Biodiversity Net Gain

Land at Broadgate Nursery

Bullock's Shortgate, Gedney

Lincolnshire

Client: Mr Luke Connolly

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Torc Ecology Ltd
Registered number 6471219 VAT number 926 5906 96
The Office, 14 Park Hill, Dersingham, King's Lynn, Norfolk PE31 6NE
Tel: 01485 524950 Web: www.torcecology.co.uk Email: info@torcecology.co.u

Client	Mr Luke Connolly
Site	Land at Broadgate Nursery, Bullock's Shortgate, Gedney, Lincolnshire PE12 0DG
Report Reference	2024_788/2
Author	Louise Brown MSc BSc (Hons) MCIEEM
Technical Review	Shaun Baker PDip, BSc (Hons) MCIEEM
Approved	Shaun Baker PDip, BSc (Hons) MCIEEM
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This Biodiversity Net Gain report has been prepared by Torc Ecology Ltd for the sole and exclusive use of Mr L. Connolly in response to his particular instruction.

This report has been prepared in accordance with The Statutory Biodiversity Metric User Guide (DEFRA, 2024) and Biodiversity Net Gain. Good Practice Principles for Development (Baker, et. al. 2019).

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1. EXECUTIVE SUMMARY

1.1. Torc Ecology Ltd was commissioned by Mr Luke Connolly in May 2025 to undertake Preliminary Ecological Appraisal and a Biodiversity Net Gain assessment of a proposed installation of a fishing pond within land at Broadgate Nurseries, Gedney in Lincolnshire.

1.2. The site comprises approximately 5989.9m² / 0.6 hectares consisting of part of a former arable field now with a cover of rye *Lolium sp*. grasses. Proposals include removal of part of the grassland to facilitate the installation of the pond and landscaping around the perimetre of the pond.

1.3. The following table outlines the results of a Biodiversity Net Gain calculation undertaken of the site using DEFRA's Statutory Biodiversity Metric Calculation Tool V4.0:

Considerations	Description	Comments
Biodiversity Evaluation	Pre and post-development scenarios were measured using the Defra Biodiversity Metric Calculation Tool version 4.0. (July 2024)	All Trading Rules have been met.
Biodiversity Value	Baseline habitats	The site comprised former arable habitat now covered with a temporary cover of grass. Baseline habitats were valued at **1.20 Biodiversity Units (BUs).**
	Proposed development	0.85 rye grass habitat BUs are to be retained. A freshwater artificial pond (non-priority pond), enhanced modified grassland and three rural trees will provide an additional 0.81 habitat BUs. Total habitat BUs = 1.51 which is a net gain of 0.31 habitat BUs. In addition a native hedgerow will deliver 0.40 hedgerow BUs although no net change can be calculated due to there being no hedgerows on the baseline calculation.
Biodiversity Impacts	Calculations show a predicted gain in habitat and hedgerow biodiversity units.	Measured in DEFRA's Biodiversity Units the proposed development will have a positive impact in habitats BUs **(+25.78%).**

2. INTRODUCTION

2.1. Background information

2.1.1. Torc Ecology Ltd was commissioned by Mr Luke Connolly in April 2024 to calculate the predicted changes in biodiversity value associated with a proposed installation of a fishing lake and associated landscape planting at land at Broadgate Nurseries, Bullock's Shortgate, Gedney, Lincolnshire PE12 0DG, hereafter referred to as 'the site'.

2.1.2. The site (OS Central Grid Reference TF 39985 21511) comprises 5989.9m² / 0.6 hectares of part of a former arable field now covered with rye grasses and few herbaceous species. New native hedgerow whips are present upon the north and east boundaries of the site with an individual immature oak *Quercus sp*. also upon the east boundary. A fishing pond is proposed at the northeast part of the site. The pond will be lined and initially fed from rainwater harvested from the roof of an adjacent agricultural shed. Native hedgerows and individual trees will be planted around the grassland along with specialist seed mixes suitable for pond edges and meadow mixes suitable for arable fields. Access to the field is via a five-bar gate from Broadgate Nurseries to the east.

2.1.3. This report provides the baseline conditions of the site as shown in Figure 1: Baseline Habitat Map and the proposed site layout as shown in Figure 2: Post-Development Habitat Map (refer to Appendix I). A summary of the results of the net gain calculations are also provided.

2.1.4. For clarity and additional detail, where required, this report should be read in conjunction with the Preliminary Ecological Appraisal Report (Torc Ecology Ltd, 2025) produced for the site.

3. METHODOLOGY

3.1. Habitat mapping

3.1.1. The field survey comprised of a Phase I habitat survey of the site which included surveying for different habitats and classifying them according to the habitats given in the UK Habitat Classification (UKHab Version 2.0). Sources of information that aided the mapping process included field survey data, aerial images and a baseline survey map supplied from the client's architect. Refer to the PEA report (Torc Ecology Ltd., 2025) for full PEA survey methodology details.

3.1.2. Using metres as the basic unit of measurement the projection for mapping was the British National Grid Ordnance Survey OSGB 1936 (EPSG 27700). A 'Minimum Mapping Unit' of c. 25m² was applied for the purpose of mapping. Habitats were mapped by en:mapping Ltd using ESRI ArcGIS / ArcPro.

3.1.3. Condition assessments were not required for the biodiversity net gain assessment. Arable habitat (including a rye grass cover) does not require to be condition assessed, nor do immature hedgerows or trees less than 7.5cm DBH.

3.2. Calculating Biodiversity Units

3.2.1. DEFRA's Statutory Biodiversity Metric Calculation Tool V4.0 (July 2024) was used to record baseline and post-development habitats for the purpose of determining biodiversity net gain.

3.2.2. The biodiversity baseline for the site was based on habitat types and areas, their distinctiveness and condition scores (where relevant) and the number of biodiversity units each type of habitat generates. Strategic Significance is determined with reference to local policies and in consultation with the Local Planning Policy (refer to Appendix III). A Local Nature Recovery Strategy has not yet been published for the South Holland District. Therefore the South East Lincolnshire Local Plan 2011-2036 and the Lincolnshire Biodiversity Action Plan were referred to as the key documents for assigning Strategic Significance to habitats upon the site.

3.2.3. The Biodiversity Metric Calculation Tool was undertaken in accordance with the Biodiversity Net Gain Good Practice Principles for Development (Baker, et al. 2019) as provided in Appendix IV.

3.3. Author

3.3.1. Ms Louise Brown is the author of this BNG report. Ms Brown is a Full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and a Consultant Ecologist at Torc Ecology Ltd. Ms Brown is an experienced field ecologist of over twenty-years' experience holding Natural England survey licences for bats (Ref: 2016-20937-CLS-CLS); great crested newts *Triturus cristatus* (Ref: 2016_27348-CLS-CLS) and barn owls *Tyto alba* (Ref: CL29/00224) as well as a Registered Consultant (RC062) on the Bat Mitigation Class Licence.

3.3.2. Ms Brown has attended a number of CIEEM approved courses in relation to biodiversity net gain, including: 'UK Habitat Classification for Biodiversity Net Gain', 'Statutory Biodiversity Metric Training', and 'QGIS for Ecologists and Conservation Practitioners'.

4. RESULTS

4.1. Baseline habitats

4.1.1. There are no irreplaceable habitats upon the site. None of the baseline habitats are categorised as being above low Strategic Significance, these habitats being of low conservation value and not being listed as or meeting the criteria for LBAP habitats. A brief description of the onsite habitats are provided below. Some habitats were not included within the assessment and a rationale is provided to support this decision.

Cropland, temporary grassland

4.1.2. The site comprised a former arable field that was in production until early 2025. A rye grass cover was dominant with few herbaceous species including mayweed and shepherd's purse. Some ruderal species were present at the field edges including creeping buttercup *Ranunculus repens*, common thistle *Cirsium vulgare* and bristly ox-tongue. On average there were 2.1 species per m².

Individual rural trees

4.1.3. An immature oak tree was present on the east boundary at less than 7.5cm DBH. Therefore the tree was not included in the biodiversity net gain assessment or recorded into the Statutory Biodiversity Metric Calculation Tool.

Native hedgerow

4.1.4. Native hedgerow whips were present upon the north and east boundaries and included hazel *Corylus avellana*, field maple *Acer campestre* and hawthorn *Crataegus monogyna*. The hedgerow saplings were newly planted and were not yet functioning as a hedgerow. Therefore the hedgerow was not included in the biodiversity net gain assessment or recorded into the Statutory Biodiversity Metric Calculation Tool.

4.1.5. A baseline biodiversity map showing the existing habitats across the site is provided in Figure 1 (Appendix I). The habitat types are also presented in the table below. The values presented are taken from DEFRA's Statutory Biodiversity Metric Calculation Tool.

Table 1: Onsite Habitat Baseline

Habitat Type	Area (ha)	Ecological Baseline Units (BUs)	Comments
Temporary grass and clover leys (c1b5)	0.59899	1.20	0.42619 (4261.9m²) rye grass cover to be retained. **Retained units 0.85 BUs**

4.2. Post-development habitats

4.2.1. **P**ost-development the site will comprise a fishing pond (non-priority pond) with a 10m buffer from the edge of the pond to comprise specialist seed mixes, native hedgerow and tree planting, as detailed below.

4.2.2. A suitable seed mix such as Emorsgate Pond Edge Mixture EP1 will be sown 1m in width around the perimetre of the pond. This seed mix contains wildflowers and grasses suitable for sowing at the wet margins of ponds. A wildflower meadow mix such as Emorsgate EM2 Standard General Purpose Meadow Mixture will also be sown as a buffer for approximately 9m from the edge of the pond mix. This meadow mixture will be managed to allow wildflowers and grasses to grow, i.e. not subject to regular cutting. This mixture is suitable for a wide range of soil types, including arable fields. The enhanced grassland will be managed to achieve a 'Moderate' condition.

4.2.3. Native hedgerow species will be sown within the wildflower buffer. Species will include hawthorn, hazel, field maple, guelder rose *Viburnum opulus* and spindle *Euonymus europaeus*. The hedgerows will be subject to a low management regime, being allowed to grow to at least 1.5m height and 1.5m width to achieve a 'Moderate' condition. Three native trees will also be planted that will achieve at least a 'Moderate' condition.

4.2.4. The Post-Development Habitat map is provided in Figure 2 (Appendix I) The post-development habitat types are presented in the table below. The values presented are taken from DEFRA's Statutory Biodiversity Metric Calculation Tool.

Table 3: Post development Habitat Creation

Habitat Creation	Area (ha)	Ecological Baseline Units (BUs)	Comments
Pond – Freshwater artificial (non-priority) habitat (r, 49)	0.04525	0.17	Fishing pond. Will be unlikely to achieve more than a 'Poor' condition.
Modified grassland	0.12755	0.44	Pond edge mix and a meadow mix suitable for arable land to be sown in a 10m buffer around the pond. To achieve a 'Good' condition.
Individual trees (u32)	0.0122	0.04	3 small native trees to be planted in the wildflower buffer to achieve a 'Moderate' condition.
TOTAL	**0.19**	**0.65**	**0.85 retained habitat BUs plus 0.65 post-development BUs = total 1.51 BUs Net % change = 0.31 BUs**
Hedgerow Creation	**Area (ha)**	**Ecological Baseline Units**	**Comments**
Native hedgerow	0.1187	0.40	Approximately 120m of native hedgerow to achieve a 'Moderate' condition providing **0.40 hedgerow BUs.**

4.2.5. The total net unit habitat change is **0.31 BUs** representing a **25.78%** biodiversity net gain. As there is no baseline hedgerow BUs a percent unit change cannot be calculated. However **0.40** hedgerow BUs are delivered.

5. CONCLUSION

5.1. The baseline condition of the site provides + 1.20 habitat BUs of which 0.85 BUs will be retained. Post-development the proposed onsite habitats provide an additional 0.65 BUs, a total of 1.51 Habitat BUs which is a gain of 0.31 BUs and a **+25.78% net change**.

5.2. The assessment has confirmed the site can achieve a total project Biodiversity Net Gain above the 10% threshold. The biodiversity metric calculation spreadsheet has been provided with this report for review as required.

6. REFERENCES

Baker, J., Hoskin, R. & Butterworth, T., 2019. *Biodiversity net gain. Good practice principles for development*. A practical guide, London: CIRIA.

Department for Communities and Local Government. (2022). *National Planning Policy Framework*. Department for Communities and Local Government, London.

Lincolnshire Biodiversity Partnership (2011). Lincolnshire Biodiversity Action Plan 2011-2030. Lincolnshire Biodiversity Partnership, Horncastle.

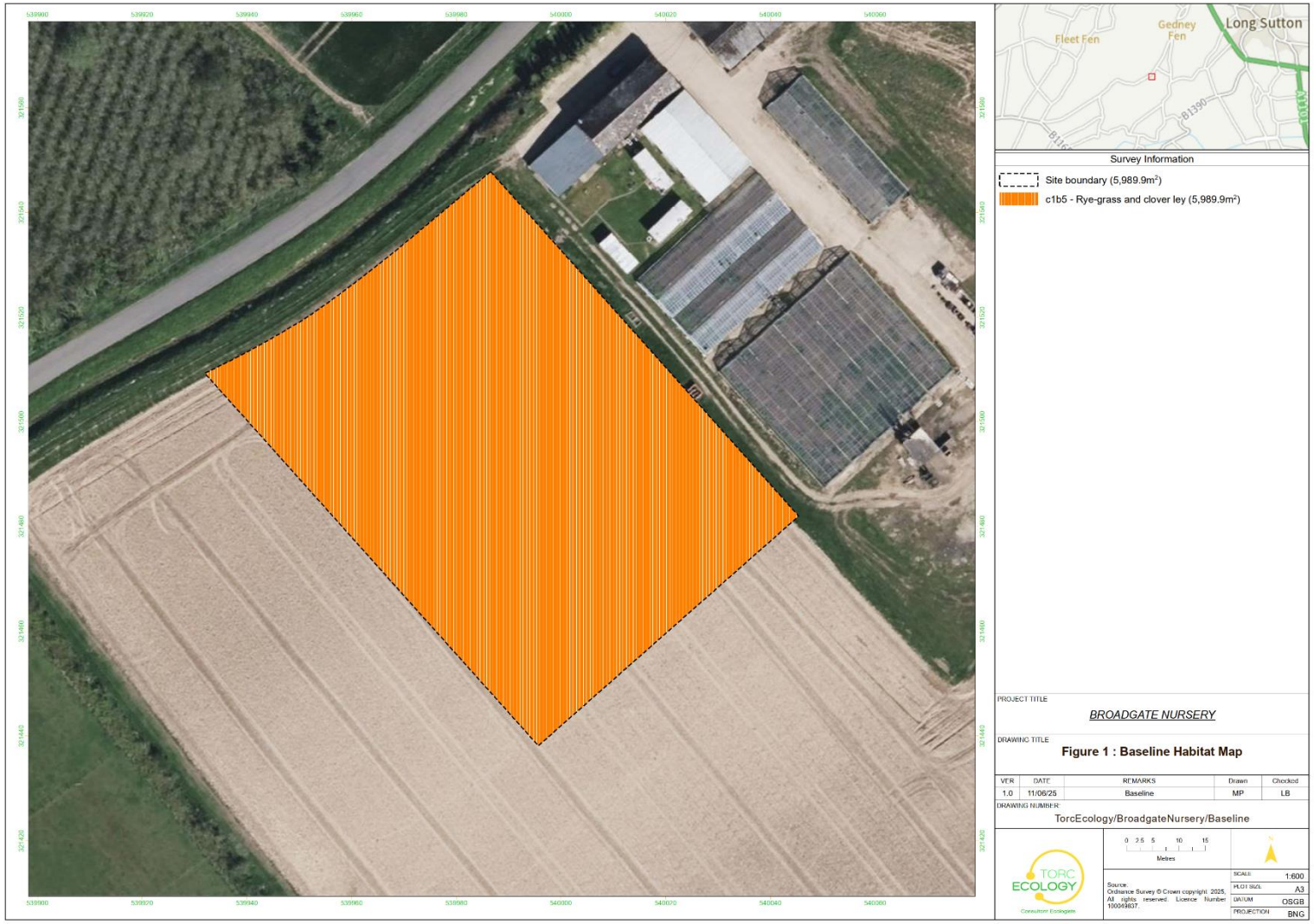
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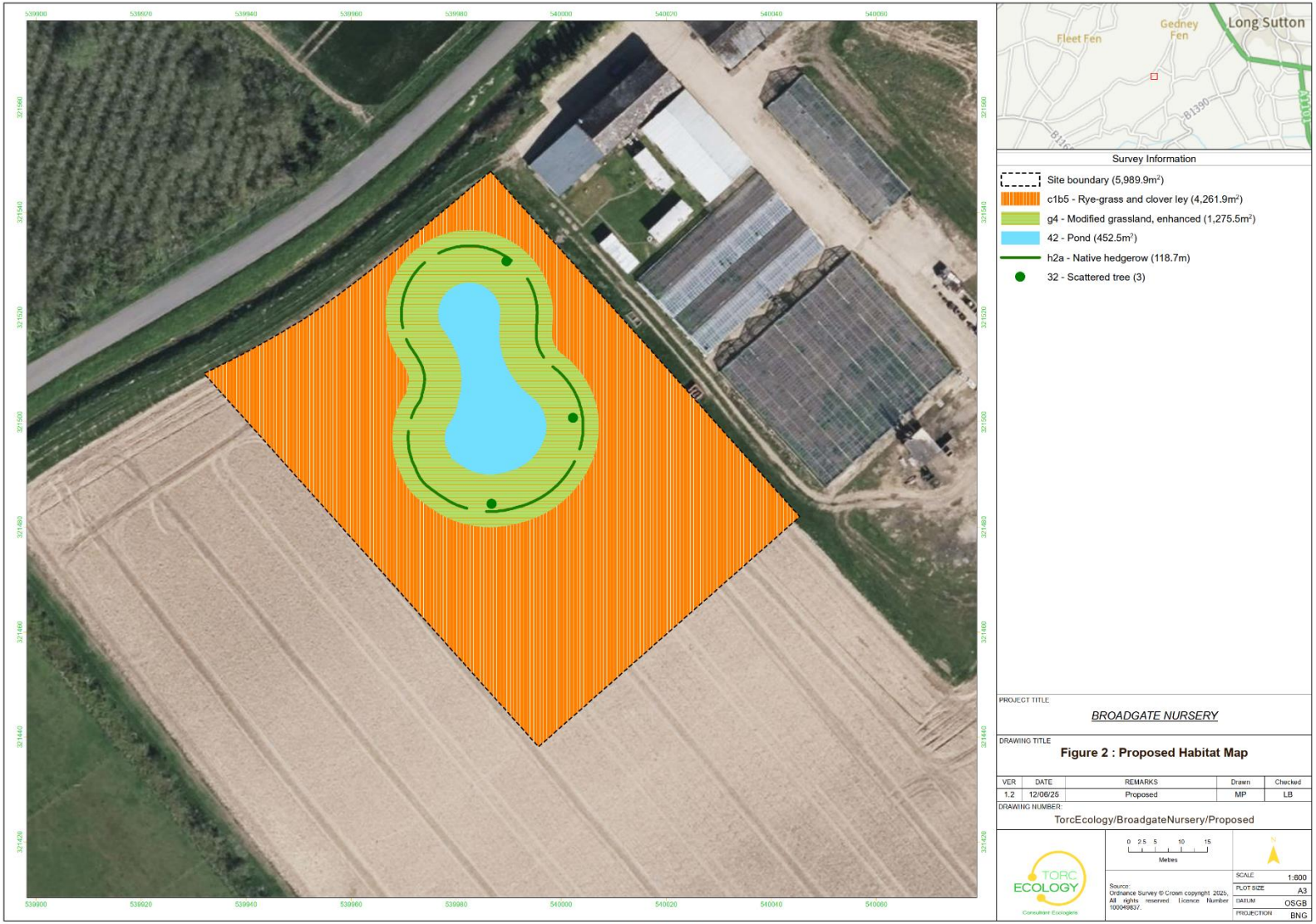
Torc Ecology Ltd (2024). *Preliminary Ecological Appraisal of Land at Broadgate Nursery, Broadgate, Gedney, Lincolnshire PE12 0DG.* Torc Ecology Ltd, King's Lynn.

Web references

DEFRA (2024). *The Statutory Biodiversity Metric User Guide.* *https://assets.publishing.service.gov.uk/media/669e45fba3c2a28abb50d426/The_Statutory_Biodiversity_Metric_-_User_Guide__23.07.24_.pdf* DEFRA.

.APPENDIX I: FIGURES 1 – 2




Fleet Fen
Gedney Fen
Long Sutton
B1390
Survey Information
Site boundary (5,989.9m²)
c1b5 - Rye-grass and clover ley (4,261.9m²)
g4 - Modified grassland, enhanced (1,275.5m²)
42 - Pond (452.5m²)
h2a - Native hedgerow (118.7m)
32 - Scattered tree (3)
PROJECT TITLE:
BROADGATE NURSERY
DRAWING TITLE:
Figure 2 : Proposed Habitat Map
VER | DATE | REMARKS | Drawn | Checked
1.2 | 12/06/25 | Proposed | MP | LB
DRAWING NUMBER:
TorcEcology/BroadgateNursery/Proposed
TORC ECOLOGY
Consultant Ecologists
0 2.5 5 10 15
Metres
Source: Ordnance Survey © Crown copyright 2025. All rights reserved. Licence Number 100049837.
SCALE 1:600
PLOT SIZE A3
DATUM OSGB
PROJECTION BNG

APPENDIX II: BIODIVERSITY NET GAIN AND PLANNING POLICY

National Planning Policy Framework

The NPPF sets out current government policy on biodiversity and nature conservation and places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications (MHC&LG, 2019). The NPPF also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within a development.

Under the NPPF planners have a duty to promote the conservation, restoration and enhancement of priority habitats. 'Plans should identify and pursue opportunities for securing measurable net gains for biodiversity'.

The NPFF works in conjunction with Government Circular 06/2005 'Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System'.

Local Planning Policies

The South East Lincolnshire Local Plan 2011 – 2036, in which South Holland district falls, was adopted in March 2019. Policy 28 'The Natural Environment' states that a high quality, comprehensive ecological network of interconnected designated sites, sites of nature conservation importance and wildlife-friendly greenspace will be achieved by protecting, enhancing and managing natural assets, partly by addressing gaps in the ecological network:

By ensuring that all development proposals shall provide an overall net gain in biodiversity, by:

> i protecting the biodiversity value of land, buildings and trees (including veteran trees) minimising the fragmentation of habitats;
>
> ii maximising the opportunities for restoration, enhancement and connection of natural habitats and species of principal importance;
>
> iii incorporating beneficial biodiversity conservation features on buildings, where appropriate; and maximising opportunities to enhance green infrastructure and ecological corridors, including water space; and
>
> iv conserving or enhancing biodiversity or geodiversity conservation features that will provide new habitat and help wildlife to adapt to climate change, and if the development is within a Nature Improvement Area (NIA), contributing to the aims and objectives of the NIA.

Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A 'UK Post-2010 Biodiversity Framework' was published in July 2012 and succeeded the UKBAP. Much of the work for the UK BAP is now focussed at a country level due to devolution and the creation of country-level biodiversity strategies.

The UKBAP lists of priority species and habitats are still valuable reference sources. Notably, they have been used to help draw up statutory lists of priority species and habitats as required under Section 41 of the NERC act and are relied upon to provide the information required to assign Strategic Significance during Biodiversity Net Gain in the absence of Local Nature Recovery Strategies.

APPENDIX IV: BIODIVERSITY NET GAIN. GOOD PRACTICE PRINCIPLES FOR DEVELOPMENT

Principle	In Practice
Apply the mitigation hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision makers where possible, compensate for losses that cannot be avoided. If compensating for losses within a development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.
Avoid losing biodiversity that cannot be offset elsewhere	Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve no net loss/ net gain.
Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to net gain. Achieve net gain in partnership with stakeholders where possible.
Address risk	Mitigate difficulty, uncertainty and other risks to achieving net gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being realised.
Make a measurable net gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.
Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust credible evidence and local knowledge to make clearly justified choices when; • Delivering compensation that is ecologically equivalent in type, amount and condition and that accounts for the location and timing of biodiversity losses • Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation • Achieving net gain locally to the development while contributing towards nature conservation priorities at local, regional and national levels • Enhancing existing or creating new habitat • Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity
Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations, i.e. do not deliver something that would occur anyway.
Create a net gain legacy	Ensure net gain generates long-term benefits by; • Engaging stakeholders and jointly agreeing practical solutions that secure net gain for the lifetime of the development and with the objective of management continuing in the future. • Planning for adaptive management and securing dedicated funding for the long-term management • Designing net gain for biodiversity to be resilient to external factors, especially climate change • Mitigate risks from other land uses • Avoiding displacing harmful activities from one location to another • Supporting local-level management of net gain activities
Optimise sustainability	Prioritise biodiversity net gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.
Be transparent	Communicate all net gain activities in a transparent and timely manner, sharing the learning with all stakeholders.