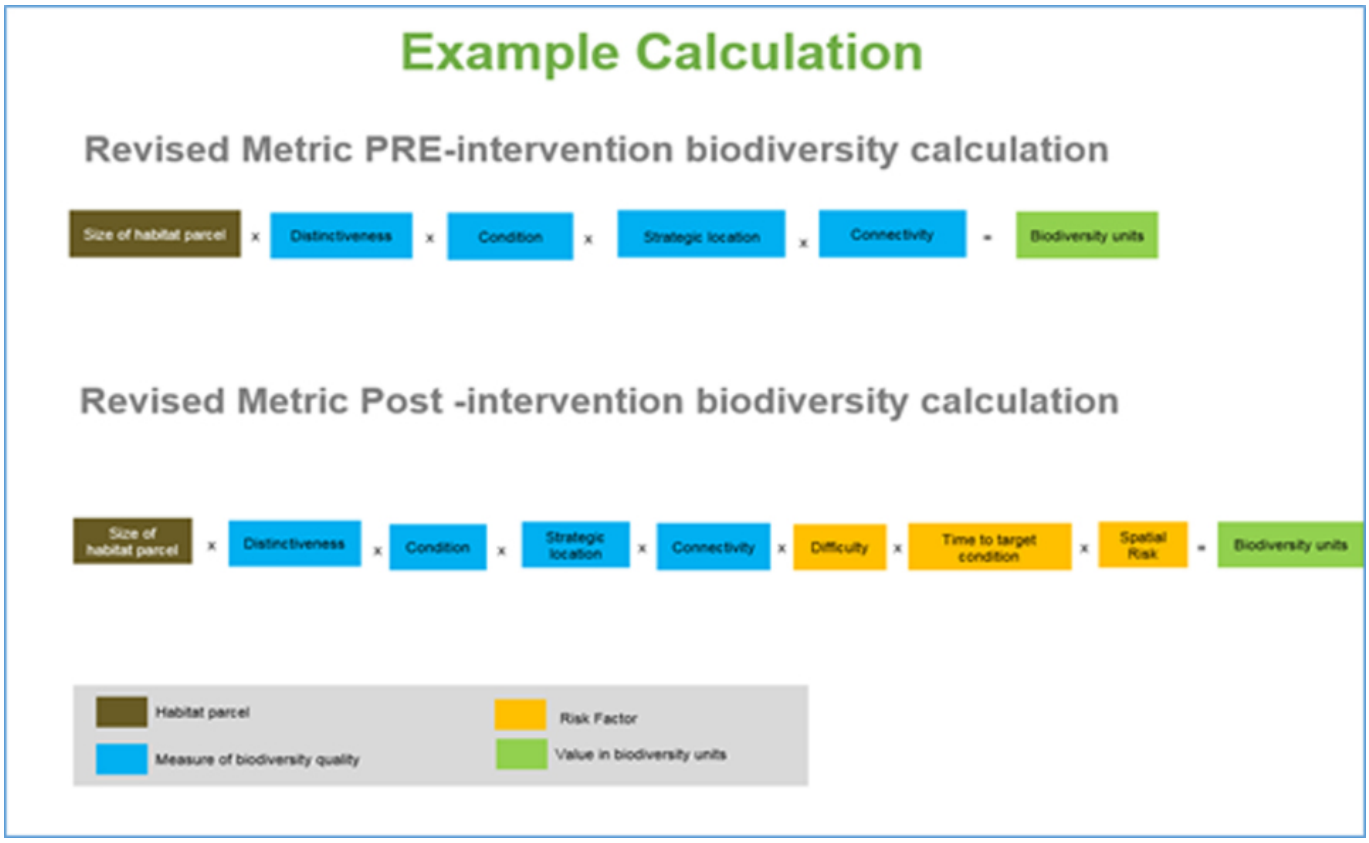
The metric does *not* assume compensatory sites will be required and can, in fact, demonstrate on-site biodiversity gain has been achieved. If an offset is required, the same metric is used to evaluate the predicted gains at compensation sites so that measurable net gain, of biodiversity is achieved.

All habitats are important, but some e.g. ancient woodland, limestone pavement, are irreplaceable and their loss cannot ever be fully compensated for. The metric evaluates impacts for a wide range of habitats, but it does not override existing law or policy that protects nationally important sites and species. In essence, the higher the biodiversity value of a habitat the higher the metric score. Therefore, compensation for impacts to unprotected, but ecologically high value habitats, will be greater compared to arable farmland, for example.

The metric calculates the scale of a habitat impact or enhancement by multiplying the area (hectares), distinctiveness (habitat type) and condition (quality) of each habitat parcel (Fig.1).

When losses are assessed – where impacts to habitats will occur - the calculation provides a negative score as habitat is being lost to development. This provides an evidence base for discussions regarding on-site mitigation and off-site compensation requirements, as per the mitigation hierarchy.

Figure 4 Example of pre-intervention and post-intervention elements included in calculating habitat units



When gains are assessed – where habitats are enhanced or created on-site, or off-site – a similar calculation is made but risk factors that account for difficulty and temporal delays are also applied (Fig. 1). The score will be positive where gains are being delivered. Habitats that are more difficult to restore or that will take a long time to reach a set target condition will score lower, these generate fewer credits and therefore a larger area is required to deliver sufficient mitigation or compensation.

The baseline habitat unit score should be used to inform development layouts, to maximise ecological gains on-site.

4.4 Residual loss

When on-site gains do not outweigh on-site losses by 10% and a net biodiversity loss is calculated, this negative biodiversity loss will become an offset requirement, if approved by the Council.

There is a 'no down-trading' policy within the metric, whereby habitat loss must be compensated for with habitat of the same value or higher - loss of high distinctiveness habitats such as lowland meadow and broad-leaved woodland must be compensated for like-for-like.

In addition to the difficulty and temporal factors applied to any gain calculations (on and off-site), a spatial factor is also applied to account for the location of a compensation receptor site in the local landscape.

This is accounted in the metric as:

- Compensation inside LPA/NCA, or deemed to be sufficiently local to site or biodiversity loss.

- Compensation outside of LPA/NCA of impact site but within neighbouring LPA/NCA.
- Compensation outside of LPA/NCA and beyond neighbouring LPA/NCA.

Strategic significance is also applied to account for the local areas strategic delivery plans and ambitions. In this context if a site is not within an area identified in the Herts Ecological Networks Map as a site with a high priority for habitat restoration or creation (categories 2 and 3a), the credit value of the site is reduced and, again, a larger area will be required to deliver the appropriate compensation (in conservation credits).

Strategic factors, dependant on development location (e.g. contribution to landscape connectivity) are as follows:

- Within area formally identified in local strategy. **Strategic: x 1 – category 1,2, 3a**
- Location ecologically desirable but not in local strategy. **Semi-strategic: 1.1 – category 3b**
- Area/compensation not in local strategy/ no local strategy. **Non-strategic: 1.15 – category 3c**

Offset compensation schemes within a strategic area are preferred. Non-strategic schemes are permitted but the conservation credits generated by sites must be reduced by a factor of up to 1.15. For rivers and streams, strategic plans include the river basin management plan and actions identified with local catchment plans.

4.5 Thresholds

Whilst there is no minimum size of development or impact for which this system applies, applicants should contact the Council to confirm if the following information is required if they are unsure. Householder applications or applications on sites devoid of biodiversity interest, such as areas of hardstanding, are unlikely to require a biodiversity metric assessment. Applications which do not require an Environmental Statement may still require the information below, unless the Council has advised otherwise.

5 Information required

So that impacts on biodiversity interests can be properly assessed using the biodiversity metric, applicants are required to submit the following information to the Council:

5.1 Purpose of ecological report

The purpose of the ecological report is to demonstrate compliance with national planning policy, local planning policy and legislation regarding planning and biodiversity. It should not be an ecological inventory followed by a series of recommendations. It must clearly and definitively show; what is there, how it will be affected by the development, how the development is compatible with policy, how any negative impacts will be avoided, mitigated or compensated so that a measurable net gain to biodiversity can be demonstrated.

N.B. Only definitively stated mitigation, compensation and enhancement measures to achieve net gain are acceptable – in accordance with BS 42020. Only statements that detail what 'will' be provided will be allowed.

5.2 Habitats and Species

Identification of all habitat types present at the site, including non-priority habitats, such as agricultural land, together with species of local distinctiveness will be required. A short description of the habitat will be necessary for the Council to confirm the habitat type (for example; to distinguish between modified grassland and other neutral grassland).

Detail regarding any statutory or non-statutory nature conservation designations. Descriptions of the habitat must be consistent with the guidance provided to accompany the biodiversity metric (as amended). The location and size of each habitat parcel (pre and post development) must be clearly marked on maps. GIS layers are preferable if available

5.3 Area

Survey material showing the location and area (in hectares) covered by each habitat type. If possible this should be provided as a GIS layer to enable verification.

5.4 Condition

A description of the condition of each habitat type. If different 'patches' of one habitat type exist between which the condition of the habitat varies significantly, then these should be identified (for example; lowland meadow A – 1.2 ha - moderate condition; other neutral grassland B – 4ha - poor condition).

Condition should be assessed using the condition assessment criteria as outlined in the Natural England Biodiversity Metric Technical Supplement JP029. **Each condition assessment should be accompanied by a brief description, or reasoning, to support the assessment made.** If a habitat condition assessment is not found in the Technical Supplement, another method of assessing condition should be employed, with supporting reasoning included. Discussion with the ecological advisors of the council is advised to determine difficult or contentious condition assessments.

High quality quadrat photographs to justify habitat condition assessments are encouraged.

6 Losses vs. gains

How each of the habitats (and habitat patches) described above will be affected by the proposal must be identified – i.e. will they be lost, retained, or enhanced in some way. Any on-site mitigation or enhancements (gains) proposed must be accompanied by further information regarding the target habitat type and condition to be achieved through management, the time period within which this target will be achieved, and a supporting outline (or full) management plan. The Council will not consider any gains (credits) to balance losses calculated without this information.

Any offset proposals where biodiversity gains are proposed will be dealt with in the same way as the point above.

The above information may also be required for indirect impacts to habitats adjacent to the site.

Results from the assessments above should be summarised in a table, with an accompanying map with each habitat parcel clearly marked on it (pre and post development) and referenced to the excel spreadsheet generated by the biodiversity metric.

Early pre-application discussions with Stevenage Borough Council ecological advisors are recommended to clarify the information required above. All surveys will be expected to be accompanied by an ecological records search from the Herts Environmental Records Centre

Ecological assessments should be carried out by qualified, suitable experienced environmental consultants using recognised methodology and at an appropriate time of year. All surveys must be compliant with BS 42020: 2013. Biodiversity Code of Practice for Planning and Development.

Any deviation from these standards must be justified and agreed with the LPA before it can be admitted. All avoidance, mitigation, compensation or enhancement measures must be definitively stated. Reports must only refer to what will be delivered. 'Recommendations' or proposals which 'could', or 'may' be undertaken are not acceptible.

7 Standards for offsets

In addition to the standards set above for assessing impacts using the Biodiversity Metric, if compensation is required, any offset schemes will be required to adhere to the following set of standards.

7.1 Site selection

For each offset receptor site put forward by an applicant, Stevenage Borough Council will approve the site selection by considering the following:

Required

- Minimum ecological unit credit gain of 10% is achieved. This applies to both terrestrial and linear units. Linear and terrestrial units cannot be summed together to achieve Net Gain.
- Any like-for-like requirements for high distinctiveness habitat loss have been met
- That additionality can be demonstrated (where biodiversity gain and proposed management at a site is additional to that which is already in place with secure funding under, for example, an agri-environment scheme).

Potential considerations

- Target habitats are appropriate (if a like-for-like requirement is needed or to meet local targets)
- Sites within categories 1 to 3a will be selected in preference to lower value categories as identified by the Herts Ecological Networks Map.
- Site is within the Stevenage Borough boundary.
- Site is within 10km distance of the development

7.2 Delivery

In approving an offset Stevenage Borough Council will also need to be satisfied that delivery will be assured, such that the following are appropriate:

- Management period, i.e. 30 years;
- Site survey information, biodiversity gain (credit) calculations and management plan have been approved;
- Sufficient funds have been allocated to deliver management long-term, anticipating costs such as legal, administration, monitoring, reporting, foreseeable risks, insurance and inflation;
- A delivery mechanism is available – e.g. enforceable legal agreements to ensure management is undertaken and required condition is achieved in accordance with the management plan;
- Annual monitoring and reporting arrangements have been made, to ensure management is being delivered as per the legal agreements.
- **Biodiversity net gains should be secured for the lifetime of the impacts of the development.** Therefore, the priority for offsets will be on land owned by local authorities, nature conservation organisations, or land managed by nature conservation organisations.

8 Biodiversity Financial Contribution

Should a developer wish not to arrange their own biodiversity offset project(s), either on their own site or on a brokered site, then the Local Authority can offer a **financial payment option - known as a Biodiversity Financial Contribution.**

In this model, developers pay a contribution, under full cost recovery, for the LPA to organise the required biodiversity accounting scheme within a set period of time (usually 5 years), monitor their progress towards meeting the required units of biodiversity gain, take action where necessary to ensure the gains are achieved, and to formally report on their progress.

8.1 Components of a Biodiversity Financial Contribution

The Biodiversity Financial Contribution is index-linked and is *the sum total of the following three components:*

Biodiversity Accounting Payment (BAP) ~ (this is the cost of the offset)

Set-up Cost + Habitat Creation Cost + (Management Cost)[1] = BAP

Contingency Payment (CP) ~ at 10% of the Biodiversity Accounting Payment (Insurance Fund)

Biodiversity Accounting Payment X 0.1 = CP

Index linked Management Payment (MP) ~ at 20% of the Biodiversity Accounting Payment (Management and Monitoring Fund)

Biodiversity Accounting Payment30 X 0.2 = MP

So, overall,

BAP + CP + MP = Biodiversity Financial Contribution

A financial calculator that shows the average unit cost for a Biodiversity Financial Contribution is included in 12 'Appendix 3', together with a table outlining the average areas of amenity grassland needed to deliver 1 habitat unit of uplift.

8.2 Payable to

This Biodiversity **Financial Contribution** will be made payable to Stevenage Borough Council in accordance with the planning condition or legal agreement. On receipt of the agreed sum, monies will be distributed into three funds, based on full cost recovery principles. These funds will be spent as set out below.

Biodiversity Accounting Fund

1 Cumulative indexation for a 30-year management period

SBC will use this fund to arrange one or more providers to compensate for the loss associated with the development. This could be arranged through a broker, or a separate legal agreement arranged by a lead Local Authority. These arrangements will be detailed within a legal agreement, in accordance with an approved Biodiversity Accounting Management and Monitoring Plan.

Contingency Fund

This fund will be formed from the pooling of the individual contingency payments and will be used to secure additional biodiversity enhancements or other ecological projects that enhance biodiversity. These enhancements will compensate for Biodiversity Accounting Schemes that do not fulfil their ecological objectives.

Management and Monitoring Fund

This fund will cover the costs of the Herts Environmental Records Centre associated with collecting data, managing databases, strategic mapping, to be used to determine where best to locate offsets based on supply of units and meeting agreed biodiversity priorities, for sample on-site monitoring and formal reporting of scheme progress. It will also cover distribution of all three funds where necessary.

9 Assessing and achieving measurable biodiversity gain on a development site

Stage 1: Check with LPA if a biodiversity metric assessment is required

Stage 2: If required, engage an ecological consultant to undertake a biodiversity metric calculation on the site to give a baseline ecological unit score.

Stage 3: Identify all priority habitats and species to be avoided and buffered in accordance with local plan policy. Undertake species surveys, informed by environmental records search.

Stage 4: Design development within the parameters of existing habitats of value, minimum ecological unit requirement to achieve net gain, and species impact mitigation requirements. Use landscaping to maximise net gain potential, e.g. native trees, wildflower verges, SUDs. Ensure all habitats have appropriate management regimes, funding and monitoring specified. All avoidance, mitigation or compensation measures must be definitively stated and marked on maps.

Stage 5: Ensure enhancement features for wildlife as required by local plan are specified and marked on plans, e.g. integrated bird and bat boxes, hedgehog highways.

Stage 6: If impact on priority habitat cannot be avoided or if net gain cannot be achieved onsite, seek a legitimately quantified biodiversity offset, engage a biodiversity offset broker to provide an offsetting agreement, or seek a biodiversity financial agreement with the LPA to provide an offset.

Stage 7: Submit planning application

Stage 8: Permission granted, biodiversity offset or biodiversity financial agreement secured by 106 agreement

10 Appendix 1 – Ecological Networks Map for Hertfordshire

Link to Hertfordshire Ecological Networks Map

11 Appendix 2 – Sample condition wording for outline and full planning decisions:

Definitions:

“Biodiversity Impact Assessment"	means the use of the most current Defra Biodiversity Metric to calculate the biodiversity impact of the scheme measured in Biodiversity Units.
“Biodiversity Loss”	means a negative Biodiversity Unit score.
“Defra Biodiversity Offsetting Metric”	means the Defra mechanism to quantify impacts on biodiversity that allows biodiversity losses and gains affecting different habitats to be compared and ensure offsets were sufficient to compensate for residual losses of biodiversity
“Financial Contribution Calculator”	means the mechanism used to calculate the fixed sum contribution.
"Biodiversity Offsetting Scheme”	means a scheme which will deliver biodiversity enhancements which shall not be less than the Biodiversity Impact Assessment score
“Biodiversity Unit”	means the product of the size of an area, and the distinctiveness and condition of the habitat it comprises to provide a measure of ecological value
"Reserved Matters"	means the details to be approved by the Council in relation to the means of access to the building(s) and the site, the appearance of the building(s), the landscaping of the site, the layout of the site and its relationship with adjoining development, and the scale of building(s)

The Owner covenants:

Commencement of Development which for the purposes of this schedule shall include operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the erection of a site office, the creation of a site compound, the creation of temporary means of access shall not take place until the Reserved Matters have been approved by the Council.

The approved Reserved Matters shall not result in a Biodiversity Impact Assessment score less than **– XX Biodiversity Units** or such other number as may be agreed with the Council.

Commencement of Development, which for the purpose of this schedule shall include operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the erection of a site office, the creation of a site compound, the creation of temporary means of access, shall not take place unless approved by the Council until a Biodiversity Offsetting Scheme has been submitted to and approved in writing by the Council (“the Approved Scheme”). The Approved Scheme shall be approved with the purpose of ensuring that the Development shall result in a biodiversity net gain of 10% in accordance with the National Planning Policy Framework.

The Approved Scheme shall either include:

- the identity an appropriate receptor site or sites;

- a management plan for the provision and maintenance of such offsetting measures for not less than 30 years from the date of implementation of the Scheme;
- the provision of contractual terms to secure the delivery of the offsetting measures; or
- provide for a fixed sum contribution to be paid to Stevenage Borough Council based on using the Financial Contribution Calculator. The Biodiversity Contribution shall not exceed £xxx exclusive of indexation calculated in accordance with the Relevant Index. The Council shall use the biodiversity contribution to enhance and secure long term management of biodiversity within the vicinity of the Application Site.

11.0.1 If the above applies to implement the Approved Scheme, no changes shall be carried out to the Approved Scheme without the written consent of the Council.

11.1 Full application provisions

Biodiversity Offsetting

“Biodiversity Impact Assessment"	means the use of the most current Defra Biodiversity Metric to calculate the biodiversity impact of the scheme measured in Biodiversity Units.
“Biodiversity Loss”	means a negative Biodiversity Unit score.
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"Biodiversity Offsetting Scheme”	means a scheme which will deliver biodiversity enhancements which shall not be less than the Biodiversity Impact Assessment score
“Biodiversity Unit”	means the product of the size of an area, and the distinctiveness and condition of the habitat it comprises to provide a measure of ecological value
"Reserved Matters"	means the details to be approved by the Council in relation to the means of access to the building(s) and the site, the appearance of the building(s), the landscaping of the site, the layout of the site and its relationship with adjoining development, and the scale of building(s)

The Owner covenants:

The Commencement of Development, which shall include operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the erection of a site office, the creation of a site compound, the creation of temporary means of access, shall not take place unless approved by the Council until a Biodiversity Offsetting Scheme appropriate to compensate for a Biodiversity Impact Assessment score of xx.xx Biodiversity Units has been submitted to and approved in writing by the Council (“the Approved Scheme”). The Approved Scheme shall be approved with the purpose of ensuring that the Development shall result in a Biodiversity Net Gain in accordance with the National Planning Policy Framework.

The Approved Scheme shall either include:

- the identity an appropriate receptor site or sites;

- a management plan for the provision and maintenance of such offsetting measures for not less than 30 years from the date of implementation of the Scheme;
- the provision of contractual terms to secure the delivery of the offsetting measures; or
- provide for a fixed sum contribution to be paid to Stevenage Borough Council based on using the Financial Contribution Calculator. The fixed sum shall not exceed £…….. The District Council shall use the contribution to enhance and secure long term management of biodiversity within the vicinity of the Application Site.

11.1.1 If the above applies to implement the Approved Scheme no changes shall be carried out to the Approved Scheme without the written consent of the Council.

11.2 S106 payment for Broker secured scheme

Biodiversity Offsetting

“Biodiversity Impact Assessment"	means the use of the most current Defra Biodiversity Metric to calculate the biodiversity impact of the scheme measured in Biodiversity Units.
“Biodiversity Loss”	means a negative Biodiversity Unit score.
"Biodiversity Offsetting Scheme”	means a scheme which will deliver biodiversity enhancements which shall not be less than the Biodiversity Impact Assessment score.
“Biodiversity Units”	means the product of the size of an area, and the distinctiveness and condition of the habitat it comprises to provide a measure of ecological value. *Note: Based on / extracted from Defra's guidance documents*
“Defra Biodiversity Offsetting Metric”	the Defra mechanism to quantify impacts on biodiversity that allows biodiversity losses and gains affecting different habitats to be compared and ensure offsets were sufficient to compensate for residual losses of biodiversity. *Note: Based on / extracted from Defra's guidance documents*

The Owner covenants:

Within 1 month of signed permission and prior to the Commencement of Development, which shall include operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the erection of a site office, the creation of a site compound, the creation of temporary means of access, or as agreed by the Council a fixed sum of £xxxx excluding VAT shall be paid to [Name of selected Biodiversity Offset Broker] to enact the approved Biodiversity Offsetting Scheme for [Offset Broker] site xxxxx that has been previously approved by the Council and will appropriately compensate for a Biodiversity Impact Assessment score of xxxxx Biodiversity Units ensuring that the Development shall result in a Biodiversity net gain in accordance with the National Planning Policy Framework, in the form of the Conservation Offset Purchase Agreement annexed hereto.

12 Appendix 3

Stevenage Borough Council are offering applicants the option to make a financial payment instead of securing an offset provider through either a broker or other means. The Biodiversity Offsetting Payment will be based on the following precautionary principles.

Should a developer wish not to arrange their own biodiversity offset project(s), either on their own site or on a brokered site, then the Local Authority, on the advice of their ecological advisors, operate an alternative option - a **financial payment option - known as a Biodiversity Financial Contribution.**

This is where developers pay a contribution, under full cost recovery, for the ecological advisors of the LPA to organise the required biodiversity accounting schemes, monitor their progress towards meeting the required units of biodiversity gain, take action where necessary to ensure the gains are achieved, and to formally report on their progress.

The Biodiversity Financial Contribution is index-linked and is *the sum total of the following three components:*

Biodiversity Accounting Payment (BAP) ~ (this is the cost of the offset)

Set-up Cost + Habitat Creation Cost + (Management Cost)[(2)] = BAP

Contingency Payment (CP) ~ at 10% of the Biodiversity Accounting Payment (Insurance Fund)

Biodiversity Accounting Payment X 0.1 = CP

Index linked Management Payment (MP) ~ at 20% of the Biodiversity Accounting Payment (Management and Monitoring Fund)

Biodiversity Accounting Payment30 X 0.2 = MP

So, overall,

BAP + CP + MP = Biodiversity Financial Contribution

This **Biodiversity Financial Contribution** will be made payable to the LPA in accordance with the planning condition or legal agreement. On receipt of the agreed sum, monies will be held by the LPA, which will distribute them into three funds, based on full cost recovery principles. These funds will be spent as set out below.

Biodiversity Accounting Fund

SBC will use this fund to arrange one or more providers to compensate for the loss associated with the development. This could be arranged through a broker, or a separate legal agreement arranged by a lead Local Authority. These arrangements will be detailed within a legal agreement, in accordance with an approved Biodiversity Accounting Management and Monitoring Plan.

Contingency Fund

2 Cumulative indexation for a 30-year management period

This fund will be formed from the pooling of the individual contingency payments and will be used to secure additional biodiversity enhancements or other ecological projects that enhance biodiversity. These enhancements will compensate for Biodiversity Accounting Schemes that do not fulfil their ecological objectives.

Management and Monitoring Fund

This fund will cover the costs of the Herts Environmental Records Centre associated with collecting data, managing databases, strategic mapping, to be used to determine where best to locate offsets based on supply of units and meeting agreed biodiversity priorities, for sample on-site monitoring and formal reporting of scheme progress. It will also cover distribution of all three funds where necessary.

The average cost of creation/restoration of habitat (2020 estimate subject to annual inflationary charges) will be:

Habitat Type	Set up costs	Create (per ha)	Maintain (per ha per yr)
Grassland	£7,000	£1686	£227
Woodland	£7,000	£1584	£184
Wetland	£7,000	£1212	£70

Average Area Requirements

The table below shows the average areas required to deliver 1 habitat unit uplift on amentiy or modified grassland. These figures are based on offset achieving maximum target condition:

Habitat	Average area required to deliver 1 habitat unit on amenity grassland including residual value
Grassland - Lowland meadows	0.3 ha
Grassland - Other natural meadows	0.18 ha
Woodland and forest - Lowland mixed deciduous woodland	2.5 ha
Heathland and shrub - Mixed scrub	0.12 ha

13 Appendix 4 - Biodiversity Offsetting Management Plan Guidance

This guidance sets out what Stevenage Borough Council expects to see in a Biodiversity Offset Management Plan

Introduction

The preparation of a management plan is an essential component in the development of a biodiversity offset scheme. The plan should outline the management prescriptions that will be carried out in order to achieve the requisite habitat creation/restoration and for the long-term management (specified in the s106) of the newly created/restored habitat(s).

Evaluation of management plans

The Biodiversity Offset Management Plan needs to be approved by Stevenage Borough Council planning authority and their ecological advisors, who will need to be assured that the scheme is capable of delivering the proposed biodiversity benefits. The assessment will be based on information provided in the BOMP, so it is important that the plan provides adequate information. SBC may request further information from the offset provider, if necessary. In some cases, it may be necessary for an ecologist from the local authority to carry out an on-site visit to confirm the assessment of the initial condition of the site.

We expect that best practice will be followed in managing offset schemes, and this should be reflected in the management plans. A large amount of published advice is available on habitat management for delivering conservation outcomes.

Management plan format and content

Guidance on management plan writing, recommended format and contents is available from several sources. A standard management plan format provides factual information on the site including location, tenure, physical and biological features; an evaluation of the existing site habitats, objectives of management e.g. what is proposed including target condition and timescale to reach target condition; detailed management prescriptions, and the process for monitoring and reporting on the sites progress towards meeting its targets.

The level of detail provided in the management plan will depend on the complexity of the offset site, existing habitat(s) and proposed habitats. Many offset schemes will be small e.g. a single field and the proposed enhancements and management relatively simple (at least in theory). The amount of information provided e.g. site description, should reflect this. However, it is important that all management plans provide adequate information to enable the local planning authority to assess the proposed offset schemes ability to deliver and sustain the proposed biodiversity gains in the long-term.

13.1 The Management Plan

The management plan is likely to require the following information:

Location and description of site

Essentially a collation of information about the site, including general points such as location, tenure, site designations, environmental information, biological information, archaeological & historical information, past uses of the site. The first stage in this process is a desk study of available information. Sources of information must include the Herts Environmental Record Centre. Not all types of information will be relevant or available for all sites. Types of information will include:

Location

A map showing the location and boundaries of the receptor site should be provided together with a grid reference. Basic site statistics such as area (ha) should be provided.

Land tenure

Provide details of land ownership and occupation.

Access and public interest

Provide details and map of access to the site including any public rights of way, access required for management e.g. machinery

Site designation and notable interest

Provide details of any statutory designation (e.g. NNR, SSSI, LNR etc) and non-statutory designations (LWS, Ecosites) within or near to the site (give distances to the site).

Environmental information

This section should provide information geology & soils, hydrology, biological information, habitats & vegetation communities and cultural information. Concentrate on factors which are of importance to the habitats being created or restored e.g. grassland soils.

Geology and Soils

Include information on geology and soils which help in understanding the ecology of the site and which might influence site management. For example, information on geology and soil type will determine whether the site is suitable for grassland creation or restoration and inform decisions on target community (e.g. low available phosphorus and appropriate pH).

Geological information can be obtained from the British Geological Survey (BGS) (http://mapapps.bgs.ac.uk/geologyofbritain/home.html). Information on soils can be obtained from the UK Soil Obseratory/Natural Environment Research Council (http://www.ukso.org/) and the National Soil Resources Institute at Cranfield University (http://www.landis.org.uk/soilscapes/). These will indicate general soil types in the area but laboratory analysis are required to determine soil properties at the site. See field assessment section below for guidance on soil analysis.

Topography

The topography of a site can influence habitats and possibly management. Briefly describe the topography of the site e.g. slope, aspect, features of importance for management etc.

Hydrology

An understanding of the hydrology of sites is essential for wetlands but can also influence other habitat types e.g. grasslands, and may also affect management. Describe the hydrology of the site e.g. the type of watercourse or water body, directions of flow, water sources, water quality, evidence of inundation etc. Again, concentrate on features that influence habitats to be created or enhanced, and management.

For wetlands including ponds, water quality is the most important factor influencing the wildlife value of a pond. This generally means clean, unpolluted, water with low levels of nutrients (like nitrates and phosphates).

13.2 Biological information

Flora and fauna

It is important to know what existing flora and fauna is present within or the near site. Particular attention should be given to protected and notable species and any other species which will influence or be affected by management e.g. invasive species. Information on the site and its surroundings should be obtained from The Herts Environmental Records Centre

Habitats and vegetation communities

Provide details of the habitats and, where relevant, vegetation communities found on the site, with distribution extent of each habitat shown on a map. The level of detail will vary from site to site but in most cases the broad habitat type will be sufficient. However, if detailed information exists or there are particular habitats or habitat features of high conservation importance, either in their own right or for key species, this should be provided.

13.3 Cultural information

Land use

Information on past land use and management (if available) is valuable for understanding how the site/habitat has changed over time. The reinstatement of traditional management is often prescribed for the restoration of priority habitats. Please give details of past (especially traditional management e.g. hay meadow, coppicing etc) where known and also present/recent management, especially where this may have influenced the current condition of the site, e.g. intensive agricultural management. Also give brief details of any land use in the area immediately bordering the site if these may have an impact on the site, for example pollution, fertiliser drift or disturbance.

Archaeological, cultural or historical interest

Provide details of any features on the site which are of archaeological, cultural or historical importance. Please consult The Herts Historic Environment Advisory Service

13.4 Field Assessment

Ecological Survey

The offset site should be surveyed by a competent botanist at an appropriate time of year for the habitat(s) present at the site. Surveys should record and map Phase 1 habitat types, UK habitats or NVC communities. Habitat description categories should be supported by UK habitat descriptions. Phase 1 and NVC habitats should be converted into UK habitats descriptions. Details of grassland conversion from NVC to UK habitats is provided in table 1 below.

Table 2 Stevenage specific conversion of grassland habitats from NVC to UK habitats descriptions used in metric

Habitat type – from metric	NVC equivalent
Lowland calcareous grassland	CG2, CG3, CG6, CG7
Lowland meadow	MG5, MG4
Modified grassland	MG7
Other neutral grassland	MG1, MG6, MG9, MG10,MG11, MG12, MG13
Tall herb communities	OV22, OV23, OV24, OV25

Full details of the survey should be provided in the Management Plan. This will provide information for the local planning authority to assess the suitability of the offset proposal. It also establishes the baseline of the offset site before creation or restoration management has started and against which the success of the scheme in meeting its target(s) can be assessed.

Site Survey results

The survey results should include:

- A description of the site including habitat(s), dominant/characteristic species, notable species etc; topography, aspect, hydrology, soil (see section below)
- A habitat map should be provided based on the Phase 1 Habitat Survey Handbook (JNCC 2010);
- A full species list;
- Photographs of the site, for example, that highlight the condition of the site e.g. rank grassland, scrub encroachment etc;
- Any factors affecting condition and/or management e.g. is the site suitable for grazing, recreational pressure etc

Baseline condition assessment

The current condition of the different habitats covered by the offset site need to be assessed to establish the baseline unit value of the site. The Biodiversity Metric 2.0 Technical Supplement contains condition assessment tables for most habitats (1.12).

The Technical Supplement does not contain condition assessment for all habitats. In this case, the ecologist should use their professional judgment and experience to determine condition, using attributes such as species-richness, the presence of indicator species (positive and negative), structural and age diversity etc. in relation to the NVC habitat type that the habitat is most similar to.

The field survey and condition assessment should be undertaken under suitable conditions e.g. appropriate time of year. Where conditions are not ideal e.g. grass is tightly grazed, the condition assessment should be carried out at a later date when conditions are suitable, otherwise a precautionary approach should be taken in assigning condition i.e. if it is difficult to determine if the habitat is in poor or moderate condition, the habitat should be assigned to the higher condition category.

When using the Technical Supplement to assess condition, count the number of failed criteria to determine the condition. Habitats are in good condition when all criteria are met, moderate condition where it fails on just one criteria and poor condition when it fails on 2 or more criteria.

Details of the condition assessment should be provided. For example, a condition assessment for grasslands should be based on the Technical Supplement methodology i.e. carry out a structured walk (see also monitoring section below). Photographs showing condition of habitat e.g. rank grassland, scrub encroachment etc should also be provided. Community representative, high resolution quadrat photographs rather than landscape photographs are particularly useful to verify botanical assessments and will be expected.

Table 3 Grassland condition assessment from Technical Supplement (adapted for Stevenage)

Habitat Description		
• Includes both agricultural, recreational, amenity, road verges and semi-natural grassland types including Priority Habitat Grasslands on all soil types • Will be dominated by grassland species with very little (is any) dwarf shrub, wetland or wooded species within the sward • Will exist above and below the level of enclosure at all altitudes		
Condition Assessment Criteria		
1. The area is clearly and easily recognisable as a good example of the grassland type and there is little difference between what is described in the relevant habitat classifications and what is visible on site 2. The appearance and composition of the vegetation on site should very closely match the characteristics for the specific habitat (i.e. as described by the UK Habitat Classification or NVC community), with species typical of the habitat representing a significant majority of the vegetation 3. Wildflowers, sedges and indicator species for the specific grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency. See relevant Habitat Classification for details of indicator species for specific habitat 4. Undesirable species and physical damage is below 5% cover 5. Cover of bare ground less than 10% (including localised areas, for example, rabbit warrens) 6. Cover of Bracken less than 20% and cover of scrub and bramble less than 5%		
Condition Assessment Criteria Score		
Good	• Wildflower and sedges listed for the habitat type above 30% excluding White Clover (*Trifolium repens*), Creeping Buttercup (*Ranunculus repens*) and injurious weeds • Meets all the condition criteria with only minor variation • None of the indicators of poor condition are present (4, 5 & 6) • Newly created grassland cannot reach this level because of invertebrate impoverishment due to colonisation limitations	3
Fairly good	• Slightly lower forb ratio than above • Newly created grassland cannot reach this level because of invertebrate impoverishment due to colonisation limitations	2.5
Moderate	• Total coverof wildflowers and sedges less than 30%, excluding White Clover, Creeping Buttercup and injurious weeds • OR clearly fails at least 1 of the condition criteria • OR the grassland type has some differences between what is described in the relevant habitat classifications and whit is visible on site. It is a lower quality example of the habitat, but clearly recognisable as such	2

	• Potentially restorable to grassland Priority Habitat with improved management • Cover of undesirable species at 5-15% • Newly created meadow grassland can achieve this condition in time frame available	
Fairly Poor	• Poorer examples of above with lower forb ratio • Proposed wildflower grassland with only one cut, or cuts in Spring and Autumn can only achieve this condition because they will be subject to net nutrient enrichment	1.5
Poor	• Most of the condition criteria are being failed • Cover of undesirable species above 15%	1
Undesirable species		
• Creeping Thistle (*Cirsium arvense*) • Spear Thistle (*Cirsium vulgare*) • Curled Dock (*Rumex crispus*) • Broad-leaved Dock (*Rumex obtusifolius*) • Common Ragwort (*Senecio jacobaea*) • Common Nettle (*Urtica dioica*) • Creeping Buttercup (*Ranunculus repens*) • White Clover (*Trifolium repens*) • Cow Parsley (*Anthriscus sylvestris*) • Marsh Thistle (*Cirsium palustre*) • Marsh Ragwort (*Senecio aquaticus*)		
Notes		
Physical damage to the vegetation from excessive poaching, damage from machinery use or storage, or any other damaging management activities		

Soil analysis

It is important that soil surveys and analysis are carried out where soil is an important factor in habitat creation and management. Advice on how to undertake a soil survey can be found in Natural England Technical Information Note TIN035. The laboratory analysis should include pH, available phosphorus, available potassium, available magnesium, total nitrogen, and hand soil texture. Natural England Technical Advice Note TIN036 gives advice on the interpretation of soil analysis. The results of the soil analysis should be presented in the management plan.

Site evaluation

The results of the field survey and soil analysis should be used to assess site suitability for habitat creation or restoration. Present the results of this assessment in the Biodiversity Offset Management Plan.

It is important that the right site is chosen for the proposed habitat. If site conditions are unsuitable e.g. nutrient levels too high, it is unlikely the scheme will succeed. The local authority has to have confidence that the scheme can deliver the proposed improvements in habitat condition. Where it is not confident that the scheme can deliver, it will request further information or may reject the scheme and request that an alternative site is found.

Calculating the offset biodiversity baseline

The baseline biodiversity unit value of the offset site should be calculated by entering the Phase 1 habitat type, current condition and area into the Biodiversity Calculator.

13.5 The Offset and Proposal Delivery

The habitat creation/restoration proposals must be described in detail. To be acceptable to the local planning authority, the following general principles should be applied to development schemes involving habitat creation and proposals must include descriptions of:

- The location, size and physical characteristics of the receptor site and presented on site plans.
- Details of the habitats/conservation features to be created/enhanced.
- Details of the offset provider (e.g. their resources, skills, experience) to deliver the offset.
- The methodology to be used to create the habitat/features
- Details of the long-term management proposed for the establishment and maintenance of the habitat/nature conservation feature.
- Future ecological monitoring of the habitat.

The appropriateness of all biodiversity offsetting schemes will be assessed by the SBC ecological advisors. Should the scheme be deemed as inappropriate, e.g. the proposed habitat, management prescriptions, target condition or timescales are considered unsuitable/unrealistic, and the scheme is considered unlikely to succeed, then the scheme will need to be amended or a biodiversity offsetting scheme on an alternative site put forward.

Calculating the biodiversity value of the proposed biodiversity offset

The biodiversity gain produced by the proposed offset scheme should be calculated using the biodiversity metric. The following data are required:

- Proposed Phase 1 habitat(s)
- Area of habitat to be created or enhanced
- Target condition
- Time to target condition
- Spatial multiplier e.g. is this offset in a strategically important area

Setting target condition and time to condition

Guidance from the Defra Biodiversity Metric supporting documents (2019) suggested that offset providers should only offer biodiversity units generated from a one step-change in condition (e.g. to improve the condition of the habitat from poor to moderate) to minimise the risks of the conservation action failing to deliver. As management actions are undertaken and the habitat improves then in due course the project can be re-valued and further units released for sale (e.g. a further improvement in condition from moderate to good). We support this precautionary approach. However, under the right conditions (e.g. low soil fertility) and management, for certain habitats, it should be possible to achieve more than a one-step change in condition e.g. poor to good condition. However, evidence will need to be presented in the management plan to justify this.

13.6 Objectives & Management

Objectives

Objectives should identify and describe what will be done i.e. expand (i.e. create) or restore habitat to deliver a change in habitat condition.

Habitat management prescriptions

Provide details of the management activities that are proposed to be carried out during the life time of the management plan in order to achieve the management plan objectives. Details of location (e.g. management plan compartment), timing and methodology should be given for each activity. This will include details of the establishment method e.g. grassland creation and a detailed work programme for the lifetime of the offset (specified in the s106), identifying when works are programmed to take place.

N.B. management prescriptions and habitat creation must be sensitive of the structure required to sustain invertebrate populations. Homogenous and simplistic management to achieve purely botanical aims are not acceptible. For example, rotationally uncut strips within hay meadows will be expected together with features such as permanent bare ground and managed scrub interface. Complex habitat interactions are encouraged such as ponds and wetlands within hay meadows or woodland. For more information on invertebrate habitat management see: Kirby, P. (1992), Habitat Management for Invertebrates: A Practical Handbook, Royal Society for the Protection of Birds

Features Influencing Management of the site

Give details of any features which may influence the management of the site. This may include management constraints e.g. access for machinery or livestock, or legal constraints such as the presence the presence of protected or invasive species.

13.7 Monitoring and reporting

The BOMP should set out the monitoring that will be undertaken to measure the success of the scheme in meeting its objectives.

Ecological Monitoring

Monitoring is an essential element of the management plan. It is required to ensure the successful establishment/restoration of the habitat, evaluating the success of management activities and provide feedback for management.

Any area of the site that is managed as part of an Offset agreement will need to conform to any agreed timetable. This is likely to be the first year of commencement and years 2, 5, 10, 15, 20 and 30 thereafter to evidence that management of the Offset Site is being successfully implemented.

Field assessment

The field assessment should be carried out by a competent botanist at an appropriate time of year. Standard habitat condition assessment methodologies should be followed e.g. structured walks through the habitat stopping at regular intervals to record condition attributes. For example, for grasslands follow the methodology set out in the Technical Supplement i.e. take a representative walk (e.g. a W route) through the grassland, recording species and other required features at a minimum of 10 stops. Site condition should be assessed using standard criteria where available (in most cases this will be based on criteria used in the Technical Supplement). The assessment methodology and the condition assessment criteria to be used should be set out in the BOMP.

Management Plan Review

The Management Plan should be subject to a review every 10 years. The review should include an appraisal of the habitats present at the site (based on the monitoring surveys), assessment of the success of the management plan to date and any required revisions to the plan. The first Plan review will need to cover:

- Success of initial habitat establishment;
- Problems and experience;
- Establish which management techniques have been successful and those that have not;
- An assessment of whether overall management has been effective.

Offset scheme schedule of costs

The management plan should give details of the offsetting scheme cost. The total cost of the scheme will be a combination of the habitat creation costs and ongoing maintenance costs. For example, for grasslands, creation costs might include seed purchase and sowing, ground preparation, weed control, installing stock proof fencing etc. Maintenance costs will include annual management e.g. haymaking and grazing for the duration of the scheme (e.g. 30 years). The schedule of costs should also include the production of the management plan, management plan reviews and ecological monitoring of the offset scheme. All costings should allow for inflation (using an index rate of 3.61% per annum).

14 Appendix 5 - The Defra Biodiversity Metric with supporting documents

14.0.1 http://publications.naturalengland.org.uk/publication/5850908674228224

15 Appendix 6 - Scientific evidence for habitat creation and restoration

15.0.1 https://apps.warwickshire.gov.uk/api/documents/WCCC-863-794

16 Appendix 7 - Planning policy, legislation and guidance references to measurable net gain

EU Biodiversity Strategy 2020;

Paragraph 2 of the National Planning Policy Framework (NPPF) (DCLG 2019) states that:

"Planning policies and decisions must also reflect relevant international obligations and statutory requirements"

This infers a due regard for the EU Biodiversity Strategy 2020 which states:

"Target 2: Maintain and restore ecosystems and their services...ensuring no net loss of biodiversity. This will be achieved ... by ensuring that any unavoidable residual impacts are compensated for or offset."

NERC Act 2006;

Section 40 of the Natural Environment and Rural Communities Act 2006 places a duty on all public authorities in England and Wales to have regard, in the exercise of all their functions, to the purpose of conserving biodiversity. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and decision making throughout the public sector, which should be seeking to make a significant contribution to the achievement of the commitments made by Government in its Biodiversity 2020 strategy.

Making Space for Nature 2010;

"Biodiversity offsets established through the planning process are another mechanism that could be used to enhance ecological networks."

"The operation of a system of biodiversity offsets could deliver net gains for wildlife.."

25 year Environment Plan 2018;

"We will embed an 'environmental net gain' principle for development, including housing and infrastructure"

"We want to establish strategic, flexible and locally tailored approaches that recognise the relationship between the quality of the environment and development. That will enable us to achieve measurable improvements for the environment – 'environmental net gains' – while ensuring economic growth and reducing costs, complexity and delays for developers."

"Our immediate ambition is to work in partnership with other Government bodies, local planning authorities and developers to mainstream the use of existing biodiversity net gain approaches within the planning system,"

"Actions we will take include making sure that existing requirements for net gain for biodiversity in national planning policy are strengthened,"

The Draft Environment (Principles and Governance) Bill 2018 policy paper;

"Subject to consultation, we intend to legislate on mandatory biodiversity net gain to ensure that new developments enhance biodiversity and help deliver thriving natural spaces for communities"

National Planning Policy Framework 2019;

"Local plans and spatial development strategies should be informed throughout their preparation by a sustainability appraisal that meets the relevant legal requirements. This should demonstrate how the plan has addressed relevant economic, social and environmental objectives (including opportunities for net gains)"

"Planning policies and decisions should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity,"

"To protect and enhance biodiversity and geodiversity, plans should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

Planning Practise Guidance, Natural Environment, July 2019

"Plans, and particularly those containing strategic policies, can be used to set out a suitable approach to both biodiversity and wider environmental net gain, how it will be achieved, and which areas present the best opportunities to deliver gains."

"The National Planning Policy Framework encourages net gains for biodiversity to be sought through planning policies and decisions. Biodiversity net gain delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development. Biodiversity net gain can be achieved on-site, off-site or through a combination of on-site and off-site measures. It may help local authorities to meet their duty under Section 40 of the Natural Environment and Rural Communities Act 2006."

"Planning conditions or obligations can, in appropriate circumstances, be used to require that a planning permission provides for works that will measurably increase biodiversity"

"Benefits could be achieved entirely on-site or by using off-site gains where necessary. Off-site measures can sometimes be secured from 'habitat banks', which comprise areas of enhanced or created habitats which generate biodiversity unit 'credits"

"Tools such as the Defra biodiversity metric can be used to assess whether a biodiversity net gain outcome is expected to be achieved"

"Using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved. The biodiversity metric can be used to demonstrate whether or not biodiversity net gain will be achieved. It enables calculation of losses and gains by assessing habitat:

- distinctiveness: whether the type of habitat is of high, medium or low value to wildlife.
- condition: whether the habitat is a good example of its type.
- extent: the area that the habitat occupies.

To achieve net gain, a development must have a sufficiently higher biodiversity unit score after development than before development."

"It is good practice to establish a detailed management plan to ensure appropriate management of the habitat in the long term, and to arrange for regular but proportionate monitoring on how the habitat creation or enhancement is progressing, indicating any remedial action necessary. Planning authorities may consider recording where habitat compensation has been established, and how relevant survey and monitoring data can best be utilised to strengthen the local biodiversity evidence base; for example by working with Local Environmental Record Centres."

National Design Code, Ministry of Housing, Communities, and Local Government, 2019

"93 Open spaces are designed to be high quality, robust and adaptable over time so that they remain fit for purpose and are managed and maintained for continual use.

94 Open spaces include public, shared and private outdoor spaces with:

- well-integrated drainage, ecology, shading, recreation and food production that achieve a biodiversity net gain as required by the 25-year Environment Plan

98 Well-designed developments include site-specific enhancements to achieve biodiversity net gains at neighbourhood, street and household level."

The impact of development on Biodiversity SPD