

MKA
ECOLOGY

Ecological Impact Assessment

Land north of Priory School, Hitchin

Site	Land North of Priory School, Hitchin
Project number	103820
Client name / Address	Arte Construction Ltd, 34-35 Berwick St, London, W1F 8RP

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Declaration of compliance

The information which we have provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

MKA Ecology Ltd is a CIEEM Registered Practice. This means that MKA Ecology Ltd are formally recognised for high professional standards, working at the forefront of our profession.



This Ecological Impact Assessment has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of practice for planning and development", CIEEM's 'Guidelines for Ecological Impact Assessment (CIEEM, 2024) and CIEEM's 'Guidelines for Ecological Report Writing' (CIEEM, 2017). A review of this report against CIEEM's EcIA Checklist is provided in Appendix 4.

Validity of data

Unless stated otherwise the information provided within this report is valid for a maximum period of 24 months from the date of surveys. If works at the site have not progressed by this time an updated site visit may be required in order to determine any changes in site composition and ecological constraints.

CONTENTS

1.	EXECUTIVE SUMMARY	4
2.	INTRODUCTION	7
2.1.	Aims and scope of Ecological Impact Assessment	7
2.2.	Site description and context	7
2.3.	Legislation and planning policy	7
2.4.	Author and reviewer	8
3.	METHODOLOGIES	9
3.1.	Scope of the assessment	9
3.2.	Desktop study	10
3.3.	Field surveys and assessments	10
3.4.	Constraints	11
3.5.	Assessment	11
4.	BASELINE CONDITIONS	12
4.1.	Designated sites	12
4.2.	Off-site habitats	12
4.3.	On-site and boundary hedgerows	12
4.4.	Reptiles	12
4.5.	Breeding birds	12
4.6.	Bats	13
4.7.	Badgers	13
4.8.	Hedgehogs	13
5.	DESCRIPTION OF THE PROPOSALS	14
6.	ASSESSMENT OF EFFECTS AND MITIGATION	15
6.1.	Designated sites	15
6.2.	Off-site habitats	15
6.3.	On-site and boundary hedgerows	16
6.4.	Reptiles	17
6.5.	Breeding birds	18
6.6.	Bats	19
6.7.	Badgers	20
6.8.	Hedgehogs	21
6.9.	Summary of assessment, mitigation, enhancement and compensation measures	22

6.10.	Biodiversity Net Gain	24
7.	CONCLUSIONS	26
8.	REFERENCES	28
9.	APPENDICES	29
9.1.	Appendix 1: Pre- and post-development UK Habitat Classification maps of Land north of Priory School, Hitchin	29
9.2.	Appendix 2: Relevant wildlife legislation and planning policy	31
9.3.	Appendix 3: Evaluation and assessment methodology	39
9.4.	Appendix 4: EclA Checklist	42
9.5.	Appendices 5-7: Survey reports	44

1. EXECUTIVE SUMMARY

This Ecological Impact Assessment was commissioned to provide information on the potential impacts of the proposed new development at Land north of Priory School, Hitchin. The suite of ecological surveys that inform this Ecological Impact Assessment were carried out in 2025 and include a Preliminary Ecological Appraisal (MKA Ecology Ltd, 2025a), reptile survey (MKA Ecology Ltd, 2025b) and Biodiversity Net Gain Assessment (MKA Ecology Ltd, 2025c).

The planning application is for a full redevelopment of the Site involving the provision of 50 new residential dwellings, whilst maintaining an ecologically sensitive site boundary.

The ecological surveys conducted in 2025 highlighted a number of potential ecological constraints within the Site. Ecological features that were within the scope of the assessments, with associated mitigation measures where relevant, are as follows (residual effects in bold):

- *Designated sites:* Oughtonhead Common Local Nature Reserve, a statutory designated site valued for its local biodiversity and recreational use, lies adjacent to the north-west of the Site. Suitable alternative natural green space will be provided to the north of the Site. This will provide residents with a place for informal recreation in order to reduce recreational pressures on Oughtonhead Common Local Nature Reserve. **Negligible effect at Local level.**
- *Off-site habitats:* The River Oughton is present within 25m of the Site. Simple prevention measures will be implemented to minimise the risk of pollution events. These measures will be detailed in a Construction Ecological Management Plan and will also serve to avoid impacts upon any protected species which may use the river. **Negligible effect at Local level.**
- *On-site and boundary hedgerows:* The hedgerows along the boundaries of the Site represent important habitat for numerous species and are classified as a Habitat of Principal Importance in England under Section 41 of the NERC Act 2006. Hedgerow H1 will be retained and protected during the proposed works and protection measures will be detailed in a Construction Ecological Management Plan. The establishment of two new species-rich native hedgerows will both directly compensate for the removal of hedgerow H2 and provide additional onsite enhancements. **Minor beneficial effect at Site level (provision of two new species-rich hedgerows, with one existing hedgerow being removed).**
- *Reptiles:* Reptile surveys carried out in 2025 identified that the Site supports a low population of common lizard and that the bund to the west of the Site, containing bramble scrub and long modified grassland habitats, is important for this species. A translocation of common lizards to a suitable receptor site will be undertaken prior to the proposed works. Once the translocation programme has been completed, a supervised destructive search of key areas that may still support reptiles may be required. Full details of the location and preparation works for the receptor site, along with the methodology to be used for the reptile translocation and supervised destructive search, should be contained within a reptile mitigation strategy. The newly created

habitats will provide on-site compensation for the suitable reptile habitat that is lost as a result of the proposed development. Additionally, any off-site habitat creation within a suitable receptor site and/or biodiversity net gain offsetting site, will enhance habitat connectivity for reptiles. **Minor beneficial effect at Local level (increased habitat provision and connectivity in the long-term).**

- *Breeding birds:* The hedgerow, long grassland and scrub present at the Site have the potential to provide suitable nesting habitats. Vegetation clearance will take place outside the bird breeding season (i.e., between September and February inclusive) or a nesting bird check will be required prior to works commencing. These measures will be detailed within a Construction Ecological Management Plan. Habitat creation and the installation of integrated bird boxes will lead to a significant increase in available nesting opportunities across the Site. The habitat creation will be further detailed within a Habitat Management and Monitoring Plan and the bird box specifications and locations will be included within an ecological enhancement scheme. **Minor beneficial effect at Site level (increased nesting opportunities).**
- *Bats:* An ash tree onsite contains a potential roosting feature for individual bats in the form of a partially healed wound hole on its eastern aspect. Precautionary measures regarding this tree will be detailed within a Construction Ecological Management Plan and will include pre-works checks and soft-felling where works are supervised by a licenced bat ecologist. The Site has potential to support foraging and commuting bats. A sensitive lighting scheme will be developed to allow suitable roosting and foraging areas for bats. Habitat creation will provide an improved foraging resource for bats and the installation of integrated bat boxes will provide improved roosting opportunities. The habitat creation will be further detailed within a Habitat Management and Monitoring Plan and the bat box specifications and locations will be included within an ecological enhancement scheme. **Minor beneficial effect at Site level (increased foraging and roosting opportunities).**
- *Badgers:* No evidence of badger or setts were recorded onsite, however, there is suitable habitat available for sett building and foraging within the Site. If a badger sett is found within 30m of the proposed development, all works will stop immediately and advice will be sought. No trenches should be left open overnight; if this is not possible, a method of egress will be provided so that badgers can get out. Any stockpiles of earth created during construction will be covered to ensure they are not colonised by badgers. These measures will be detailed within a Construction Ecological Management Plan. **Negligible effect at Site level.**
- *Hedgehog:* The onsite scrub, hedgerows and dry ditch provide suitable habitat for hedgehog. Vegetation clearance will be undertaken systematically and in a directional manner and holes will be provided at the bottom of each boundary fence to maintain connectivity for hedgehogs between properties. These measures will be detailed within a Construction Ecological Management Plan. **Minor beneficial effect at Site level (increased foraging and sheltering habitat).**

A Biodiversity Net Gain Assessment (MKA Ecology Ltd, 2025c) indicates that, as a result of the proposed development, there will be a net loss of 10.35 habitat units which correlates to a 70.81% loss

in habitat units. For hedgerows there will be a net gain of 0.79 hedgerow units which correlates to a 76.54% gain in hedgerow units. The trading rules for habitats have not been satisfied, due to the loss of other neutral grassland and bramble scrub. In order to reach the requirement for a 10% net gain in habitat units and satisfy the trading rules for medium distinctiveness habitats, further biodiversity units will be generated offsite. The proposed net gain in hedgerow units exceeds the mandatory 10% requirement and trading rules for hedgerows have been satisfied. It should be noted that the predicted net-gain in biodiversity is reliant on the successful restoration and/or creation of habitats and their maintenance for the foreseeable future. A HMMP will be produced for the Site to outline measures for the successful creation and management of habitats for a minimum of 30 years

2. INTRODUCTION

2.1. Aims and scope of Ecological Impact Assessment

In October 2025, MKA Ecology Ltd was commissioned to undertake an Ecological Impact Assessment (EclA) for a development at Land north of Priory School, Hitchin. Within this report this area is referred to as the Site or Land north of Priory School, Hitchin. The proposals comprise the provision of 50 new residential dwellings with associated hardstanding and garden habitats, whilst maintaining an ecologically sensitive site boundary including tree planting and the creation of species-rich grassland and hedgerows. Within this report these proposals are referred to as the Proposed Development.

This report combines the findings and recommendations of the ecology surveys undertaken in 2025 comprising a Preliminary Ecological Appraisal (MKA Ecology Ltd, 2025a), reptile survey (MKA Ecology Ltd, 2025b) and Biodiversity Net Gain Assessment (MKA Ecology Ltd, 2025c).

The aims of this assessment are:

- To establish baseline ecological conditions at the Site;
- To identify and describe all potentially significant ecological effects associated with the proposed development;
- To set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects;
- To identify how mitigation measures will be secured;
- To provide an assessment of the significance of any residual effects;
- To identify appropriate enhancement measures; and
- To set out any requirements for post-construction monitoring.

2.2. Site description and context

The Site is located in the north-east of the town of Hitchin (central grid reference TL 17918 30862) and is under the authority of North Hertfordshire District Council. It currently comprises a field of other neutral grassland, bordered on the south, east and north by hedgerow and a bund with scrub and modified grassland along the western boundary. The Site encompasses an area of 1.7ha. The current habitats onsite are presented in a UK Habitat Classification map in Appendix 1.

2.3. Legislation and planning policy

This Ecological Impact Assessment has been made with reference to relevant wildlife legislation and planning policy. Relevant legislation considered within the scope of this document includes the following:

- The Wildlife and Countryside Act 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Countryside and Rights of Way (CRoW) Act 2000;
- Wild Mammals (Protection) Act 1996.

In addition to obligations under wildlife legislation, the revised National Planning Policy Framework (NPPF) updated on 7th February 2025 requires planning decisions to contribute to conserving and enhancing the local environment.

North Hertfordshire District Council has produced an adopted Local Plan (North Hertfordshire District Council, 2022) which covers a number of policies relating to biodiversity and habitat conservation, including:

- Policy SP1: Sustainable development in North Hertfordshire
- Policy SP9: Design and Sustainability
- Policy SP12: Green infrastructure, landscape and biodiversity

Where relevant these are discussed in further detail in Section 5. Relevant excerpts from each policy are set out in more detail in Appendix 2.

2.4. Author and reviewer

This report has been prepared by Alfie Bunting, Consultant Ecologist at MKA Ecology Ltd. Alfie has five years' professional ecological experience and holds a Level 1 great crested newt licence from Natural England. The report has been reviewed by Andy Symes ACIEEM, Senior Ecologist at MKA Ecology Ltd. Andy has over seven years' professional ecological experience.

3. METHODOLOGIES

3.1. Scope of the assessment

This Ecological Impact Assessment has been undertaken in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in UK and Ireland (CIEEM, 2024).

Following the results of a Preliminary Ecological Appraisal (MKA Ecology Ltd, 2025a), reptile survey (MKA Ecology Ltd, 2025b) and Biodiversity Net Gain Assessment (MKA Ecology Ltd, 2025c), the scope of this assessment is largely based on the Site's value within the local area.

Protected and notable habitats, species or species groups which were scoped out at the Preliminary Ecological Appraisal stage (see Appendix 5) are listed below and are not considered further within the scope of this assessment:

- Plants and fungi: The Site is of negligible ecological value in terms of plant species.
- Invertebrates: The Site does not contain suitable habitat to support protected species, or important assemblages of invertebrates.
- Amphibians: The Site is isolated from suitable waterbodies, with none present within 500m and an absence of recent records in the area.

It is considered that the ecological features to which the development is expected to impact upon are those pertaining to:

- Designated sites
- Off-site habitats
- On-site and boundary hedgerows
- Reptiles
- Breeding birds
- Bats
- Badgers
- Hedgehogs

The assessment therefore only considers these groups from this point onwards. Full results of the surveys which led to the above scope are provided in Appendices 5-7.

3.2. Desktop study

A data search was commissioned in April 2025, with the study area being defined as Land north of Priory School, Hitchin and a 2km radius. The organisations listed in Table 1 were contacted with regard to biodiversity data. The details of the original desktop study are provided in the Preliminary Ecological Appraisal (MKA Ecology Ltd, 2025a; Appendix 5).

Table 1: Organisations providing biodiversity data

Organisation	Data collected	Date collected
Multi-agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk	Information on local, national and international statutory protected areas.	18/04/2025
Hertfordshire Environmental Record Centre (HERC)	Information on protected and notable sites and species within 2km of the Site (TL 17918 30862).	02/04/2025
Ordnance Survey maps and aerial photography	Information on habitats and connectivity between the Site and the surrounding landscape	02/04/2025
Plantlife Important Plant Areas Buglife Important Invertebrate Areas	Information on important areas for flora and fauna (TL 17918 30862).	02/04/2025
Natural England GCN Impact Risk Zone Map https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::gcn-risk-zones-cambridgeshire/explore	Information on the Natural England great crested newt impact risk zones for District Level Licensing.	02/04/2024

3.3. Field surveys and assessments

The following field surveys were conducted:

- **Preliminary Ecological Appraisal (MKA Ecology Ltd, 2025a; Appendix 5):** The survey was conducted in April 2025 and included a desktop study, UK Habitat Classification and protected species scoping survey.
- **Reptile survey (MKA Ecology Ltd, 2025b; Appendix 6):** A presence/likely absence survey for reptiles was undertaken in accordance with survey guidance from Froglife (1999) and Gent & Gibson (2003).
- **Biodiversity Net Gain Assessment (MKA Ecology Ltd, 2025c; Appendix 7):** Undertaken using the Defra Statutory Biodiversity Metric (Defra, 2024) to detail how the biodiversity enhancements in the Proposed Development will lead to an overall benefit to biodiversity.

3.4. Constraints

Constraints relating to each survey are presented in the individual survey reports (Appendices 5-7). None of these constraints were considered significant and the survey efforts provided a good understanding of the ecological conditions at the site.

3.5. Assessment

Ecological features are identified, evaluated and assessed with reference to the CIEEM Guidelines for Ecological Impact Assessment (CIEEM, 2024). A detailed methodology is available in Appendix 3 and report specific methodologies in each relevant appendix.

4. BASELINE CONDITIONS

This section describes the ecological baseline and assesses the importance of ecological features relevant to the assessment for the designated sites, habitats and species recorded in this area. It includes summarised field survey data and relevant existing information gathered from the key documents relating to the Site concerning species groups and ecological features scoped in to this assessment.

4.1. Designated sites

Oughtonhead Common Local Nature Reserve (LNR), a non-statutory designated site valued for its local biodiversity and recreational use, lies adjacent to the north-west of the Site. This designated site is valued at a **Local** level.

4.2. Off-site habitats

The River Oughton is located 25m north of the Site at its closest point. As well as having value as a habitat, the river also has potential to support protected species such as fish and water vole. The riverine habitats are valued at a **Local** level.

4.3. On-site and boundary hedgerows

The hedgerows along the boundaries of the Site represent important habitat for numerous species and are classified as a Habitat of Principal Importance in England under Section 41 of the NERC Act 2006. The on-site and boundary hedgerows are valued at the **Site** level.

4.4. Reptiles

The habitat present at the Site is suitable for reptiles, in particular the habitats to the west of the Site with a bund and a mixture of scrub and modified grassland with a longer sward. Furthermore, Oughtonhead Common is well connected to the Site, where there are historical records of grass snake. Reptile surveys undertaken by MKA Ecology Ltd in 2025 recorded a peak count of 10 common lizards and identified the bund to the west of the site containing bramble scrub and long modified grassland habitats as an important for common lizard. (MKA Ecology Ltd, 2025b). It was concluded that the Site supports a low population of common lizard which is considered to be valued at the **Site** level.

4.5. Breeding birds

There is habitat present at the Site that holds the potential to support breeding birds, such as the trees, hedgerow, long grassland and scrub. Consequently, there is considered to be a high potential for a

small number of common nesting birds to be present. The risk of a significant assemblage or any specially protected bird species being present is considered to be low, although the large amount of hedgerow provides potential breeding habitat for species such as house sparrow, a BoCC red status species and Section 41 (NERC Act 2006) Species of Principal Importance. The breeding bird assemblage is considered to be valued at the **Site** level.

4.6. Bats

An ash tree (T013; Greenwillows Associates, 2025) within hedgerow H2 contains a potential roosting feature for individual bats in the form of a partially healed wound hole on its eastern aspect (TN1, Appendix 1). Additionally, the considerable length of unlit hedgerow at the Site has potential to provide an important linear feature to be used by bats for commuting and foraging. Overall, the risk of roosting bats being present is considered to be low and the likelihood of foraging or commuting bats is moderate. This is valued at the **Site** level.

4.7. Badgers

Although no signs of badger were observed at the Site, suitable habitat is present for both sett-building (the bund to the west and dry ditch to the north) and foraging (grassland and hedgerow). There is a low risk of this species being present at the Site at the time of the proposed works and this is valued at the **Site** level.

4.8. Hedgehogs

The onsite scrub, hedgerows and dry ditch are suitable to support hedgehog and there is a moderate risk of this species being present onsite at the time of the proposed works. This is valued at the **Site** level.

5. DESCRIPTION OF THE PROPOSALS

The planning application is for a full redevelopment of the 1.7ha Site involving the provision of 50 new residential dwellings with associated hardstanding and garden habitats, whilst maintaining an ecologically sensitive site boundary including tree planting and the creation of species-rich grassland and hedgerows. The proposed area habitats include developed land, modified grassland, other neutral grassland, introduced shrub, sustainable drainage system (SuDS) planting, vegetated garden and individual trees. With regards to hedgerows, the proposals include retaining the native hedgerow on the southern boundary (H1) and the native hedgerow adjacent to the eastern boundary, removing the majority of the native hedgerow with trees to the north of the western boundary (H2) and creating two species-rich native hedgerows to the west and south-west of the Site. The proposed post-development habitats are presented in Appendix 1. The current landscaping plans lead to a net loss of 70.81% in habitat units and a net gain of 76.54% in hedgerow units as shown within the Biodiversity Net Gain Assessment undertaken for the proposed development (MKA Ecology Ltd, 2025c).

6. ASSESSMENT OF EFFECTS AND MITIGATION

The following assessment is based on combined information from the suite of ecological surveys undertaken by MKA Ecology in 2025. An assessment of the significance of residual effects is provided only where the ecological feature or species is confirmed to be present onsite.

6.1. Designated sites

Potential impacts

Oughtonhead Common LNR, a non-statutory designated site valued for its local biodiversity and recreational use, lies adjacent to the north-west of the Site. Given its proximity, there is some potential for indirect impacts through increased visitor pressure, such as trampling, disturbance to wildlife, or degradation of informal paths. However, the scale of the development is modest, and these impacts are expected to be limited. In the absence of mitigation there will likely be a minor negative effect at a local level.

Mitigation measures

The provision of on-site greenspace and signage will reduce the visitor pressure on Oughtonhead Common LNR. Suitable alternative natural green space (SANGS) will be provided as part of the new development to the north of the Site to provide residents with a place for informal recreation in order to reduce recreational pressures on Oughtonhead Common LNR. The SANGS will be planted with a range of native species including species-rich other neutral grassland, SuDS planting and native individual trees. It is recommended that potential impacts and mitigation measures regarding Oughtonhead Common LNR should be discussed with relevant stakeholders.

Significance of residual effects

Even in the presence of mitigation there will be a minor increase in visitor pressure on Oughtonhead Common LNR. However, this is not considered to be significant because the number of new residential dwellings is modest and Oughtonhead Common LNR is designed with visitor pressure in mind, with appropriate signage and surfaced walking areas.

The overall effect of the project on designated sites will be **negligible** at a **local** level.

6.2. Off-site habitats

Potential impacts

Given the proximity of the Site to the River Oughton (25m at its closest point) there is potential risk of contaminants from the Site reaching this river resulting in downstream impacts. This includes both contamination during construction and surface water run-off contamination during the operational

phase. In the absence of mitigation there is potential for there to be a major negative effect at a local level.

Mitigation measures

During construction a range of simple steps will be taken to minimise the risk of pollution events, such as locating the storage of fuel, chemicals, machinery, car parking and material stockpiles away from the river and any exposed soil. Chemicals and fuels should be stored on an impermeable surface and diversion drains and bunds can be used to direct run-off away from open water and exposed soils. More detail of potential measures to minimise the risk of contaminated surface water run-off during construction will be provided in a Construction Ecological Management Plan (CEcMP). The CEcMP will also detail standard mitigation measures to minimise dust, noise and lighting upon the river and designated site to the north and north-west. These measures would serve to avoid impacts upon any protected species which may use the river, such as fish or water vole, in the event they are present.

Significance of residual effects

No residual negative effects to off-site habitats are anticipated to occur as a result of the proposed works, providing that the above mitigation measures are implemented. The overall effect of the project on off-site habitats will be **negligible** at a **local** level.

6.3. On-site and boundary hedgerows

Potential impacts

The hedgerows along the boundaries of the Site represent important habitat for numerous species and are classified as a Habitat of Principal Importance in England under Section 41 of the NERC Act 2006. The proposals include retaining the native hedgerow on the southern boundary (H1) and the native hedgerow adjacent to the eastern boundary. The majority of the hedgerow with trees to the north of the western boundary (H2) will be removed to facilitate the proposed works. Unmitigated impacts on the retained boundary hedgerows and a lack of compensation for the loss of hedgerow H2 will likely result in a moderate negative effect at the site level.

Mitigation measures

Where possible, hedgerows will be retained and protected during the proposed works. Protection measures will be detailed in the CEcMP and include the installation of Heras fencing with an appropriate buffer zone.

Compensation/enhancement measures

The removal of hedgerow H2 will be directly compensated by the establishment of a new species-rich native hedgerow. An additional species-rich native hedgerow will also be created to provide further enhancements. Detail regarding the establishment and management of post-development habitats will be provided in a Habitat Management and Monitoring Plan (HMMP).

Significance of residual effects

No residual negative effects to the on-site and boundary hedgerows are anticipated to occur as a result of the proposed works. The biodiversity net gain calculations indicate a 76.54% net gain in hedgerow units. The overall effect of the project on the on-site and boundary hedgerows will be a **permanent minor benefit** at the **Site level**.

6.4. Reptiles

Potential impacts

All UK reptile species are protected under Schedule 5 of the Wildlife & Countryside Act 1981, and are listed as Species of Principal Importance under the NERC Act 2006. It is an offence to intentionally kill or injure individuals of these species. Reptile surveys carried out in 2025 identified that the Site supports a low population of common lizard and that the bund to the west of the site, containing bramble scrub and tall modified grassland habitats, is important for this species. Construction works carried out without sufficient mitigation risk killing or injuring common lizards. Additionally, changes to the bund, bramble scrub and tall modified grassland habitats to the west of the site has the potential to cause permanent adverse impacts to the common lizard population present onsite.

Mitigation measures

Mitigation for reptiles is most effectively and economically achieved when it is possible to retain areas of suitable reptile habitat in situ. The native hedgerow on the southern boundary (H1) and the native hedgerow adjacent to the eastern boundary provide suitable habitat for common lizard and will be retained and protected during the proposed works. The proposed development includes grassland habitat with a long sward suitable to support reptiles, with other neutral grassland planting to the north of the Site and modified grassland and SuDS planting to the west of the Site, where the majority of the common lizards found during the reptile surveys were located. However, these habitats are not to be retained and instead will be planted following the end of the construction phase. Therefore, a translocation of common lizards should occur prior to the proposed works, in which common lizards are relocated to a suitable receptor site that has been identified and agreed with the Local Authority in advance of the mitigation works.

In order to ensure that a receptor site is suitable to receive common lizards, some habitat enhancement works (including scrub removal, grassland planting and installation of artificial reptile hibernacula) should be undertaken prior to the commencement of the translocation programme. The receptor site should ideally be local to the donor site, and not be subject to planning or other ecological threats in the foreseeable future. Full details of the location and preparation works for the receptor site, along with the methodology to be used for the reptile translocation, should be contained within a reptile mitigation strategy document to be submitted to and approved by the Local Planning Authority.

Once the translocation programme has been completed, a destructive search of key areas that may still support reptiles may be necessary under an ecological watching brief. These measures will also be included within the reptile mitigation strategy.

Compensation/enhancement measures

The newly created other neutral grassland, modified grassland, SuDS planting and hedgerows will provide on-site compensation for the suitable reptile habitat that is lost as a result of the proposed development. Additionally, any off-site habitat creation within a suitable receptor site and/or biodiversity net gain offsetting site, will enhance habitat connectivity for reptiles.

Significance of residual effects

No residual negative effects to reptiles are anticipated to occur as a result of the proposed works. The proposed works will temporarily remove all suitable habitat for reptiles from the Site. The new habitats provided both on and off-site will retain habitat suitability for reptiles and provide an increase in connectivity between other suitable habitat in the local vicinity. The overall effect of the project on reptiles will be a **temporary minor negative impact** on the **site** level followed by a **permanent minor benefit** at a **local** level.

6.5. Breeding birds

Potential impacts

All wild birds, their active nests and eggs are protected under The Wildlife and Countryside Act 1981, which makes it an offence to deliberately, or recklessly, kill or injure any wild bird or damage or destroy any active birds' nest or eggs. Suitable nesting habitat is available in the form of the on-site trees, hedgerow, long grassland and scrub. Vegetation clearance could lead to the destruction of nests if conducted during the bird breeding season (March to August inclusive). In the absence of mitigation there will likely be a major negative effect at a site level.

Mitigation measures

Any vegetation clearance work will be conducted outside of the breeding bird season, (**i.e., to take place between September and February inclusive**). Where vegetation works are required during the breeding bird season these will only proceed following a nesting bird check undertaken by a suitably qualified ornithologist. Any active birds' nest identified during this check must be protected from harm until the nesting attempt is complete. This will require a buffer to be left around the nest, the size of which will depend upon the species involved (as a general rule, this will be 10m in all directions around the nest). Any buffers established as a result of the initial nesting bird check must be subjected to a second check after the original nesting attempt is completed, before such areas can be removed during the breeding bird season. These measures will be included in the CEcMP and should be secured through a planning condition.

Compensation/enhancement measures

There will be a net gain in nesting habitat due to the creation of further habitats at the Site that can be used by breeding birds, such as additional tree and hedgerow planting.

In order to provide enhanced nesting opportunities for breeding birds, integrated bird boxes will be incorporated into the design scheme. A minimum of 14 bird boxes will be installed, to include provision of swift *Apus apus* boxes and generalist bird boxes. Bird box specifications and locations will be agreed and included within an ecological enhancement scheme prior to commencement of works. These measures should be secured through a planning condition.

Significance of residual effects

There may be a time lag between the loss of habitat suitable for breeding birds and the creation of new habitats (hedgerow and trees). This is due to the time that it will take for these habitats to become properly established. However, this is not considered to be significant because there will still be feeding and nesting opportunities available during this time within the retained hedgerow and adjacent woodland and hedgerow habitats. The bird boxes installed at the Site will also provide immediate nesting opportunities for target species. The overall effect of the project will be a **permanent minor benefit** at a **Site** level.

6.6. Bats

Potential impacts

All bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of Conservation of Habitats and Species Regulations 2017. Some bat species are also Species of Principal Importance listed on Section 41 of the NERC Act 2006. It is an offence to deliberately disturb a bat, damage or destroy a bat roost, intentionally or recklessly disturb a bat at a roost, or obstruct access to a roost.

An ash tree (T013; Greenwillows Associates, 2025) within hedgerow H2 contains a potential roosting feature for individual bats in the form of a partially healed wound hole on its eastern aspect (TN1, Appendix 1). If this tree is removed without appropriate mitigation, there is a risk that individual bats may be killed, or injured, and that a bat roost will be damaged or destroyed without appropriate.

The considerable lengths of unlit hedgerow on and adjacent to the Site has potential to provide an important linear feature to be used by bats for commuting and foraging. Additionally, the woodland habitat adjacent to the east of the Site may support roosting bats. Bat roosting behaviour, commuting and foraging activity can be dramatically affected by artificial lighting (Institute of Lighting Professionals, 2023).

In the absence of mitigation there will likely be a major negative effect at a site level.

Mitigation measures

The ash tree containing a potential roosting feature for individual bats (TN1, Appendix 1) will be subject to precautionary mitigation measures in order to avoid harm to any bats or impacts to roosts that maybe present at the time of the works. Such measures will be detailed within the CECMP and include pre-works checks by the ecologist and soft-felling where works are supervised by a licenced bat ecologist. Tree sections containing roosting features should be left on the ground overnight to allow potential roosting bats to disperse.

The proposed exterior lighting on the new buildings and access roads will be designed and managed to ensure that the area remains suitable for foraging bats. A sensitive lighting strategy will be developed to allow suitable roosting and foraging areas for bats and following the guidance set out by the Institute of Lighting Professionals (2023). The lighting scheme should minimise light spill onto all boundary vegetation, particularly the vegetation along the eastern and northern boundaries. This should be secured through a planning condition.

Compensation/enhancement measures

To provide improved provisions for roosting bats, integrated bat boxes will be included within the design scheme. A minimum of 14 bat boxes will be installed. Bat box specifications and locations will be agreed and included within an ecological enhancement scheme prior to commencement of works. These measures should be secured through a planning condition.

Significance of residual effects

No residual negative effects to bats are anticipated to occur as a result of the proposed works. The new hedgerows and trees will provide an improved foraging resource for bats and the bat boxes will provide improved roosting opportunities. The overall effect of the project will be a **permanent minor benefit** at a **Site** level.

6.7. Badgers

Potential impacts

Badger setts and badgers occupying a sett are protected under the Protection of Badgers Act 1992. No setts were found on-site, however there is suitable habitat available for sett building and foraging within the Site.

If a sett is created onsite prior to or during the proposed works then, in the absence of mitigation, there will likely be a major negative effect at a site level.

Mitigation measures

If a badger sett is found within 30m of the construction footprint of the proposed development, all works will stop immediately and advice will be sought from MKA Ecology Ltd. Simple measures to ensure that badgers are not harmed during the construction phase of the project will also be implemented including:

- No trenches should be left open overnight, if this is not possible, a method of egress will be provided so that badgers can get out;
- Any stock piles of earth created during construction will be covered if they are to be left for any length of time to ensure they are not colonised by badgers.

These practices should be outlined in the CEcMP.

Significance of residual effects

No residual negative effects to badgers are anticipated to occur as a result of the proposed works. The overall effect of the project on badgers will be **negligible** at the **Site** level.

6.8. Hedgehogs

Potential impacts

The onsite scrub, hedgerows and dry ditch are suitable to support hedgehogs. If vegetation clearance is carried out without due care, then there is a risk of injuring or killing individuals.

The installation of boundary fences between gardens can impact on hedgehogs through loss of habitat connectivity.

In the absence of mitigation there will likely be a major negative effect at a site level.

Mitigation measures

Vegetation clearance will be undertaken systematically with vegetation cleared in a directional manner from the inside of the site outwards enabling any hedgehogs present to disperse from the Site. Regular checks for these species should be made throughout the duration of the vegetation clearance. These measures will be detailed in the CEcMP.

At least one 13cm x 13cm hole will be installed at the bottom of each boundary fence (with a focus on fences separating residential gardens, and excluding fences adjacent to roads), in order to maintain connectivity for hedgehogs between properties. These will be accompanied with appropriate signage indicating their purpose and stipulating that they should remain open.

Significance of residual effects

No residual negative effects to hedgehogs are anticipated to occur as a result of the proposed works. The new hedgerow and garden habitats will increase the suitability of the Site for this species.

The overall effect of the project will be a **permanent minor benefit** at a **Site** level.

6.9. Summary of assessment, mitigation, enhancement and compensation measures

Table 2 below summarises the ecological features, impacts, mitigation measures and residual impacts. The table also shows how mitigation, compensation and enhancements will be secured.

Table 2: Summary of mitigation and compensation measures for Land north of Priory School, Hitchin

Ecological feature	Significance of residual effect	Mitigation measures	Secured by	Compensation and/or enhancement measures	Secured by
Designated sites	Negligible effect at a local level.	Provision of suitable alternative natural green space.	Planning condition	N/A	N/A
Off-site habitats	Negligible effect at a local level.	Measures to reduce the risk of pollution events.	CEcMP	N/A	N/A
On-site and boundary hedgerows	Permanent minor benefit at the Site level.	Where possible, hedgerows will be retained and protected during the proposed works.	CEcMP	Provision of two new species-rich hedgerows.	HMMP
Reptiles	Temporary minor negative impact on the Site level and a permanent minor benefit at a local level.	Translocation of common lizards to a suitable receptor site prior to the proposed works and a destructive search of key areas under ecological supervision.	Reptile mitigation strategy, CEcMP	Provision of suitable on- and off-site habitats.	Reptile mitigation strategy, HMMP
Breeding birds	Permanent minor benefit at the Site level.	Vegetation clearance to avoid nesting bird season, or nesting bird checks.	CEcMP	Provision of bird boxes and increase in suitable habitat.	Planning condition, HMMP

Ecological feature	Significance of residual effect	Mitigation measures	Secured by	Compensation and/or enhancement measures	Secured by
Bats	Permanent minor benefit at the Site level.	Proposed exterior lighting is designed and managed appropriately. Soft-felling of ash tree (TN1) under ecological supervision.	Planning condition, CEcMP	Provision of bird boxes and increase in suitable habitat.	Planning condition, HMMP
Badgers	Negligible effect at the Site level.	Works will stop immediately and ecological advice sought if a sett is found within 30m of the Site. Simple measures implemented to ensure badgers are not harmed during the construction phase.	CEcMP	N/A	N/A
Hedgehog	Permanent minor benefit at the Site level.	Vegetation clearance will be undertaken systematically in a directional manner with regular checks for these species. Holes will be installed at the bottom of each boundary fence to maintain connectivity for hedgehogs.	CEcMP	N/A	N/A

6.10. Biodiversity Net Gain

The BNG assessment calculated that there will be a net loss of 10.35 habitat units and a net gain of 0.79 hedgerow units at the Site as a result of the Proposed Development (MKA Ecology Ltd, 2025c). This equates to percentage net gains of -70.81% in habitat units and 76.54% in hedgerow units.

The proposed development will result in a 70.81% net loss in habitat units which is considerably less than the mandatory 10% net gain. In order to reach the 10% requirement, further habitat biodiversity units will be generated offsite. A total of 11.81 units is required to reach the mandatory 10% requirement. A suitable receptor site will be identified, registered with the Natural England Biodiversity Gain Sites Register and secured through a legal agreement, such as Section 106 agreement, to ensure the biodiversity gains are delivered and maintained.

The off-site units should not only deliver on the 10% target, but also result in the trading rules being met. Although a total of 11.81 units are required to reach the 10% requirement, more units than this will be required in order to pass trading rules. In order to pass the trading rules, a total of 12.17 units are required, of which there must be 11.99 medium distinctiveness grassland units and 0.18 medium distinctiveness scrub (heathland and shrub broad habitat type) units. Alternatively, high or very high distinctiveness habitats could be used instead of grassland or scrub.

The procurement of the units required to reach the 10% requirement and pass trading rules should be required as a condition of planning approval for the proposed development.

The proposed net gain in hedgerow units exceeds the mandatory 10% requirement and trading rules for hedgerows have been satisfied. Therefore, no further offsetting is required for hedgerows at the Site.

The proposed post-development area habitats at the Site include buildings, hardstanding, vegetated garden, introduced shrub, sustainable drainage system (SuDS) planting, modified grassland, other neutral grassland and 64 individual urban trees. With regards to hedgerows, the proposals include retaining the native hedgerow (H1) and planting three new species-rich native hedgerows. The new other neutral grassland, urban trees and species-rich native hedgerows produce the largest numbers of biodiversity units.

It should be noted that the predicted net-gain in biodiversity is reliant on the successful restoration and/or creation of habitats and their maintenance for the foreseeable future. It is critical that habitats and hedgerows onsite reach the proposed target conditions/the proposed interventions are successfully implemented. This will require careful consideration during both the planning and construction phase. It is particularly important that the other neutral grassland, individual urban trees and species-rich native hedgerows reach target structure and condition.

A Habitat Management and Monitoring Plan (HMMP) will be produced for the Site. This will outline measures for the successful creation and management of habitats for a minimum of 30 years to ensure the target conditions for each habitat type is reached as outlined in the biodiversity net gain assessment (MKA Ecology Ltd, 2025c). This should be secured through a planning condition.

7. CONCLUSIONS

The Site comprises a field of other neutral grassland, bordered on the south, east and north by hedgerow, and a bund with scrub and modified grassland along the western boundary.

The Proposed Development involves the provision of 50 new residential dwellings with associated hardstanding and garden habitats, whilst maintaining an ecologically sensitive site boundary including tree planting and the creation of species-rich grassland and hedgerows.

Potential impacts to designated sites will be mitigated for by providing suitable alternative natural green space to the north of the Site. This will provide residents with a place for informal recreation in order to reduce recreational pressures on Oughtonhead Common LNR.

Potential impacts to offsite habitats, such as the nearby River Oughton, will be mitigated for by implementing a range of simple prevention measures to minimise the risk of pollution events. These measures will be detailed in a CEcMP and will also serve to avoid impacts upon any protected species which may use the river.

Potential impacts to the on-site and boundary hedgerows will be mitigated for by retaining and protecting hedgerows where possible. Protection measures will be detailed in the CEcMP. The establishment of two new species-rich native hedgerows will both directly compensate for the removal of hedgerow H2 and provide additional onsite enhancement. Detail regarding the establishment and management of post-development habitats will be provided in a HMMP.

Potential impacts to reptiles will be mitigated for by carrying out a translocation of common lizards to a suitable receptor site prior to the proposed works. Once the translocation programme has been completed, a supervised destructive search of key areas that may still support reptiles may be required. Full details of the location and preparation works for the receptor site, along with the methodology to be used for the reptile translocation and supervised destructive search, should be contained within a reptile mitigation strategy. The newly created habitats will provide on-site compensation for the suitable reptile habitat that is lost as a result of the proposed development. Additionally, any off-site habitat creation within a suitable receptor site and/or biodiversity net gain offsetting site, will enhance habitat connectivity for reptiles.

Potential impacts to active birds' nests will be mitigated for by carrying out any vegetation clearance outside of the breeding season. Alternatively, a nesting bird check undertaken by a suitably qualified ornithologist will be required. A CEcMP will be developed to ensure that works to vegetation are carried out in a manner that will not directly impact actively breeding birds. Habitat creation and the installation of integrated bird boxes will lead to a significant increase in available nesting opportunities across the

Site. The habitat creation will be further detailed within the HMMP and the bird box specifications and locations will be included within an ecological enhancement scheme.

Precautionary mitigation measures will be detailed in the CEcMP in order to mitigate for potential impacts to roosting bats. Such measures will include pre-works checks and soft-felling where works are supervised by a licenced bat ecologist. Potential impacts to foraging and commuting bats will be mitigated by designing and managing any proposed exterior lighting in such a way that the area remains suitable for bats. A sensitive lighting strategy will be developed to allow suitable roosting and foraging areas for bats. Habitat creation will provide an improved foraging resource for bats, and the installation of integrated bat boxes will provide improved roosting opportunities. The habitat creation will be further detailed within the HMMP and the bat box specifications and locations will be included within an ecological enhancement scheme.

Potential impacts to badgers will be mitigated by: covering trenches overnight or providing a method of egress; covering stockpiles of earth if they are to be left for any length of time; and stopping work immediately and seeking advice if a badger or badger sett is discovered within or adjacent to the Site.

Potential impacts to hedgehogs will be mitigated by carrying out vegetation clearance systematically and in a directional manner; and by providing holes at the bottom of each boundary fence to maintain connectivity for hedgehogs between properties. These measures will be detailed within the CEcMP.

The CEcMP, HMMP, reptile mitigation strategy, ecological enhancement scheme and sensitive lighting strategy should all be secured through a planning condition.

There will be a net loss of 10.35 habitat units and a net gain of 0.79 hedgerow units at the Site as a result of the Proposed Development. This equates to a 70.81% loss in habitat units and a 76.54% gain in hedgerow units. The trading rules for habitats have not been satisfied, due to the loss of other neutral grassland and bramble scrub. In order to reach the requirement for a 10% net gain in habitat units and satisfy the trading rules for medium distinctiveness habitats, further biodiversity units will be generated offsite. The proposed net gain in hedgerow units exceeds the mandatory 10% requirement and trading rules for hedgerows have been satisfied. It should be noted that the predicted net-gain in biodiversity is reliant on the successful restoration and/or creation of habitats and their maintenance for the foreseeable future. The HMMP that will be produced for the Site will outline measures for the successful creation and management of habitats for a minimum of 30 years.

Overall, for the species discussed in this report, the Proposed Development is anticipated to have a minor beneficial impact at a Site level. Once the offsite units have been secured, the development will deliver at least a 10% net gain in biodiversity.

8. REFERENCES

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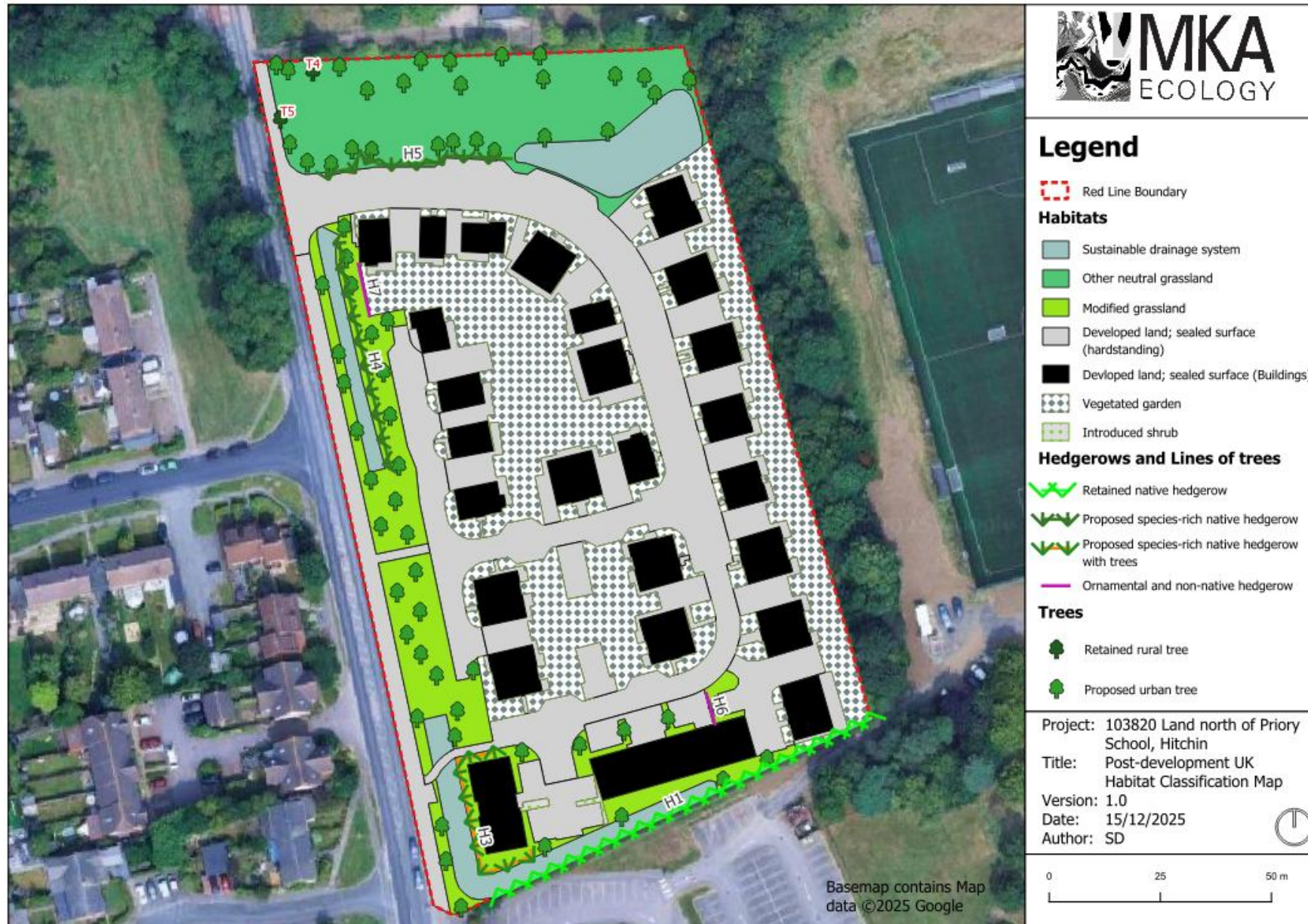
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9. APPENDICES

9.1. Appendix 1: Pre- and post-development UK Habitat Classification maps of Land north of Priory School, Hitchin





9.2. Appendix 2: Relevant wildlife legislation and planning policy

9.2.1. National Legislation and planning policy

Please note that the following is not an exhaustive list, and is solely intended to cover the most relevant legislation pertaining to species commonly associated with development sites.

Subject	Legislation (England)	Relevant prohibited actions
Amphibians		
Great crested newt <i>Triturus cristatus</i> Natterjack toad <i>Epidalea calamita</i>	Schedule 2 of Conservation of Habitats and Species Regulations 2017 (as amended)	- Deliberately capture or kill, or intentionally injure; - Deliberately disturb or recklessly disturb them in a place used for shelter or protection; - Damage or destroy a breeding site or resting place; - Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and - Possess an individual, or any part of it, unless acquired lawfully.
	Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	
Reptiles		
Common lizard <i>Zootoca vivipara</i> Adder <i>Vipera berus</i> Slow-worm <i>Anguis fragilis</i> Grass snake <i>Natrix helvetica</i>	Part of Sub-section 9(1) of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	Intentionally kill or injure individuals of these species (Section 9(1)).

Subject	Legislation (England)	Relevant prohibited actions
Sand lizard <i>Lacerta agilis</i> Smooth snake <i>Coronella austriaca</i>	Full protection under Section 9 of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Deliberately or intentionally kill, capture (take) or intentionally injure; • Deliberately disturb; • Deliberately take or destroy eggs; • Damage or destroy a breeding site or resting place or intentionally damage a place used for shelter; or • Intentionally obstruct access to a place used for shelter.
Birds		
All wild birds	Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure, or take any wild bird or their eggs or nests.
'Schedule 1' birds	Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)	• Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young; or • Disturb the dependent young of any wild bird listed on Schedule 1.
Mammals		
Bats (all UK species)	Schedule 2 of Conservation of Habitats and Species Regulations 2017 (as amended)	• Deliberately capture, injure or kill a bat; • Deliberately disturb a bat (disturbance is defined as an action which is likely to: (i) Impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) Impair their ability to hibernate or migrate; or (iii) Affect significantly the local

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	distribution or abundance of the species); • Damage or destroy a bat roost; • Intentionally or recklessly disturb a bat at a roost; or • Intentionally or recklessly obstruct access to a roost. In this interpretation, a bat roost is "<i>any structure or place which any wild [bat]...uses for shelter or protection</i>". Legal opinion is that the roost is protected whether or not the bats are present at the time.
Badger <i>Meles meles</i>	Protection of Badgers Act 1992	Under Section 3 of the Act: • Damage a sett or any part of it; • Destroy a sett; • Obstruct access to, or any entrance of, a sett; or • Disturb a badger when it is occupying a sett. A sett is defined legally as any structure or place which displays signs indicating current use by a badger (Natural England 2007).
Otter <i>Lutra lutra</i>	Schedule 2 of Conservation of Habitats and Species Regulations 2017 (as amended)	• Deliberately capture, injure or kill an otter; • Deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or

Subject	Legislation (England)	Relevant prohibited actions
	Section 9(4)(b) and (c) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young; • Intentionally or recklessly disturb any otter whilst it is occupying a holt; • Damage or destroy or intentionally or recklessly obstruct access to an otter holt.
Water vole <i>Arvicola amphibius</i>	Section 9 of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure or take water voles; • Possess or control live or dead water voles or derivatives; • Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection; or • Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.
<i>Crustaceans</i>		
White-clawed crayfish <i>Austropotamobius pallipes</i>	Section 9(1) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure or take white-clawed crayfish by any method.

The Environment Act 2021

The Environment Act 2021, sets out key legislation after the UK's exit from the European Union. With the largest changes to green regulations in decades, the Act includes the establishment of an Office for Environmental Protection, targets on air pollution, water quality and biodiversity, and the enshrinement of the 25 Year Environment Plan in law. The Act also makes provisions for a mandatory 10% net gain in biodiversity for all developments covered by the Town and Country Planning Act and it also introduces a statutory requirement for Local Nature Recovery Strategies.

Full legislation text available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

The Conservation of Habitats and Species Regulations 2017

Full legislation text available at: <http://www.legislation.gov.uk/uksi/2019/579/contents/made>

The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: <http://www.legislation.gov.uk/ukpga/1981/69/contents>.

Countryside and Rights of Way Act 2000

Full legislation text available at: <http://www.legislation.gov.uk/ukpga/2000/37/contents>

Section 41 of Natural Environments and Rural Communities (NERC) Act 2006

Full legislation text available at: <http://www.legislation.gov.uk/ukpga/2006/16/section/41>

Many of the species above, along with a host of others not afforded additional protection, are listed on Section 41 of the NERC Act 2006.

Section 41 (S41) of the Natural Environment and Rural Communities (NERC Act 2006) requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn up in consultation with Natural England and draws upon the UK Biodiversity Action Plan (BAP) List of Priority Species and Habitats.

The S41 list should be used to guide decision-makers such as local and regional authorities to have regard to the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006. The duty applies to all local authorities and extends beyond just conserving what is already there, to carrying out, supporting and requiring actions that may also restore or enhance biodiversity.

Schedule 9 of Wildlife and Countryside Act 1981

In addition to affording protection to some species, The Wildlife and Countryside Act 1981 (as amended) also names species which are considered invasive and require control. Section 14 of the Act prohibits the introduction into the wild of any animal of a kind which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed in Schedule 9 to the Act. In the main, Schedule 9 lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated.

Wild Mammals (Protection) Act 1996

Full legislation text is available at: <http://www.legislation.gov.uk/ukpga/1996/3/contents>

Under this legislation it is an offence to cause unnecessary suffering to wild mammals, including by crushing and asphyxiation. It largely deals with issues of animal welfare, and covers all non-domestic mammals including commonly encountered mammals on development sites such as rabbits, foxes and field voles.

Birds of Conservation Concern (BoCC)

This is a quantitative assessment of the status of populations of bird species which regularly occur in the UK, undertaken by the UK's leading bird conservation organisations. It assesses a total of 245 species against a set of objective criteria to place each on one of three lists – Green, Amber and Red – indicating an increasing level of conservation concern. There are currently 70 species on the Red list, 103 on the Amber list and 72 on the Green list. The classifications described have no statutory implications, and are used merely as a tool for assessing scarcity and conservation value of a given species.

National Planning Policy Framework (NPPF)

Full text is available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>.

The revised NPPF was updated on 7 February 2025 setting out the Government's planning policies for England and the process by which these should be applied. The policies within the NPPF are a material consideration in the planning process. The key principle of the NPPF is a presumption in favour of sustainable development, with sustainable development defined as a balance between economic, social and environmental needs.

Policies 187 to 201 of the NPPF address conserving and enhancing the natural environment, stating that the planning system should:

- Contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes;
- Recognise the wider benefits of ecosystem services; and
- Minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Furthermore, there is a focus on re-use of existing brownfield sites or sites of low environmental value as a priority, and discouraging development in National Parks, Sites of Specific Scientific Interest, the Broads or Areas of Outstanding Natural Beauty other than in exceptional circumstances.

Where possible, planning policies should also:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

- 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.

Policies 153 to 160 of the NPPF address proposals affecting the green belt and Policy 159 states that the improvements to green spaces required as part of the Golden Rules should:

- Contribute positively to the landscape setting of the development;
- Support nature recovery; and
- Meet local standards for green space provision.

9.2.2. Local Planning Policies

North Herts Council has produced an adopted Local Plan which covers a number of policies relating to biodiversity and habitat conservation, including:

- Policy SP1: Sustainable development in North Hertfordshire - Grant planning permission for proposals that, individually or cumulatively: (iv) protect key elements of North Hertfordshire's environment including biodiversity, important landscapes, heritage assets and green infrastructure (including the water environment); and (v) secure any necessary mitigation measures that reduce the impact of development, including on climate change.
- Policy SP9: Design and Sustainability – (C) Require Strategic Masterplans and planning applications for Strategic Housing Sites and significant development to (as applicable): (vi) create and accessible multi-functional green infrastructure network that provides: a high-quality integrated network to support ecological connectivity, biodiversity net gain, climate adaptation and mitigation linking into the wider Ecological Network.
- Policy SP12: Green infrastructure, landscape and biodiversity – States that it will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhance and will:
 - Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;
 - Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;
 - Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:
 - Internationally designated sites
 - Nationally designated sites
 - Locally designated sites;
 - Non-designated sites that include important habitats and species
 - Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected

- species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity;
 - Protect other open spaces and support provision of new and improved open space.
- Policy NE4: Biodiversity and geological sites – Only grant planning permission for proposals that appropriately protect, enhance and manage biodiversity in accordance with the hierarchy and status of designations and features listed in Policy SP12. All development should deliver measurable net gains for biodiversity and geodiversity, contribute to ecological networks and the water environment, and/or restore degraded or isolated habitats where possible.

9.3. Appendix 3: Evaluation and assessment methodology

Ecological features are evaluated and assessed following the guidelines from the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (EclA, CIEEM, 2024). The evaluation and assessment process adopted within this Ecological Assessment is set out below.

Establishing potentially important ecological features

Potentially important ecological features of relevance to the development are determined in accordance with current CIEEM guidelines. Table A 1 below lists examples of ecological features that are typically considered, along with examples.

Table A 1: List of Ecological Features considered for importance

Potentially Important Ecological Features	Examples
Statutory nature conservation designations	SSSIs, SACs, SPAs, Ramsar sites, LNRs, NNRs
Non-statutory nature conservation designations	Local Wildlife Sites (LoWS); County Wildlife Sites (CWS)
Protected Species	European Protected Species
International, National or local priority habitats	S41 priority habitats and species; Annex I Habitats; County/Local BAP habitat
Notable species or sub-species	Individual red-listed species
Notable or large population or assemblage of species	Diverse bird assemblage; exceptional numbers of common amphibians
Habitats which form diverse mosaics, create important connection and/or have synergistic attributes	Riparian habitat corridors; hedgerow network utilised by important bat population
Habitats of potential or supplementary importance (for the expansion, restoration or creation of S41 or SSSI quality habitats)	Scrub buffer zones; land used for foraging bird assemblage for which a SSSI is designated.

Establishing likely zone of influence

For the purposes of this assessment, the Site is considered to be inside the 'zone of influence' of:

- Internationally important designations within 10km of the Site boundary.
- Nationally important designations within 2km of the Site boundary.
- Locally important designations within 2km of the Site boundary.
- Non-statutory designations within 2km of the Site boundary.

These distances identified set out above are considered sufficient for identifying the majority of designations which may be affected by the proposals. However, it is acknowledged that in certain circumstances effects beyond these distances are possible, and are considered for each case.

It should also be noted that certain ecological features have smaller 'zones of influence' than those mentioned above. For such features the appropriate zone of influence is described and justified as appropriate within the report, depending on their respective sensitivity to an environmental change.

The results of professionally accredited or published scientific studies have been used and referenced, where available, to establish the spatial and temporal limits of the changes likely to be caused by development activities and to justify decisions about the zone of influence.

Determining importance of ecological features

In determining the importance of ecological features, a range of guidelines and reference materials have been utilised, including:

- Criteria against which statutory and non-statutory nature conservation designations are selected (e.g. SSSI designation criteria; LWS selection criteria).
- Definitions for national and priority habitats.
- Publications and guidelines against which to establish the importance of particular populations or assemblages of species groups, e.g:
 - Bats: Wray *et al*, (2010) for evaluating bat populations and roosts.
 - Reptiles: Froglife (1999) for evaluating population size estimates for reptiles.
- Publications describing the conservation status of individual species (e.g. Red-data books).
- The Hedgerows Regulations to assess the importance of hedgerows.
- National, regional and local species Atlases.
- Species/group population trends.

It should be noted that the legal protection which some species and their habitats receive are considered separately from 'importance' within this assessment as not all legally protected species are necessarily rare (e.g. common pipistrelle bat). Legal issues and the appropriate mechanism for dealing with any such constraint are addressed in the report.

It should also be noted that the social, community, economic or multifunctional importance attributed to ecological features are not assessed as they fall out of the scope of this Ecological Assessment.

Geographic frame of reference

In assigning importance to an ecological resource, the following geographic frames of reference are used:

- International
- National (i.e. England/Northern Ireland/Scotland/Wales);
- Regional (e.g. East Anglia);
- County (or Metropolitan e.g. in London);
- Local (or Parish)
- Site

The size, conservation status and the quality of features or species are all relevant in determining importance. Furthermore, the importance of a species and/ or habitat may vary depending on its geographical location.

Characterising effects and their significance

Effects of the proposed project or operation are characterised using the following terminology:

- Direct or indirect
- Beneficial or adverse
- Magnitude and/or extent
- Duration
- Reversibility
- Timing and frequency

9.4. Appendix 4: EcIA Checklist

EcIA Criteria			Yes No NA	Page reference number(s)
Pre-app.scope	1	Where pre-application advice has been received for the Local Planning Authority and/or an NGO and/or statutory body (e.g. NE DAS, NRW DAS), it has been fully accounted for in the EcIA.	NA	
	2	The scope, structure and content of the EcIA is in accordance with published good practice	Y	9
Surveys, Sites, Species and Habitats	3	Adequate and up-to-date: a. Desk study has been undertaken b. Phase 1 habitat survey (or equivalent) has been undertaken c. Phase 2 ecology surveys have been undertaken (where necessary)	Y	10
	4	All statutory and non-statutory sites likely to be significantly affected are clearly and correctly identified	Y	12
	5	All protected or priority species and priority habitats likely to be significantly affected are clearly and correctly identified, and adequate surveys have been undertaken to inform the baseline	Y	12
	6	Any invasive non-native plant species present are clearly and correctly identified	NA	
	7	Where a separate PEA report states that Phase 2 ecology surveys are required, these have been undertaken in full and results submitted with the application (or lack of such surveys is justified)	Y	10, 44
Impacts and Effects	8	The assessment is based on clearly defined development proposals along with relevant drawings/plans (and any plans used are the same version number as those submitted with the application) or	Y	14, 29
	9	The residual ecological effects are considered to be not significant at any geographical scale irrespective of the detailed development proposals, and the assessment is based on a worst-case scenario	Y	15
	10	The report describes and assesses all likely significant ecological effects (including cumulative effects) clearly stating the geographical scale of significance (where relevant)	Y	15
Mitigation, Compensation and Enhancement	11	The mitigation hierarchy has been clearly followed	Y	15
	12	The report: a. Clearly identifies the proposed mitigation and compensation measures, and explains how these will adequately address all likely significant adverse effects b. Includes, where necessary, proposals for post-construction monitoring c. Recommends how proposed measures may be secured through planning conditions/obligations and/or necessary licences	Y	15
	13	A summary table of proposed mitigation and compensation measures has been provided	Y	22
	14	The need for any mitigation licences required in relation to protected species is clearly identified	NA	
	15	Proposals to deliver ecological enhancement/Biodiversity Net Gain have been provided	Y	15, 44
Competence/Good Practice	16	Limitations of the ecological work have been correctly identified and the implications explained	Y	11, 44
	17	All relevant key timing issues (e.g. site vegetation clearance or roof removal) that may constrain or adversely affect the proposed timing of the development have been identified	Y	22
	18	All ecological work and surveys accord with published good practice methods and guidelines OR deviation from such guidelines is made clear and fully justified, and the implications for subsequent conclusions and recommendations made explicit in the report	Y	11, 44
	19	All ecologists and surveyors hold appropriate species licences (where relevant) and/or have all necessary competencies to carry out the work undertaken	Y	8, 44
Conclusions	20	The report clearly identifies where the proposed development complies with relevant legislation and policy, highlighting any possible non-compliance issues, and highlighting circumstances where a conclusion cannot be drawn as it requires an assessment of non-ecological issues (such as socio-economic ones)	Y	7

EclA Criteria			Yes No NA	Page reference number(s)
	21	The report provides a clear summary of losses and gains for biodiversity, and a justified conclusion of an overall net gain for biodiversity	Y	22, 24
	22	Justifiable conclusions based on sound professional judgement have been drawn as to the significance of effects on any designated site, protected or priority habitat/species or other ecological feature, and a justified scale of significance has been stated	Y	12,15

9.5. Appendices 5-7: Survey reports

The following appendices are attached separately. Each survey methodology is detailed within the relevant report.

Appendix 5: Preliminary Ecological Appraisal

Appendix 6: Reptile Survey

Appendix 7: Biodiversity Net Gain Assessment



MKA
ECOLOGY

Preliminary Ecological Appraisal

Land north of Priory School, Hitchin

Site	Land North of Priory School, Bedford Road, Bearton, Hertfordshire, SG5 2UR
Project number	103820
Client name / Address	Arte Construction Ltd, Leytonstone House, 3 Hanbury Drive, Leytonstone, London, United Kingdom

Version number	Date of issue	Revisions
1.0	24 July 2025	2025 update

Author(s)	Kyle Marshall	K Marshall
Surveyor(s)	Alfie Bunting Kyle Marshall	Alfie Bunting
Reviewed by	Will O'Connor CEcol MCIEEM Felix Bird	W O'Connor Felix Bird
Contact	MKA Ecology Limited, 01763 262211, enquiries@mkaecology.co.uk	

Declaration of compliance

This Preliminary Ecological Appraisal has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of practice for planning and development". The information which we have provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.



MKA Ecology Ltd is a CIEEM Registered Practice. This means that MKA Ecology Ltd are formally recognised for high professional standards, working at the forefront of our profession.

Validity of data

Unless stated otherwise the information provided within this report is valid for a maximum period of 24 months from the date of survey. If works at the site have not progressed by this time an updated site visit may be required in order to determine any changes in site composition and ecological constraints.

CONTENTS

1.	EXECUTIVE SUMMARY	3
2.	INTRODUCTION	5
2.1.	Aims and scope of Preliminary Ecological Appraisal	5
2.2.	Site description and context	5
2.3.	Previous survey effort	5
2.4.	Proposed development.....	5
2.5.	Legislation and planning policy.....	6
3.	METHODOLOGIES	7
3.1.	Desktop study	7
3.2.	UK Habitat Classification	8
3.3.	Protected and notable species scoping survey	8
3.4.	Surveyor, author and reviewer	10
3.5.	Date, time and weather conditions	10
3.6.	Constraints.....	10
4.	RESULTS	11
4.1.	Desktop study	11
4.2.	UK Habitat Classification	15
4.3.	Protected species scoping survey	19
5.	ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS	23
6.	CONCLUSIONS	34
7.	REFERENCES	35
8.	APPENDICES	37
8.1.	Appendix 1: Relevant wildlife legislation and planning policy.....	37
8.2.	Appendix 2: UK Habitat Classification species list	45
8.3.	Appendix 3: Site photographs	48
8.4.	Appendix 4: Bird and bat box recommendations.....	53

1. EXECUTIVE SUMMARY

In April 2025 MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal of Land north of Priory School, Hitchin. The appraisal included a habitat survey, protected species scoping survey and desktop study of protected and notable sites and species in the area. A site visit was undertaken on 14 April 2025.

The Site primarily comprises of a field of other neutral grassland, bramble scrub and native hedgerow, with modified grassland along the northern and western boundary. The proposed development is for the delivery of up to 55 new homes for the residents of Hitchin, whilst maintaining an ecologically sensitive site boundary. The proposed layout of the project is unknown at this stage.

Oughtonhead Common Local Nature Reserve is adjacent to the north-western corner of the Site. Furthermore, the northern boundary borders a corridor of greenspace, centred around the River Oughton, that links Oughtonhead Common in the west and Cadwell Marsh/Burymead Springs Local Wildlife Sites in the east.

The following ecological constraints were identified at the Site with recommendations made as follows;

- **Designated sites:** The proposed development may lead to increased recreational pressures on the Oughtonhead Common LNR. Suitable alternative natural green space should be provided on-site or nearby off-site for recreational use by residents following development, to reduce recreation pressure on the designated LNR. These should be planted with native habitats and species including, species-rich grassland, ponds, native scrub, native trees and hedgerows.
- **Off-site habitats:** Given the proximity to the River Oughton, any development of the Site should consider how best to minimise the risk of pollution entering the water course both from construction and from surface-water run-off during the operational phase. Mitigation should be secured through a Construction Ecological Management Plan (CEcMP)
- **On-site habitats:** The hedgerow habitats are in good condition, with a variety of native woody species and mature/semi-mature trees to provide a varied structure. These are classified as Habitats of Principal Importance due to the presence of over 80% cover by native woody species. All hedgerows at the Site should be retained where possible. If this is not feasible then the loss of this habitat should be compensated by the creation of new areas of species-rich hedgerow habitat;
- **Birds:** The scrub and hedgerow on-site provide suitable habitat for breeding birds. Any pre-construction vegetation clearance should occur outside of the bird breeding season (March to August inclusive), to avoid impacts on active birds' nests. If the planned works occur during the breeding season, then nesting bird surveys will be required ahead of any vegetation clearance.

- **Reptiles:** There is suitable habitat for reptiles present along the northern and western boundary, particularly around the bund where scrub and taller vegetation are present. Reptile surveys undertaken by MKA Ecology Ltd in 2021 and 2022 consistently concluded that the Site supports a low population of common lizard. It is recommended to conduct updated reptile surveys at the Site (March/April at the earliest), in order to rule out the possibility of the development impacting on this species group.
- **Bats:** The ash tree that contains potential for roosting bats (TN1, Figure 1), should be retained and protected. However, if plans change and direct impact or removal is unavoidable, further surveys will be required.
- **Other mammals:** The Site offers suitable habitat for hedgehog. Vegetation clearance should be conducted sensitively and during daylight hours. Hedgehog access should be maintained by incorporating at least one 13 x 13 cm hole at the base of each fence line. These measures should be included in the CECMP.

In order to fully assess the impacts of the development on protected species, habitats and the wider landscape and detail all necessary mitigation, an Ecological Impact Assessment should be undertaken for the Site following the recommended surveys.

In line with the National Planning Policy Framework, and Local Planning Policy new biodiverse habitats should be created at the Site, this should include native planting and creation of habitats such as species-rich grassland, ponds, native scrub and native tree planting. This habitat creation and enhancement should be supported by a Biodiversity Net Gain assessment in order to comply with the requirements of the Environment Act 2021, National Planning Policy Framework, and Local Planning Policy. A minimum 10% net gain in biodiversity post-development is required at the Site.

Bird and bat boxes should be included post development, integrated into the new buildings and mounted on existing trees. To amalgamate these recommendations and ensure long-term security of these habitats, a Habitat Management and Monitoring Plan should be created for the Site.

2. INTRODUCTION

2.1. Aims and scope of Preliminary Ecological Appraisal

In April 2025 MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal at Land north of Priory School, Hitchin by Arte Construction Ltd in order to support a planning application for the construction of residential dwellings.

The aims of the Preliminary Ecological Appraisal were to:

- Undertake a desktop study to identify the extent of protected and notable species and habitats within close proximity of the Site;
- Prepare a habitat map for the Site;
- Identify evidence of protected species/species of conservation concern at the Site;
- Assess the potential impacts of the proposed development, using existing plans;
- Outline recommendations for further survey effort where required; and
- Outline recommendations for biodiversity enhancements.

2.2. Site description and context

The survey area is shown on the map in Figure 1. Within this report this area is referred to as the Site or Land north of Priory School, Hitchin. It is located in the north-east of the town of Hitchin (central grid reference TL 17918 30862) and is under the authority of North Hertfordshire District Council. It currently comprises a recently grazed field of other neutral grassland, bordered on the south, east and north by hedgerow and a bund with scrub and modified grassland along the northern and western boundary. The Site encompasses an area of 1.7ha.

2.3. Previous survey effort

A Preliminary Ecological Appraisal was previously conducted in November 2020 by MKA Ecology Ltd (MKA Ecology Ltd, 2020). Reptile surveys were also undertaken by MKA Ecology Ltd in October 2021 and September 2022 (MKA Ecology Ltd, 2021 and 2022).

2.4. Proposed development

The proposed development is for the delivery of up to 55 new dwellings for the residents of Hitchin, whilst maintaining an ecologically sensitive Site boundary. The proposed layout of the Site has not been confirmed at this stage.

2.5. Legislation and planning policy

This Preliminary Ecological Appraisal has been undertaken with reference to relevant wildlife legislation and planning policy.

Relevant legislation considered within the scope of this document includes the following:

- The Environment Act 2021;
- The Wildlife and Countryside Act 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Countryside and Rights of Way (CROW) Act 2000;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

Further information is provided in Appendix 1, including levels of protection granted to the species considered in Section 3.3.

In addition to obligations under wildlife legislation, the revised National Planning Policy Framework (NPPF) updated on 7 February 2025 requires planning decisions to contribute to conserving and enhancing the local environment. Further details are provided in Appendix 1.

North Hertfordshire District Council has produced an adopted Local Plan (North Hertfordshire District Council, 2022) which covers a number of policies relating to biodiversity and habitat conservation, including:

- Policy SP1: Sustainable development in North Hertfordshire
- Policy SP9: Design and Sustainability
- Policy SP12: Green infrastructure, landscape and biodiversity

Where relevant these are discussed in further detail in Section 5. Relevant excerpts from each policy are set out in more detail in Appendix 1.

3. METHODOLOGIES

This Preliminary Ecological Appraisal has been undertaken in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal, 2nd edition (CIEEM, 2017).

3.1. Desktop study

A data search was conducted for the Site and the surrounding area within 2km. The search was extended to 10km for internationally designated sites. Data was retrieved from the sources listed in Table 1.

Table 1: Sources of data for desktop study

Organisation	Data collected	Date collected
Multi-agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk	Information on local, national and international statutory protected areas.	18/04/2025
Hertfordshire Environmental Record Centre (HERC)	Information on protected and notable sites and species within 2km of the Site (TL 17918 30862).	02/04/2025
Ordnance Survey maps and aerial photography	Information on habitats and connectivity between the Site and the surrounding landscape	02/04/2025
Plantlife Important Plant Areas Buglife Important Invertebrate Areas	Information on important areas for flora and fauna (TL 17918 30862).	02/04/2025
Natural England GCN Impact Risk Zone Map https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::gcn-risk-zones-cambridgeshire/explore	Information on the Natural England great crested newt impact risk zones for District Level Licensing.	02/04/2024

Species records from the data search exceeding 20 years in age are excluded as they are considered to be historical records.

3.2. UK Habitat Classification

Habitats were surveyed using the standardised UK Habitat classification and mapping methodology (UKHab Ltd, 2023). Data were recorded onto a Samsung Tablet in a Geographic Information System (GIS), in this instance QField, following a modified UK Habs colour mapping palette. Dominant plant species were observed and recorded within each habitat type. The plant species nomenclature follows that of Stace (2019).

The DAFOR scale is used to describe the relative abundance of species. The scale is shown in Table 2. It is important to note that where a species is described as rare this description refers to its relative abundance within the Site and is not a description of its abundance within the wider landscape. Therefore, a species with a rare relative abundance within the Site may be common within the wider landscape.

Table 2: DAFOR scale

DAFOR code	Relative abundance
D	Dominant
A	Abundant
F	Frequent
O	Occasional
R	Rare

In order to assess grassland habitats a series of 1m by 1m quadrats are used to understand species composition. Within each quadrat the percentage cover of each species is recorded. The number of quadrats used varies depending on grassland complexity. Low complexity grasslands, such as amenity grasslands, have fewer quadrats. Neutral, acidic and calcareous grasslands have at least five quadrats to ensure the habitat types are correctly assigned.

3.3. Protected and notable species scoping survey

As part of the Preliminary Ecological Appraisal, an assessment of the potential for the habitats on site, or within the zone of influence of the proposed development, to support protected or notable species was made. This assessment was based on the quality, extent and interconnectivity of suitable habitats, along with the results of the desktop study detailed in Section 3.1. This includes Species of Principal Importance as listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, and Red and Amber listed Birds of Conservation Concern (BoCC) as per Stanbury *et al.*, 2021 (see Appendix 1).

Protected and notable species considered within the protected species scoping survey for Land north of Priory School, Hitchin include the following:

- Plants and fungi: Including species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) such as bluebell *Hyacinthoides non-scripta*, and Species of Principal Importance such as cornflower *Centaurea cyanus* and corn buttercup *Ranunculus arvensis*.
- Invertebrates: Including Species of Principal Importance such stag beetle *Lucanus cervus* and buff ermine *Spilosoma lutea*.
- Fish: European eel *Anguilla anguilla*, river lamprey *Lampetra fluviatilis*, brown trout *Salmo trutta* subsp. *fario*.
- Amphibians: Great crested newt *Triturus cristatus* and common toad *Bufo bufo*.
- Reptiles: Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica helvetica*.
- Birds: With special reference to species listed under Schedule 1 of The Wildlife and Countryside Act, 1981, Species of Principal Importance and BoCC species.
- Mammals: Badger *Meles meles*, bats (all species), water vole *Arvicola amphibius*, otter *Lutra lutra*, hazel dormouse *Muscardinus avellanarius*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, harvest mouse *Micromys minutus*, polecat *Mustela putorius* and European beaver *Castor fiber*.

In each case the likelihood of presence of these protected species in the zone of influence of the proposed development was classified as being either confirmed, high, moderate, low or negligible.

- **Confirmed:** The species is confirmed during the Preliminary Ecological Appraisal, previous survey effort or recent records.
- **High:** Habitats are available which are highly suitable for this species and there are records within the desktop study. The surrounding areas also provide widespread opportunities for the species which are well connected to the Site.
- **Moderate:** Some suitable habitat available for the species although not of optimum quality. Species is present with the desktop study.
- **Low:** Some suitable habitat available for the species but this is low value and possibly of small scale or with poor connectivity. No, or very few, records returned in the desktop study.
- **Negligible:** No suitable habitat available for the species, or very little poor-quality habitat.

This protected species scoping survey is designed to assess the *potential* for presence or absence of a particular species or species group, and does not constitute a full survey for these species.

3.4. Surveyor, author and reviewer

The survey was undertaken by Alfie Bunting, assisted by Kyle Marshall, and report written by Kyle. Alfie is an Ecologist at MKA Ecology Limited with three years' experience undertaking Preliminary Ecological Appraisals and holds a Level 1 great crested newt licence from Natural England. Kyle is a Graduate Ecologist in his first year of ecological consultancy. The report has been reviewed by Will O'Connor CEcol MCIEEM, Director and Principal Ecologist at MKA Ecology Ltd and Felix Bird, Senior Ecologist at MKA Ecology Ltd. Will has over 15 years' experience as a consultant ecologist and Felix has over six years' experience.

3.5. Date, time and weather conditions

See Table 3 below for details of the date, time and prevailing weather conditions recorded during the site visit for the Preliminary Ecological Appraisal.

Table 3: Date, time and weather conditions of survey visit

Date	Time of survey	Weather conditions*
14/04/2025	10:00	Wind: 1 Cloud: 3 Temp: 13°C Rain: None

*Wind as per Beaufort Scale / Cloud cover given in Oktas.

3.6. Constraints

A single visit cannot always ascertain the presence or absence of a protected species. However, an assessment is made of the likelihood for protected species to occur based on habitat characteristics and the ecology of each species. Where there is potential for protected species, additional survey work may be required to ascertain their presence or absence.

Data on species records obtained from local biological records centres are sometimes only available at low spatial resolutions and are constrained by the voluntary nature of the contributions and what has been chosen to be submitted as records. While these records provide a useful indication of species recorded in the local area, in particular protected or notable species, the data is not necessarily an accurate reflection of species assemblages or abundance in the vicinity.

4. RESULTS

4.1. Desktop study

An ecological desktop study was completed for the Site and the surrounding 2km. Data provided by Hertfordshire Environmental Records Centre identified numerous UK and European protected species, Species and Habitats of Principal Importance (as listed under Section 41 of the NERC Act 2006), and species of conservation concern within 2km of the Site. It should be noted that this is not a comprehensive list of the distribution or extent of the local flora and fauna of conservation importance. These species records are discussed in greater detail in the protected species scoping survey section (Section 4.3 below).

Details of the one statutorily designated site (a Local Nature Reserve, LNR) identified as part of the desktop study are displayed in Table 4 below. One Site of Special Scientific Interest (SSSI), Oughtonhead Lane, was identified within the desktop study, but as the site was designated for geological interest, it is not considered further in this report.

Table 4: Statutorily designated sites within 2km of Land north of Priory School, Hitchin

Site name*	Area (ha)	Distance and direction	Reasons for selection
Oughtonhead Common LNR	17.4	Adjacent (10m) north-west	Oughton Head consists of the main area of common in the south-east and the Wildlife Trust nature reserve to the north. The common supports marshy grassland with fen but with drier areas of neutral grassland, scrub and woodland. Mixed wet woodland forms a belt of varying width along the north bank of the River Oughton which has its source at the western end. The site is one of the larger fen woodlands in Hertfordshire and has a long history of being managed as a fen. The western sections are dominated by mature alder <i>Alnus glutinosa</i> carr (an unusual habitat in Hertfordshire). The river itself supports aquatic plants of note, the remnant fen components are notable within the county and the area is important for a range of invertebrates, amphibians, reptiles, birds and mammals, with grass snake, harvest mouse, brown hare and water voles recorded.

Details of non-statutorily designated sites identified as part of the desktop study are displayed in Table 5 below. These consist of one Herts and Middlesex Wildlife Trust Nature Reserve (HMWT Nature Reserve) and 11 Local Wildlife Sites (LWS).

Table 5: Non-statutorily designated sites within 2km of Land north of Priory School, Hitchin

Site name*	Area (ha)	Distance and direction	Reasons for selection
Oughtonhead HMWT Nature Reserve	25.3	Adjacent (10m) north-west	See Table 4 for designation information for Oughtonhead Common.
Westmill Lane, Ickleford LWS	0.0	300m north-northwest	Buildings and environs important for protected species.
Cadwell Marsh & Burymead Springs LWS	11.9	670m north-east	A mosaic site supporting a variety of habitats including derelict marshy meadows, scrub, reed beds, hazel <i>Corylus avellana</i> coppice, willow <i>Salix spp.</i> plantation, a dismantled railway embankment, an old hedge (along the Icknield Way) and spring-fed pools (old borrow pits). The site is bordered by the Rivers Hiz and Purwell. Water voles have been recorded beside the Purwell and harvest mice within Burymead Springs.
River Hiz, Ickleford North LWS	0.5	1.1km north-northeast	Stretch of River Hiz important for water vole.
Cadwell Grove Meadows LWS	4.5	1.1km north-northeast	Old damp meadows adjacent to the River Hiz supporting neutral marshy grassland. A ditch cuts through the meadows. Species recorded in the grassland includes bird's-foot trefoil <i>Lotus corniculatus</i> , common sorrel <i>Rumex acetosa</i> , cowslip, common knapweed <i>Centaurea nigra</i> , oxeye daisy <i>Leucanthemum vulgare</i> , meadow vetchling <i>Lathyrus pratensis</i> , greater bird's-foot trefoil <i>Lotus pedunculatus</i> , lady's smock <i>Cardamine pratensis</i> , meadowsweet <i>Filipendula ulmaria</i> and ragged robin <i>Lychnis flos-cuculi</i> . Several species of sedge have also been noted.

Site name*	Area (ha)	Distance and direction	Reasons for selection
Cadwell Lane Gasworks Meadow LWS	3.2	1.1km north-east	Site dominated by dense hawthorn <i>Crataegus monogyna</i> scrub in the south with open patches of herb rich communities on calcareous spoil. Some remnant old grassland is present at the northern end of the site. Species of interest recorded include agrimony <i>Agrimonia eupatoria</i> , common knapweed, greater knapweed <i>Centaurea scabiosa</i> , lady's bedstraw <i>Galium verum</i> , bird's-foot trefoil, wild basil <i>Clinopodium vulgare</i> and meadow vetchling. Two orchids, common spotted-orchid <i>Dactylorhiza fuchsii</i> and southern marsh-orchid <i>Dactylorhiza praetermissa</i> , have been recorded. Across the lower third of the site is an old boundary feature and there is a hedgerow to the eastern border. Protected species have been recorded from the site.
Cadwell Crossing LWS	0.0	1.2km north-east	Scrubby railway banks by Icknield Way with records for great pignut <i>Bunium bulbocastanum</i> , a possible Herts Vulnerable species.
River Purwell, Walsworth Common LWS	0.3	1.4km east-southeast	River Purwell and banks with some botanical interest and records of water vole.
Lower Green, Ickleford LWS	1.9	1.6km north-northeast	An area of moderately diverse rough grassland dissected by a road. Species recorded in the grassland include agrimony, bird's-foot trefoil, common knapweed, greater knapweed, common rest-harrow <i>Ononis repens</i> , meadow buttercup <i>Ranunculus acris</i> , field scabious <i>Knautia arvensis</i> and sedges <i>Carex spp.</i> and rushes <i>Juncus spp.</i> in the damper areas. Ditches, some planted trees, and a pond in the north corner add to the habitat diversity.
River Hiz, Cadwell LWS	0.2	1.7km north-northeast	Stretch of river with tall herbs, grassland and scattered trees. Habitat important for water vole.

Site name*	Area (ha)	Distance and direction	Reasons for selection
Windmill Hill LWS	2.8	1.8km south-east	Public open space on a calcareous gravel hill supporting short grassland. A steep roadside bank supports an interesting grassland flora including wild clary <i>Salvia verbenaca</i> , a species rare in Hertfordshire.
Ickleford Common North LWS	14.5	2km north-northeast	Traditionally grazed pastures supporting unimproved neutral and wet acid grasslands, and a stretch of the River Hiz. The rich flora (over 100 species) includes spiny rest-harrow <i>Ononis spinosa</i> , pepper-saxifrage <i>Silene silaus</i> , salad burnet <i>Sanguisorba minor</i> , Cowslip <i>Primula veris</i> , marsh bedstraw <i>Galium palustre</i> , fen bedstraw <i>Galium uliginosum</i> and marsh valerian <i>Valeriana dioica</i> . The common is also important for its fauna with water vole, water shrew <i>Neomys fodiens</i> , and ant hills in abundance in the old pasture. Many breeding, passage and wintering birds also use the site.

The Site is situated on the northern edge of the town of Hitchin. Directly north of the Site lies the River Oughton and its associated riparian habitat, forming a continuous corridor of greenspace that links Oughtonhead Common Local Nature Reserve (LNR) to the west with Cadwell Marsh and Burymead Springs Local Wildlife Sites (LWS) to the east. Adjacent to the eastern boundary of the Site is a narrow strip of woodland that extends north-eastwards towards the River Oughton, further strengthening the Site's connection to this green corridor. This corridor is likely to be of ecological importance for riparian species such as water vole and grass snake, both of which have been historically recorded in the area.

Land to the west and south of the Site is primarily suburban residential, with allotment gardens located near the River Oughton. To the east lies a large area of amenity grassland associated with three local schools. The hedgerows bordering these greenspaces are likely to play a key role in facilitating the movement of various species through the landscape, enhancing connectivity between the Site and the adjacent Local Wildlife Sites to the east.

Oughtonhead Common Local Nature Reserve (LNR), a non-statutory designated site valued for its local biodiversity and recreational use, lies adjacent to the north west boundary. Given its proximity, there is a risk of accidental damage during construction through pollution run-off, dust, lighting. Furthermore there is some potential for indirect impacts post-construction through increased visitor pressure, such as trampling, disturbance to wildlife, or degradation of informal paths. However, the scale of the

development is modest, and these impacts are expected to be limited. Mitigation measures are outlined in Section 5 to protect this designated site and to avoid adverse impacts from occurring.

The Site also lies within SSSI Impact Risk Zones (Natural England, 2019) for the Oughtonhead Lane SSSI. Only large infrastructure such as warehousing / industry where net additional gross internal floorspace is greater than 1,000m² and needing its own water supply requires LPA consultation with Natural England. No consultation is therefore necessary for the present development.

4.2. UK Habitat Classification

The Site was found to comprise other neutral grassland with some taller, ruderal vegetation, modified grassland and scrub along the western boundary and hedgerows along the eastern, northern and southern boundaries. More detailed species lists, along with their relative abundance, can be found in Appendix 2. The UK habitat classification survey map is provided in Figure 1, at the end of this section. Descriptions of the habitat types present along with dominant species compositions are provided below.

Modified grassland (g4)

The western and northern boundaries of the Site is comprised of three parcels of modified grassland.

Parcel G1 runs alongside the road on the western boundary of the Site and consists of short mown modified grassland. Perennial ryegrass *Lolium perenne* is abundant here, whilst false oat grass *Arrhenatherum elatius* and ribwort plantain *Plantago lanceolata* are frequently occurring. Dandelion *Taraxacum officinale*, white clover *Trifolium repens* and yarrow *Achillea millefolium* are occasionally occurring. Species density is moderate for this area, averaging 8.6 species per metre across five quadrats. See Photograph 1, Appendix 3. Although it supports over 20% broadleaf herb cover and more than eight species per square metre—characteristics typically associated with other neutral grassland—its composition includes more than one grass species not commonly sown for intensive agricultural production, and perennial ryegrass exceeds 30% cover. As a result, the habitat does not meet the criteria for classification as other neutral grassland.

Secondary codes relevant to this habitat type include:

- 108 – Frequently Mown

Parcel G2 runs along approximately half of the western boundary of the Site, between G1, G3, and two areas of bramble scrub. This area consists of modified grassland with a dry ditch and areas of scattered scrub. In this area, the grassland has been left uncut, allowing it to develop a longer sward with scattered scrub now present throughout (Photograph 2, Appendix 3). Ruderal species such as cleavers *Galium aparine*, creeping thistle *Cirsium arvense* and willowherb *Epilobium* ssp. being more frequently observed. Young sycamore *Acer pseudoplatanus*, crab apple *Malus sylvestris*, *prunus* sp., and ash *Fraxinus excelsior* were also frequent. These were likely self-set, and are too small to count as trees,

apart from a single sycamore. Species density is moderate, averaging 6.25 species per square metre across four quadrats. Although the grassland supports over 20% broadleaf herb cover—it contains fewer than eight species per square metre. In addition, the sward includes more than one grass species not generally sown for intensive agriculture, and perennial ryegrass comprises more than 30% of the cover. As such, the habitat does not meet the criteria for classification as other neutral grassland.

Secondary codes relevant to this habitat type include:

- 10 – Scattered Scrub
- 81 – Ruderal or Ephemeral
- 202 – Young Trees – self-set

The third parcel of modified grassland was located along the northern boundary of the site (Photograph 3, Appendix 3). Bramble *Rubus fruticosus* agg is abundant within this parcel, with hawthorn and hogweed frequently occurring. Species density is low, averaging five species per square metre across three quadrats.

Secondary codes relevant to this habitat type include:

- 10 – Scattered Scrub
- 81 – Ruderal or Ephemeral

Other neutral grassland (g3c)

This grassland comprises the majority of the Site. Yorkshire-fog *Holcus lanatus* and false oat-grass were abundant within grassland parcel G3, with cock's-foot *Dactylis glomerata*, hogweed *Heracleum sphondylium*, and red fescue *Festuca rubra* also occurring occasionally (Photograph 4, Appendix 3). Species density was moderate, averaging 9.5 species per square metre across ten quadrats. The grassland meets the key criteria for classification as other neutral grassland, including the presence of broadleaf herb cover exceeding 20%, a species-rich sward with more than eight species per square metre, and a botanical composition characteristic of non-intensively managed neutral grasslands.

Bramble scrub (h3d)

Two areas of scrub were located on the western edge of the Site (Photograph 5, Appendix 3), one to the north and one to the south of the western bund. The habitat was dominated by bramble (See Photograph 6, Appendix 3). A small mature individual ash tree is present in the northern area of bramble scrub.

Secondary codes relevant to this habitat type include:

- 203 – Mature Tree

Native hedgerow (h2a5)

The southern boundary of the Site is formed of native hedgerow (H1). H1 is dominated by hawthorn, and appears to be regularly managed and is a uniform two metres in height (Photograph 7, Appendix 3). A small mature individual ash tree is present on the eastern section of this southern boundary hedgerow.

Secondary codes relevant to this habitat type include:

- 203 – Mature Tree

There is a hedgerow along the eastern boundary dominated by hawthorn, with field maple *Acer campestre* frequently occurring. Most of this hedgerow is located outside of the site boundary, with a high number of hawthorn suckers appearing just inside. The occasional sycamore tree is also present. This hedgerow is overgrown and appears to be unmanaged, with a height of up to six metres (Photograph 8, Appendix 3).

Native hedgerow with trees (h2a7)

A short length of hedgerow with trees (H3) forms the northern part of the western boundary of the Site. The hedgerow consists of three mature ash trees and some smaller elm *Ulmus minor* and ash trees. A Potential Roosting Feature (PRF) for bats was identified as a partially healed wound hole on the eastern aspect of an ash. This hedgerow is also heavily ivy-clad (Photograph 9, Appendix 3).

Secondary codes relevant to this habitat type include:

- 203 – Mature Tree

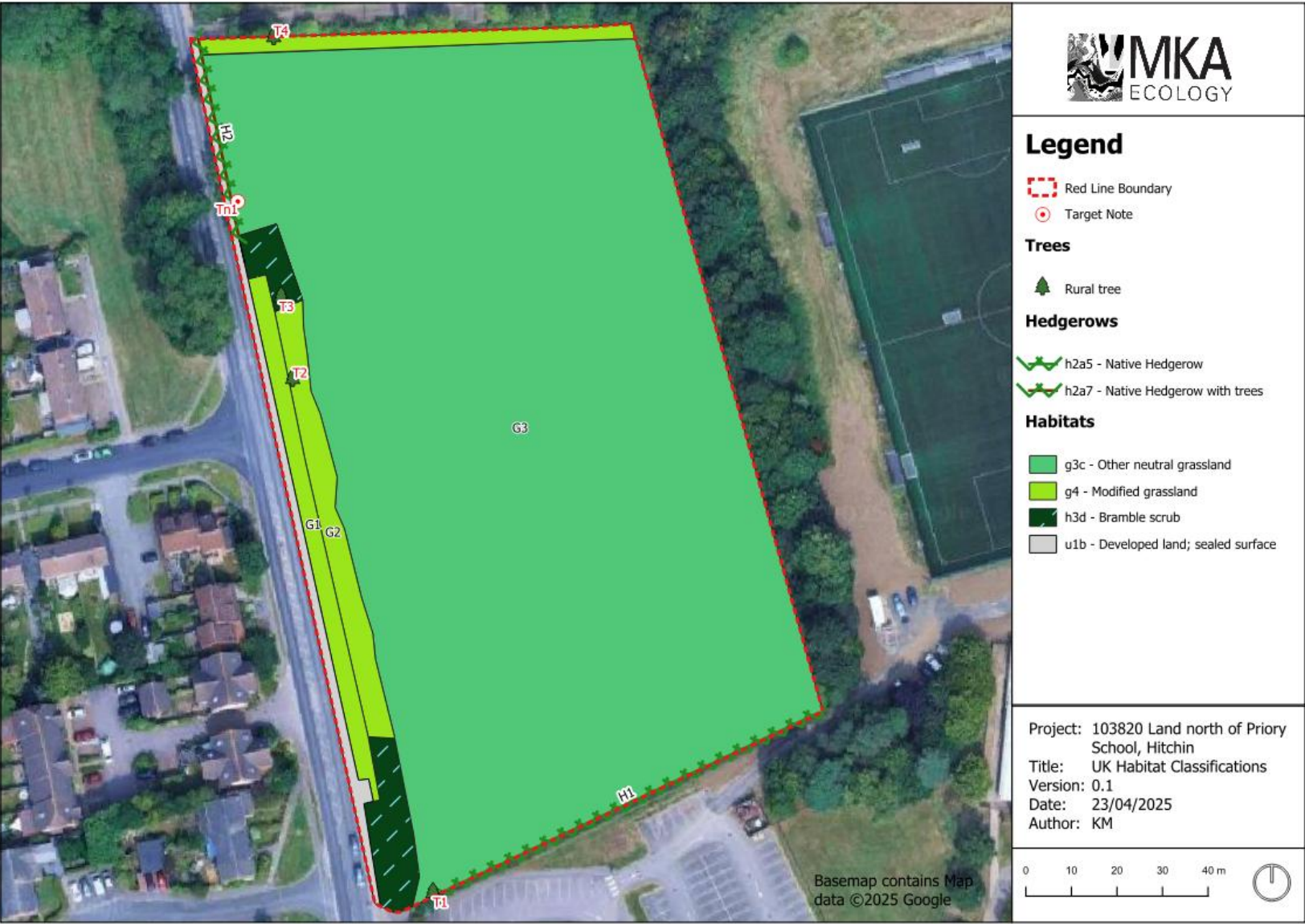
Developed land; sealed surface (u1b)

A bus stop and tarmac public footpath runs alongside the road on the extent of the western boundary of the Site.

Individual trees

Four trees were present. T1 is an ash located within H1, on the southern boundary of the site. T2 is a sycamore that is located in northern section of grassland G2. T3 is an ash found in the northern bramble scrub parcel to the west of the site. T4 is a cypress *Cupressus sp.* located on the western aspect of the northern boundary, within the modified grassland.

Figure 1: UK Habitat Classification map of Land north of Priory School, Hitchin



Target notes for Figure 1:

Target note	Description
TN1	PRF in ash tree – Wound hole partially healed

4.3. Protected species scoping survey

Plants and fungi

A small number of records of notable plant species were returned within the data search, although for the most part these records are over 20 years old, or a substantial distance away (approximately one kilometre). Notably, there are recent records of the Schedule 9 (Wildlife and Countryside Act 1981) invasive species Japanese knotweed *Fallopia japonica* from within the town of Hitchin, but these are from more than a kilometre away from the Site.

No Japanese knotweed, or any other notable species were identified on-site. Overall, the likelihood of the Site to contain protected or notable plant species is considered to be **negligible**. As such, this species group will not be addressed further in this report.

Invertebrates

The data search returned numerous records of protected invertebrate species within 2km of the Site, including species listed under Section 41 of the NERC Act 2006, such as cinnabar *Tyria jacobaeae*, large nutmeg *Apamea anceps*, and white ermine *Spilosoma lubricipeda*. The nearest protected species was small heath *Coenonympha pamphilus*, which was recorded 300m east of the Site.

There are recent records of the Schedule 9 (Wildlife and Countryside Act 1981) invasive species signal crayfish *Pacifastacus leniusculus* from the River Hiz, into which the River Oughton flows. It is likely that this species is also present within the River Oughton, just to the north of the Site, however unless the dry ditch on-site floods, it is unlikely that the development will be affected by this species.

Overall, the likelihood of protected invertebrate species, or important assemblages of invertebrates, being present onsite is **negligible**.

Fish

There are recent records of brown trout (listed under Section 41 of the NERC Act 2006) from the River Oughton, in locations both upstream and downstream of the Site. Overall, the likelihood of the Site to contain this species, unless the dry ditch to the west of the Site floods, is **negligible**, however in the absence of mitigation measures there is considered to be a **low** risk of these species being impacted by contaminant run-off from any development taking place at the Site, given its proximity to the River Oughton.

Amphibians

There were only six records of great crested newt returned in the data search, all from over 20 years ago. There were also a number of records of common toad from within 2km of the Site, but these were also made over 20 years ago and from locations over 600m away from the Site. No ponds were identified within 500m of the Site using Ordnance Survey maps and aerial photography. Defra's MAGIC website returned no European Protected Species Licences granted for great crested newt within 2km of the Site. The Site falls within a Green Natural England risk zone for great crested newt (Natural England, 2024).

There is suitable terrestrial habitat present on the Site in the form of hedgerow, scrub and longer vegetation within the dry ditch and along the western bund, however, due to the isolated nature of the Site from suitable waterbodies, and the lack of records in the area, the likelihood of the site supporting great crested newts is considered to be **negligible**. As such, this species group will not be addressed further in this report.

Reptiles

There are numerous records of reptile species from data search, including adder, common lizard, slow-worm and grass snake. Although the majority of these records are over 20 years old, the habitat present at the Site is suitable for reptiles, in particular the modified grassland to the west of the Site with its mixture of scrub and longer sward. Furthermore, Oughtonhead Common is well connected to the Site, where there are historical records of grass snake. Reptile surveys undertaken by MKA Ecology Ltd in 2021 recorded a peak count of two common lizard and surveys in 2022 recorded a peak count of one common lizard (MKA Ecology Ltd, 2022). It was concluded that the Site supported a low population of common lizard at the time of these surveys.

Overall, the likelihood of the Site to currently support reptiles is considered to be **moderate**.

Birds

Twelve species were recorded during the site visit. These species are shown in Table 6 together with their conservation status. It is important to note that this is not a full inventory of species for the site.

Table 6: Bird species recorded during site visit at Land north of Priory School, Hitchin

Common name	Systematic name	S1 W&CA ¹	BoCC ² Status	S41 SPI ³	Local PrSp ⁴
Jackdaw	<i>Corvus monedula</i>	-	Green	-	-
Woodpigeon	<i>Columba palumbus</i>	-	Amber	-	-
Blue tit	<i>Cyanistes caeruleus</i>	-	Green	-	-
Great tit	<i>Parus major</i>	-	Green	-	-

Common name	Systematic name	S1 W&CA ¹	BoCC ² Status	S41 SPI ³	Local PrSp ⁴
Kestrel	<i>Falco tinnunculus</i>	-	Amber	-	-
Buzzard	<i>Buteo buteo</i>	-	Green	-	-
Red kite	<i>Milvus milvus</i>	Yes	Green	-	-
Chiffchaff	<i>Phylloscopus collybita</i>	-	Green	-	-
Carrion crow	<i>Corvus corone</i>	-	Green	-	-
Robin	<i>Erithacus rubecula</i>	-	Green	-	-
Blackcap	<i>Sylvia atricapilla</i>	-	Green	-	-
Dunnock	<i>Prunella modularis</i>	-	Amber	Yes	-
Wren	<i>Troglodytes troglodytes</i>	-	Amber	-	-

¹ Schedule 1 of The Wildlife and Countryside Act 1981 (see Appendix 1)

² Birds of Conservation Concern (see Appendix 1)

³ Section 41 (NERC Act 2006) 'Species of Principal Importance' (see Appendix 1)

⁴ Local Priority Species

The data search returned numerous records of notable birds within 2km of the Site, including species that are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) such as kingfisher *Alcedo atthis* and under Section 41 of the NERC Act 2006 such as spotted flycatcher *Muscicapa striata* and yellowhammer *Emberiza citrinella*. There is a limited amount of habitat on-site to support species such as this, however the Oughtonhead Common LNR to the west is likely to support species such as yellowhammer and kingfisher. There is however a large amount of hedgerow present at the Site, which will provide potential breeding habitat for house sparrow, a BoCC red status species and Section 41 (NERC Act 2006) Species of Principal Importance.

The trees, scrub and hedgerow within the Site and on the boundaries provide suitable habitat for breeding birds. The grassland may support ground-nesting birds, as the longer sward offers adequate shelter for nesting. The likelihood of birds utilising the site for breeding is considered to be **high**. The likelihood of the site supporting significant local assemblages of protected and notable bird species is considered to be **low**.

Bats

The data search returned a number of bat records within 2km of the Site; these consisted of seven bat species: barbastelle *Barbastella barbastellus*, brown long-eared bat *Plecotus auritus*, Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*. There were also a number of records

of unidentified bat species and unidentified pipistrelle species. A search of Defra's MAGIC website showed no European Protected Species Licences have been granted for bats within 2km of the Site.

There were no buildings at the Site and the only one suitable PRF was identified in the form of a partially healed wound hole on the eastern aspect of an ash tree within hedgerow H3 (Target note 1, Figure 1). However, the considerable length of unlit hedgerow at the Site is likely to provide an important linear feature to be used by bats for navigation and within the landscape and also for foraging.

Overall, the risk of roosting bats being present is considered to be **low** and the likelihood of foraging or commuting bats is **moderate**.

Badgers

There were numerous records of badger within 2km of the Site returned during the data search, although only one record was both recent (2022) and geographically close (approximately 130m to the north of the Site). Although no signs of badger were observed at the Site, suitable habitat is present for both sett building (the bund to the west of the Site and dry ditch to the north) and foraging (grassland and hedgerow). There is also plenty of hedgerow and adjacent woodland providing cover for movement through the Site. Therefore, there is a **low** risk of this species being present at the Site.

Water vole

The most recent record of water vole returned from the data search is from 2012, from 1.5km to the west in Oughtonhead Common LNR. No suitable habitat for this species is present onsite, however the River Oughton passes within approximately 25m north of the Site, and provides suitable habitat for this species.

The low number of recent, spatially proximate records and distance between the Site and the River Oughton suggests the risk of presence onsite is **negligible**, however the risk of presence within the immediate vicinity is **low**.

Other mammals

The most recent records of hedgehog were returned during the data search, from 2021. The closest record was 450m away from the Site in a suburban residential area to the west. The areas of scrub and longer vegetation to the west of the Site, hedgerow and dry ditch will all provide cover and foraging opportunities for hedgehog in the area. As such there is a **moderate** risk of hedgehog utilising the Site.

5. ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS

This section outlines key ecological issues for consideration, recommendations for further work and ecological enhancements where appropriate.

Designated sites

Oughtonhead Common Local Nature Reserve (LNR), a non-statutory designated site valued for its local biodiversity and recreational use lies adjacent to the northern boundary. Given its proximity, there is some potential for indirect impacts through increased visitor pressure, such as trampling, disturbance to wildlife, or degradation of informal paths. However, the scale of the development is modest, and these impacts are expected to be limited. Mitigation measures such as provision of on-site greenspace, signage, and managed access should be considered to reduce potential effects.

It is recommended suitable alternative natural green space (SANGS) should be provided as part of the new development either on-site or nearby off-site to provide residents with a place for informal recreation in order to reduce recreational pressures on Oughtonhead Common LNR. The SANGS should be planted with a range of native species including species-rich grassland, native scrub, native trees, hedgerows and even ponds. It is recommended potential impacts and mitigation measures should be discussed with relevant stakeholders.

Recommendation 1

Provide suitable alternative natural green space on-site or nearby off-site for the use by residents in order to reduce recreational pressure on designated sites.

Off-site habitats

Given the proximity of the Site to the River Oughton (25m at its closest point) there is potential risk of contaminants from the Site, both during construction but also surface water run-off contamination during the operational phase, into this river. Water to flow from any development at the Site will need to be considered in both construction and operational phases, particularly given how close the Site is to the River Oughton headwaters, and the potential for downstream impacts. Steps must be taken to ensure that there are no impacts on this watercourse.

During construction there are a range of simple steps that can be taken to minimise the risk of pollution events, such as locating the storage of fuel, chemicals, machinery, car parking and material stockpiles, away from watercourses such the stream to the north-west. Chemicals and fuels should be stored on an impermeable surface. Diversion drains and bunds can be used to direct run-off away from open water and exposed soils. More detail of potential measures to minimise the risk of contaminated surface water run-off during construction should be provided in a Construction Ecological Management Plan

(CEcMP). The CEcMP should also detail standard mitigation measures to minimise dust, noise and lighting upon the river and designated site to the north. These measures would serve to avoid impacts upon any protected species which may use the river, such as fish or water vole, in the event they are present.

Recommendation 2

Avoid construction impacts on the River Oughton, 25m to the north of the Site by storing materials and chemicals away from the watercourse and from any exposed soil and by using diversion drains and bunds. Measures should be provided in a Construction Ecological Management Plan (CEcMP).

On-site/ boundary habitats

The hedgerows along the boundaries of the Site represent important habitat for numerous species. Hedgerows are listed as a Habitat of Principal Importance in England under Section 41 of the NERC Act 2006. All hedgerows should be retained and enhanced. They should be protected during construction by the installation of Heras fencing with an appropriate buffer zone. If any sections of hedgerow are to be removed, they should be directly compensated by the establishment of a new native species-rich hedgerow.

Recommendation 3

Protect and enhance the hedgerows on the Site boundaries. The fence should allow for a buffer zone between the fence and the vegetation. Any tree lines and hedgerows that require removal as part of the development should be directly compensated by the establishment of a new native species-rich hedgerow.

Reptiles

Reptile surveys undertaken by MKA Ecology Ltd in 2021 and 2022 consistently concluded that the Site supports a low population of common lizard (MKA Ecology Ltd 2022). Suitable habitat for reptiles (is present on the Site, such as grassland and ruderal vegetation around the western bund, scrub and hedgerows. Impacts on reptiles are possible through clearance of vegetation and construction activities, as well as longer term habitat loss.

All UK reptile species are protected under Schedule 5 of the Wildlife & Countryside Act 1981, and are listed as Species of Principal Importance under the NERC Act 2006. It is an offence to intentionally kill or injure individuals of these species (see Appendix 1 for more information).

It is recommended reptile surveys are undertaken to update the previous results and confirm the current status of reptiles at the Site. These surveys should be carried out using artificial cover objects (on or under which reptiles can bask) in the active season which runs from March to October. The optimum survey times are in April, May and September. Seven visits should be conducted during suitable weather conditions according to guidance published by Froglife (1999).

Recommendation 4

Undertake updated reptile surveys to determine presence/absence of reptiles at the Site.

Birds

The grassland, trees, scrub and hedgerow on-site and on the Site boundaries provide suitable nesting habitat for breeding birds.

All wild birds, their active nests and eggs are protected under The Wildlife and Countryside Act 1981 (as amended), which makes it an offence deliberately, or recklessly, to kill or injure any wild bird or damage or destroy any active birds' nest or eggs.

Scheduling vegetation removal works between the months of September and February inclusive (i.e. outside of the bird season) would avoid impacts on breeding birds.

Where vegetation clearance works are required during the breeding bird season (between the months of March and August inclusive), such works can only proceed following the completion of a nesting bird check undertaken by an experienced ornithologist. Any active birds' nest identified during this check must be protected from harm until the nesting attempt is complete. This will require a buffer to be left around the nest, the size of which will depend upon the species involved (as a general rule, this will be 10m in all directions around the nest). Any buffers established as a result of the initial nesting bird check must be subjected to a second check after the original nesting attempt is completed, before such areas can be removed during the breeding bird season.

Recommendation 5

Schedule vegetation clearance works between the months of September and February inclusive to avoid impacts on breeding birds. Where this timing is not feasible works should be preceded by a nesting bird check.

It is strongly recommended that any potential nesting bird habitat is cleared outside the breeding bird season in order to avoid potentially lengthy delays if nests are found during nesting bird checks.

The loss of bird nesting habitat at the Site will be mitigated for by the provision of species-rich hedgerow and bird boxes as part of the biodiversity enhancements proposed for the Site. These provisions are discussed in greater detail in the relevant section below.

Bats

All bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of Conservation of Habitats and Species Regulations 2017. Some bat species are also Species of Principal Importance listed on Section 41 of the NERC Act 2006. It is an offence to deliberately disturb

a bat, damage or destroy a bat roost, intentionally or recklessly disturb a bat at a roost, or obstruct access to a roost.

An ash tree within hedgerow H2 was found to support a PRF consisting of a partially healed wound and was assessed as having potential to support roosting bats. This tree should be retained and protected where possible during development, and it should be protected from indirect impacts such as lighting and disturbance post-development. No direct impacts to this tree by the proposed works are anticipated, however, if plans change and removal or direct impact is unavoidable post-development, then further surveys will be required.

Recommendation 6

Retain and protect the ash tree with potential to support roosting bats (TN1, Figure 1). Further surveys will be required if this is not possible.

The hedgerows onsite provide linear habitats that are suitable for foraging and commuting bats. The current proposed plans include the retention, and potential enhancement, of all the onsite linear features. If plans change and any sections of hedgerow or trees are to be removed, then further bat surveys will be required to determine what impacts this will have on foraging and/or commuting bats.

Recommendation 7

All onsite linear features will be retained. If plans change and any sections of hedgerow or trees are to be removed, then further bat surveys will be required.

Bat roosting behaviour, commuting and foraging activity can additionally be dramatically affected by artificial lighting (IPL, 2023). It is strongly recommended that any proposed exterior lighting on the new buildings/access roads is designed and managed appropriately to ensure that the area remains suitable for foraging bats. A sensitive lighting scheme should be developed to allow suitable roosting and foraging areas for bats. In particular, the species-rich hedgerow with trees on the eastern boundary that is connected to a narrow strip of woodland to the east, is likely a suitable linear feature used by bats for navigation and foraging. This connects with an irregularly spaced tree line along the Site's northern boundary. Further bat surveys will be required if the tree with noted bat potential (TN1) or the habitats surrounding the River Oughton to the north of the Site are to be impacted by either temporary or permanent lighting. The sensitive lighting strategy should be developed following the guidance set out by the Institute of Lighting professionals (2023). These measures should be secured through a planning condition. A sensitive lighting scheme should be adopted, that minimises light spill onto all boundary vegetation, particularly the vegetation along the eastern and northern boundaries.

Recommendation 8

Light pollution from any lighting should be minimised both during and after the construction phase. A sensitive lighting scheme should be developed to allow for suitable roosting and foraging areas for bats

within the Site with maximum use of appropriate luminaries and directed lighting. The boundary vegetation, particularly to the north and east, should remain unlit. Key habitats include the onsite hedgerows and tree with noted bat potential (TN1).

Badgers

Badger setts and badgers occupying a sett are protected under the Protection of Badgers Act 1992. The protection includes protection from disturbance within their setts. No setts were found on-site, however there is suitable habitat available for sett building at the Site, as well as foraging habitat. If a badger sett is discovered on-site during construction, works should stop immediately and advice should be sought from an ecologist.

Measures should be implemented during construction works to ensure no badgers are negatively affected by the works such as ensuring any trenches dug and left exposed overnight have a means of escape for badgers, stockpiles of earth should be covered when not in use as badgers can create temporary setts in uncovered piles of earth artificial lighting of the Site overnight should also be limited. These measures should be detailed with a CECMP.

Recommendation 9

If any setts are discovered on-site works must stop and advice from an ecologist be sought. Measures should be detailed within a CECMP

Recommendation 10

Ensure construction practices take into account the potential use of the Site by badgers. These should be detailed within a CECMP

Other mammals

There is suitable habitat for hedgehog on site. It is recommended that any vegetation clearance is undertaken systematically with vegetation cleared in a directional manner from the inside of the site outwards enabling any hedgehogs present to disperse from the Site, regular checks for these species should be made throughout the duration of the vegetation clearance. Details of these measures should be outlined within a CECMP.

Recommendation 11

Vegetation clearance should be undertaken systematically with vegetation cleared in a directional manner to enable hedgehog to disperse, with regular checks for the species during this process.

The installation of boundary fences between gardens can impact on hedgehogs through loss of habitat connectivity. At least one 13cm x 13cm hole should be installed at the bottom of each boundary fence (with a focus on fences separating residential gardens, and excluding fences adjacent to roads), in order to maintain connectivity for hedgehogs between properties. These 'hedgehog highways' (PTES,

2018) should have appropriate signage installed to indicate their purpose and stipulate that they should remain open.

Recommendation 12

Maintain habitat connectivity for hedgehog through the installation of at least one 13cm x 13cm hole at the bottom of each boundary fence (with a focus on fences separating residential gardens, and excluding fences adjacent to roads). These should be accompanied with appropriate signage indicating their purpose and stipulating that they should remain open.

Opportunities for biodiversity enhancement

Following the issue of the National Planning Policy Framework (NPPF; see Appendix 1), all planning decisions should aim to maintain and enhance, restore or add to biodiversity and geological conservation interests. Ecological enhancements should aim to deliver biodiversity gains for the proposed development. As the precise plans are not yet established for the Site, there are opportunities to incorporate ecological enhancements at an early stage.

To comply with the Environment Act 2021, National Planning Policy Framework, and Local Planning policy, a Biodiversity Net Gain Assessment is recommended to ensure that provisions are made to enhance the Site for biodiversity post-development. Creating new biodiverse habitats as well as retaining existing features will assist in reaching the required 10% net gain in biodiversity.

Recommendation 13

Conduct a Biodiversity Net Gain Assessment.

Planting of native species or those with a known attraction or benefit to local wildlife is recommended in landscape proposals. This will help to increase native plant species diversity, provide more ecologically valuable habitats, and result in a greater diversity of other dependent taxonomic groups.

The hedgerow along the southern boundary is dominated by hawthorn. This habitat could be enhanced by increasing the number of native woody species present, and varying the structure of vegetation within the habitat by planting suitable native tree species within the hedgerow. Examples of suitable tree species for planting include field maple and holly (both of which are present elsewhere at the Site). The enhancement of this hedgerow will also help to screen the Site from the School to the south.

Recommendation 14

It is recommended that native British species are incorporated within the planting scheme for the final landscaping design in order to enhance the overall value of the Site for biodiversity, in line with the requirements of the NPPF.

Recommendation 15

Enhance the hedgerow along the southern boundary of the Site, by increasing the number of native British species within the hedgerow and also planting some taller trees in order to increase the structural variation.

Further habitat enhancements at the Site should be focused along the northern and western boundaries, in order to provide a buffer to the parts of the Site that connect to the east-west habitat corridor to the north, that links Oughtonhead Common LNR in the west and Cadwell Marsh/ Burymead Springs LWS's. This should include creating a neutral grassland wildflower meadow along the northern and eastern site edges and planting additional native trees along the northern boundary.

A wildflower meadow along the site's northern and western edges, would increase the ecological value of the Site above what is currently present. It is recommended that a species rich mix is used for the area designated as wildflower meadow. This is designed to create a grassland that is flower rich and contains plant species that provide sources of pollen and nectar for many different invertebrate types including bees, butterflies and moths, hoverflies and beetles. Native trees suitable for planting along the northern boundary include pedunculate oak, willow and hazel (all species either present on-site or within the local area).

Recommendation 16

A wildflower meadow is recommended to be created along the northern and eastern edges of the Site. Native tree species are recommended to be planted in the gaps that currently exist within the tree line along the northern boundary.

The creation of deadwood features at the Site will be particularly valuable for invertebrates as a foraging resource, which in turn benefits a range of other species such as hedgehogs and reptiles. This could include rotting roots or tree stumps spread around various locations. The drilling of holes or cutting of notches can add even more value for invertebrates. These features should be concentrated along the northern and eastern boundaries.

Recommendation 17

Incorporate simple biodiversity enhancement measures such as the provision of three deadwood features.

Enhanced opportunities for breeding birds should be incorporated into the design scheme. Bird boxes should be mounted on trees, fences and built structures at the Site. Given the large areas of open grassland to the east, it is recommended that there is focus on swift *Apus apus* boxes, provided that the proposed buildings are sufficiently tall, together with the provision of generalist bird boxes.

Recommendation 18

A minimum of 14 bird boxes should be installed at the Site, to include a nine box provisions for swifts and five box provisions generalist species.

The tree lines and hedgerows at the Site have the potential for use by foraging bats. With this in mind, enhanced opportunities for roosting bats should also be provided at the Site through installation of bat boxes. These boxes should be integrated into the walls of the buildings in order to minimise maintenance. If this is not possible, bat boxes can also be wall-mounted or tree-mounted, although these are less preferable.

Recommendation 19

Provisions should be made for roosting bats at the Site post-development, to include at least 14 integrated, wall mounted or tree mounted bat boxes.

The Environment Act 2021 states that all Biodiversity Net Gain assessments must be accompanied by an appropriate management plan that covers the next 30 years of Site management. This serves to ensure that all proposed habitats achieve the desired ecological value used in net gain calculations. It is recommended that a Habitat Management and Monitoring Plan (HMMP) is produced in order to ensure legislative compliance.

Recommendation 20

Produce a Habitat Management and Monitoring Plan (HMMP) covering the next 30 years to accompany the Biodiversity Net Gain assessment.

Ecological Impact Assessment

This report of sets out the baseline conditions of the Site, and the need for further survey work. An Ecological Impact Assessment should be produced, which will summarise ecological information, assess impacts based on final site plans, and clearly set out mitigation and compensation measures at the Site.

Recommendation 21

Produce an Ecological Impact Assessment which will outline the ecological impacts, mitigation measures and compensation of the application.

Summary of recommendations

Table 7 below summarises the recommendations made within this report, and specifies the stage of the development at which action is required. Colour coding of cells within the table is as follows:

Key:

	No action required for this species group at this stage
	Action required (see notes for details)
	Level of action required will be determined following the further survey work

Table 7: Summary of recommendations at Land north of Priory School, Hitchin

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Designated sites	Consideration for alternative natural green space to alleviate pressure on Oughtonhead Common LNR	No	No	Alternative natural green space, either on-site or off-site.
Off-site habitats	Consideration for minimising potential impact of surface-water run-off pollution into the River Oughton.	Develop CEcMP for the protection of River Oughton during construction and protection of adjacent hedgerow on eastern boundary.	Protection of adjacent hedgerow by Heras fencing with buffer. Follow CEcMP for River Oughton protection	No

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
On-site habitats	Native planting	Develop CEcMP	Protection of trees and hedgerows by Heras fencing with buffer where possible.	Native planting, enhancement of southern hedgerow, creation of wildflower meadow, planting of native trees along the northern boundary.
Reptiles	Further survey work (April, May and September peak months).	TBC	TBC	TBC
Birds	No	No	Timing of works for vegetation removal OR further survey work Incorporate integrated bird boxes into new buildings	Bird boxes and native planting
Bats	Sensitive lighting strategy. Retain tree with PRF-I OR further survey work	No	Incorporate integrated bat boxes into new buildings.	Bat boxes and native planting.
Badgers	No	Develop CEcMP with badger-sensitive construction practices	Adopt badger-sensitive construction practices during development	No

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Hedgehog	No	Develop CEcMP with details of systematic vegetation removal for protection of hedgehog	Follow CEcMP	Hedgehog highways under boundary fences.

Table 8: Summary of further surveys recommended at Land north of Priory School, Hitchin

Species/species group	Purpose of survey	Survey period (inclusive unless otherwise stated)
Reptiles	Confirm presence/absence	Apr, May, Sep
Bats (depending on impacts)	Understand species assemblages and identify key foraging areas or commuting routes	April-Oct

6. CONCLUSIONS

A Preliminary Ecological Appraisal was undertaken at Land north of Priory School, Hitchin to support a planning application for the construction of up to 55 residential dwellings. The Site comprises other neutral grassland, bramble scrub, modified grassland to the north and west, and a dry ditch to the west. Native hedgerows and occasional trees form the boundaries. The Site lies adjacent to the River Oughton, and Oughtonhead Common Local Nature Reserve (LNR) is located immediately north-west of the Site boundary.

Ecological constraints identified at Land north of Priory School, Hitchin relate to designated sites, habitats of ecological value both on and off site, reptiles, breeding birds and roosting bats. The Site lies within a Site of Special Scientific Interest Impact Risk Zone. Although Natural England is not required to be consulted based on the scale of the proposed development, the proximity of the River Oughton and the LNR means that indirect impacts such as pollution during construction and visitor pressure post construction are possible. These should be addressed through the implementation of a Construction Environmental Management Plan and the inclusion of on-site greenspace.

The hedgerows with trees are considered to be of ecological value and should be retained and protected during construction. An ash tree with a potential roosting feature for bats within the Site should be retained where possible or assessed further if removal is required. Vegetation across the Site is suitable for nesting birds and clearance should be timed to avoid the breeding season. Where this is not possible, a nesting bird check must be undertaken by a suitably qualified ecologist. The western bund and tussocky grassland offer suitable habitat for reptiles, and their presence is considered a constraint to development. Further survey effort has been recommended to inform any mitigation measures required.

In order to synthesise the potential impacts of the development on protected species, habitats and the wider landscape, an Ecological Impact Assessment should be undertaken at the Site following completion of the recommended surveys. To comply with the Environment Act 2021, National Planning Policy Framework, and local planning policy, a Biodiversity Net Gain Assessment should be completed to ensure that biodiversity is enhanced post-development. This should prioritise retention and enhancement of existing habitats, alongside the creation of new features such as scrub, native tree planting, and green infrastructure. A sensitive lighting scheme should be implemented to minimise impacts on nocturnal wildlife such as foraging bats. Bird and bat boxes should be incorporated into the development, and a Habitat Management and Monitoring Plan should be produced to secure the long-term viability of retained and created habitats.

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8. APPENDICES

8.1. Appendix 1: Relevant wildlife legislation and planning policy

Please note that the following is not an exhaustive list, and is solely intended to cover the most relevant legislation pertaining to species commonly associated with development sites.

Subject	Legislation (England)	Relevant prohibited actions
Amphibians		
Great crested newt <i>Triturus cristatus</i> Natterjack toad <i>Epidalea calamita</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	- Deliberately capture or kill, or intentionally injure; - Deliberately disturb or recklessly disturb them in a place used for shelter or protection; - Damage or destroy a breeding site or resting place; - Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and - Possess an individual, or any part of it, unless acquired lawfully.
	Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	
Reptiles		
Common lizard <i>Zootoca vivipara</i> Adder <i>Vipera berus</i> Slow-worm <i>Anguis fragilis</i> Grass snake <i>Natrix helvetica helvetica</i>	Part of Sub-section 9(1) of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	Intentionally kill or injure individuals of these species (Section 9(1)).

Subject	Legislation (England)	Relevant prohibited actions
Sand lizard <i>Lacerta agilis</i> Smooth snake <i>Coronella austriaca</i>	Full protection under Section 9 of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	• Deliberately or intentionally kill, capture (take) or intentionally injure; • Deliberately disturb; • Deliberately take or destroy eggs; • Damage or destroy a breeding site or resting place or intentionally damage a place used for shelter; or • Intentionally obstruct access to a place used for shelter.
Birds		
All wild birds	Wildlife and Countryside Act 1981 (as amended)	• Intentionally kill, injure, or take any wild bird or their eggs or nests.
'Schedule 1' birds	Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)	• Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young; or • Disturb the dependent young of any wild bird listed on Schedule 1.
Mammals		
Bats (all UK species)	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	• Deliberately capture, injure or kill a bat; • Deliberately disturb a bat (disturbance is defined as an action which is likely to: (i) Impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) Impair their ability to hibernate or migrate; or (iii) Affect significantly the local

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	distribution or abundance of the species); • Damage or destroy a bat roost; • Intentionally or recklessly disturb a bat at a roost; or • Intentionally or recklessly obstruct access to a roost. In this interpretation, a bat roost is "<i>any structure or place which any wild [bat]...uses for shelter or protection</i>". Legal opinion is that the roost is protected whether or not the bats are present at the time.
Badger <i>Meles meles</i>	Protection of Badgers Act 1992	Under Section 3 of the Act: • Damage a sett or any part of it; • Destroy a sett; • Obstruct access to, or any entrance of, a sett; or • Disturb a badger when it is occupying a sett. A sett is defined legally as any structure or place which displays signs indicating current use by a badger (Natural England 2007).
Hazel dormouse <i>Muscardinus avellanarius</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	• Intentionally or deliberately capture or kill, or intentionally injure;

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	- Deliberately disturb or intentionally or recklessly disturb them in a place used for shelter or protection; - Damage or destroy a breeding site or resting place; - Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and - Possess an individual, or any part of it, unless acquired lawfully.
Otter <i>Lutra lutra</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	- Deliberately capture, injure or kill an otter; - Deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young; - Intentionally or recklessly disturb any otter whilst it is occupying a holt; - Damage or destroy or intentionally or recklessly obstruct access to an otter holt.
	Section 9(4)(b) and (c) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	
Water vole <i>Arvicola amphibius</i>	Section 9 of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	- Intentionally kill, injure or take water voles; - Possess or control live or dead water voles or derivatives; - Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection; or - Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.

Subject	Legislation (England)	Relevant prohibited actions
<i>Crustaceans</i>		
White-clawed crayfish <i>Austropotamobius pallipes</i>	Section 9(1) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	Intentionally kill, injure or take white-clawed crayfish by any method.

The Environment Act 2021

Full legislation text available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

The Environment Act 2021, sets out key legislation after the UK's exit from the European Union. With the largest changes to green regulations in decades, the Act includes the establishment of an Office for Environmental Protection, targets on air pollution, water quality and biodiversity, and the enshrinement of the 25 Year Environment Plan in law. The Act also makes provisions for a mandatory 10% net gain in biodiversity for all developments covered by the Town and Country Planning Act and it also introduces a statutory requirement for Local Nature Recovery Strategies.

The Conservation of Habitats and Species Regulations 2017 (as amended)

Full legislation text available at: [The Conservation of Habitats and Species Regulations 2017 \(as amended\)](https://www.legislation.gov.uk/ukpga/2017/10/contents/enacted) (legislation.gov.uk)

The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/1981/69/contents](https://www.legislation.gov.uk/ukpga/1981/69/contents).

Countryside and Rights of Way Act 2000

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/2000/37/contents](https://www.legislation.gov.uk/ukpga/2000/37/contents)

Protection of Badgers Act 1992

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/1992/51/contents](https://www.legislation.gov.uk/ukpga/1992/51/contents)

Section 41 of Natural Environments and Rural Communities (NERC) Act 2006

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/2006/16/section/41](https://www.legislation.gov.uk/ukpga/2006/16/section/41)

Many of the species above, along with a host of others not afforded additional protection, are listed on Section 41 of the NERC Act 2006.

Section 41 (S41) of the Natural Environment and Rural Communities (NERC Act 2006) requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn

up in consultation with Natural England and draws upon the UK Biodiversity Action Plan (BAP) List of Priority Species and Habitats.

The S41 list should be used to guide decision-makers such as local and regional authorities to have regard to the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006. The duty applies to all local authorities and extends beyond just conserving what is already there, to carrying out, supporting and requiring actions that may also restore or enhance biodiversity.

Schedule 9 of Wildlife and Countryside Act 1981 (as amended)

In addition to affording protection to some species, The Wildlife and Countryside Act 1981 (as amended) also names species which are considered invasive and require control. Section 14 of the Act prohibits the introduction into the wild of any animal of a kind which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed in Schedule 9 to the Act. In the main, Schedule 9 lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated.

Wild Mammals (Protection) Act 1996

Full legislation text is available at: <http://www.legislation.gov.uk/ukpga/1996/3/contents>

Under this legislation it is an offence to cause unnecessary suffering to wild mammals, including by crushing and asphyxiation. It largely deals with issues of animal welfare, and covers all non-domestic mammals including commonly encountered mammals on development sites such as rabbits, foxes and field voles.

Birds of Conservation Concern (BoCC)

This is a quantitative assessment of the status of populations of bird species which regularly occur in the UK, undertaken by the UK's leading bird conservation organisations. It assesses a total of 245 species against a set of objective criteria to place each on one of three lists – Green, Amber and Red – indicating an increasing level of conservation concern. There are currently 70 species on the Red list, 103 on the Amber list and 72 on the Green list. The classifications described have no statutory implications, and are used merely as a tool for assessing scarcity and conservation value of a given species.

National Planning Policy Framework (NPPF)

Full text is available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>.

The revised NPPF was updated on 7 February 2025 setting out the Government's planning policies for England and the process by which these should be applied. The policies within the NPPF are a material consideration in the planning process. The key principle of the NPPF is a presumption in favour of sustainable development, with sustainable development defined as a balance between economic, social and environmental needs.

Policies 187 to 201 of the NPPF address conserving and enhancing the natural environment, stating that the planning system should:

- Contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes;
- Recognise the wider benefits of ecosystem services; and
- Minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.

Furthermore, there is a focus on re-use of existing brownfield sites or sites of low environmental value as a priority, and discouraging development in and around National Parks, Sites of Specific Scientific Interest, the Broads, and National Landscapes other than in exceptional circumstances.

Where possible, planning policies should also:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- 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.

Local policy

North Herts Council has produced an adopted Local Plan which covers a number of policies relating to biodiversity and habitat conservation, including:

- Policy SP1: Sustainable development in North Hertfordshire - Grant planning permission for proposals that, individually or cumulatively: (iv) protect key elements of North Hertfordshire's environment including biodiversity, important landscapes, heritage assets and green infrastructure (including the water environment); and (v) secure any necessary mitigation measures that reduce the impact of development, including on climate change.

- Policy SP9: Design and Sustainability – (C) Require Strategic Masterplans and planning applications for Strategic Housing Sites and significant development to (as applicable): (vi) create and accessible multi-functional green infrastructure network that provides: a high-quality integrated network to support ecological connectivity, biodiversity net gain, climate adaptation and mitigation linking into the wider Ecological Network.
- Policy SP12: Green infrastructure, landscape and biodiversity – States that it will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhance and will:
 - Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;
 - Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;
 - Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:
 - Internationally designated sites
 - Nationally designated sites
 - Locally designated sites;
 - Non-designated sites that include important habitats and species
 - Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity;
 - Protect other open spaces and support provision of new and improved open space.

8.2. Appendix 2: UK Habitat Classification species list

Please note that these lists are intended to be incidental records and do not constitute a full botanical survey of the site. Relative abundance is given using the DAFOR scale. Please see Table 2 for details.

Other neutral grassland – G1

Common Name	Systematic Name	Relative abundance
Perennial rye-grass	<i>Lolium perenne</i>	A
Ribwort plantain	<i>Plantago lanceolata</i>	F
Tall fescue	<i>Festuca arundinacea</i>	F
Cock's-foot	<i>Dactylis glomerata</i>	O
Daisy	<i>Bellis perennis</i>	O
Dandelion	<i>Taraxacum officinale</i>	O
White clover	<i>Trifolium repens</i>	O
Yarrow	<i>Achillea millefolium</i>	O
Yorkshire fog	<i>Holcus lanatus</i>	O
Annual meadow-grass	<i>Poa annua</i>	R
Buttercup sp.	<i>Ranunculus sp.</i>	R
Chickweed	<i>Stellaria media</i>	R
Creeping cinquefoil	<i>Potentilla reptans</i>	R
Cut-leaved crane's-bill	<i>Geranium dissectum</i>	R
Spotted bur clover	<i>Medicago arabica</i>	R

Other neutral grassland with scattered scrub – G2

Common Name	Systematic Name	Relative abundance
False oat-grass	<i>Arrhenatherum elatius</i>	A
Cow parsley	<i>Anthriscus sylvestris</i>	F
Elder	<i>Sambucus nigra</i>	F
Hawthorn	<i>Crataegus monogyna</i>	F
Hogweed	<i>Heracleum sphondylium</i>	F
Perennial rye-grass	<i>Lolium perenne</i>	F
White dead-nettle	<i>Lamium album</i>	F

Common Name	Systematic Name	Relative abundance
Ash	<i>Fraxinus excelsior</i>	O
Bramble	<i>Rubus fruticosus</i>	O
Dock sp.	<i>Rumex sp.</i>	O
Prunus sp.	<i>Prunus sp.</i>	O
Yorkshire fog	<i>Holcus lanatus</i>	O
Cleavers	<i>Galium aparine</i>	R
Cock's-foot	<i>Dactylis glomerata</i>	R
Common ivy	<i>Hedera helix</i>	R
Crab apple	<i>Malus sylvestris</i>	R
Creeping thistle	<i>Cirsium arvense</i>	R
Dandelion	<i>Taraxacum officinale</i>	R
Lesser celandine	<i>Ficaria verna</i>	R
Stinging nettle	<i>Urtica dioica</i>	R

Other neutral grassland – G3

Common Name	Systematic Name	Relative abundance
False oat-grass	<i>Arrhenatherum elatius</i>	A
Yorkshire fog	<i>Holcus lanatus</i>	A
Cock's-foot	<i>Dactylis glomerata</i>	O
Hogweed	<i>Heracleum sphondylium</i>	O
Red fescue	<i>Festuca rubra agg.</i>	O
Vetch sp.	<i>Vicia sp.</i>	O
Barren strawberry	<i>Potentilla sterilis</i>	R
Bugle	<i>Ajuga reptans</i>	R
Bulbous buttercup	<i>Ranunculus bulbosus</i>	R
Cow parsley	<i>Anthriscus sylvestris</i>	R
Creeping buttercup	<i>Ranunculus repens</i>	R
Creeping thistle	<i>Cirsium arvense</i>	R
Crested dog's-tail	<i>Cynosurus cristatus</i>	R

Common Name	Systematic Name	Relative abundance
Cut-leaved crane's-bill	<i>Geranium dissectum</i>	R
Dandelion	<i>Taraxacum officinale</i>	R
Ground ivy	<i>Glechoma hederacea</i>	R
Hedge bedstraw	<i>Galium mollugo</i>	R
Meadow buttercup	<i>Ranunculus acris</i>	R
Oxeye daisy	<i>Leucanthemum vulgare</i>	R
Perennial ryegrass	<i>Lolium perenne</i>	R
Common ragwort	<i>Senecio jacobaea</i>	R
Ribwort plantain	<i>Plantago lanceolata</i>	R
Yarrow	<i>Achillea millefolium</i>	R

Native hedgerow – H1

Common Name	Systematic Name	Relative abundance
Hawthorn	<i>Crataegus monogyna</i>	D

Native hedgerow – H2

Common Name	Systematic Name	Relative abundance
Hawthorn	<i>Crataegus monogyna</i>	D
Field maple	<i>Acer campestre</i>	A
Sycamore	<i>Acer pseudoplatanus</i>	O

Native hedgerow with trees – H3

Common Name	Systematic Name	Relative abundance
Hawthorn	<i>Crataegus monogyna</i>	D
Elm sp.	<i>Ulmus sp.</i>	A
Ash	<i>Fraxinus excelsior</i>	O

8.3. Appendix 3: Site photographs

Photograph 1: Short mown modified grassland, western boundary



Photograph 2: Modified grassland with scattered scrub



Photograph 3: Modified grassland, northern boundary



Photograph 4: Other neutral grassland, parcel G3



Photograph 5: Bramble scrub to the west



Photograph 6: Bramble scrub with ash tree



Photograph 7: Native hedgerow H1, southern boundary



Photograph 8: Native hedgerow H2, eastern boundary



Photograph 9: Native hedgerow with tree H3, to the west of grassland G3



8.4. Appendix 4: Bird and bat box recommendations

Bird box recommendations

A large number of bird boxes are available, designed for the specific needs of individual species. These are normally either designed to be mounted onto trees, external walls or integrated into a building. In general, bird boxes should be mounted out of direct sunlight and prevailing winds, out of reach of predators, with suitable foraging habitat for the subject species close by. Bird boxes should also be left up over winter as they can provide useful roosting sites for birds in bad weather.

Nest boxes should be cleaned at the end of each bird breeding season. All nesting material and other debris should be removed from the box. It should then be scrubbed clean with boiling water to kill any parasites (avoid using any chemicals). Once the box is clean, it should be left to dry out thoroughly. Under the Wildlife and Countryside Act 1981 it is an offence to disturb breeding birds and therefore annual cleaning is best undertaken from October to January when there is no risk of disturbing breeding birds.

Generalist boxes

Boxes to attract garden birds and woodland breeding species such as tits, nuthatch, redstart and pied flycatcher can be placed in gardens, orchards, woodlands and a wide variety of other habitats. The species of birds attracted to the box will depend upon the size of the entrance hole (see table below).

Boxes should be fixed two to five metres up a tree or wall, out of the reach of predators such as domestic cats. Unless there are trees or buildings, which give permanent shelter, it is best facing between north and east.

General		
Example	Description	Picture
Bird Brick Houses Integrated bird box	http://www.birdbrickhouses.co.uk/brick-nesting-boxes/integrated-bird-box/ Integrated into outside skin of 75mm and most 3" brickwork courses. Comes with a variety of hole sizes to suit particular bird species.	
Entrance Hole	Species	

28mm	Blue-, Marsh-, Coal- and Crested Tit, Wren.	
34mm	Great-, Blue-, Marsh-, Coal- and Crested Tit, Nuthatch, Pied Flycatcher, House Sparrow	
40mm	Redstart and Black Redstart	
50mm	Starling	
60mm	Spotted Flycatcher	
Schwegler No. 1B General Purpose Nest box	www.schwegler-nature.com Suitable for various garden and woodland birds, created with different sized entrance holes to avoid competition between species. Other variations (e.g. 2M) can be free hanging, to deter predators.	
Entrance Hole	Species	
26 mm	Blue-, Marsh-, Coal- and Crested Tit, possibly Wren. All other species are prevented from using the nest box due to this smaller entrance hole	
32 mm	Great-, Blue-, Marsh-, Coal- and Crested Tit, Redstart, Nuthatch, Pied Flycatcher, Tree and House Sparrows.	
Oval	Redstart; also used by species that nest in the diameter 32 mm boxes. However, because more light enters the brood chamber, it is preferred by Redstarts.	

Swift boxes

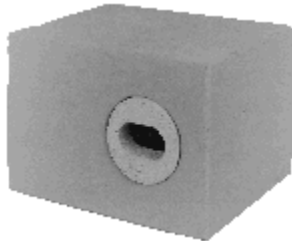
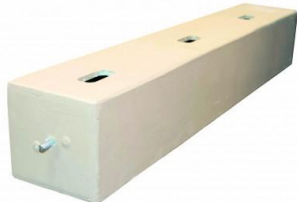
Swifts are colonial nesters and it is important to have several nest sites in one area. It is recommended that most buildings should have between 4 and 10 nest provisions. Swifts also feed almost exclusively on the aerial plankton of flying insects and airborne spiders of small to moderate size, so therefore require habitats which support these invertebrates.

Nest boxes designed for swifts should be installed at least 5m high, around the eaves of the building or under deeply overhanging eaves to allow swifts to drop into the air to forage. The boxes should be positioned away from climbing plants to avoid access for predators such as rodents.

Swifts typically nest in flat spaces within buildings or within a crevice or cavity. The ideal nest box should have an oval or rectangular hole around 30mm (h) x 65mm (w). The internal dimensions of the box should be approximately 400mm (w) x 200mm (d) x 150mm (h).

Swifts can be attracted to areas that they have not previously colonised using 'swift response calls'. Audio CDs are available for this purpose and are available on the Schwegler website (www.schwegler-nature.com).

Swift		
Example	Description	Picture
Swift S Brick	Introduction — S Brick (actionforswifts.com) Swift S bricks provide excellent nesting opportunities for swifts whilst fitting into the brickwork seamlessly without compromising the appearance of the building. The swift boxes will likely require an attraction call system for swifts. This can be set on timer and replays the tape of birds calling to attract them to the nest site, There is no set system for this, but assembly of parts can be achieved quite easily as outlined at this website: http://actionforswifts.blogspot.com/p/attraction-call-systems-for-swifts.html. The system can be purchased for about £30.	 
lbstock Swift Box	www.lbstock.com This swift brick can be built into a wall on new buildings.	

Swift		
Example	Description	Picture
Woodstone Build-in Swift Box	https://gardenature.co.uk This nest box is made from a concrete and wood fibre mix. It can be mounted on a wall, or it can be built into the fascia of a wall. The front of the Woodstone swift box can be removed for cleaning. It should be fitted at least 5 metres above the ground ensuring there is an unobstructed flight path for birds entering and leaving the box.	 A rectangular concrete and wood fibre nest box with a white front panel featuring a circular entrance hole. Several screws and a hex key are shown next to it.
Schwegler Brick Box Type 25	www.schwegler-nature.com This brick design can be built into the wall of the new development and the external surface, excluding the hole, can be rendered to match the surrounding wall.	 A square brick nest box with a circular entrance hole in the center of one face.
Triple Genesis Swift Nest Box	https://www.wildcare.co.uk/ It can be mounted on an external wall to provide three swift nesting sites.	 A long, rectangular wooden nest box with three circular entrance holes along its top edge.
Swift box model 30	http://actionforswifts.blogspot.com/p/diy-swift-box-designs.html This box is suitable for any location as it has a double thickness, waterproof roof (made of uPVC). The 30° sloping roof should deter predators.	 A wooden nest box with a white, sloping uPVC roof, mounted on a brick wall.

Swift		
Example	Description	Picture
Schwegler Swift Box Number 18	www.schwegler-nature.com This Swift Box No. 18 is ideally suited for creating Swift colonies under overhanging eaves.	

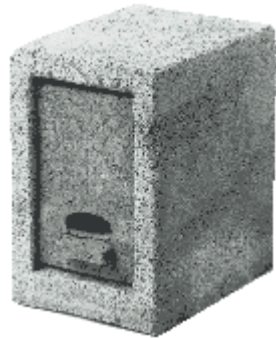
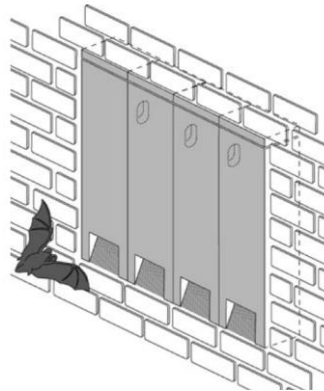
Bat box recommendations

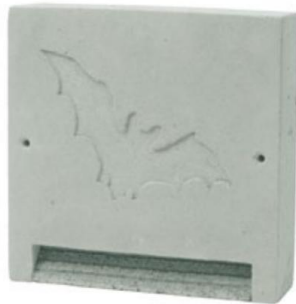
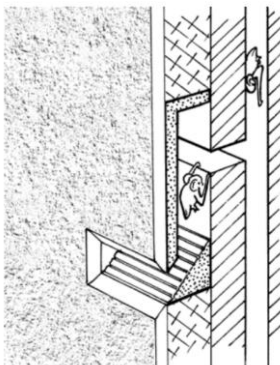
A wide range of bat boxes are available to suit a variety of species and design requirements. Bat boxes can be mounted externally on buildings, built directly into the wall structure or mounted on trees (dependent on box design).

Boxes are more likely to be inhabited if they are located where bats feed and it may help to place the box close to features such as tree lines or hedgerows, which bats are known to use for navigation and can provide immediate cover for bats leaving the roost. Boxes should be placed in areas sheltered from strong winds and are exposed to the sun for part of the day. Access to any bat roosting features should not be lit and should also be at a reasonable height to avoid predation (at least 2m if possible, preferably 4-5m).

Example	Description	Picture
Schwegler General Purpose Bat Box 2F	www.schwegler-nature.com Height: 33 cm Weight: approx. 3.8 kg External diameter: 16 cm Installation: Hanging A general purpose box, suitable for all species.	

Example	Description	Picture
Schwegler General Purpose Bat Box 2F with Double Front Panel	www.schwegler-nature.com Height 33 cm Weight: approx. 4.1 kg External diameter: 16 cm Installation: Hanging This box is suitable for crevice dwellers, such as Nathusius' pipistrelle, Daubenton's bat and common pipistrelle.	
Schwegler 1FF	www.schwegler-nature.com Dimensions: 14(d) x 27(w) x 43(h) cm Weight: 9.9 kg Installation: Hanging This box is suitable for crevice dwellers, such as Nathusius' pipistrelle, Daubenton's bat and common pipistrelle. This box minimises temperature fluctuations in spring and autumn and is self-cleaning.	
Schwegler 1FQ	www.schwegler-nature.com Dimensions: 60(h) x 35(w) x 9(d) cm Weight: 15.8kg Installation: Attached to most external brick, timber or concrete walls at least 3m high. Can also be placed inside roof space This box is ideal for all types of bats that inhabit buildings. The box is weather-resistant and is also temperature controlled and self-cleaning. The front panel of the box can also be painted during manufacture, to match an existing colour.	

Example	Description	Picture
Brick Box Type 27	www.schwegler-nature.com Dimensions: 26.5(h) x 18(w) x 24(d) cm Weight: 9.5kg Installation: Can be flush with outside wall and rendered or covered so only the entrance hole is visible. This box is ideal for all types of bats that inhabit buildings.	
2FR Schwegler Bat Tube	www.schwegler-nature.com Dimensions: 47(h) x 20(w) x 12.5(d) Weight: 9.8kg Installation: Can be installed on external walls – either flush or beneath a rendered surface in concrete and, during renovation work, under wooden panelling or in building cavities. Several tubes should be installed together (recommended three). This box is ideal for all types of bats that inhabit buildings. By installing boxes side by side a colony roosts can be created with any size requirement. This box has three different environmental partitions inside, attracting different species. The box is self-cleaning.	 
1WI Schwegler Summer and Winter Bat Box	www.schwegler-nature.com Dimensions: 55(h) x 35(w) x 9.5(d) cm Weight: 15kg Installation: Attached to most types of external brick, timber or concrete walls. It can be installed flush-mounted and rendered over or simply against the wall. It should be installed at a height of at least 3m.	

Example	Description	Picture
	This box typically attracts building-inhabiting bat species like pipistrelles or serotine bat. This box is weather-resistant and designed for both winter hibernation and larger colonies in summer, including nursery roosts.	
1FE Schwegler Bat Access Panel	www.schwegler-nature.com Dimensions: 30(h) x 30(w) x 8(d) cm. Weight: approx. 5.1 kg. Installation: Installation of multiple units is recommended. The box can be integrated into insulation or masonry. It can also be attached to the underlying structure to cover existing cavities, allowing bats to still use them. Install at least 3m above the ground. This is a general purpose box, suitable for all species. There is a maintenance-free access panel for installing on or in the surface of exterior walls. The open rear enables bats to continue to use existing nesting sites in walls.	 

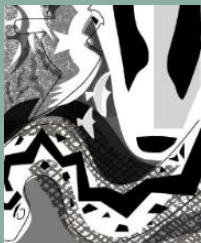


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Reptile Survey

Land North of Priory School, Hitchin

Site	Land North of Priory School, Bedford Road, Hitchin, Hertfordshire, SG5 2UR
Project number	103820
Client name / Address	William Naalchigar c/o Arte Construction Ltd, Leytonstone House, 3 Hanbury Drive, Leytonstone, London, E11 1GA

Version number	Date of issue	Revisions
1.0	19 November 2021	Original
2.0	11 October 2022	Addition of 2022 survey data
3.0	8 July 2025	Addition of 2025 survey data

Author(s)	Kyle Marshall	<i>K Marshall</i>
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Reviewed by	Felix Bird	<i>Felix Bird</i>

Declaration of compliance

The information which we have provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.



MKA Ecology Ltd is a CIEEM Registered Practice. This means that MKA Ecology Ltd are formally recognised for high professional standards, working at the forefront of our profession.

Validity of data

Unless stated otherwise the information provided within this report is valid for a maximum period of 12 months from the date of survey. If works at the site have not progressed by this time an updated site visit may be required in order to determine any changes in site composition and ecological constraints.

CONTENTS

1. EXECUTIVE SUMMARY	3
2. INTRODUCTION	5
2.1. Aims and scope of reptile survey.....	5
2.2. Site description	5
2.3. Summary of previous survey effort	5
2.4. Proposed development.....	6
2.5. Legislation and planning policy	6
3. METHODOLOGIES	8
3.1. Reptile Surveys.....	8
3.2. Surveyors	10
3.3. Constraints.....	11
4. RESULTS	16
4.1. Reptile survey 2021	16
4.2. Reptile survey 2022	16
4.3. Reptile survey 2025	17
4.4. Population estimate	17
5. EVALUATION AND RECOMMENDATIONS	22
5.1. Assessment of results (2021 and 2022 surveys).....	22
5.2. Assessment of results (2025 surveys).....	22
5.3. Assessment of impacts	23
5.4. Mitigation strategy	24
6. CONCLUSIONS	25
7. REFERENCES	26
8. APPENDICES.....	27
Appendix 1: Legislation and planning policy	27
Appendix 2: Raw survey data.....	29
Appendix 3: Proposed plan, June 2025	32

1. EXECUTIVE SUMMARY

In May 2025, MKA Ecology Ltd was commissioned to undertake updated reptile surveys at Land north of Priory School, Hitchin in order to establish the presence/absence of this species group. These updated surveys were undertaken between 16 May 2025 and 3 June 2025 and were commissioned due to the time elapsed since the previous survey effort. The surveys involved the deployment of Artificial Cover Objects (ACOs) at the site followed by seven survey visits to search the site and Artificial Cover Objects for reptiles in suitable weather conditions. Two sets of surveys have previously been undertaken at the Site in 2021 and 2022, consisting of seven survey visits following the deployment of the of ACOs. The results all three surveys are included in this report.

The Site comprises tussocky neutral grassland with scattered scrub and ruderal vegetation, particularly along the western bund, and is bounded by hedgerows on the remaining sides. The proposed development involves the creation of 55 residential dwellings with associated gardens and landscaping. The habitats present across the Site are suitable for reptiles, particularly along the western and northern boundaries, and numerous local records of reptile species were returned during the data search, including adder *Vipera berus*, common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, and grass snake *Natrix helvetica helvetica*.

In 2021, a low population of common lizard was recorded, with a peak count of two individuals and all sightings concentrated along the western bund. This survey was undertaken in October, outside the optimal seasonal window, and ACOs were left in place for only one week prior to survey—both of which are considered constraints that may have limited detection. A total of 85 ACOs were used in 2021. In 2022, the results were consistent, with a maximum of one adult common lizard recorded per visit. Of the seven surveys, five were carried out in September—within the optimal survey period—while two took place in early October, which was not considered a significant constraint. A total of 83 ACOs were deployed in 2022.

The 2025 surveys recorded a total of 17 observations of common lizard, with a peak count of 10 individuals during the fifth survey visit. Reptiles were observed along both the western and northern boundaries of the Site. In line with Froglife (1999) guidance, the Site is still considered to support a low population of common lizard. However, this was a marked increase in reptile numbers when compared with the previous surveys. All survey visits were carried out within the optimal seasonal window and under suitable weather conditions, providing confidence in the robustness of the results. It should be noted that population estimates are indicative only, due to the limitations of a seven-visit presence/absence survey. A total of 91 ACOs were deployed in 2025.

Common lizard is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and mitigation will be required to ensure individuals are not harmed during development.

To ensure compliance with relevant wildlife legislation and safeguard the common lizard population, a reptile mitigation strategy should be developed for the Site. This strategy should outline the methodology for the translocation of reptiles from areas to be affected by development and include details on the location, enhancement, and long-term management of a suitable receptor site. Early consultation between ecologists and landscape architects is strongly recommended to identify a receptor site within the development footprint, where possible. The site should be enhanced through measures such as vegetation management and the installation of hibernacula to support a higher density of reptiles and ensure the long-term viability of the population. These recommendations should be outlined in greater detail within the mitigation strategy, to be submitted to and agreed by the Local Planning Authority prior to the commencement of works.

2. INTRODUCTION

2.1. Aims and scope of reptile survey

In May 2025 MKA Ecology Ltd was commissioned by William Naalchigar on behalf of Arte Construction Ltd to undertake updated reptile surveys at Land north of Priory School, Hitchin in order to support a planning application. These are updated reptile surveys due to the time elapsed since the previous survey efforts in 2021 and 2022. The aims of the surveys undertaken were to:

- Determine the presence or likely absence of native British reptiles at the Site;
- Calculate population size class estimates for any reptiles recorded at the Site;
- Detail recommendations for mitigation where required; and
- Detail recommendations for biodiversity enhancements with regards to native British reptiles where appropriate.

2.2. Site description

The survey area is shown on the map in Figure 3. Within this report this area is referred to as the Site or Land north of Priory School, Hitchin. The Site is located in the north-east of the town of Hitchin (central grid reference TL 17918 30862) and is under the authority of North Hertfordshire District Council. The Site was found to comprise of predominantly other neutral grassland with some taller, ruderal vegetation and scrub along the western boundary and hedgerows along the northern and southern boundaries. The habitat that borders the main area is comprised of modified grassland. The main grassland receives occasionally mowing. The Site encompasses an area of 1.7ha.

2.3. Summary of previous survey effort

An initial Preliminary Ecological Appraisal was completed in December 2020. The habitats present were considered suitable for reptiles, in particular the raised earth bank on the western border which contains a mixture of scrub and longer vegetation. Numerous records of reptiles were also returned from the data search, including adder, common lizard, slow-worm and grass snake. Furthermore, Oughtonhead Common is in close proximity to the Site, which has historical records of grass snake. Overall, the likelihood of the Site to contain reptiles was considered to be moderate.

Reptile surveys were conducted at the Site in 2021 by MKA Ecology Ltd (2021). These surveys found that the site supported a low breeding population of common lizard (Froglife, 1999). However, these surveys were undertaken during a sub-optimal time of year, which was considered to be a major constraint. As such, it was decided that it would be necessary to conduct repeat surveys in 2022 to gain a more complete understanding of the reptile population.

An updated Preliminary Ecological Appraisal was produced in November 2022 (MKA Ecology Ltd, 2022). The risk of reptiles on site was considered to have remained consistent with 2021 with there being a moderate likelihood of reptiles occurring on site. The updated seven-visit presence or absence survey for reptiles in 2022 was undertaken following the recommendation in this report. During the 2022 survey (MKA Ecology Ltd, 2023a) one adult common lizard was recorded on the second survey visit, and one adult common lizard was recorded on the fifth survey visit. These findings are largely in keeping with those recorded during the 2021 survey effort, with the Site supporting a low breeding population of common lizard (Froglife, 1999). Two of the seven surveys were undertaken outside of the optimal survey window. Given that the majority of surveys were undertaken during the optimal survey window (September), and that the surveys in October were very early in the month, this is not considered to be a serious constraint to the survey effort.

In 2025 an updated Preliminary Ecological Appraisal was conducted by MKA Ecology Ltd (MKA Ecology Ltd, 2025). The risk of reptiles on-site has remained consistent with the evaluations from 2020 and 2022, indicating a moderate likelihood of their presence. The 2025 reptile surveys were undertaken in light of the recommendations from this report.

2.4. Proposed development

The proposed development is for the delivery of new homes for the residents of Hitchin, whilst maintaining an ecologically sensitive Site boundary. The proposed layout of the Site is unknown at this stage.

2.5. Legislation and planning policy

The four most commonly encountered species of reptile; common lizard, slow-worm, adder and grass snake are listed under Schedule 5 of the Wildlife & Countryside Act 1981 as amended by the CRoW Act 2000, and are subject to part of Section 9(1) and all of Section 9(5) which makes it illegal to:

- Intentionally kill, injure (Section 9(1))
- Selling, offering for sale, possessing or transporting for the purpose of sale or publishing advertisements to buy or sell a protected species (Section 9(5))

Smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* are afforded further protection within the UK, however their presence within North Hertfordshire is considered to be highly unlikely.

In addition to obligations under wildlife legislation, the revised National Planning Policy Framework (NPPF) updated on 7 February 2025 requires planning decisions to contribute to conserving and enhancing the local environment. Further details are provided in Appendix 1.

Furthermore, all reptile species are designated as Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This sets out a duty for decision makers, including local planning authorities, to contribute towards maintaining, and where possible enhancing the conservation status of any Section 41 Species of Principal Importance found on a site.

3. METHODOLOGIES

3.1. Reptile Surveys

A presence / likely absence survey was undertaken in accordance with survey guidance from Froglife (1999) and Gent & Gibson (2003).

The survey involved the placement of Artificial Cover Objects (ACO) together with direct observation to determine whether reptiles were present or likely absent. ACO were placed in clusters spread evenly across all habitats considered suitable for reptiles. The surveys' location of ACO clusters in relation to habitat features during the 2021, 2022 and 2025 surveys are shown in Figure 1, Figure 2 and Figure 3 respectively. A total of 85 ACOs were used in 2021, 83 in 2022, and 91 in 2025, with placement focused on areas of suitable reptile habitat across the Site.

The ACO are composed of approximately 0.5m² sheets of corrugated metal and roof felt. Reptiles often use ground objects as a place to shelter from predation or disturbance and for absorbing heat. They are ectothermic, which is to say that they gain their body heat from the sun. Reptiles within the immediate vicinity are attracted to ACO in order to gain heat at appropriate times of day, because of the materials ability to absorb heat and provide a warmer micro-habitat than the surrounding vegetation.

During placement of refugia, the surveyor conducted a slow walkover of the site, searching for any reptiles as they walked, being careful to be quiet and to minimise vegetation disturbance where possible.

The ACO were left for 14 days to allow any reptiles present to habituate to them. Seven survey visits were then carried out in suitable weather conditions between 16 May 2025 and 2 June 2025. Visits were timed to the period of the day when reptiles are most likely to be seeking a means of gaining additional heat, i.e. early morning, late afternoon, post-showers and cooler times of day. Different species and even sexes of animals have differing behavioural patterns and preferences in terms of using such ACO and basking out in the open, therefore a varied approach to visit times is generally beneficial in ensuring a thorough survey. Details of timings and weather conditions for each survey can be found in Table 1.

Table 1: Summary of weather conditions (2021 surveys)

Visit	Date	Time of survey	Weather conditions*	
1	06/10/2021	09:55	Wind: 1 Cloud: 1/8	Temp: 12 °C Rain: None

Visit	Date	Time of survey	Weather conditions*	
2	07/10/2021	11:22	Wind: 1 Cloud: 2/8	Temp: 11 °C Rain: None
3	08/10/2021	10:20	Wind: 1 Cloud: 2/8	Temp: 12°C Rain: None
4	11/10/2021	10:10	Wind: 1 Cloud: 3/8	Temp: 10/11°C Rain: None
5	12/10/2021	11:20	Wind: 1 Cloud: 1/8	Temp: 11°C Rain: None
6	13/10/2021	10:36	Wind: 1 Cloud: 4/8	Temp: 11/12°C Rain: None
7	14/10/2021	13:15	Wind: 1 Cloud: 5/8	Temp: 14°C Rain: None

*Wind as per Beaufort Scale / Cloud cover given in Oktas.

Table 2: Summary of weather conditions (2022 surveys)

Visit	Date	Time of survey	Weather conditions*	
1	22/09/2022	09:00	Wind: 2 Cloud: 2-4/8	Temp: 12°C Rain: None
2	23/09/2022	10:10	Wind: 2 Cloud: 8/8	Temp: 15°C Rain: None
3	26/09/2022	17:45	Wind: 1 Cloud: 7/8	Temp: 12°C Rain: None
4	27/09/2022	18:15	Wind: 1 Cloud: 2/8	Temp: 11°C Rain: None
5	28/09/2022	14:10	Wind: 2 Cloud: 8/8	Temp: 14°C Rain: None
6	3/10/2022	13:45	Wind: 2 Cloud: 4/8	Temp: 16°C Rain: None
7	4/10/2022	11:35	Wind: 2-3 Cloud: 7/8	Temp: 16°C Rain: None

*Wind as per Beaufort Scale / Cloud cover given in Oktas.

Table 3: Summary of weather conditions (2025 surveys)

Visit	Date	Time of survey	Weather conditions*	
1	16/05/2025	10:00	Wind: 3 Cloud: 2/8	Temp: 13°C Rain: None
2	19/05/2025	16:15	Wind: 4 Cloud: 4/8	Temp: 18°C Rain: None
3	21/05/2025	16:04	Wind: 3 Cloud: 3/8	Temp: 17°C Rain: None
4	23/05/2025	09:30	Wind: 4 Cloud: 4/8	Temp: 16°C Rain: None
5	27/05/2025	10:00	Wind: 4 Cloud: 8/8	Temp: 15°C Rain: None
6	29/05/2025	08:05	Wind: 4 Cloud: 4/8	Temp: 15°C Rain: None
7	03/06/2025	10:45	Wind: 6 Cloud: 7/8	Temp: 14°C Rain: Light

*Wind as per Beaufort Scale / Cloud cover given in Oktas.

3.2. Surveyors

The 2021 reptile survey site visits were undertaken by:

- Evan Burdett (Graduate Ecologist, MKA Ecology Ltd). Evan has one years' experience completing reptile surveys.
- James Hanlon, sub-contractor for MKA Ecology Ltd.

The 2022 reptile survey site visits were undertaken by:

- Gabrielle Wilbur ACIEEM (Senior Ecologist, MKA Ecology Ltd). Gabrielle has seven years' experience undertaking reptile surveys.
- Lydia Ennis ACIEEM (Consultant Ecologist, MKA Ecology Ltd). Lydia has 3 years' experience undertaking reptile surveys.
- Phoebe Waller (Seasonal Ecologist, MKA Ecology Ltd). Phoebe has one seasons' experience undertaking reptile surveys.
- James Hanlon, sub-contractor for MKA Ecology Ltd.

The 2025 reptile survey site visits were undertaken by:

- Joe Gillis (Ecologist, MKA Ecology Ltd). Joe has one years' experience undertaking reptile surveys.
- Alfie Bunting (Consultant Ecologist, MKA Ecology Ltd). Alfie has three years of experience undertaking reptile surveys.
- Maddy Grove (Graduate Ecologist, MKA Ecology Ltd). Maddy has one years' experience undertaking reptile surveys.
- Robin Pickett (Graduate Ecologist, MKA Ecology Ltd). Robin has one years' experience undertaking reptile surveys.

The report was written by Kyle Marshall, Graduate Ecologist at MKA Ecology Ltd. Kyle is in his first year as a professional ecologist. The report was reviewed and authorised by Felix Bird, Senior Ecologist at MKA Ecology Ltd. Felix has six years' experience as a consultant ecologist.

3.3. Constraints

Numbers of common lizards may be under-recorded during optimal weather conditions because of their rapid movement and sensitivity to disturbance (JNCC, 2003). However, the use of incidental visual inspections during the survey limits the risk of bias.

It should be noted that to estimate a population size, at least 20 visits per season are needed. Only seven-visit surveys were undertaken, as the aim was to establish the presence or absence of reptiles on site, not to gain a full understanding of the population size.

2021

The survey visits were conducted in October, which is a sub-optimal month for reptile surveys. Whilst the surveys were conducted between early October and mid-October, and within the recommended temperature window of 9-18°C, it is on the cusp of when reptiles start to go into hibernation. It is thus likely that the number of active common lizards was much reduced at the time of survey. The estimated population is thus likely to be under representative.

The reptile mats were left for seven days before the first reptile survey was completed, when best practice recommends a two-week period for them to be left in situ. Due to the sub-optimal timing, earlier survey commencement was considered to override the need to await a second week of mats being left.

These were considered to be significant constraints which could affect the results of the survey effort.

2022

Two of the surveys were undertaken in October, which is a sub-optimal month for reptile surveys as stated above. Whilst these surveys were conducted in early October, they were undertaken within the recommended temperature window of 9-18°C. Given that the majority of surveys were undertaken during September, and that the surveys in October were very early in the month, this is not considered

to be a serious constraint to the survey effort. Whilst it is possible that the completion of two of the surveys in October has led to a slight under representation of the true size of the reptile population, it is highly unlikely that these surveys would have identified a significantly larger population.

The reptile mats were left for 12 days before the first reptile survey was completed, when best practice recommends a two-week (14 days) period for them to be left in situ. This is not considered to be a major constraint to the survey effort.

2025

The final survey was undertaken at the start of June, which is a sub-optimal month for reptile surveys as higher temperatures can result in lower detection rates when using ACO. However, this was not considered a major constraint as the survey was completed within the recommended temperature window of 9-18°C.

Not all of the common lizards could be sexed due to their rapid movements, which limited opportunities for close observation.

Figure 1: Location of reptile ACO at Land north of Priory School (2021 surveys)



Figure 2: Location of reptile ACO at Land north of Priory School (2022 surveys)



Figure 3: Location of reptile ACO at Land north of Priory School (2025 surveys)



4. RESULTS

4.1. Reptile survey 2021

Three records of common lizard were made across the site with a maximum of two common lizard recorded during a single visit (see Table 4). These were all recorded along the western boundary of the Site and included a juvenile, a yearling and an adult common lizard. The presence of juveniles does indicate that a breeding population is present. A map illustrating the number and species of reptiles found at each ACO group is shown in Figure 4. The full survey results are provided in Appendix 2.

Table 4: The peak count of reptiles recorded on each survey visit at Land north of Priory School

Survey visit	Peak count for each survey visit
	<i>Common lizard</i>
1	0
2	1
3	0
4	0
5	2
6	0
7	0

4.2. Reptile survey 2022

Two records of adult common lizard were made across the site with a maximum of one common lizard recorded during a single visit (see Table 5). These were both recorded along the western boundary of the Site. A map illustrating the number and species of reptiles found at each ACO group is shown in Figure 5. The full survey results are provided in Appendix 2.

Table 5: The peak count of reptiles recorded on each survey visit (2022 surveys)

Survey visit	Peak count for each survey visit
	<i>Common lizard</i>
1	0

Survey visit	Peak count for each survey visit
	<i>Common lizard</i>
2	1 (adult)
3	0
4	0
5	1 (adult)
6	0
7	0

4.3. Reptile survey 2025

Seventeen records of common lizard were made across the site, with a maximum of ten common lizards recorded during a single visit (Table 6). These were recorded along the western and northern boundaries of the Site. In addition, a dead adult common lizard was recorded along the western boundary during survey visit seven. A map illustrating the number of species of reptiles found at each ACO group is shown in Figure 6. The full survey results are provided in Appendix 2.

Table 6: The peak count of reptiles recorded on each survey visit (2025 surveys)

Survey visit	Peak count for each survey visit
	<i>Common lizard</i>
1	0
2	1
3	2
4	0
5	10
6	2
7	2 (plus 1 dead individual)

4.4. Population estimate

Following the guidance suggested by Froglife (1999) populations of reptiles can be classified as 'low, good or exceptional' based on the number and species of reptiles per hectare recorded on site.

In addition to these classifications, the Key Reptile Site Register is a mechanism designed to promote the safeguard of important reptile sites (Froglife, 1999).

To qualify as a Key Reptile Site, a site must meet at least one of the following criteria:

- Supports three or more reptile species;
- Supports two snake species;
- Supports an exceptional population of one species;
- Supports an assemblage of species scoring at least 4;
- Does not meet any of the previous criteria, but is of particular regional importance due to local rarity.

The population size categories and scoring for the Key Reptile Register are shown in Table 7 below. It is worth noting that these population size categories are only estimates of the actual population, which is beyond the scope of this survey.

Table 7: Population size categories for common reptile species

Species	Low Population (Scores 1)	Good Population (Scores 2)	Exceptional population (Scores 3)
Grass snake	<5	5-10	>10
Adder	<5	5-10	>10
Slow worm	<5	5-20	>20
Common lizard	<5	5-20	>20

The figures in Table 7 refer to the maximum number of adults seen by observation and/or under ACO, as seen by one surveyor in one day, at a refuge density of up to 10 per hectare.

The reptile survey recorded a peak count of 10 individuals across the 1.7Ha site, resulting in a density of approximately 5.88 common lizard per hectare. However 91 ACO were deployed, a density of 53.5 refuges per hectare and 5.35 times greater than the 10 refuge per hectare density used for calculating the figures in Table 7. Reducing the observed peak density (5.88) by the same rate (5.35) to generate comparable numbers results in a density of approximately 1.10 common lizards per hectare. The site can therefore be said to support a low population of common lizard.

Figure 4: Distribution of reptiles recorded at Land north of Priory School (2021 Surveys)



Figure 5: Distribution of reptiles recorded at Land north of Priory School (2022 Surveys)



Figure 6: Distribution of reptiles recorded at Land north of Priory School (2025 Surveys)



5. EVALUATION AND RECOMMENDATIONS

The following section contains an evaluation of the reptile survey results for Land north of Priory School, along with recommendations for further work where required.

5.1. Assessment of previous results (2021 and 2022 surveys)

The Site was found to sustain a low breeding population of common lizard. All captures were made close to the western bund of the site.

In 2021, the survey was undertaken at a sub-optimal time of year, October. Due to the late commissioning, ACO were also only left in place for one week instead of two, as it was felt that the need to undertake surveys as soon as possible prior to hibernation was of greater significance than waiting a further week for reptiles to find them. Whilst these were considered to be major constraints to the survey effort in 2021, and possibly resulted in an underestimation of the population sizes of reptiles present, the results of the surveys conducted in 2022 support the conclusion that only a low population of common lizards are present.

In 2021, all surveys were undertaken in suitable weather conditions and the temperature in October 2021 was, in keeping with recent trends, above average. Rainfall was also higher than the average for this month. Common lizards will commence hibernation in October and it is likely the association with capture near the bund in the west of the site may be of reptiles moving to hibernate in this area

In 2022, The majority of the surveys (five out of seven) were undertaken in September, which is within the optimal window for undertaking reptile surveys. Two of the surveys were undertaken in October, which is a sub-optimal time of year. However, given that the weather was largely consistent across all seven surveys, this is not considered to be a major constraint.

The results of the 2022 surveys were largely in keeping with those conducted in 2021. In 2022, a maximum of one adult common lizard was recorded on any one visit. On the two visits in which this was recorded, both records were located on the western bund. Common lizards will commence hibernation in October and it is likely the association with capture near the bund in the west of the site may be of reptiles moving to hibernate in this area, which mirrors the results of the 2021 surveys.

5.2. Assessment of results (2025 surveys)

The site was found to sustain a low population of common lizard during the 2025 surveys, however these surveys recorded a significant increase in reptile activity compared to previous years, with a total

of 17 records of common lizard across the seven survey visits and a peak count of 10 individuals on a single visit. This marks a notable rise from the 2021 and 2022 survey efforts.

As with previous years, common lizards were predominantly recorded along the western boundary of the Site, with several additional observations made near the northern boundary and a single observation within the field. This increased spatial distribution suggests that the reptile population may be expanding within the Site or that improved survey conditions have led to a better detection rate.

The 2025 surveys were undertaken mostly within the optimal survey window (mid-May to early June) and mostly in suitable weather conditions. While the final survey was conducted in early June—considered a marginally sub-optimal period—temperatures remained within the preferred range for reptile activity (9–18°C), and this is therefore not considered a significant constraint.

The marked increase in recorded individuals may reflect either a genuine rise in population size or a higher detection rate due to improved survey timing and weather conditions. Nonetheless, based on the peak count and the estimated density of approximately 1.10 individuals per hectare, the Site is assessed to support a low population of common lizard in accordance with Froglife (1999) guidance.

The continued use of the western bund by reptiles, especially in proximity to bramble and longer grass, supports the conclusion that this area is of particular value to the species for basking, foraging, and potentially for hibernation. The bund should therefore be considered in any future mitigation or enhancement planning.

5.3. Assessment of impacts

As per the most up-to-date plans (Appendix 3), the proposed development involves the creation of 55 residential units across the majority of the grassland. The bund containing bramble scrub and grassland habitats has been highlighted as important for common lizard and if removed has the potential to adversely impact the population present onsite.

The development would have to ensure that no reptiles were injured or killed during the process of construction to comply with the requirements of the Wildlife and Countryside Act 1981, as amended. In addition, under the provisions of the Natural Environment and Rural Communities Act 2006 the development would need to ensure that the biodiversity within the Site is maintained. If reptile habitat is to be disturbed by the development, mitigation is required to ensure that no individuals are harmed and ideally that there is no net loss of reptile populations.

A reptile mitigation strategy is required to ensure that the development is sustainable, and this is described in further detail below.

5.4. Mitigation strategy

Mitigation for the presence of reptile species is a commonly encountered development issue. Mitigation is most effectively and economically achieved when it is possible to retain areas of suitable reptile habitat *in situ*. Where possible the design scheme for the site should aim to include sufficient areas of retained habitat to ensure the long-term viability of the reptile populations at the site. However, where in-situ retention is not possible, options exist for the identification of a suitable off-site receptor site, to be agreed with the Local Authority in advance of the mitigation works.

In order to ensure that a receptor site is suitable to receive common lizard, some habitat enhancement works (including scrub removal, grassland planting and installation of artificial reptile hibernacula) should be undertaken prior to the commencement of the translocation programme. The receptor site should ideally be local to the donor site, and not be subject to planning or other ecological threats in the foreseeable future. Full details of the location and preparation works for the receptor site, along with the methodology to be used for the reptile translocation, should be contained within a reptile mitigation strategy document to be submitted to and approved by the Local Planning Authority.

Once the translocation programme has been completed, a destructive search of key areas that may still support reptiles may be necessary under an ecological watching brief. These measures will also be included within the reptile mitigation strategy.

Recommendation 1

Develop a reptile mitigation strategy for the Site, to include methodology for translocation of the known population of common lizard present and the location and management of the receptor site.

Recommendation 2

Early consultation between landscape architects and ecologists are required to develop an appropriate receptor site within the development footprint that can be retained and preserved through construction and operation. Connectivity will be key to a sustainable solution; the receptor site will require some habitat improvements to facilitate an increased density of reptiles.

6. CONCLUSIONS

A seven-visit presence or absence survey was completed at Land north of Priory School in 2025 to update the findings from the 2021 and 2022 surveys and assess any changes in the status of reptiles on site. The 2025 survey effort recorded a significant increase in reptile activity, with a maximum count of ten common lizards recorded during a single visit. A total of seventeen records were made, with lizards observed along both the western and northern boundaries of the Site.

Based on this data, the Site is assessed to support a low population of common lizard, in line with Froglife (1999) criteria. This is broadly in line with previous findings, although the 2025 survey recorded a large increase in numbers of individuals.

The proposed development involves the creation of 55 residential dwellings, which will result in the loss of suitable reptile habitat. Without appropriate mitigation, there is a risk of harm to individual reptiles and the local population.

A reptile mitigation strategy must be developed to ensure compliance with wildlife legislation and to safeguard the local common lizard population. This should include the identification of a suitable receptor site, ideally within the red line boundary, and the implementation of measures such as habitat enhancement, installation of reptile fencing, and translocation of individuals. Liaison between ecologists and landscape architects at an early stage will be important to integrate ecological design into the wider development scheme.

The mitigation strategy should also outline the methodology for the translocation process and include post-translocation works such as a destructive search under ecological supervision. These measures will help ensure that reptile populations are protected and that the development proceeds in an ecologically responsible manner.

7. REFERENCES

Froglife (1999) Reptile Survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

Gent, T., and Gibson, S. (2003) *Herpetofauna Workers Manual*. JNCC: Peterborough

8. APPENDICES

Appendix 1: Legislation and planning policy

Conservation of Habitats and Species Regulations 2017 (as amended)

Full legislation text available at: <http://www.legislation.gov.uk/uksi/2017/1012/contents/made>

The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: <http://www.legislation.gov.uk/ukpga/1981/69>

Section 41 of Natural Environments and Rural Communities (NERC) Act 2006

Full legislation text available at: <http://www.legislation.gov.uk/ukpga/2006/16/contents>

National Planning Policy Framework (NPPF)

Full text is available at: <https://www.gov.uk/government/collections/revised-national-planning-policy-framework>

The revised NPPF was updated on 7 February 2025 setting out the Government's planning policies for England and the process by which these should be applied. The policies within the NPPF are a material consideration in the planning process. The key principle of the NPPF is a presumption in favour of sustainable development, with sustainable development defined as a balance between economic, social and environmental needs.

Policies 187 to 201 of the NPPF address conserving and enhancing the natural environment, stating that the planning system should:

- Contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes;
- Recognise the wider benefits of ecosystem services; and
- Minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity.

Furthermore there is a focus on re-use of existing brownfield sites or sites of low environmental value as a priority, and discouraging development in National Parks, Sites of Specific Scientific Interest, the Broads or Areas of Outstanding Natural Beauty other than in exceptional circumstances.

Where possible, planning policies should also

“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”.

Appendix 2: Raw survey data

The following tables shows the number of common lizard recorded at each ACO cluster across all survey visits.

2021 survey visits:

Common lizard:

ACO group*	Site visit number						
	1	2	3	4	5	6	7
A	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0
E	0	0	0	0	1	0	0
F	0	1	0	0	1	0	0
Total	0	1	0	0	2	0	0

* see Figure 4 for location reference

Additional information:

Visit	Time	ACO cluster	Temperature (°C)	Species	Juvenile/ adult	Sex	Comments
2	11:38	F	n/a	CL	Adult	n/a	
5	11:35	E	n/a	CL	Yearling	n/a	
5	11:38	F	n/a	CL	Juvenile	n/a	

2022 survey visits:

Common lizard:

ACO group*	Site visit number						
	1	2	3	4	5	6	7
A	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0

ACO group*	Site visit number						
	1	2	3	4	5	6	7
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
F	0	1	0	0	1	0	0
Total	0	1	0	0	1	0	0

* see Error! Reference source not found. for location reference

Additional information:

Visit	Time	ACO cluster	Temperature (°C)	Species	Juvenile/ adult	Sex	Comments
2	10:20	F	15	CL	Adult	F	
5	14:18	F	14	CL	Adult	F	

2025 survey visits:

Common lizard:

ACO group*	Site visit number						
	1	2	3	4	5	6	7
A	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0
C	0	0	0	0	6	2	1
D	0	0	0	0	0	0	1
E	0	0	0	0	0	0	0
F	0	1	2	0	4	0	1
Total	0	1	2	0	10	2	3

* see Figure 6 for location reference

Additional information:

Visit	Time	ACO cluster	Temperature (°C)	Species	Juvenile/ adult	Sex	Comments
2	16:33	F	18	CL	Adult	F	
3	16:23	F	17	CL	Adult	Unknown	
3	16:30	F	17	CL	Adult	F	
5	10:04	F	15	CL	Juvenile	F	Shedding skin
5	10:08	F	15	CL	Juvenile	M	Tail regrowth
5	10:13	F	15	CL	Adult	M	Tail stump, right foot missing
5	10:20	F	15	CL	Juvenile	M	
5	10:25	C	15	CL	Adult	Unknown	
5	10:25	C	15	CL	Adult	Female	
5	10:37	C	15	CL	Adult	Male	
5	10:40	C	15	CL	Adult	Female	
5	10:47	C	15	CL	Juvenile	Male	
5	10:47	C	15	CL	Adult	Female	
6	08:20	C	15	CL	Adult	Unknown	
6	08:25	C	15	CL	Adult	Unknown	
7	10:54	C	13	CL	Adult	Unknown	
7	11:11	D	13	CL	Juvenile	Female	
7	10:47	F	13	CL	Juvenile	Female	Dead

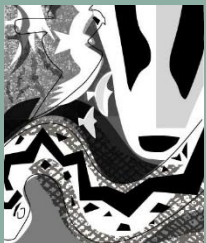


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Biodiversity Net Gain Assessment

Land North of Priory School, Hitchin

Site	Land North of Priory School, Hitchin
Project number	103820
Client name / Address	Arte Construction Ltd, 34-35 Berwick St, London, W1F 8RP

Version number	Date of issue	Revisions
1.0	19 December 2025	Original version

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Declaration of compliance

The information which we have provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.



We are a Chartered Institute of Ecology and Environmental Management (CIEEM) Registered Practice. All of our ecologists are members of CIEEM and between them carry licences for the majority of protected species.

CONTENTS

1.	EXECUTIVE SUMMARY	3
2.	INTRODUCTION	4
2.1.	Purpose.....	4
3.	HABITATS.....	6
3.1.	Present – baseline condition survey	6
3.2.	Future – proposed landscape and enhancements	6
4.	METHODOLOGIES.....	9
4.1.	Biodiversity Net Gain assessor.....	9
4.2.	Assignment of habitats	9
4.3.	Trading Summary	10
4.4.	Data collection and mapping habitats.....	10
4.5.	Hedgerows.....	11
4.6.	Rivers and streams.....	11
4.7.	Habitat degradation	11
4.8.	Sharing data	11
4.9.	Assumptions and constraints.....	11
5.	RESULTS AND RECOMMENDATIONS	16
5.1.	Results	16
5.2.	Recommendations	17
6.	CONCLUSIONS	19
7.	REFERENCES	20
8.	APPENDICES	21
8.1.	Appendix 1: Assignment of biodiversity metric multipliers.....	21
8.2.	Appendix 2: Biodiversity net gain calculator	36
8.3.	Appendix 3: Quadrat data.....	37

1. EXECUTIVE SUMMARY

In April 2025 MKA Ecology Limited was commissioned to undertake a Biodiversity Net Gain assessment for Land North of Priory School, Hitchin. This Biodiversity Net Gain Assessment has been prepared to detail how the biodiversity enhancements in the proposed scheme will lead to an overall benefit to biodiversity.

The Site primarily comprises of a field of other neutral grassland with modified grassland, bramble scrub, individual trees and native hedgerows along the boundaries. The proposed development involves the delivery of 50 new residential dwellings, whilst maintaining an ecologically sensitive site boundary. The newly proposed habitats include the retention of one native hedgerow and the creation of other neutral grassland, modified grassland, vegetated garden, introduced shrub, developed land, 64 individual trees, three species-rich native hedgerows and two ornamental non-native hedgerows.

To provide an objective assessment of the potential value of the proposed biodiversity enhancements, the DEFRA Statutory Biodiversity Metric (DEFRA, 2024) is applied. The measures, a proxy for biodiversity that use habitat types and their areas, are compared before (the existing condition) and after the completion of the proposed development.

It is concluded that the proposed development is likely to lead to a net loss of 70.81% in habitat units and a net gain of 76.54% in hedgerow units. The other neutral grassland and species-rich native hedgerows are the most crucial created habitats required in delivering the predicted units. Trading rules have not been satisfied for medium distinctiveness habitats.

In order to reach the requirement for a 10% net gain in habitat units and satisfy the trading rules for medium distinctiveness habitats, further biodiversity units will be generated offsite. A total of 11.81 units is required to reach the mandatory 10% net gain. However more units are required to pass the trading rules. To satisfy the trading rules and offset for the loss of other neutral grassland and bramble scrub, a total of 12.17 units are required, of which there must be 11.99 medium distinctiveness grassland units and 0.18 medium distinctiveness scrub (heathland and shrub broad habitat type) units. Alternatively, high or very high distinctiveness habitats could be used instead of grassland or scrub. The procurement of these units should be required as a condition of planning approval for the proposed development.

It should be noted that the predicted net-gain in biodiversity is reliant on the successful restoration and/or creation of habitats and their maintenance for the foreseeable future. It will be critical to ensure that appropriate management activities are put in place in order to achieve the desired condition of the proposed habitats. It is recommended that measures to ensure the successful creation and long-term management of proposed habitats are outlined in a Habitat Management and Monitoring Plan (HMMP) for the Site.

2. INTRODUCTION

2.1. Purpose

This Biodiversity Net Gain Assessment is submitted for the approval of North Hertfordshire District Council to show how a 10% net gain for biodiversity will be achieved as required by the LPA.

The purpose of this assessment is to review the existing biodiversity value of the Site, comparing this to the proposed landscape masterplan and calculate an overall biodiversity net change for the Site. The primary method of calculating this change will follow the DEFRA Statutory Biodiversity Metric (Defra, 2024). The aim of using this method is to demonstrate whether the proposed development and landscape masterplan will deliver a net gain in biodiversity.

The process of achieving and assessing Biodiversity Net Gain should follow the below principles and rules, as set out within *Biodiversity Net Gain, Good Practice Principles for Development* (Baker *et al.*, 2019) (Table 1) and *The Statutory Biodiversity Metric – User Guide (draft)* (DEFRA, 2024) (Table 2).

This Biodiversity Net Gain Assessment is in line with British Standard BS8683.

Table 1: The UK's good practice principles for biodiversity net gain (Baker *et al.*, 2019)

Principle	In practice
1. 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 the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.
2. Avoid losing biodiversity that cannot be offset elsewhere	Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve NNL/net gain.
3. 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.
4. 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 losses occurring and gains being fully realised.
5. Make a measurable net gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.

Principle	In practice
6. 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 also 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
7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).
8. Create a Net Gain legacy	Ensure Net Gain generates long-term benefits by: - Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity - Planning for adaptive management and securing dedicated funding for long-term management - Designing Net Gain for biodiversity to be resilient to external factors, especially climate change - Mitigating risks from other land uses - Avoiding displacing harmful activities from one location to another and - Supporting local-level management
9. Optimise sustainability	Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.
10. Be transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

Table 2: Biodiversity net gain rules (DEFRA, 2024)

Rule	In practice
1	The trading rules of this biodiversity metric must be followed.
2	Biodiversity unit outputs, for each type of unit, must not be summed, traded, or converted between types. The requirement to deliver at least a 10% net gain applies to each type of unit.
3	To accurately apply the biodiversity metric formula, you must use the biodiversity metric calculation tool or small sites biodiversity metric tool (SSM) for small sites. The tools remove the need for a user to manually calculate the change in biodiversity value. The tool will summarise the results of the calculation and inform a user whether the biodiversity net gain objective has been met.
4	In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority.

3. HABITATS

3.1. Present – baseline condition survey

A Preliminary Ecological Appraisal was conducted by MKA Ecology Ltd on 14 April 2025 (MKA Ecology Ltd, 2025) to inform the baseline habitats present. The Site was found to cover a total of 1.8 hectares and comprises other neutral grassland, modified grassland, bramble scrub, hardstanding, individual trees, native hedgerows and a native hedgerow with trees. The habitats at the Site were mapped during the Preliminary Ecological Appraisal and are presented in Figure 1. The areas occupied by each habitat type are detailed in Table 4 in the next section.

Survey constraints of the Preliminary Ecological Appraisal are described in Section 4.9.

No irreplaceable habitats were identified onsite during the survey. Please note that any impacts on designated sites and protected species that may result from the development have been addressed in the Preliminary Ecological Appraisal, which also outlines plans for mitigation and enhancement where required (MKA Ecology Ltd, 2025).

3.2. Future – proposed landscape and enhancements

The proposed development involves the construction of 50 residential dwellings with associated landscaping and access. Proposed habitats include other neutral grassland, modified grassland, vegetated garden, introduced shrub, developed land, individual trees, species-rich native hedgerows and ornamental non-native hedgerows and are presented in Figure 2.

It is these proposed habitats that will form the basis of the calculation of 'net-change' in biodiversity using the DEFRA metric.

Figure 1: Pre-development habitats at Land north of Priory School, Hitchin (UK Habitat classification map)

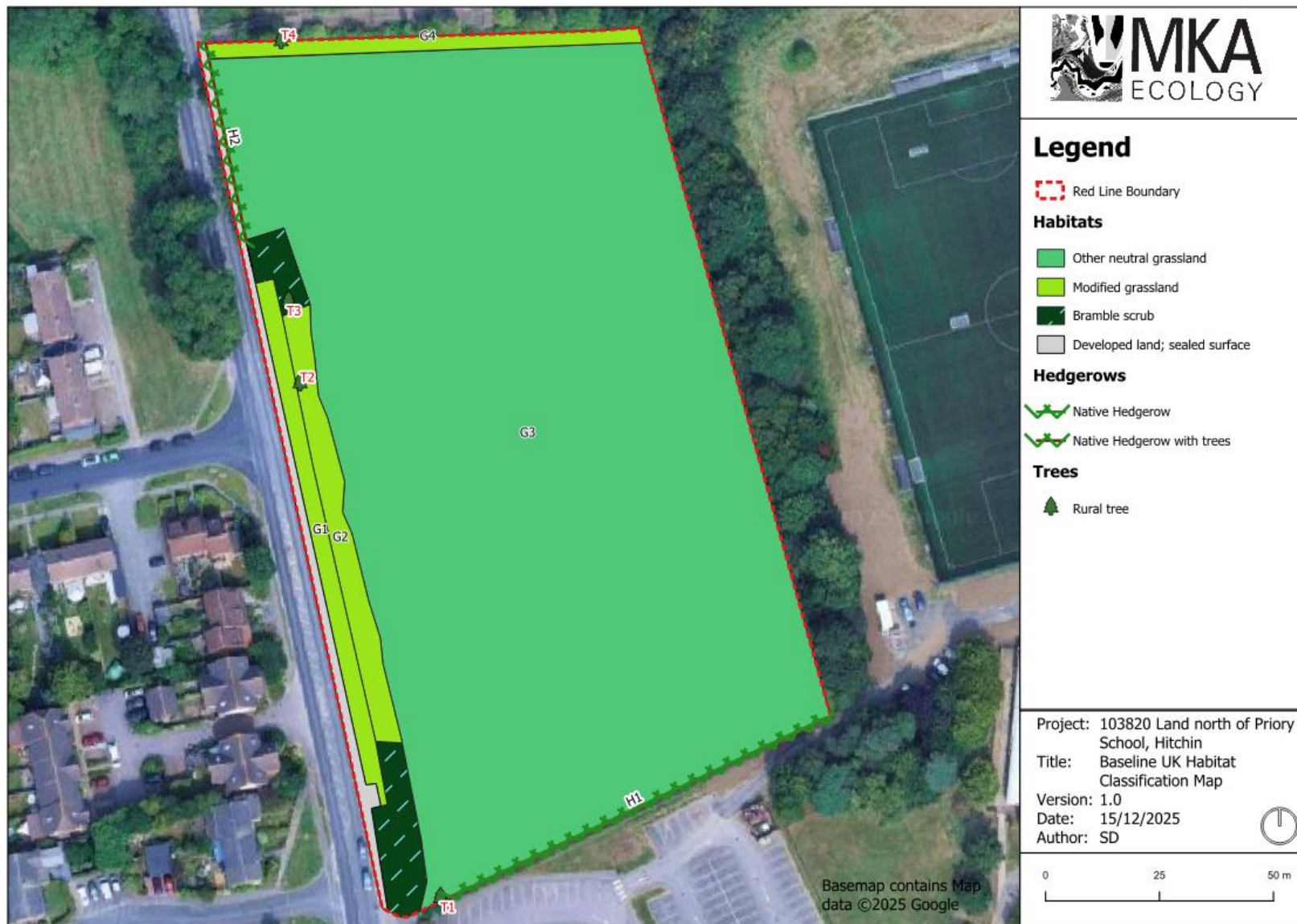
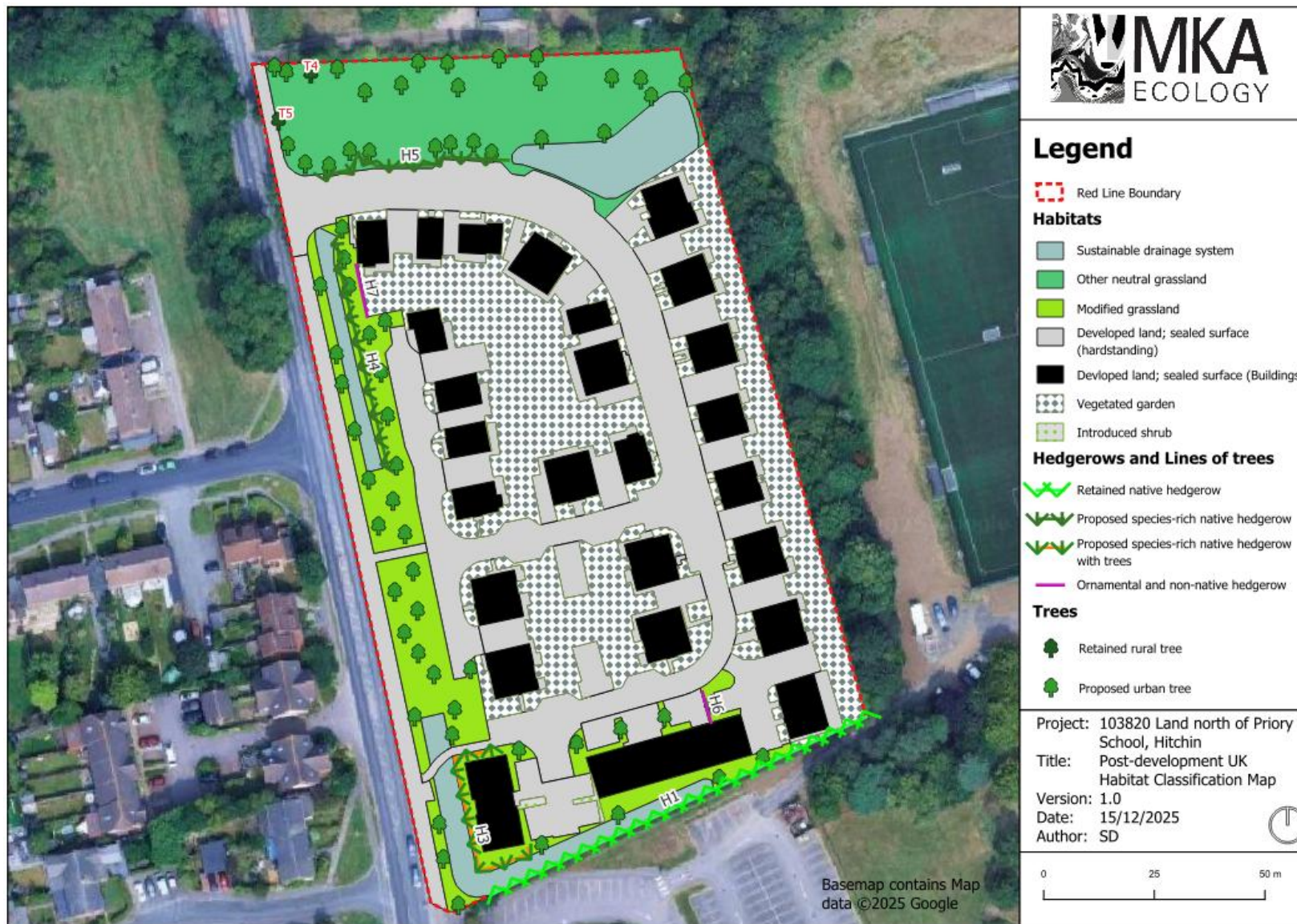


Figure 2: Post-development habitats at Land north of Priory School, Hitchin (UK Habitat classification map)



4. METHODOLOGIES

4.1. Biodiversity Net Gain assessor

This Biodiversity Net Gain assessment was conducted by Eleanor Richards, Ecologist at MKA Ecology Ltd and Alfie Bunting, Consultant Ecologist at MKA Ecology Ltd. Eleanor and Alfie each have over two years' experience conducting Biodiversity Net Gain assessments and are considered competent assessors under the Statutory Biodiversity Metric requirements (DEFRA, 2024). The condition assessment was undertaken by Alfie Bunting and Kyle Marshall. Kyle is a Graduate Ecologist at MKA Ecology Ltd in his first year of ecological consultancy. The Biodiversity Net Gain Assessment was reviewed by Liam Price MCIEEM, Senior Ecologist at MKA Ecology Ltd. Liam has over seven years' experience as a consultant ecologist and is considered a competent assessor under the Statutory Biodiversity Metric requirements (DEFRA, 2024).

4.2. Assignment of habitats

To establish whether the proposed development will contribute positively to biodiversity we use the Defra Statutory Biodiversity Metric (DEFRA, 2024). This method uses habitat as a proxy for biodiversity and its primary application is to provide planners and developers with a method of establishing how much and what type of habitats should be created or enhanced in order to ensure that the proposed development results in a net gain for biodiversity. The calculations within the metric are based on each habitat being assigned a score for each of the following core quality components:

- Distinctiveness: A measure of the type and importance of a habitat;
- Condition: A measure of the present or predicted condition of a habitat type; and
- Strategic significance: How a habitat is regarded within Local Planning Policy.

The score for habitat distinctiveness is automatically assigned in the Statutory Biodiversity Metric based on the habitat type. Please see Appendix 1 for further information on how habitat condition and strategic significance was assigned in this assessment.

For proposed habitats, where there is an attempt to predict the habitat type following establishment additional handicaps or risk scores are imposed representing the following factors:

- Difficulty: More difficult habitats incur a greater risk.
- Time to condition: In general, it takes longer for habitats to reach a better condition, plus certain habitats by their very nature take longer to create or restore.
- If the creation or enhancement of habitats is delayed, an additional risk score is applied. This will not apply in the present case.

- If habitats are created off-site, an additional risk score is applied. This will apply in the present case.

The multipliers used in habitat assignment in the Biodiversity Net Gain Metric are detailed further in Table 3 below.

Table 3: Multipliers used in the calculation of Biodiversity Net Gain

Multiplier	When applied	Description
Distinctiveness	Before and after	A measure of the type of habitat, automatically assigned within the Metric. Habitats with greater value are assigned a higher score.
Condition	Before and after	The condition of the habitat. Uses the Technical Supplement (<i>Panks et al. 2021a</i>); Higher levels of condition give rise to greater values. In some cases, no condition assessment is required and these habitats are automatically allocated a score.
Strategic significance	Before and after	Whether a habitat is important within its local context.
Time to target condition	After	Used to account for the fact that habitat creation as part of a development is rarely instant. A 'handicap' is applied, with habitats that take longer to establish resulting in a greater reduction.
Difficulty of creation/restoration	After	Habitats that are more difficult to create/restore cause a reduction in the biodiversity unit as they are associated with a greater risk of failure.
Spatial risk	After	Habitat that is created at a greater distance away from the development site carries a greater risk of removing other natural habitats.
Advanced and delayed habitat creation	After	Used to account for situations where there is a mismatch between a negative impact on biodiversity and work to create or enhance the 'post-intervention habitats'. This can either be in the form of habitat creation occurring in advance or being delayed beyond the point of baseline losses.

4.3. Trading Summary

The DEFRA Statutory Biodiversity Metric includes a Trading Summary which must be satisfied to achieve a positive outcome in the Net Gain assessment (see Rule 1, Table 2). The trading rules ensures that habitat losses are compensated for on a "like for like" or "like for better" basis. Newly created or enhanced habitats should achieve a higher distinctiveness and/or condition than those lost.

Further details on how the metric is calculated is provided in the aforementioned publications, with more site-specific detail provided in Appendix 1 and Appendix 2.

4.4. Data collection and mapping habitats

In order to undertake the BNG assessment using the DEFRA Statutory Biodiversity Metric (DEFRA, 2024), the habitat types and area measurements are required for both the baseline habitats and the proposed post-development habitats. Baseline habitats were mapped and areas calculated using QGIS during the Preliminary Ecological Appraisal (see Section 3.1 for details of habitat types). The proposed

habitats were calculated in QGIS using digitised and geo-referenced versions of the soft and hard works plans within the Landscape Specification and Management Plan (Arborterra Ltd, 2025) (see Section 3.2 for details of habitat types).

4.5. Hedgerows

Hedgerows, given their unique linear characteristic and their position as ‘edge habitats’ are treated as linear features in the Statutory Biodiversity Metric calculator and are calculated as ‘hedgerow units’. The metrics calculated for hedgerows have therefore been calculated and presented separately. Current and proposed hedgerows were mapped, and their lengths calculated, using QGIS.

4.6. Rivers and streams

Rivers and streams, given their linear form and important role in habitat connectivity, are treated as linear features in the Statutory Biodiversity Metric calculator and are calculated as ‘watercourse units’. The metrics calculated for rivers and streams have therefore been calculated and presented separately. No rivers are present onsite and therefore this category is omitted in this assessment.

4.7. Habitat degradation

It is confirmed that the baseline habitats have not been significantly altered or modified since 30 January 2020 and, as such, it is appropriate to assess the baseline habitats in their current condition.

4.8. Sharing data

Relevant ecological data collected during baseline habitat and protected species surveys at the Site will be shared with Hertfordshire Environmental Records Centre following acceptance of this Biodiversity Net Gain Assessment.

4.9. Assumptions and constraints

Several assumptions are made to enable this Biodiversity Net Gain assessment. The primary assumptions are listed below:

- The net gains in biodiversity that are estimated are reliant on the successful restoration and/or creation of habitats and their maintenance for the foreseeable future; and,
- It is assumed that there will be a two-year time delay between vegetation clearance and establishing the on-Site habitats. However, the construction timeline (as yet to be determined) will inform any required updates to the habitat creation delays at the Biodiversity Gain Plan stage.

There were no significant constraints to the habitat survey or condition assessment which may influence the baseline assessment of habitats present.

Table 4: Attribution of multiplier levels to each habitat type at present and for the proposed development

Habitat type and area	Multiplier (and score)					
	Distinctiveness (automatically assigned)	Condition	Strategic significance	Time to target condition	Difficulty of creation/ enhancement	Spatial risk
<i>Baseline habitats</i>						
Bramble scrub (0.044 ha)	Medium (4)	Condition Assessment N/A (1)	Low (1)	-	-	-
Developed land; sealed surface (0.035 ha)	Very Low (0)	N/A – Other (0)	Low (1)	-	-	-
Modified grassland (0.031 ha)	Low (2)	Good (3)	Low (1)	-	-	-
Modified grassland (0.045 ha)	Low (2)	Poor (1)	Low (1)	-	-	-
Modified grassland (0.052 ha)	Low (2)	Moderate (2)	Low (1)	-	-	-
Other neutral grassland (1.571 ha)	Medium (4)	Moderate (2)	Medium (1.1)	-	-	-
Rural tree (0.0122 ha)	Medium (4)	Moderate (2)	High (1.15)	-	-	-
Rural tree (0.0041 ha)	Medium (4)	Poor (1)	High (1.15)	-	-	-
<i>Proposed habitat creation</i>						
Developed land; sealed surface (buildings) (0.2797 ha)	Very Low (0)	N/A – Other (0)	Low (1)	0 years (1)	Low (1)	Within site
Developed land; sealed surface (hardstanding) (0.6456 ha)	Very Low (0)	N/A – Other (0)	Low (1)	0 years (1)	Low (1)	Within site

Habitat type and area	Multiplier (and score)					
	Distinctiveness (automatically assigned)	Condition	Strategic significance	Time to target condition	Difficulty of creation/ enhancement	Spatial risk
Vegetated garden (0.3594 ha)	Low (2)	Condition Assessment N/A (1)	Low (1)	3 years (0.899)	Low (1)	Within site
Sustainable drainage system (0.1097 ha)	Low (2)	Moderate (2)	Medium (1.1)	5 years (0.837)	Medium (0.67)	Within site
Introduced shrub (0.0023 ha)	Low (2)	Condition Assessment N/A (1)	Low (1)	3 years (0.899)	Low (1)	Within site
Modified grassland (0.1856 ha)	Low (2)	Moderate (2)	Low (1)	6 years (0.808)	Low (1)	Within site
Other neutral grassland (0.2034 ha)	Medium (4)	Good (3)	High (1.15)	12 years (0.652)	Low (1)	Within site
Urban tree (0.0733 ha)	Medium (4)	Poor (1)	High (1.15)	12 years (0.652)	Low (1)	Within site
Urban tree (0.1954 ha)	Medium (4)	Moderate (2)	High (1.15)	29 years (0.356)	Low (1)	Within site
Rural tree (0.0041 ha)	Medium (4)	Moderate (2)	High (1.15)	0 years (1) – existing tree	Low (1)	Within site
<i>Baseline hedgerows</i>						
Native hedgerow – H1 (0.09 km)	Low (2)	Good (3)	Moderate (2)	-	-	-
Native hedgerow with trees – H2 (0.044 km)	Medium (4)	Moderate (2)	Moderate (2)	-	-	-
<i>Proposed hedgerow creation</i>						
Species-rich native hedgerow with trees – H3 (0.047 km)	High (6)	Moderate (2)	High (1.15)	12 years (0.652)	Low (1)	Within site

Habitat type and area	Multiplier (and score)					
	Distinctiveness (automatically assigned)	Condition	Strategic significance	Time to target condition	Difficulty of creation/ enhancement	Spatial risk
Species-rich native hedgerow – H4 (0.052 km)	Medium (4)	Moderate (2)	High (1.15)	7 years (0.799)	Low (1)	Within site
Species-rich native hedgerow – H5 (0.045 km)	Medium (4)	Good (3)	High (1.15)	14 years (0.607)	Low (1)	Within site
Non-native and ornamental hedgerow – H6 (0.007 km)	V. Low (1)	Poor (1)	Low (1)	3 years (0.899)	Low (1)	Within site
Non-native and ornamental hedgerow – H7 (0.012 km)	V. Low (1)	Poor (1)	Low (1)	3 years (0.899)	Low (1)	Within site

5. RESULTS AND RECOMMENDATIONS

5.1. Results

The overall comparison of biodiversity units is presented in Table 5 below. The calculator used to derive these figures is provided in Appendix 2.

With the current layout, there will be a net loss of 10.35 habitat units which correlates to a 70.81% loss in habitat units. The trading rules for habitats have not been satisfied, due to the loss of other neutral grassland and bramble scrub. For hedgerows there will be a net gain of 0.79 hedgerow units which correlates to a 76.54% gain in hedgerow units and the trading rules have been satisfied.

Table 5: Results of biodiversity metric calculations

Habitat	Biodiversity units (current)*	Biodiversity units (proposed)*	Biodiversity net-change*	Net percentage change	Trading rules satisfied
Habitats	14.62	4.27	-10.35	-70.81%	No
Hedgerows	1.03	1.81	0.79	76.54%	Yes

*habitat or hedgerow units, as appropriate

The trading rules for medium distinctiveness habitats such as other neutral grassland, bramble scrub and individual trees state that the same broad habitat type or a higher distinctiveness habitat is required. The trading rules have been satisfied for individual trees through the provision of 64 new trees but have not been satisfied for other neutral grassland or bramble scrub.

Other neutral grassland is in the grassland broad habitat type and is considered medium distinctiveness. This means that to pass trading rules, the loss of other neutral grassland must be compensated for through the creation of medium distinctiveness grassland or a high or very high distinctiveness habitat. In the current layout no high or very high distinctiveness habitats will be created and although there will be some creation of new other neutral grassland, this is not enough to satisfy the trading rules. In order to pass the trading rules, a further 11.99 units of either medium distinctiveness grassland or a high or very high distinctiveness habitat are required. If other neutral grassland is used to offset this habitat, a total of at least 1.2412 ha of this habitat in good condition or 1.5580 ha of this habitat in moderate condition will be required.

Bramble scrub is in the heathland and shrub broad habitat type and is considered medium distinctiveness. This means that to pass trading rules, the loss of bramble scrub must be compensated for through the creation of medium distinctiveness habitat from the heathland and shrub broad habitat type or a high or very high distinctiveness habitat. In the current layout no high or very high

distinctiveness habitats or habitats within the heathland and shrub broad habitat type will be created. Habitats within the heathland and shrub broad habitat type include scrub habitats such as mixed scrub. In order to pass the trading rules, 0.18 units of either medium distinctiveness habitat from the heathland and shrub broad habitat type or a high or very high distinctiveness habitat are required. If mixed scrub is used to offset this habitat, a total of at least 0.0400 ha of this habitat in poor condition or 0.0229ha of this habitat in moderate condition will be required.

The largest numbers of habitat units are generated by the creation of other neutral grassland (1.83 units). The next largest numbers of habitat units are generated by the creation of vegetated garden (0.65 units) and the planting of 48 native urban trees (0.64 units).

The majority of the hedgerow units are generated by the creation of two species-rich native hedgerows (H4 – 0.37 units; H5 – 0.38 units) and one species-rich native hedgerow with trees (0.42 units).

5.2. Recommendations

The proposed development will result in a 70.81% net loss in habitat units which is considerably less than the mandatory 10% net gain. In order to reach the 10% requirement, further habitat biodiversity units will be generated offsite. A total of 11.81 units is required to reach the mandatory 10% requirement. A suitable receptor site will be identified, registered with the Natural England Biodiversity Gain Sites Register and secured through a legal agreement, such as Section 106 agreement, to ensure the biodiversity gains are delivered and maintained.

The off-site units should not only deliver on the 10% target, but also result in the trading rules being met. Although a total of 11.81 units are required to reach the 10% requirement, more units than this will be required in order to pass trading rules. In order to pass the trading rules, the loss of other neutral grassland must be compensated for through the creation of medium distinctiveness grassland or a high or very high distinctiveness habitat generating at least 11.99 units. Additionally, the loss of bramble scrub must be compensated for through the creation of medium distinctiveness habitat from the heathland and shrub broad habitat type or a high or very high distinctiveness habitat generating at least 0.18 units. To summarise, a total of 12.17 units are required, of which there must be 11.99 grassland units and 0.18 scrub (heathland and shrub broad habitat type) units. Alternatively, high or very high distinctiveness habitats could be used instead of grassland or scrub.

The procurement of the units required to reach the 10% requirement and pass trading rules should be required as a condition of planning approval for the proposed development.

Recommendation 1

Procure sufficient off-site habitat units to reach the 10% requirement and pass trading rules. This should be delivered as a condition of planning approval.

The overall net gain in biodiversity units predicted in this assessment is reliant on the successful restoration and/or creation of habitats and their maintenance for the foreseeable future. It is critical that the habitats and hedgerows onsite reach the target conditions estimated in this assessment. This will require careful consideration during both the planning and construction phase. It is particularly important that the other neutral grassland, individual trees and species-rich hedgerows reach target structure and condition.

It is recommended that a Habitat Management and Monitoring Plan (HMMP) is produced for the Site. This will outline measures for the successful creation and management of habitats for a minimum of 30 years to ensure the target conditions for each habitat type is reached as outlined in this assessment. The provision of a HMMP should be required as a condition of planning approval for the proposed development.

Recommendation 2

Produce a HMMP for the Site covering a minimum of 30 years post-development.

6. CONCLUSIONS

The proposed development at Land North of Priory School, Hitchin involves the delivery of 50 new residential dwellings, whilst maintaining an ecologically sensitive site boundary. The landscaping plans include the retention of one native hedgerow and the creation of other neutral grassland, modified grassland, vegetated garden, introduced shrub, developed land, 64 individual trees, three species-rich native hedgerows and two ornamental non-native hedgerows.

The use of the DEFRA Statutory Biodiversity Metric to calculate measures of biodiversity for the existing and proposed habitats confirms that the proposed development is likely to lead to a net loss of 70.81% in habitat units and a net gain of 76.54% in hedgerow units. The other neutral grassland and species-rich native hedgerows are the most crucial created habitats required in delivering the predicted units. Trading rules have not been satisfied for medium distinctiveness habitats.

In order to reach the requirement for a 10% net gain in habitat units and satisfy the trading rules for medium distinctiveness habitats, further biodiversity units will be generated offsite. A total of 11.81 units is required to reach the mandatory 10% net gain. To satisfy the trading rules and offset for the loss of other neutral grassland and bramble scrub, a total of 12.17 units are required, of which there must be 11.99 medium distinctiveness grassland units and 0.18 medium distinctiveness scrub (heathland and shrub broad habitat type) units. Alternatively, high or very high distinctiveness habitats could be used instead of grassland or scrub. The procurement of these units should be required as a condition of planning approval for the proposed development. It is proposed that these units are provided within a suitable receptor site that is registered with the Natural England Biodiversity Gain Sites Register and secured through a legal agreement.

The predicted net-gain in biodiversity is reliant on the successful restoration and/or creation of habitats and their maintenance for the foreseeable future. It will be critical to ensure that appropriate management activities are put in place in order to achieve the desired condition of the proposed habitats. It is recommended that measures to ensure the successful creation and long-term management of proposed habitats are outlined in a HMMP for the Site.

7. REFERENCES

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8. APPENDICES

8.1. Appendix 1: Assignment of biodiversity metric multipliers

Strategic significance

Strategic significance was set to 'Moderate' for the baseline habitat 'Other neutral grassland'. The reasons for this are set out below:

- Within the Chilterns National Character Area (number 110) document (Natural England, 2013), the Ecosystem Services section discusses regulating water quality on page 16, including how permanent grasslands will contribute to trapping mobile soils and pollutants and to slowing rapid run-off. The Site is situated less than 30m from the River Oughton and therefore the grassland is significant in its close position next to the river and has value in regulating water quality.
- The Site is situated in close proximity (10m) to the Oughtonhead Common Local Nature Reserve (LNR). This contains a mosaic of habitats, one of which is neutral grassland. The grassland on Site represents a continuation of this habitat type and creates a corridor along the River Oughton.

Strategic significance was set to 'High' for the baseline habitats 'Rural tree', 'Native hedgerow' and 'Native hedgerow with trees'. This is because hedgerows and trees are notable habitats within the North Hertfordshire District Council Local Plan (North Hertfordshire District Council, 2022).

Strategic significance was set to 'good' for the created habitats 'Other neutral grassland', 'Urban tree', 'Species-rich native hedgerow' and 'Species-rich native hedgerow with trees'; and was set to 'Moderate' for 'Sustainable drainage system'. The reasons for this are set out below:

- Hedgerows are a key boundary habitat within the Chilterns National Character Area (Natural England, 2013) and hedgerows and trees are notable habitats within the North Hertfordshire District Council Local Plan (North Hertfordshire District Council, 2022).
- The Site is located within an area which has been designated as a high priority for habitat creation within the Hertfordshire Ecological Networks Map (Hertfordshire County Council, 2013). Therefore, it is considered a desirable location for the creation of semi-natural habitats such as other neutral grassland.
- Strategically placed sustainable urban drainage features are key water management features in the Oughton Valley as described in the North Hertfordshire District Green Infrastructure Plan (Land Use Consultants, 2009). Given the Site's close proximity to the River Oughton, this is considered to be an ecologically desirable location to place sustainable drainage system habitat.

Condition

The below tables detail the rationale for the condition assessments made for each habitat type.

Baseline habitats

Modified grassland – G1

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). 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 m ² (excluding those listed in Footnote 1), 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.	Species density averages 8.6 species per m2 across five quadrats (see Appendix 3).	✓
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.	This sward height within the grassland was not varied, consisting of shown mown grass.	x
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Scrub cover was less than 20%.	✓
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.	Physical damage was less than 5% of the total grassland area.	✓
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Bare ground was between 1% and 5%.	✓
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Bracken was not present within this grassland.	✓

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	No invasive non-native species were present.	✓
Target Condition: Good Meets six out of seven criteria.			

Modified grassland – G2, ditch

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
A	There are 6-8 vascular plant species per m² present, including at least 2 forbs (these may include those listed in Footnote 1). 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 m² (excluding those listed in Footnote 1), 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.	Species density averages 6.25 species per m2 across four quadrats (see Appendix 3).	✓
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.	The sward height within the grassland was not varied.	x
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Scrub cover was greater than 20% of the total grassland area.	x
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.	Physical damage caused by high footfall was evident in more than 5% of the total grassland area.	x
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Bare ground was between 1% and 10%.	✓
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Bracken was not present within this grassland.	✓

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	No invasive non-native species were present.	✓
Target Condition: Moderate Meets four out of seven criteria including essential criterion A.			

Modified grassland – G4

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
A	There are 6-8 vascular plant species per m² present, including at least 2 forbs (these may include those listed in Footnote 1). 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 m² (excluding those listed in Footnote 1), 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.	Species density averages 5 species per m2 across three quadrats (see Appendix 3).	x
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.	This sward height within the grassland was not varied.	x
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Bramble scrub was abundant within this parcel of grassland.	x
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.	Physical damage was less than 5% of the total grassland area.	✓
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Bare ground was between 1-10%.	✓

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Bracken cover was less than 20%.	✓
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	No invasive non-native species were present.	✓
Target Condition: Poor Meets four out of seven criteria but fails essential criterion A			

Other neutral grassland – G3

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
A	<i>The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description – the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present.</i> Note: this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	The grassland meets the key criteria for classification as other neutral grassland, including the presence of broadleaf herb cover exceeding 20%, a species-rich sward with more than eight species per square metre, and a botanical composition characteristic of non-intensively managed neutral grasslands.	✓
B	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% of the sward is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	The sward height was varied.	✓
C	Cover of bare ground is between 1% and 5%, including localised areas, for example rabbit warrens.	Some small patches of bare ground were recorded and the total cover was less than 5% of the grassland.	✓
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%	No bracken or scrub was recorded within the grassland.	✓
E	Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of the Wildlife and Countryside Act) are present, this criterion is automatically failed.	Combined cover of species indicative of sub-optimal condition and physical damage is less than 5%. No invasive non-native plant species were recorded in the grass.	✓
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species indicative of sub-optimal conditions and non-native invasive species cannot contribute towards this count)	The grassland had an average of 8.8 species per m ² across 10 quadrats when excluding species indicative of suboptimal condition (see Appendix 3).	x

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
	<i>Note - this criterion is essential for achieving Good condition for non-acid grassland types only.</i>		
	Target Condition: Moderate Meets five out of six criteria but fails essential criterion F.		

Rural tree (4 no.)

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria			
	<i>Tree reference and size</i>	T1 (small)	T2 (small)	T3 (small)	T4 (small)
A	<i>More than 70% of trees are native species.</i>	✓	✓	✓	x
B	<i>Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.</i>	✓	✓	✓	✓
C	<i>More than 50% of trees are mature or veteran.</i>	x	x	x	x
D	<i>There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.</i>	x	x	x	✓
E	<i>Management regime has encouraged micro habitat sites for birds, mammals and insects e.g. presence of deadwood, cavities or loose bark etc.</i>	x	x	x	x
F	<i>More than 20% of the tree canopy area is oversailing vegetation beneath.</i>	✓	✓	✓	x
*	Condition: Moderate x3 and Poor x1 T1, T2 and T3 meet three out of six criteria and are in moderate condition. T4 meets two out of six criteria and is in poor condition.				

Other habitats

Habitat	Condition score	Rationale for condition assessment
Urban – developed land; sealed surface	N/A – other	No condition assessment required – allocated a score of 0
Bramble scrub	N/A	No condition assessment required – allocated a score of 1

Baseline hedgerows

Native hedgerow – H1

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A1	<i>Height</i> <i>>1.5m average along the length</i>	The hedgerow has an average height greater than 1.5m average along the length.	✓
A2	<i>Width</i> <i>>1.5m average along length</i>	The hedgerow has an average width greater than 1.5m.	✓
B1	<i>Gap – hedge base</i> <i>Gap between ground and base of canopy <0.5m for >90% of length</i>	The gap between the ground and the base of the canopy was not less than 0.5m for the majority of the length.	x

B2	Gap – hedge canopy continuity Gaps make up <10% of the total length and no canopy gaps >5m	Gaps make up less than 10% of the total length and there are no canopy gaps greater than 5m.	✓
C1	Undisturbed ground and perennial vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow and is present on one side of the hedgerow at least.	There was greater than 1m of undisturbed ground around the hedgerow for the majority of its' length.	✓
C2	Nutrient-enriched perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Plant species indicative of nutrient-enriched soils including cow parsley and hogweed made up more than 20% of the area of undisturbed ground.	x
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (included those listed on Schedule 9 of the WCA ³) and recently introduced species.	There was an absence of invasive non-native plant species.	✓
D2	Current damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activity.	The hedgerow was free from damage via human activity.	✓
*	Condition: Good Passes six out of eight criteria and does not fail both attributes within any functional group.		

Native hedgerow with trees – H2

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A1	Height >1.5m average along the length	The hedgerow was greater than 1.5m average along the length.	✓
A2	Width >1.5m average along length	The hedgerow was greater than 1.5m average along the width.	✓
B1	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length	The gap between the ground and base of canopy was less than 0.5m for the majority of the length.	✓
B2	Gap – hedge canopy continuity Gaps make up <10% of the total length and no canopy gaps >5m	Gaps make up more than 10% of the total length.	x
C1	Undisturbed ground and perennial vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow and is present on one side of the hedgerow at least.	There was greater than 1m of undisturbed ground around the hedgerow for the majority of its' length.	✓
C2	Nutrient-enriched perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Nutrient-enriched vegetation including common nettle was abundant within the hedgerow.	x
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (included those listed on Schedule 9 of the WCA ³) and recently introduced species.	There was an absence of invasive non-native plant species.	✓
D2	Current damage	The hedgerow exhibited evidence of damage via human activity such as excessive cutting back.	x

	>90% of the hedgerow or undisturbed ground is free of damage caused by human activity.		
E1	Tree class There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 – 50m of hedgerow.	The trees within the hedgerow are all semi-mature.	x
E2	Tree health At least 95% of hedgerow trees are in healthy condition (excluding veteran features valuable for wildlife). There is little or no adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	There was some evidence of damage to tree health at the time of the survey including crown dieback and sparsity.	x
*	Condition: Moderate Fails five criteria and only fails both attributes within one functional group.		

Proposed post-development habitats (created and retained)

Urban – SuDS

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
A	Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single ecotone (i.e. scrub, grassland, herbs) should not account for more than 80% of the total habitat area.	Vegetation structure will not be varied, rather forming a single ecotone of grassland.	x
B	There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, this must be satisfied by native species only.	This habitat will be planted with a particular seed mix and managed in a way that meets this criterion, the details of which will be provided within the recommended HMMP.	✓
C	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	This habitat will be managed to ensure no invasive non-native or otherwise detrimental species colonise the habitat, the details of which will be provided within the recommended HMMP.	✓
D	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife.	This habitat will be planted with a particular seed mix and managed in a way that meets this criterion, the details of which will be provided within the recommended HMMP.	✓
E	The vegetation is comprised of plant species suited to wetland or riparian situations.	This habitat will be planted with a particular seed mix and managed in a way that meets this criterion, the details of which will be provided within the recommended HMMP.	✓
*	Target Condition: Moderate This habitat is expected to pass four out of five criteria		

Modified grassland

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
A	There are 6-8 vascular plant species per m² present, including at least 2 forbs (these may include those listed in Footnote 1). 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 m² (excluding those listed in Footnote 1), 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.	The grassland will be planted with a particular seed mix and managed in a way that meets this criterion, the details of which will be provided within the recommended HMMP.	✓
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.	The sward of this grassland will be managed in a uniform manner.	x
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	The grassland will be managed to limit the spread of scrub, the details of which will be provided within the recommended HMMP.	✓
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.	Due to the location of this grassland in an urban environment and alongside roads and footpaths, physical damage from high levels of footfall is likely.	x
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)².	Due to the location of this grassland alongside roads and footpaths and the shading created by the planting of 40 trees, increased cover of bare ground is likely.	x
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	The grassland will be managed to limit the spread of bracken, the details of which will be provided within the recommended HMMP.	✓
G	There is an absence of invasive non-native plant species³ (as listed on Schedule 9 of WCA⁴).	The grassland will be managed to ensure no invasive non-native species colonise the habitat, the details of which will be provided within the recommended HMMP.	✓
Target Condition: Moderate The grassland is expected to pass four criteria, including essential criterion A.			

Other neutral grassland

Condition Assessment Criteria		Rationale for Meeting Condition Assessment Criteria	
A	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description – the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. Note: this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	The grassland will be planted with a particular seed mix and managed in a way that meets this criterion, the details of which will be provided within the recommended HMMP.	✓
B	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% of the sward is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	The grassland will be managed in a way that meets this criterion, the details of which will be provided within the recommended HMMP.	✓
C	Cover of bare ground is between 1% and 5%, including localised areas, for example rabbit warrens.	The grassland will be monitored to ensure that cover of bare ground stays between 1% and 5%, the details of which will be provided within the recommended HMMP.	✓
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%	The grassland will be managed to limit the spread of bracken and scrub, the details of which will be provided within the recommended HMMP.	✓
E	Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species (as listed on Schedule 9 of the Wildlife and Countryside Act) are present, this criterion is automatically failed.	The grassland will be managed to reduce physical damage and ensure no invasive non-native species colonise the habitat, the details of which will be provided within the recommended HMMP. However, due to the high footfall expected and use of parts of the grassland as an informal footpath and play area, physical damage is likely.	x
F	There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type (species indicative of sub-optimal conditions and non-native invasive species cannot contribute towards this count)	The grassland will be planted with a particular seed mix and managed in a way that meets this criterion, the details of which will be provided within the recommended HMMP.	✓
Target Condition: Good The grassland is expected to pass five out of six criteria, including essential criterion A.			

Individual trees – Urban trees – 16 non-native trees

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A	The tree is a native species (or at least 70% within the block are native species).	These trees are proposed to be non-native species.	x

B	<i>The tree canopy will be 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).</i>	Individual trees automatically pass this criterion. Where trees are planted in close proximity, the canopies are likely to form continuous cover once they mature.	✓
C	<i>The tree will be mature (or more than 50% within the block are mature).</i>	These trees are likely to reach maturity; however, this extends beyond the scope of the 30-year HMMP required for BNG.	x
D	<i>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.</i>	Due to the location of these trees within areas that can be easily accessed by the public, a precautionary approach has been taken and it is assessed that these trees will likely fail this criterion.	x
E	<i>Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.</i>	It is unlikely that these trees will be managed to allow such micro habitats to develop due to health and safety restrictions relating to their locations.	x
F	<i>More than 20% of the tree canopy area is oversailing vegetation beneath.</i>	These trees are each proposed to be oversailing vegetated areas, primarily modified or other neutral grassland.	✓
*	Condition: Poor These 16 trees are expected to each pass just two criteria.		

Individual trees – Urban trees – 48 native trees

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A	<i>The tree is a native species (or at least 70% within the block are native species).</i>	These trees are proposed to be native species.	✓
B	<i>The tree canopy will be 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).</i>	Individual trees automatically pass this criterion. Where trees are planted in close proximity, the canopies are likely to form continuous cover once they mature.	✓
C	<i>The tree will be mature (or more than 50% within the block are mature).</i>	These trees are likely to reach maturity; however, this extends beyond the scope of the 30-year HMMP required for BNG.	x
D	<i>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.</i>	Due to the location of these trees within areas that can be easily accessed by the public, a precautionary approach has been taken and it is assessed that these trees will likely fail this criterion.	x
E	<i>Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.</i>	It is unlikely that these trees will be managed to allow such micro habitats to develop due to health and safety restrictions relating to their locations.	x
F	<i>More than 20% of the tree canopy area is oversailing vegetation beneath.</i>	These trees are each proposed to be oversailing vegetated areas, primarily modified or other neutral grassland.	✓
*	Condition: Moderate These 48 trees are expected to each pass three criteria.		

Rural tree (T5 - retained small tree from H2)

Condition Assessment criteria	Rationale for Meeting Condition Assessment Criteria
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A	The tree is a native species (or at least 70% within the block are native species).	The tree is a field maple <i>Acer campestre</i> .	✓
B	The tree canopy will be 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).	Individual trees automatically pass this criterion. Where trees are planted in close proximity, the canopies are likely to form continuous cover once they mature.	✓
C	The tree will be mature (or more than 50% within the block are mature).	This tree is already present, previously within hedgerow H2, and is semi-mature.	x
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.	There is currently and will continue to be regular pruning to stop road overhang.	x
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Natural ecological niches are and will continue to be present within the tree as a result of dense ivy cover.	✓
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	The tree will be oversailing proposed grassland creation.	✓
*	Condition: Moderate This tree currently passes four out of six criteria and is expected to continue to do so.		

Rural tree (T4 - retained)

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A	The tree is a native species (or at least 70% within the block are native species).	The tree is a non-native cypress tree <i>Cupressus sp.</i>	x
B	The tree canopy will be 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).	Individual trees automatically pass this criterion. Where trees are planted in close proximity, the canopies are likely to form continuous cover once they mature.	✓
C	The tree will be mature (or more than 50% within the block are mature).	This retained tree is 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.	This tree is currently and will continue to be free from adverse impact by human activities.	✓
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Natural ecological niches are not currently present within this tree and are not expected to develop.	x
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	The tree will be oversailing proposed grassland creation.	✓
*	Condition: Moderate This tree is expected to pass four out of six criteria.		

Other habitats

Habitat	Condition score	Rationale for condition assessment
Urban – vegetated garden	Condition Assessment N/A (1)	Automatically assigned in the metric.

Habitat	Condition score	Rationale for condition assessment
Urban – introduced shrub	Condition Assessment N/A (1)	Automatically assigned in the metric.
Urban – developed land; sealed surface	N/A – Other (0)	Automatically assigned in the metric.

Proposed post-development hedgerows (created and retained)

Species-rich native hedgerow with trees – H3

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A1	Height >1.5m average along the length	The required height should be achieved with appropriate management.	✓
A2	Width >1.5m average along length	The hedgerow will be managed to an average width of 1m.	x
B1	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length	Should be achievable with appropriate management regime and sensitive trimming to ensure no gaps appear at the base of the canopy.	✓
B2	Gap – hedge canopy continuity Gaps make up <10% of the total length and no canopy gaps >5m	Should be achievable with appropriate management regime and sensitive trimming to ensure no gaps appear in the canopy. Dead specimens will be replaced.	✓
C1	Undisturbed ground and perennial vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow and is present on one side of the hedgerow at least.	Modified grassland that is likely to be maintained to a short uniform sward is to border the hedgerow.	x
C2	Nutrient-enriched perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	With appropriate management, it is assumed that nutrient-enriched vegetation will not exceed more than 20% of the hedgerow.	✓
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (included those listed on Schedule 9 of the WCA ³) and recently introduced species.	Appropriate management should ensure that there is an absence of invasive non-native and recently introduced plant species.	✓
D2	Current damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activity.	Due to the location of the hedgerow within areas that can be easily accessed by the public, a precautionary approach has been taken and it is assessed that the hedgerow will likely fail this criterion.	x
E1	Tree class: There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and/or ancient) and there is on average at least one mature, ancient or veteran tree present per 20-50m of hedgerow.	Only one age class of tree will be present.	x
E2	Tree health: At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Due to the location of these trees within areas that can be easily accessed by the public, a precautionary approach has been taken and it is assessed that these trees will likely fail this criterion.	x

*	Condition: Moderate Likely to fail five criteria and fails both attributes in just one functional group.
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Species-rich native hedgerow – H4

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A1	Height >1.5m average along the length	The required height should be achieved with appropriate management.	✓
A2	Width >1.5m average along length	The hedgerow will be managed to an average width of 1m.	x
B1	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length	Should be achievable with appropriate management regime and sensitive trimming to ensure no gaps appear at the base of the canopy.	✓
B2	Gap – hedge canopy continuity Gaps make up <10% of the total length and no canopy gaps >5m	Should be achievable with appropriate management regime and sensitive trimming to ensure no gaps appear in the canopy.	✓
C1	Undisturbed ground and perennial vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow and is present on one side of the hedgerow at least.	Modified grassland that is likely to be maintained to a short uniform sward is to border the hedgerow.	x
C2	Nutrient-enriched perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	With appropriate management, it is assumed that nutrient-enriched vegetation will not exceed more than 20% of the hedgerow.	✓
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (included those listed on Schedule 9 of the WCA ³) and recently introduced species.	Appropriate management should ensure that there is an absence of invasive non-native and recently introduced plant species.	✓
D2	Current damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activity.	Due to the location of the hedgerow within areas that can be easily accessed by the public, a precautionary approach has been taken and it is assessed that the hedgerow will likely fail this criterion.	x
*	Condition: Moderate Likely to fail three criteria with none in the same functional group.		

Species-rich native hedgerow – H5

Condition Assessment criteria		Rationale for Meeting Condition Assessment Criteria	
A1	Height >1.5m average along the length	The required height should be achieved with appropriate management.	✓
A2	Width >1.5m average along length	The hedgerow will be managed to an average width of 1m.	x
B1	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length	Should be achievable with appropriate management regime and sensitive trimming to ensure no gaps appear at the base of the canopy.	✓
B2	Gap – hedge canopy continuity Gaps make up <10% of the total length and no canopy gaps >5m	Should be achievable with appropriate management regime and sensitive trimming to ensure no gaps appear in the canopy.	✓

C1	<i>Undisturbed ground and perennial vegetation</i> >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length measured from outer edge of hedgerow and is present on one side of the hedgerow at least.	Undisturbed other neutral grassland will be created to the north of this hedgerow.	✓
C2	<i>Nutrient-enriched perennial vegetation</i> Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	With appropriate management, it is assumed that nutrient-enriched vegetation will not exceed more than 20% of the hedgerow.	✓
D1	<i>Invasive and neophyte species</i> >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (included those listed on Schedule 9 of the WCA ³) and recently introduced species.	Appropriate management should ensure that there is an absence of invasive non-native and recently introduced plant species.	✓
D2	<i>Current damage</i> >90% of the hedgerow or undisturbed ground is free of damage caused by human activity.	Due to the location of the hedgerow within areas that can be easily accessed by the public, a precautionary approach has been taken and it is assessed that the hedgerow will likely fail this criterion.	x
*	Condition: Good Likely to fail two criteria that are not in the same functional group.		

Other hedgerows

Habitat	Condition score	Rationale for condition assessment
H1 – Native hedgerow (0.292 km)	Good (3)	Maintained in the same condition – see baseline condition assessment
H6 – Non-native and ornamental hedgerow (0.021 km)	Poor (1)	Automatically assigned in the metric.
H7 – Non-native and ornamental hedgerow (0.007 km)	Poor (1)	Automatically assigned in the metric.

8.2. Appendix 2: Biodiversity net gain calculator

As attachment.

8.3. Appendix 3: Quadrat data

Modified grassland – G1

Quadrat number	Systematic Name	Systematic Name
Q1	Perennial rye-grass	<i>Lolium perenne</i>
Q1	Ribwort plantain	<i>Plantago lanceolata</i>
Q1	Dandelion	<i>Taraxacum officinale</i>
Q1	White clover	<i>Trifolium repens</i>
Q1	Yarrow	<i>Achillea millefolium</i>
Q1	Cock's-foot	<i>Dactylis glomerata</i>
Q1	Chickweed	<i>Stellaria media</i>
Q1	Creeping cinquefoil	<i>Potentilla reptans</i>
Q2	Perennial rye-grass	<i>Lolium perenne</i>
Q2	Ribwort plantain	<i>Plantago lanceolata</i>
Q2	Dandelion	<i>Taraxacum officinale</i>
Q2	White clover	<i>Trifolium repens</i>
Q2	Yarrow	<i>Achillea millefolium</i>
Q2	Cock's-foot	<i>Dactylis glomerata</i>
Q2	Tall fescue	<i>Festuca arundinacea</i>
Q2	Annual meadow-grass	<i>Poa annua</i>
Q2	Spotted bur clover	<i>Medicago arabica</i>
Q2	Daisy	<i>Bellis perennis</i>
Q3	Perennial rye-grass	<i>Lolium perenne</i>
Q3	Ribwort plantain	<i>Plantago lanceolata</i>
Q3	Dandelion	<i>Taraxacum officinale</i>
Q3	White clover	<i>Trifolium repens</i>
Q3	Yarrow	<i>Achillea millefolium</i>
Q3	Cock's-foot	<i>Dactylis glomerata</i>
Q3	Tall fescue	<i>Festuca arundinacea</i>
Q3	Unidentified forb species	N/A
Q4	Perennial rye-grass	<i>Lolium perenne</i>
Q4	Ribwort plantain	<i>Plantago lanceolata</i>
Q4	Dandelion	<i>Taraxacum officinale</i>
Q4	Yarrow	<i>Achillea millefolium</i>
Q4	Cock's-foot	<i>Dactylis glomerata</i>
Q4	Yorkshire fog	<i>Holcus lanatus</i>
Q4	Buttercup sp.	<i>Ranunculus sp.</i>
Q5	Perennial rye-grass	<i>Lolium perenne</i>
Q5	Ribwort plantain	<i>Plantago lanceolata</i>

Q5	Dandelion	<i>Taraxacum officinale</i>
Q5	Yarrow	<i>Achillea millefolium</i>
Q5	Cock's-foot	<i>Dactylis glomerata</i>
Q5	Chickweed	<i>Stellaria media</i>
Q5	Cut-leaved crane's-bill	<i>Geranium dissectum</i>
Q5	Spotted bur clover	<i>Medicago arabica</i>
Q5	Tall fescue	<i>Festuca arundinacea</i>
Q5	Daisy	<i>Bellis perennis</i>

Modified grassland – G2

Quadrat number	Systematic Name	Systematic Name
Q1	False oat-grass	<i>Arrhenatherum elatius</i>
Q1	Cow parsley	<i>Anthriscus sylvestris</i>
Q1	Hogweed	<i>Heracleum sphondylium</i>
Q1	White dead-nettle	<i>Lamium album</i>
Q1	Yorkshire fog	<i>Holcus lanatus</i>
Q1	Cleavers	<i>Galium aparine</i>
Q1	Common ivy	<i>Hedera helix</i>
Q2	False oat-grass	<i>Arrhenatherum elatius</i>
Q2	Hogweed	<i>Heracleum sphondylium</i>
Q2	White dead-nettle	<i>Lamium album</i>
Q2	Cleavers	<i>Galium aparine</i>
Q2	Perennial rye-grass	<i>Lolium perenne</i>
Q2	Dandelion	<i>Taraxacum officinale</i>
Q3	Hogweed	<i>Heracleum sphondylium</i>
Q3	Cock's-foot	<i>Dactylis glomerata</i>
Q3	Perennial rye-grass	<i>Lolium perenne</i>
Q3	Creeping thistle	<i>Cirsium arvense</i>
Q3	Dock sp.	<i>Rumex sp.</i>
Q3	Stinging nettle	<i>Urtica dioica</i>
Q4	False oat-grass	<i>Arrhenatherum elatius</i>
Q4	Hogweed	<i>Heracleum sphondylium</i>
Q4	Cock's-foot	<i>Dactylis glomerata</i>
Q4	Dock sp.	<i>Rumex sp.</i>
Q4	Lesser celandine	<i>Ficaria verna</i>
Q4	Rosebay willowherb	<i>Chamaenerion angustifolium</i>

Modified grassland – G4

Quadrat number	Systematic Name	Systematic Name
Q1	Bramble	<i>Rubus fruticosus</i>
Q1	Rosebay willowherb	<i>Chamaenerion angustifolium</i>
Q1	Prickly sowthistle	<i>Sonchus asper</i>
Q1	Hedge bedstraw	<i>Galium mollugo</i>
Q2	Bramble	<i>Rubus fruticosus</i>
Q2	Rosebay willowherb	<i>Chamaenerion angustifolium</i>
Q2	Hedge bedstraw	<i>Galium mollugo</i>
Q2	White dead-nettle	<i>Lamium album</i>
Q2	Yorkshire fog	<i>Holcus lanatus</i>
Q3	Bramble	<i>Rubus fruticosus</i>
Q3	Rosebay willowherb	<i>Chamaenerion angustifolium</i>
Q3	Prickly sowthistle	<i>Sonchus asper</i>
Q3	Cock's-foot	<i>Dactylis glomerata</i>
Q3	Stinging nettle	<i>Urtica dioica</i>
Q3	Hogweed	<i>Heracleum sphondylium</i>

Other neutral grassland – G3

Quadrat number	Systematic Name	Systematic Name
Q1	False oat-grass	<i>Arrhenatherum elatius</i>
Q1	Yorkshire fog	<i>Holcus lanatus</i>
Q1	Cock's-foot	<i>Dactylis glomerata</i>
Q1	Red fescue	<i>Festuca rubra</i> agg.
Q1	Rough meadow-grass	<i>Poa trivialis</i>
Q1	Hogweed	<i>Heracleum sphondylium</i>
Q1	Vetch sp.	<i>Vicia</i> sp.
Q1	Hedge bedstraw	<i>Galium mollugo</i>
Q1	Common ragwort	<i>Senecio jacobaea</i>
Q1	Yarrow	<i>Achillea millefolium</i>
Q1	Oxeye daisy	<i>Leucanthemum vulgare</i>
Q2	False oat-grass	<i>Arrhenatherum elatius</i>
Q2	Yorkshire fog	<i>Holcus lanatus</i>
Q2	Cock's-foot	<i>Dactylis glomerata</i>
Q2	Red fescue	<i>Festuca rubra</i> agg.
Q2	False-brome	<i>Brachypodium sylvaticum</i>
Q2	Creeping buttercup	<i>Ranunculus repens</i>
Q2	Bulbous buttercup	<i>Ranunculus bulbosus</i>
Q2	Vetch sp.	<i>Vicia</i> sp.

Q2	Dandelion	<i>Taraxacum officinale</i>
Q2	Common ragwort	<i>Senecio jacobaea</i>
Q2	Bugle	<i>Ajuga reptans</i>
Q2	Hawthorn	<i>Crataegus monogyna</i>
Q2	Sedge sp.	<i>Carex sp.</i>
Q3	Yorkshire fog	<i>Holcus lanatus</i>
Q3	Cock's-foot	<i>Dactylis glomerata</i>
Q3	Red fescue	<i>Festuca rubra agg.</i>
Q3	Hogweed	<i>Heracleum sphondylium</i>
Q3	Vetch sp.	<i>Vicia sp.</i>
Q3	Hedge bedstraw	<i>Galium mollugo</i>
Q3	Common ragwort	<i>Senecio jacobaea</i>
Q3	Creeping buttercup	<i>Ranunculus repens</i>
Q3	Meadow buttercup	<i>Ranunculus acris</i>
Q3	Bugle	<i>Ajuga reptans</i>
Q3	Cut-leaved crane's-bill	<i>Geranium dissectum</i>
Q4	False oat-grass	<i>Arrhenatherum elatius</i>
Q4	Yorkshire fog	<i>Holcus lanatus</i>
Q4	Crested dog's-tail	<i>Cynosurus cristatus</i>
Q4	Hogweed	<i>Heracleum sphondylium</i>
Q4	Vetch sp.	<i>Vicia sp.</i>
Q4	Yarrow	<i>Achillea millefolium</i>
Q4	Creeping thistle	<i>Cirsium arvense</i>
Q4	Cow parsley	<i>Anthriscus sylvestris</i>
Q4	Dandelion	<i>Taraxacum officinale</i>
Q5	Yorkshire fog	<i>Holcus lanatus</i>
Q5	Perennial rye-grass	<i>Lolium perenne</i>
Q5	Hogweed	<i>Heracleum sphondylium</i>
Q5	Red fescue	<i>Festuca rubra agg.</i>
Q5	Vetch sp.	<i>Vicia sp.</i>
Q5	Common ragwort	<i>Senecio jacobaea</i>
Q5	Ribwort plantain	<i>Plantago lanceolata</i>
Q5	Creeping thistle	<i>Cirsium arvense</i>
Q5	Ground ivy	<i>Glechoma hederacea</i>
Q6	Yorkshire fog	<i>Holcus lanatus</i>
Q6	Cock's-foot	<i>Dactylis glomerata</i>
Q6	Red fescue	<i>Festuca rubra agg.</i>
Q6	Hogweed	<i>Heracleum sphondylium</i>
Q6	Vetch sp.	<i>Vicia sp.</i>

Q6	Bulbous buttercup	<i>Ranunculus bulbosus</i>
Q6	Ribwort plantain	<i>Plantago lanceolata</i>
Q7	False oat-grass	<i>Arrhenatherum elatius</i>
Q7	Yorkshire fog	<i>Holcus lanatus</i>
Q7	Cock's-foot	<i>Dactylis glomerata</i>
Q7	Hogweed	<i>Heracleum sphondylium</i>
Q7	Red fescue	<i>Festuca rubra</i> agg.
Q7	Vetch sp.	<i>Vicia</i> sp.
Q7	Ground ivy	<i>Glechoma hederacea</i>
Q7	Selfheal	<i>Prunella vulgaris</i>
Q8	False oat-grass	<i>Arrhenatherum elatius</i>
Q8	Yorkshire fog	<i>Holcus lanatus</i>
Q8	Cock's-foot	<i>Dactylis glomerata</i>
Q8	Red fescue	<i>Festuca rubra</i> agg.
Q8	Hogweed	<i>Heracleum sphondylium</i>
Q8	Cow parsley	<i>Anthriscus sylvestris</i>
Q8	Vetch sp.	<i>Vicia</i> sp.
Q8	Hedge bedstraw	<i>Galium mollugo</i>
Q8	Dandelion	<i>Taraxacum officinale</i>
Q8	Ground ivy	<i>Glechoma hederacea</i>
Q8	Ribwort plantain	<i>Plantago lanceolata</i>
Q9	False oat-grass	<i>Arrhenatherum elatius</i>
Q9	Yorkshire fog	<i>Holcus lanatus</i>
Q9	Cock's-foot	<i>Dactylis glomerata</i>
Q9	Red fescue	<i>Festuca rubra</i> agg.
Q9	Hogweed	<i>Heracleum sphondylium</i>
Q9	Vetch sp.	<i>Vicia</i> sp.
Q9	Perennial ryegrass	<i>Lolium perenne</i>
Q10	False oat-grass	<i>Arrhenatherum elatius</i>
Q10	Yorkshire fog	<i>Holcus lanatus</i>
Q10	Cock's-foot	<i>Dactylis glomerata</i>
Q10	Red fescue	<i>Festuca rubra</i> agg.
Q10	Hogweed	<i>Heracleum sphondylium</i>
Q10	Vetch sp.	<i>Vicia</i> sp.
Q10	Barren strawberry	<i>Potentilla sterilis</i>
Q10	Hedge bedstraw	<i>Galium mollugo</i>
Q10	Cow parsley	<i>Anthriscus sylvestris</i>



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