Brindle &Green

Biodiversity Impact Assessment

Land Adjacent to Stubbin Wood Nursery, Derbyshire

Report Reference: BG25.134

February 2025

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Revision Details

Revision	Approved	Revision Details
N/A	N/A	N/A

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1 Summary

1.1.1 Where a development has an impact on biodiversity, Biodiversity Net Gain encourages developers to secure an increase in appropriate natural habitat and ecological features over and above that being affected. In order to determine whether there is no net loss or a net gain to biodiversity from a development project, a quantitative approach involving the use of a metric is required. In 2012, DEFRA created such a metric to quantify the impact of a development in terms of 'habitat units. The UK government's 25 Year Environment Plan will require all new developments in England, delivered via the existing planning and development process to meet a mandatory improvement in biodiversity value.

1.1.2 This Biodiversity Impact Assessment (BIA) draws upon the results of the Preliminary Ecological Appraisal BG25.134 (February 2025). This assessment includes the results of biodiversity value calculations, derived using the DEFRA Statutory Biodiversity Metric Calculator Tool, based upon the design proposals for the application site.

1.1.3 During the baseline assessment, the habitats recorded comprised of a hardstanding and an amenity grassland as part of a school field. The habitats on site were evaluated as holding 'site' value in relation to its local surroundings and a regional context. Habitats present within the application boundary are locally frequent and were not of notable criteria for local or national BAP habitats. The condition of baseline on site were assessed as "Poor" tot 'Moderate condition when assessed against the criteria outlined within the technical supplement for the Statutory Biodiversity Metric. The east of the site contained hardstanding and therefore does not require condition assessments. The habitats were recorded using the UK Habitat Classification (Version 2) survey methodology for the purposes of the biodiversity metric.

1.1.4 Using the Biodiversity metric, the existing habitats within the application boundary were valued at 0.94 'Habitat Units'. The proposed scheme was calculated to hold 0.06 'Habitat Units', resulting in an overall net-loss to biodiversity of -0.88'Habitat Units' (-93.47%). Trading rules have also not been satisfied for habitats under the current assessment and habitat creation within the red line boundary does meet the mandatory 10% net gain requirements as set out by Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021).

1.1.5 The report should be reviewed in conjunction with the Preliminary Ecological Appraisal BG25.134 (February 2025) and the accompanying Metric (BG25.134 Stubbin Wood Nursery, Derbyshire– STATUTORY BIODIVERSITY METRIC - DRAFT).

1.1.6 It should be noted that the baseline has been made as a worst-case scenario and likely to change following the results of further botanical survey work during the appropriate season.

2 Introduction

2.1.1 Brindle and Green Ltd were commissioned by INCO Construction & Development Consultants on behalf of T.E.A.M Education Trust, to undertake a Biodiversity Impact Assessment (BIA) at the site known as Land adjacent to Stubbin Wood Nursery, Shirebrook, in the district of Bolsover, Derbyshire. This report provides an appraisal of the biodiversity value associated with the existing habitats established during the baseline survey and assesses the impacts in terms of biodiversity loss against the proposed layout (Appendix 1) using the Statutory Biodiversity Metric.

2.1.2 The application site is 0.13ha in extent and is situated in the town and civil parish of Shirebrook along the Derbyshire – Nottinghamshire border in the district of Bolsover, Derbyshire.

2.1.3 The site is dominated by an amenity grassland with a section of hardstanding to the east of the red line boundary. The site will be subject to a full planning application for site clearance to facilitate the development of a new classroom building with associated external play areas, sheltered walkway and car parking. Design proposals for the site are presented in Appendix 1 of this report.

2.1.4 The purpose of this report is to assess the current biodiversity habitat and value of the site, so as to reduce net-loss as a result of the development.

2.1.5 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Brindle & Green Limited. The results of the Biodiversity Impact Assessment are based on information provided by our client and the Preliminary Ecological Appraisal BG25.134 (February 2025). This report pertains to this information only.

3 Methodology

3.1 Biodiversity Metric

3.1.1 The biodiversity accounting system is underpinned by a metric that calculates the ecological value of both development impact and habitat restoration/creation.

3.1.2 The Biodiversity Metric is designed by Natural England in consultation with a range of experts and tested over a two-year period. The metric is based on an assessment of habitat type and condition. Habitat types are classified into three bands of 'distinctiveness' which are: priority habitats as defined in the NERC Act 2006 (high), semi-natural habitats (medium) and managed habitats, such as arable farmland (low).

3.1.3 Compensation arrangements must be like-for-like or better, i.e. the loss of semi-natural habitats can only be compensated for through the creation of priority or other semi-natural habitats, not through creation of lesser quality habitat. 'Trading up' options allow for the loss of poor-quality habitat, such as farmland, to be compensated for with the creation of high-quality habitat.

3.1.4 The ecological value of the habitat lost to development is a function of its distinctiveness, its condition and the area lost – scores are assigned to all three variables and multiplied together to arrive at the number of units lost. To compensate for a loss, the same or more units ('conservation credits') must then be delivered through habitat creation or restoration at another site that is going to be managed for wildlife (the 'receptor' site or compensation site).

3.1.5 The number of credits delivered by the compensation receptor sites are also a function of the type, condition and area of the habitat being created or restored. But additionally, there are a further range of 'multipliers' applied to the creation of habitat because there are a number of risks to take account of – spatial, temporal and delivery.

3.1.6 Linear habitats (such as hedgerows) and River Habitats (such as wet ditches, streams) are measured separately to the rest of the site habitats and included within a separate section – hedge baseline and hedge creation, river baseline and river creation. The aim is to achieve a 10% net-gain for hedgerow and river units as well as for habitat units.

3.1.7 However, the current site plan (Appendix 1) site does not include, or is not adjacent to, any linear habitats or a watercourse to require hedgerow and river baseline and creation assessments. Therefore, these elements of the metric assessment are not included within the report.

3.2 Mapping and Assessment

3.2.1 A Phase 1 habitat survey was carried out by Brindle and Green Ltd (BG25.134 February 2025) to ascertain the baseline of the site. The habitats were then converted to and mapped using the UK Habitat Classification (v2.01) and condition assessed using the criteria outlined within the Statutory Biodiversity Metric habitat condition assessment sheets. The phase 1 habitats were translated into the UK Habitat Classification system to input into the metric. The classification of habitats and conditions follow the outline in the Natural England Technical Support document associated with the latest edition of the metric.

3.2.2 Habitats were mapped within QGIS software to allow area calculations. The proposed scheme was overlayed and measured using the georeferencing tool. Polygons and lines used to measure existing habitat areas were classified by their proposed habitat type, to provide reference. Polygons depicting target areas for net gain are also included within Appendix 3. These target areas include grassland creation, proposed hedge laying and enhancement, and tree planting in areas of open space.

3.2.3 Proposed buildings, pavements, access roads and footpaths were categorised as Developed land; sealed surface. These areas will be outside the control of any long-term habitat management scheme and will likely be the most prevalent habitat type within these areas. The majority of available green space will be categorised as modified grassland and will be located along the southeast of the site with smaller sections of modified grassland situate along the outskirts of the building. One urban tree will be situation within the modified grassland area.

3.3 Assessing Strategic Significance

3.3.1 A desk study utilising publications within the adopted Local Plan for Bolsover District (March 2020), the Lowland Derbyshire Biodiversity Action Plan (2011), as well as open-source data available from Multi Agency Geographic Information for the countryside (MAGIC) was searched to determine the strategic significance of the site.

3.4 Limitations

3.4.1 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

3.4.2 The assessment was undertaken outside the appropriate time of the year. The eastern section of site comprised of hardstanding and a small area of modified grassland, where species that they comprise of vary very little. Therefore, it can be confidently assessed that the habitat assessment of this site is representative of flora year-round.

3.4.3 However, the school grass playing field exhibited some indicator species conducive of a higher distinctiveness habitat compared to modified grassland. As a result, further botanical surveys will be undertaken at an appropriate time of year to accurately categorise and assess the condition of the grassland onsite. Therefore, for the purposes of this report, the grassland has been categorised as medium distinctiveness' Other neutral grassland' to provide a "worst case scenario". This Biodiversity Impact Assessment will be amended in line with the results of these further surveys, as prescribed within Report ref: BG25.134 'Preliminary Ecological Appraisal – Land adj Stubbin Wood Nursery'.

3.4.4 Georeferencing does not provide an exact measurement of the elements of the proposed scheme.

4 Assessment Calculator Results

4.1 Existing Biodiversity Value

4.1.1 The application site contains habitats ranging from low to medium distinctiveness. Details of distinctiveness, condition and reason for condition are detailed within Table 1 below.

Table 1: Summary of condition assessment for habitat and hedge baseline.

Habitat	Distinctiveness	Condition	Reason
Urban – Developed land; sealed surface	Very Low	N/A - Other	Hardstanding footpath and access road at the northeast of the site. No condition assessment is required for this habitat
Grassland – Other neutral grassland	Low	Moderate	Grassland throughout the majority (0.117ha) of the site. Condition assessment and categorisation to be completed at an appropriate time of year for botanical surveys. Will likely fail condition criterion B, and E, resulting in Moderate condition for medium distinctiveness grassland. Grassland may also be downgraded to modified grassland (Low Distinctiveness) as a result of the botanical survey
Grassland – Modified Grassland	Medium	Poor	Low species diversity dominated by Perennial Rye Grass (*Lolium perenne*). Fails essential Criterion A to achieve a condition higher than poor.

4.1.2 The total area of the habitats to be impacted is 0.13ha. The existing habitats within the application boundary were valued at 0.94 'Habitat Units'.

4.2 Scheme Design with Ecological Enhancements

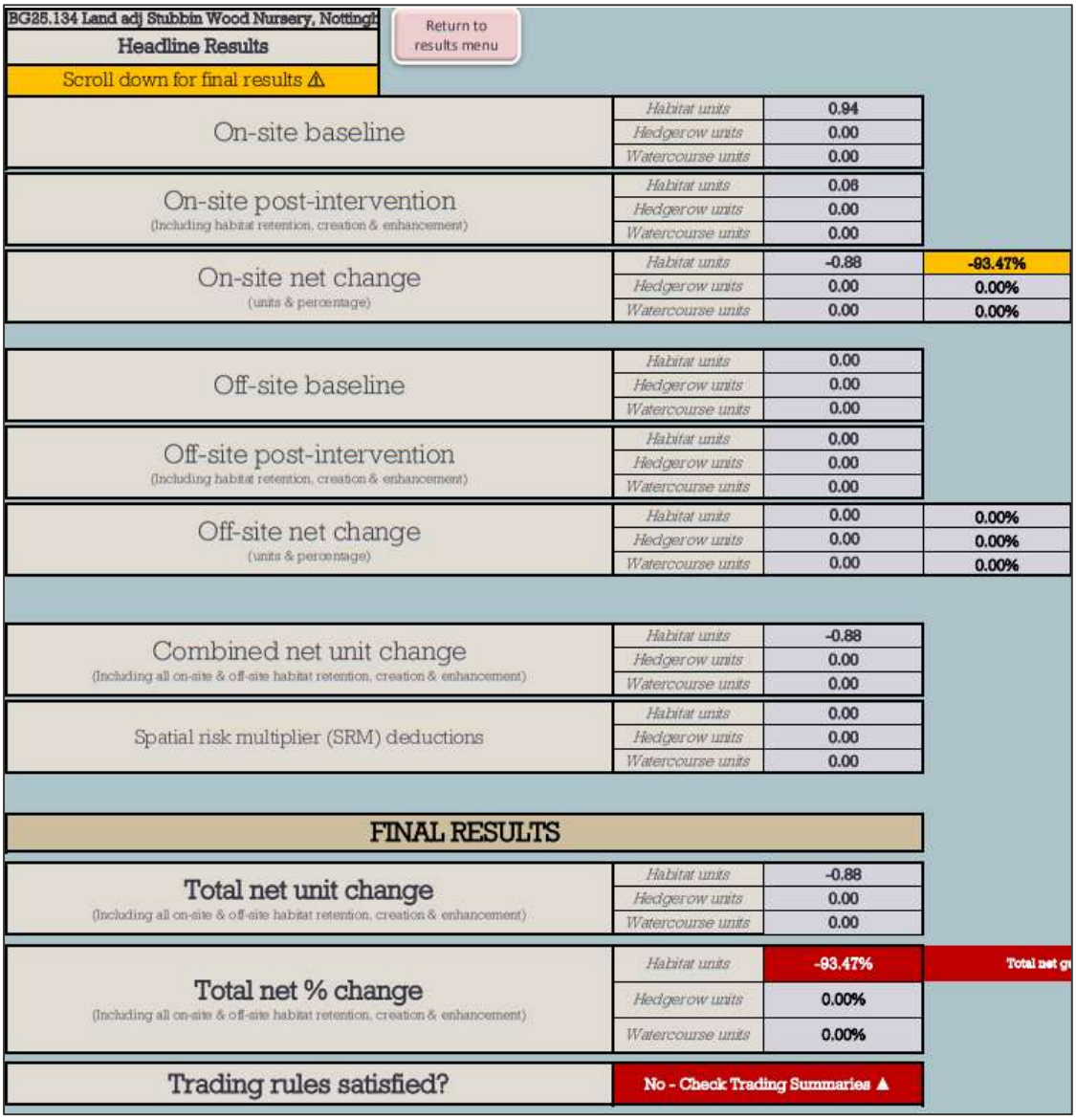
4.2.1 The proposed development is for site clearance to facilitate the development a new classroom building with associated external play areas, sheltered walkway and car parking. Design proposals for the site are presented in Appendix 1 of this report.

4.2.2 The results in Table 2 below show the scores calculated with maximised potential of planted habitats within available open space and buildings. The recommendations outlined in the section will require management under a Habitat Management and Monitoring Plan (HMMP) in order to achieve their target conditions outlined within the metric calculations.

4.2.3 Appendix 3 highlights a series of areas of habitats to be created within the red line boundary which includes small areas of modified grassland, likely managed to a "Poor" condition score and

used for amenity purposes. A total of one small urban tree will be planted, using a native species and is expected to achieve a "moderate" condition score.

Table 2: Biodiversity Impact Assessment Score, Scheme with onsite Ecological Enhancements



BG25.134 Land adj Stubbin Wood Nursery, Nottingh	Return to results menu		
Headline Results			
Scroll down for final results ⚠			
On-site baseline	*Habitat units*	0.94	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.06	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Habitat units*	-0.88	-93.47%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Off-site baseline	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	*Habitat units*	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-0.88	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-0.88	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-93.47%	Total net gi
	Hedgerow units	0.00%	
	Watercourse units	0.00%	
Trading rules satisfied?	No - Check Trading Summaries ▲		

5 Evaluation

Development Proposals

5.1.1 The site will be subject to a full planning application for site clearance to facilitate the development of a new classroom building with associated external play areas, sheltered walkway and car parking. Design proposals for the site are presented in Appendix 1 of this report.

5.1.2 Using the Biodiversity metric, the existing habitats within the application boundary were valued at 0.94 'Habitat Units'.

5.1.3 The proposed scheme was calculated to hold 0.06 'Habitat Units' resulting in an overall net-loss to biodiversity of -0.88 'Habitat Units' (-93.47%). Trading rules have also not been satisfied, likely due to the amount of Other neutral grassland lost as a result of the proposals, which requires that the "Same broad habitat or a higher distinctiveness habitat" be created

5.1.4 This report has considered all available area of open space and has been compiled to inform landscape plans to maximise the potential within areas of open space within the design plans. The urban tree will require management under a Habitat Management and Monitoring Plan (HMMP) to achieve the designated target conditions set out within the accompanying metric.

5.1.5 The proposals will see an overall net loss to biodiversity with trading rules not satisfied. Therefore, offsite compensation within the ownership boundary and/or the purchasing of credits is required to demonstrate that the minimum statutory 10% net gain of biodiversity for the scheme meets the mandatory requirement as set out by Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021) and Policy SC 9: Biodiversity and Geodiversity of the adopted Local Plan for Bolsover District (2020).

6 Ecological Management Prescriptions

6.1.1 To implement maximising the potential of habitats within areas of open green space, a Habitat Management and Monitoring Plan (HMMP) should be compiled. The plan will include suitable seed mixes for sown grassland and a native woody species for urban trees with an appropriate management regime. Appendix 3 details each of the target areas for ecological enhancement to guide any landscape proposals.

6.2 Creation of Habitat Within Open Space

Modified Grassland – Poor Condition

6.2.1 Modified grassland will be created at the east of the site and surrounding the new building. This habitat will likely have an increased management regime and managed for amenity rather than ecological purposes. Therefore, a condition score of "Poor" will likely be achieved with three of the condition criteria being met, as outlined within Table 3.

Table 3: Condition Assessment Criteria for "Modified grassland"

GRASSLAND Habitat Type (low distinctiveness)	
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per, please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.
C*	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus agg.* may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.

E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).
F*	Cover of bracken (*Pteridium aquilinum*) is less than 20%.
G*	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).

*indicates target criteria

Urban Trees – Moderate Condition

6.2.2 One small individual **"Urban tree"** is proposed within the created modified grassland east of the site. This will consist of a native species, which is relevant to the local surroundings, and will not be expected to reach a stem diameter of more than 30cm. This individual tree will be oversailing more than 20% of vegetation and therefore is expected to achieve a target condition score of **'**Moderate**'**, with at least three of the condition criteria satisfied as detailed in Table 4 below.

Table 4: Condition Assessment Criteria for 'Individual Trees'

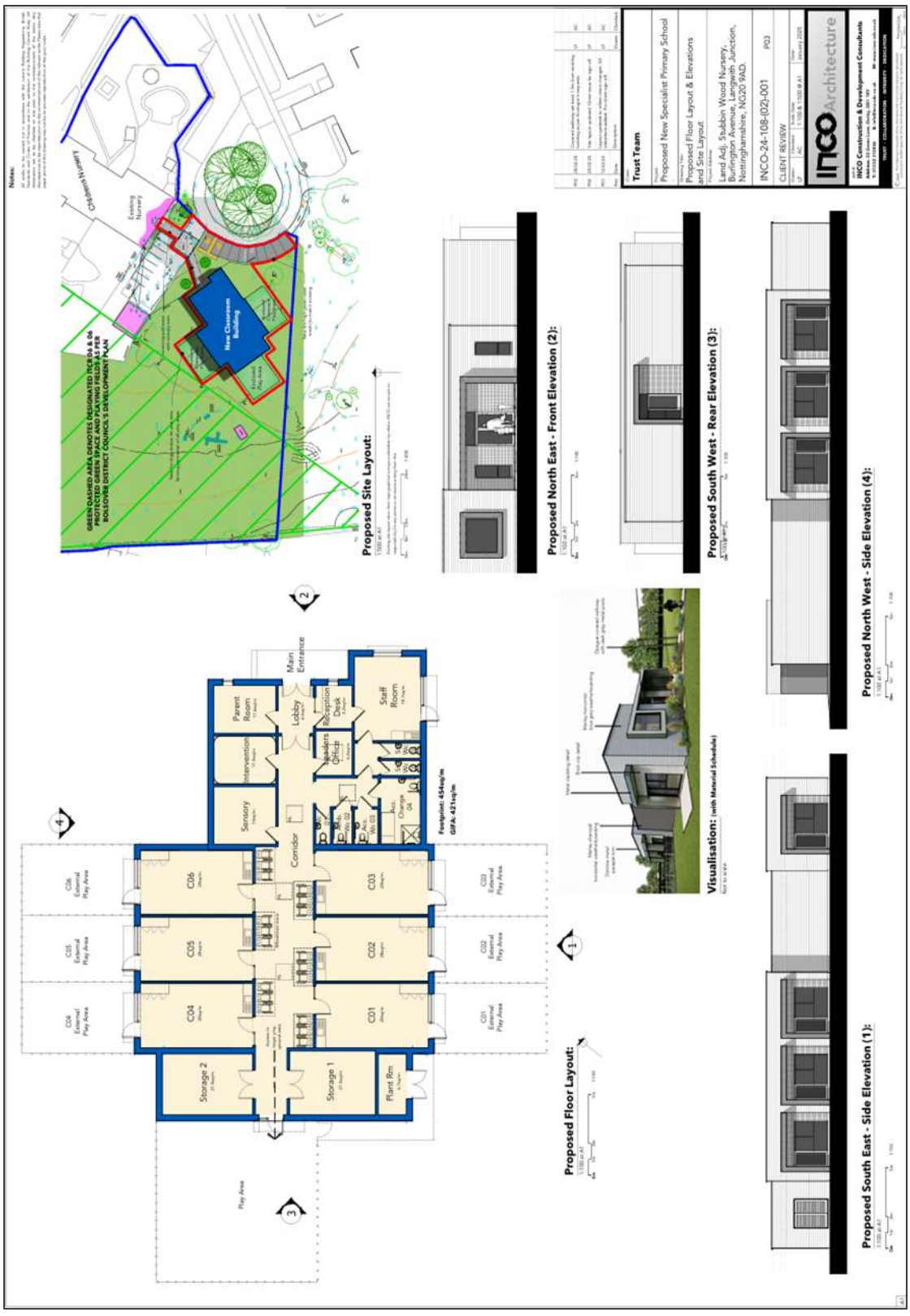
INDIVIDUAL TREES Habitat Type	
A*	The tree is a native species (or at least 70% within the block are native species).
B*	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).
C	The tree is mature (or more than 50% within the block are mature).
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.
F*	More than 20% of the tree canopy area is oversailing vegetation beneath.

*Indicates target criteria

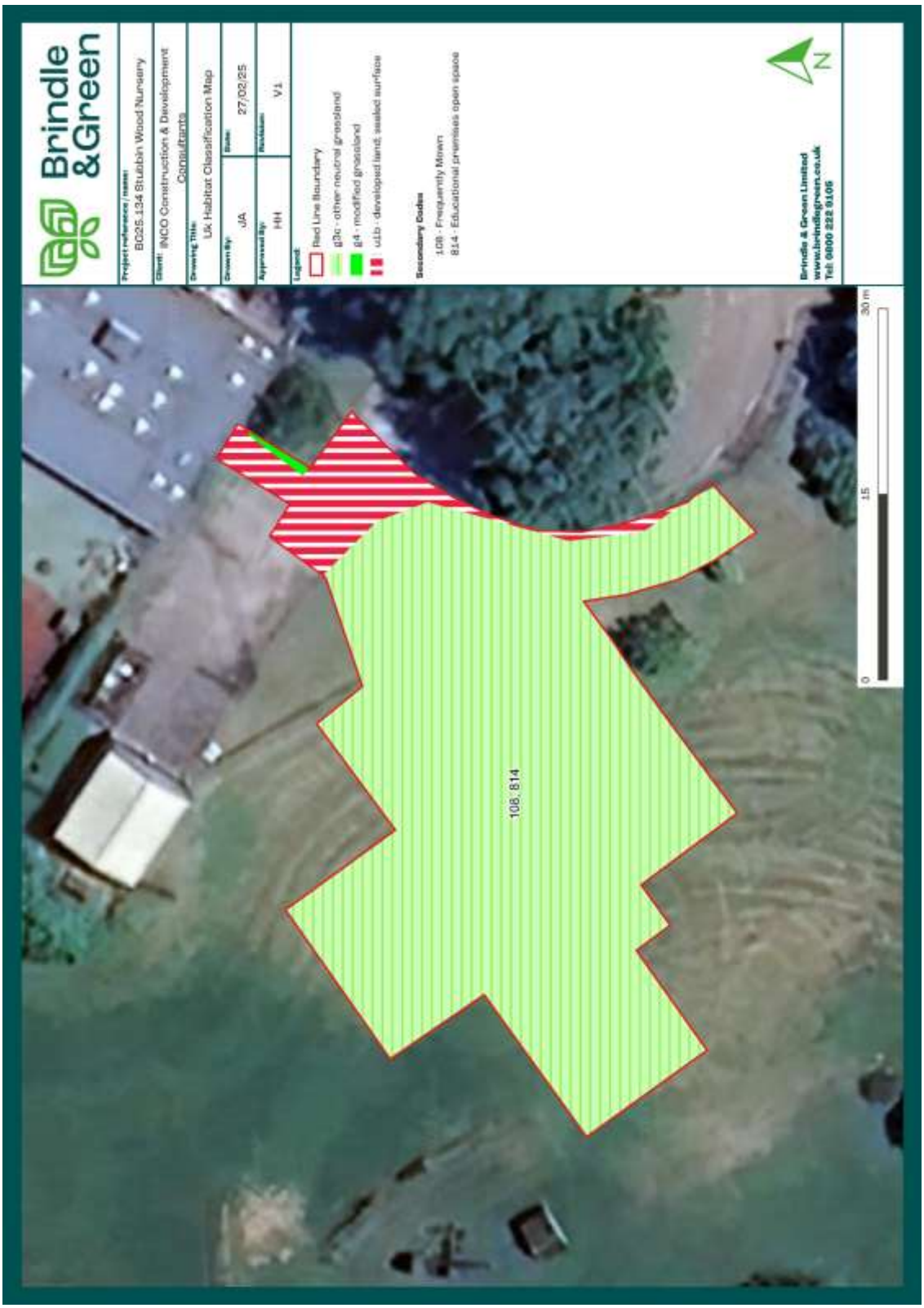
Developed Land, Sealed Surface - Condition Assessment N/A

6.2.3 Areas associated with buildings, access, parking, and roads, material such as brick, mortar, tarmac, concrete, or a similar sealed surface material, will hold no value for biodiversity within the statutory biodiversity metric but are necessary for the proposals. These habitats cannot be condition assessed within the metric calculator.

Appendix 1. Proposed Plans



Appendix 2. Existing Habitats



Appendix 3. Proposed Site Layout

Appendix 4. References

Bolsover District Council (2020), Local Plan for Bolsover District. Bolsover District Council

CIEEM (2019), Biodiversity Net Gain Good Practice Principles For Development.

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