Beth Ellison-Perrett BSc (Hons) MSc MRSB
Senior Ecologist
Email: bethep@arbtech.co.uk
Arbtech Consulting Ltd
arbtech.co.uk

Ecological Mitigation Plan, Landscape and Ecological Management Plan and Great Crested Newt Precautionary Working Methods Statement

Survey site:

Berkshire County Sports Club, Sonning Lane, Sonning, Reading RG4 6ST

Client:

HP Architecture

Survey date:

31st March 2025

Project:

This report is prepared to inform a planning application with the Berkshire County Council. The proposal is described as:

The construction of three sheltered paddle courts, three tennis courts and additional parking.

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

> The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.
> The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.
>
> (BS 42020, 2013)

Contents

1.0 Introduction 5

2.0 Site Context and Survey Information 7

2.1 Site Location and Landscape Context 7

2.2 Ecological Information 7

3.0 Landscape and Ecological Management Plan (LEMP) 13

3.1 Enhancement 13

4.0 Great Crested Newt Precautionary Working Methods Statement (GCNPWMS) 20

4.1 Habitats Present on site and Assessed Value for Great Crested Newts 20

4.2 Impact Assessment 20

4.3 Mitigation and Enhancement Prescriptions 21

5.0 Ecological Mitigation Plan 24

Appendix 1: Proposed Development Plan 26

Appendix 2: Site Location Plan 27

Appendix 3: Baseline Habitat Plan 28

Appendix 4: Post Development Habitat Plan 29

1.0 Introduction

Arbtech Consulting Limited was instructed by HP Architecture to produce an Ecological Mitigation Plan, Landscape and Ecological Management Plan and Great Crested Newt Precautionary Working Methods Statement for Berkshire County Sports Club, Sonning Lane, Sonning, Reading RG4 6ST (hereafter referred to as "the site").

A planning application for the construction of three sheltered paddle courts, three tennis courts and additional parking (hereafter referred to as "the proposed development") was granted approval, with conditions, by Berkshire County Council (Ref: 242913). This plan has been produced to inform the discharge of conditions, which states:

Landscape and Ecological Management Plan (LEMP)

Prior to the commencement of development, a landscape and ecological management plan (LEMP) shall be submitted to, and be approved in writing by, the local planning authority. The content of the LEMP shall include the following:

a) Description and evaluation of features to be managed.

b) Ecological trends and constraints on site that might influence management.

c) Aims and objectives of management – to include maintenance of habitats required for achieving biodiversity net gain for a minimum period of 30 years

d) Appropriate management options for achieving aims and objectives.

e) Prescriptions for management actions.

g) Details of the body/organization/landowner(s) or others responsible for implementation of the plan.

h) Ongoing monitoring and remedial measures.

The plan shall set out (where the results from monitoring show that conservation aims and objectives of the LEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme. The approved plan will be implemented in accordance with the approved details.

Reason: In the interests of safeguarding green infrastructure and biodiversity net gain. Relevant policies: Core Strategy policies CP1, CP3 & CP7, Managing Development Delivery Local Plan policies CC03 & TL23 and paragraph 174(d) of the National Planning Policy Framework.

Great Crested Newt Precautionary Working Methods Statement

Prior to the commencement of the development there shall be submitted to and approved in writing by the local planning authority a Great Crested Newt Precautionary Working Methods Statement (GCNPWMS), which shall detail reasonable avoidance measures to safeguard individual great crested newts from harm during the development. The development shall be carried out in accordance with the approved details within the GCNPWMS.

Reason: To minimise the impacts of development on biodiversity, in accordance with Policy CP7 of Wokingham Borough Council's Core Strategy, Section 15 of the NPPF, Circular 06/2005 and the Natural Environment and Rural Communities Act 2006

A plan showing the proposed development is provided in Appendix 1.

The aim of this plan is to outline mitigation measures required to minimise impacts on biodiversity as well as to outline habitat creation and enhancement opportunities and long-term management which will ensure that a net gain in biodiversity is achieved and maintained on the site, in accordance with the National Planning Policy Framework (NPPF).

This plan has been informed by a Preliminary Ecological Appraisal and Statutory BNG Metric and Assessment which was completed by Arbtech Consulting Ltd in September 2024 and January 2025 respectively (Arbtech, 2025).

2.0 Site Context and Survey Information

2.1 Site Location and Landscape Context

The rectangular survey site is centred on National Grid Reference SU 75684 75020 and has an area of approximately 0.48ha. The site consists of hardstanding surrounded by a decorative privet hedgerow on the south and western boundaries and a beech hedgerow to the north and eastern boundaries. There are also 2 areas of grassland located within the site with the largest an area to the eastern aspect of site and a small parcel to the south-western aspect of site. An asphalt road provides access to the site from the main road. The site is surrounded by recreational fields to the north and west of the site, agricultural fields to the south of the site and Caversham lakes to the east. The wider landscape consists of broadleaved woodland, agricultural fields, residential properties and watercourses. The River Thames passes site 500 m to the east of site. A site location plan is provided in Appendix 2.

2.2 Ecological Information

Table 1 summarises the survey findings for the site and outlines any potential impacts as a result of the proposed development along with recommendations and biodiversity enhancement opportunities, as detailed in Preliminary Ecological Appraisal (Arbtech, 2024).

Table 1: Summary of baseline survey information, potential impacts, recommendations and biodiversity enhancement opportunities for the site (Preliminary Ecological Appraisal, Arbtech, 2024)

Ecological Survey Factor	Summary of Survey Findings, Impacts and Recommendations
Bats	
Summary of Survey Findings	**EPSL data** There are 11 EPSLs within a 2km radius of site. **Foraging and commuting habitat** Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of grassland and species-rich hedgerow with trees. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn provide foraging opportunities for local bat populations. Most notably, the hedgerows on site are mature and extend beyond the site adding to the continuity of vegetated linear features present in the wider landscape. Bats are well known to utilise linear features to aid navigation whilst travelling between foraging resources and roost sites.
Foreseen Impacts	**Foraging and commuting habitat** The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. However, the proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas. **Artificial lighting**

	The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.
Recommendations	**Artificial lighting** A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2
Birds	
Summary of Survey Findings	**Trees and vegetation** No bird nests were identified within the vegetation on-site; however, they all offer nesting opportunities and nest-building resources for birds. No habitat for schedule 1 birds was observed.
Foreseen Impacts	**Buildings/trees** The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
Recommendations	**Buildings/trees** Any vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged.
Reptiles	
Summary of Survey Findings	**Habitat suitability** The hedgerows at site provide suitable habitat to support reptiles. However, the site is surrounded heavily managed recreational grassland with a sward height of <5cm and by urban development (i.e. roads and buildings) which is considered sub-optimal for reptile migration and therefore reptiles are considered unlikely to migrate from any nearby suitable habitats to the development site. As such it is likely that reptiles are absent from the development site. **Wider landscape**

	The sections of the woodland in the wider landscape are of elevated ecological value within the wider landscape and may represent important resources for local reptile populations. These adjacent habitats provide optimal foraging, commuting, and refuge opportunities for reptiles and are well connected to further suitable habitat in the wider landscape. The presence of reptiles utilising these adjacent habitats cannot be discounted.
Foreseen Impacts	Although a small area of suitable habitat is being removed as part of the development, there is a low risk that a low number of reptiles could be present in the vicinity of the works. These could be injured or killed without mitigation.
Recommendations	A precautionary working method will be implemented for widespread reptiles during construction.
Amphibians	
Summary of Survey Findings	**Aquatic habitat suitability (including ponds within 500m)** There are no ponds on the site, but a review of aerial imagery (MAGIC and OS Maps) indicates the presence of two ponds within 500m; the pond in the LNR Ali's Pond (P1) is located ~0.1km north of the site and the other pond (P2) is located 0.15km north of the site. There is a car park, grassland and hedgerow margins between the ponds and site, which creates habitat connectivity for great crested newts. **Terrestrial habitat suitability** The site provides limited suitable terrestrial habitat for amphibians given the lack of optimal habitat (i.e. scrub, rank grassland). The areas of hard standing and amenity grass offer sub-optimal habitat for terrestrial amphibians. The hedgerows may offer refuge for these species, however given the urban nature of the surrounding landscape (i.e. dominated by roads and hard standing which are sub-optimal for amphibians) it is unlikely that amphibians will migrate on to site. However, there is suitable terrestrial habitat across the wider landscape so amphibians may commute through site to optimal habitat in surrounding area.
Foreseen Impacts	When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of 0.35ha of grassland, hedgerow and hardstanding. If great crested newts are present within the pond 125m to the north of the site, when completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a **Green risk score**, which states: **Offence Highly unlikely**.
Recommendations	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction.
Badger	
Summary of Survey Findings	No badger setts were noted on site or within a 30m radius of the site. The site is considered unsuitable for badgers given the lack of suitable sett excavation areas/ground. Further, there is limited suitable badger foraging habitat on site given the lack of fruiting trees/scrub. The site is also surrounding by urban

	development and recreational fields (i.e. roads and buildings), which is sub-optimal habitat therefore reducing the likelihood of badgers being present within the surrounding area of the site.
Foreseen Impacts	No impacts are anticipated on badgers as a result of the proposed development.
Recommendations	Owing to the nature of the proposed development and the low potential for impacts to badgers, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction.
Other e.g. hedgehog	
Summary of Survey Findings	The hedgerow onsite provides foraging and commuting opportunities for hedgehogs, with woodland habitat nearby.
Foreseen Impacts	Hedgerow will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.
Recommendations	Similar to the badgers, a precautionary working method will be implemented during construction.

2.3 Habitats recorded on Site

The baseline ecological conditions of relevance to this report were determined as a result of the previous ecological assessments undertaken at the site. Full condition assessments for each habitat type (where relevant) are given in BNG report (Arbtech, January 2025). Habitats recorded onsite are shown in table 2 below:

Table 2: the baseline habitats onsite (BNG, Arbtech, 2025)

Habitat	Description	Condition Assessment
Developed Land; Sealed Surfaces – [u1b]	Existing paving, footpaths, small structures, tennis courts, and the access road to the site.	**N/A** – Condition pre-determined.
Other Neutral Grassland – [g3c]	Existing grasslands surrounding the tennis courts and along the pathway leading south. Kept to a low sward height through regular maintenance. No notable species present and low mix of vascular species.	**Poor** – Assessed using the 'grassland medium, high & v. high' habitat condition sheet.
Species Rich Native Hedgerow – [h2a5]	The eastern boundary of site consists of a species-rich hedgerow with blackthorn(D) and hawthorn (D) being the dominant species and other species present sessile oak (O), horse chestnut (O), ash (F), holly (O) and sycamore (F). The ground flora consisted of cocks foot (D), common nettle (D), knapweed (O), bramble (F) and night shade (O). (SRNH1)	**Moderate** – Assessed using the 'hedgerow' habitat condition sheet.

Native Hedgerow – [h2a]	The north-eastern and eastern boundaries of the hard standing consist of a beech (D) hedgerow with occasional bramble (O). The ground flora consisted of ruderal species such as mallow (O), common nettle (D) and one specimen of small nettle (R) and lemon balm (R). (NH1 & 2)	**Poor** – Assessed using the 'hedgerow' habitat condition sheet.
Non-native and Ornamental Hedgerow – [h2b]	Surrounding the hardstanding which forms the main body of site there is an ornamental privet (D) hedgerow to the west, south and north-west boundaries. Ground flora was sparse with occasional ruderal flora consisting of ground ivy (D), ragwort (O), dandelion (O), common ivy (A) and creeping thistle (F). (OH1 – 4)	**Poor** – Condition pre-determined.

2.4 Habitat Retention, Enhancement and Creation

A net gain of >10% has been achieved for habitat units through design strategies. Habitats recorded post-development are shown in table 3 below:

Table 3: the post-development habitats onsite (BNG, Arbtech, 2025)

Habitat	Description	Condition Assessment
Developed Land; Sealed Surfaces – [u1b]	**Retained** – Hard standing including: covered padel tennis courts, pathways, paving, outdoor padel tennis courts, and access road.	**N/A** – Condition pre-determined.
	Created – hardstanding including covered padel tennis courts, huts, pathways, paving, carparking and extension to outdoor padel tennis courts.	
Other Neutral Grassland – [g3c]	**Retained** – as existing. Areas surrounding the courts, existing buildings and pathways to be retained as is.	**Poor** – Assessed using the 'grassland medium, high & v. high' habitat condition sheet.
	Created – extensions to existing areas to be managed under the current management regime for the surrounding grassland.	
	Enhanced – grassland areas to the east and south-east of proposed padel tennis courts to be enhanced through native wildflower planting, adjustments to management regime, and limiting through access.	**Good** – Assessed using the 'grassland medium, high & v. high' habitat condition sheet.
Individual Urban Trees – [33]	**Created** – 3nr new planted native fruit trees.	**Moderate** – Assessed using the 'Individual Trees' habitat condition sheet.

Species Rich Native Hedgerow – [h2a5]	**Retained** – as existing (SRNH1).	**Moderate** – Assessed using the 'hedgerow' habitat condition sheet.
Native Hedgerow – [h2a]	**Retained** – hedgerow to the north of the existing tennis courts (NH1) as existing.	**Poor** – Assessed using the 'hedgerow' habitat condition sheet.
	Created – extension of NH1 to infill gap with OH1.	
	Created – new hedgerow (NH3&4) to be created to be created along the pathway leading south and around the outdoor tennis hut.	**Moderate** – Assessed using the 'hedgerow' habitat condition sheet.
Non-native and Ornamental Hedgerow – [h2b]	**Retained** – hedgerow to the north of proposed covered padel tennis courts (OH1).	**Poor** – Condition pre-determined.

3.0 Landscape and Ecological Management Plan (LEMP)

The responsibility for implementing the management regime described within this Landscape and Ecological Management Plan (LEMP) lies with the applicant, Berkshire County Sports Club. It is the responsibility of the applicant to ensure that all monitoring and reporting requirements are carried out by a suitably qualified and experienced professional. Berkshire County Council or any subsequently formed local authority under devolution is responsible for reviewing the monitoring reports submitted to the authority and assessing whether enforcement action is required if the management actions and objectives described in this gain plan are not met throughout the 30-year period.

3.1 Enhancement

Enhancement of the site and subsequent management prescriptions to ensure the ongoing biodiversity value post-construction are detailed in Table 4 below. No management prescriptions are given for Developed land, non-native and ornamental hedgerow as none are required to ensure viability.

Table 4: Habitat Creation and Enhancement Prescriptions

Ecological receptor	Specification
Tree and Shrub Planting	Native trees will be planted, as shown on the proposed landscape plans and post development BNG habitat plan (see Appendix 1 & 4). Three new planted native fruit trees, planted in accordance with supplier's recommendations and BS 8545 and BS3936-1. ***Objectives*** • To plant a range of trees that will provide pollinating, foraging, commuting, and refuge opportunities for protected and/ or notable species groups including amphibians, bats, birds, hedgehogs, and reptiles. • Ensure that good horticultural practice is employed to encourage the long-term health and vitality of all trees and shrubs. • Ensure well-balanced crowns and/ or natural shape by preventing over-competition. ***Creation Method*** • **Ground preparation and planting** Each tree will be planted within a hole three times as wide of the supplied pot and of a similar depth. Root balls will be soaked thoroughly in water before planting and root balls will be loosened to expose restricted roots before planting. The planted trees and shrubs will then be backfilled ensuring there are no air pockets around roots or any roosts protruding out of the ground.

- **Timing**

  It is best to prepare the land during the summer ready for planting between November and March. Planting trees and shrubs before the new year helps ensure better rooting and subsequent establishment including faster growth during the first growing season.

Table 4.1: Native scrub and tree management prescriptions over a minimum 30-year term.

Management	When	Rationale	BNG condition criteria compliance
At the end of each growing season all plant failures are to be 100% replaced	When required; checked annually in Autumn.	To maintain amenity and wildlife value.	A
If required, provision of stakes and guards. Guards to be left on for a minimum of 5 years	N/A	Protect from damage	D
Stakes will be checked and any broken or damaged stakes during this time would be removed (as above) and replaced with ties re-fixed	When required; checked annually in Autumn.	Maintain protection	D
Remove weeds	When required; checked twice annually in early spring and in Autumn.	Reduce competition for resources nutrients etc. by weeds	F
Application of bark mulch at a depth of 50 mm	Immediately after planting and then when required; checked annually in Autumn.	Reduce competition for resources nutrients etc. by weeds	C, E, F
Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow	D
Apply a light dressing of well-rotted manure	Annually in the winter	Note the overuse of manure fertilisers will encourage vigorous grasses and weeds to grow.	B, C
Removal of spent flowers from perennial plants will be removed through 'deadheading'	Twice annually, late spring and in the Autumn.	Allows plants to place more energy into re-growth.	A
Watering will be undertaken before and after planting out and as necessary for the continued thriving of all planting.	When required; provide more water during periods of draught and less water during times of prolonged rain.	Ensures plants do not dry out and subsequently fail.	B, C, D, F

Other Neutral Grassland

Small parcels of grassland surrounding the courts, existing buildings and pathways to be retained as is and new areas of grassland, extensions to existing

areas to be managed under the current management regime for the surrounding grassland. Grassland areas to the east and south-east of proposed padel tennis courts will be improved and planted with a wildflower seed mix as shown on the proposed landscape plans and post development BNG habitat plan (see Appendix 1 & 4).

Enhancement Method:

- **Ground preparation and planting**

  A soft strip of the current vegetation present will be undertaken and removed from the area to provide a bare soil substrate for sowing the seed mix. The bare soil will be subject to light rolling or trampling to provide a firm base for seeding.

- **Seeding**:

  To be undertaken in the spring between April and May or in the Autumn between September and October.

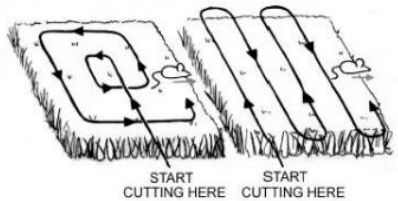
  The following seed rates are recommended: 50kg/ha or 5g/m^2

- **Proposed seed mix:**

  It is proposed to seed the meadow with Premium Wildflower Meadow Seed Mix & British wildflower seed to incorporate a mix of forbs and grasses within the other neutral grassland. The mixture contains no dominant grass species.; it is considered reasonable to assume a species diversity of 6-8 species per m^2.

Table 4.2. Other neutral grassland management prescriptions over a minimum 30-year term.

Management	When	Rationale	BNG condition criteria compliance
Cut grassland Every 2-3 years, with no more than 50% of the grassland cut each year. This will continue to maintain the tussocky sward for species such as reptiles and mammals and prevent over encroachment. This will only be cut during the hibernation season Oct-March to a height of 100mm and all arising removed	Winter months.	This ensures the meadow does not grow excessively long and become rank but allows wildflowers to set seed and invertebrates to breed. This will also allow a diverse sward of varying lengths to naturally occur in accordance with growth characteristics of each species. Cuts will be during winter to avoid killing fauna such as reptiles within he grassland. Cutting will also follow a routine as demonstrated below- to prevent entrapping and killing any wildlife	A, B, D, E

			within the meadow.  	
	Cut grass as to provide a heterogeneous habitat structure aiming to maintain at least 20% of grass <7cm and 20% >7cm. As such, each cutting phase must cut 20% of the area to ground level, 60% of the area to 15cm, and the remainder to 30cm. These areas must be rotated each year to maintain a diverse sward.	Late March / early April and– late August/ early Sept	To retain a diverse sward whilst limiting impacts to protected species potentially present at ground level and ensuring the natural germination of seeds.	B
	Remove weeds, bracken and sprouting scrub	twice annually in early spring and in Autumn.	Reduce competition for resources nutrients etc.	A, C, D, E, F
	Turn and dry the cut grass over 3-5 days before removing arisings off Site	Post cut .	This allows the seeds to drop encouraging species diversity and invertebrates to relocate unharmed. Cuttings will have to be removed to prevent nutrient enrichment of the soil which will affect meadow quality	A, E, F
	Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow or cause large areas of bare ground due to inhospitable growing conditions	C
Native hedgerow	**Overview:** The hedgerow to the north of the existing tennis courts (NH1) will be retained. It is proposed to create native hedgerows on site, including extension of NH1 to infill gap with OH1 and – new hedgerows (NH3&4) to be created to be created along the pathway leading south and around the outdoor tennis hut. As shown on the proposed landscape plans and post development BNG habitat plan (see Appendix 1 & 4). ***Objectives:*** • To create native hedgerows of moderate condition. • To create dense hedgerows that will provide foraging, commuting, and refugia opportunities for notable species groups including bats, birds, badgers, and hedgehogs.			

- To ensure native species only are planted.
- Ensure cultural techniques are employed which use a variety of mulches and organic fertilisers and which minimise the use of chemicals and peat wherever possible.

Creation Method:

- **Ground preparation**
  Prepare the ground by digging over a strip approximately 60-90cm (2-3ft) wide and one spit (or spade blade) deep. Soils that become waterlogged in winter may require a permanent drainage system. Alternatively, form the soil into a ridge about 15-20cm (6-8in) high and 50-70cm (20-28in) across to plant into.
- **Planting**
  Plants will be positioned set back from hardscaped boundaries to allow space for the hedgerow to develop and mature prior to requiring any significant management/ cutting back. Plant density will focus on achieving a hedgerow width >1m; as such, plants will be planted in a staggered double row approximately 45-60cm apart, where individual plants are planted 90cm apart within each row.
  Proposed species include hawthorn and blackthorn.
- **Timing**
  It is best to prepare the land during the summer ready for planting between November and March. Planting before the new year helps ensure better rooting and subsequent establishment including faster growth.

Table 4.3. Native hedgerow management prescriptions over a minimum 30-year term.

Management	When	Rationale	BNG condition criteria compliance
If required, provision of stakes and guards. Guards to be left on for a minimum of 5 years	N/A	Protect from damage	A1 & A2
Stakes will be checked and any broken or damaged stakes during this time would be removed (as above) and replaced with ties re-fixed	When required; checked annually in Autumn.	Maintain protection	D2
Remove weeds	When required; checked twice annually in early spring and in Autumn.	Reduce competition for resources nutrients etc.by weeds	D1
Application of bark mulch at a depth of 50 mm	Immediately after planting and then when required; checked annually in Autumn.	Reduce competition for resources nutrients etc.by weeds	D1
Apply a light dressing of well-rotted manure	Annually in the winter	Note the overuse of manure fertilisers	A1 & A2

			will encourage vigorous grasses and weeds to grow.	
	Watering will be undertaken before and after planting out and as necessary for the continued thriving of all planting.	When required; provide more water during periods of draught and less water during times of prolonged rain.	Ensures plants do not dry out and subsequently fail.	A1, A2, B1, & B2
	Check and replace any plant failures once a year	For the first 5 years	To ensure no gaps form.	A1, A2, B1, & B2
	Once the hedgerow reaches an average height of 1.5m or above along the hedgerow length, this height or above must be retained.	To be checked annually once hedgerow reaches 1.5m in height.	To ensure the hedgerow is not maintained at a low level of worse value to biodiversity.	A1
	Once the hedgerow reaches an average width of 1.5m or above along the hedgerow length, this width or above must be retained.	To be checked annually once hedgerow reaches 1.5m in width.	To ensure the hedgerow is not maintained at a thin density of worse value to biodiversity.	A2
	Flailing to be avoided- due to increase risk of disease entering individuals. Management to include a mixture of pruning, live head and dead hedge layering once at a suitable size.	Once hedge has reach desired size, to be undertaken in winter months after any berry producing plants have finished. No cutting between 1st March and 31st September. Laying recommended very 5-10 years	To increase hedge density and to prevent high volumes of damage which will reduce hedgerow health and quality over time.	

3.2 Timing/Monitoring

Monitoring Term

Monitoring will take place for at least 30 years post-development to ensure that the net gain is maintained for at least the minimum legal term.

Maintenance and monitoring will be carried out by Berkshire County Sports Club.

Creation period

Habitat enhancement and creation works will be scheduled to take place following the completion of major development works to ensure newly created habitats are not damaged during construction activities. The proposed timeline is as follows:

1. Pre-Development (Prior to Construction)
   - Identify and protect any existing ecological features that must be retained.
   - Implement measures and avoid to areas designated for habitat creation to prevent soil compaction or contamination.
2. Post-Development (After Major Construction Works)
   - Soil Preparation

    - Remove any construction debris and de-compact soil as necessary.
    - Introduce appropriate soil treatments to optimize conditions for target grassland species (e.g., reducing nutrient loads if necessary).
    - Undertake any excavation or reprofiling works for pond enhancement, including removal of nutrient-rich sediments where necessary.
    - Install silt traps or flow control features to manage nutrient and sediment input into the pond.
  - Seed Sowing and Planting (in autumn or spring)
    - Sow seed mix suited to the local conditions.
    - Introduce plug plants of key forbs to accelerate species establishment.
  - Initial Establishment and Maintenance (First 1–2 Years)
    - Implement a sensitive cutting regime as to not destroy the habitats.
    - Control competitive species such as dominant grasses to encourage plant diversity.
    - Avoid the use of herbicides and artificial fertilisers to maintain habitat integrity.
  - Long-Term Management
    - Continue appropriate management strategies outlines in table 4.
    - Adjust management practices if required having discussed this with the monitoring individual.

This phased approach ensures that the habitat establishment aligns with best practices and maximizes biodiversity benefits while avoiding damage from construction activities.

New Habitats

Monitoring and reporting will take place on years 2,5,10,15,20,25,30 following the year that major development works are completed and the 30-year BNG period begins. Monitoring reports as referenced above shall be sent to the local authority by November 1st of each year in which monitoring is undertaken. As a minimum these reports shall contain:

- A summary of management actions taken over the previous monitoring period and their timing;
- A summary of problems encountered in meeting management objectives and any mediation actions taken or planned to address problems;
- A current UK habitat condition assessment for each post-development habitat accompanied by the following supporting evidence:
  - species composition and % cover quadrat data for grassland habitats following sampling methods of the National Vegetation Classification (NVC; Rodwell 1992*),
  - species composition and whole feature assessment of hedgerow habitat and trees; and
  - photographs of each habitat parcel.

4.0 Great Crested Newt Precautionary Working Methods Statement (GCNPWMS)

4.1 Habitats Present on site and Assessed Value for Great Crested Newts

The site consists of hardstanding surrounded by a decorative privet hedgerow on the south and western boundaries and a beech hedgerow to the north and eastern boundaries. There are also 2 areas of grassland located within the site with the largest an area to the eastern aspect of site and a small parcel to the south-western aspect of site. An asphalt road provides access to the site from the main road. The site provides limited suitable terrestrial habitat for amphibians given the lack of optimal habitat (i.e. scrub, rank grassland). The areas of hard standing and amenity grass offer sub-optimal habitat for terrestrial amphibians. The hedgerows may offer refuge for these species, however given the urban nature of the surrounding landscape (i.e. dominated by roads and hard standing which are sub-optimal for amphibians) it is unlikely that amphibians will migrate on to site. However, there is suitable terrestrial habitat across the wider landscape so amphibians may commute through site to optimal habitat in surrounding area.

4.2 Impact Assessment

When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of 0.35ha of grassland, hedgerow and hardstanding. Assuming great crested newts are present within the pond 125m to the north of the site, when completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a **Green risk score**, which states: **Offence Highly unlikely**

Given the limited habitat removal proposed and subsequent low risk of an offence taking place as a result of the proposed development, the use of Reasonable Avoidance Measures (RAMs) in place of further surveys and licensing is considered suitable to eliminate impacts to great crested newts. This procedure is in accordance with current Natural England Guidance (Natural England 2015), which states:

"Licensable activities should ideally be designed out of developments during the early planning stages. This should result in avoiding harm to great crested newt populations and can save developers the time and expense of licensed mitigation measures. Many potentially licensable activities can in fact be avoided by careful planning of the development combined with simple precautionary measures. In many cases, adopting such an approach may mean that no licence is required (as no offence would be committed)…

…Green: offence highly unlikely' indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (see Non-licensed avoidance measures tool) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest."

4.3 Mitigation and Enhancement Prescriptions

Table 5 below details the mitigation measures for the site as to prevent impacts to great crested newts as a result of the proposed development and details enhancement prescriptions to ensure the continued value of the site to great crested newts post-development.

Table 5: Mitigation and Enhancement Prescriptions

Mitigation and Enhancements	Specification
Ecological Clerk of Works	The below RAMs will be supervised by an Ecological Clerk of Works (EcOW) comprising a suitably qualified ecologist. The EcOW will ensure that the mitigation detailed below is implemented effectively and that no great crested newts or any other amphibian species are harmed during the works.
Informative Statement	If any great crested newts are found on site during the development all works must stop immediately and the EcOW will need to advise how to progress the development in line with wildlife legislation and planning policy. Further surveys to determine the size of the population present and/ or an EPSL may be required where impacts to great crested newts cannot be avoided.
Reasonable Avoidance Measures	***Pre-development vegetation clearance*** Precautionary methods of working when removing the grassland and introduced shrubs are required to prevent causing injury or death to great crested newts if present. Vegetation clearance works are best undertaken during the breeding period for great crested newts when they are most likely to be present within breeding waterbodies rather than terrestrial habitats between mid-March and mid-June. If this timeframe cannot be achieved and clearance works must take place outside of the typical breeding period between mid-June and October, thorough searches, and subsequent sensitive destruction of refugia habitats will be undertaken by hand to further limit potential impacts to great crested newts. Clearance works must not take place between October and March when amphibians are torpid and thus highly vulnerable to injury or death. Vegetation removal will comprise a phased cutting method in addition to cutting in systematic patterns. The phased cutting method will be undertaken in two stages; the first cut will remove all vegetation to approximately 200-300mm from ground level and the second cut will be to ground level/ bare ground. Great crested newts are most likely to be present at or just below ground level; the phased technique allows any individuals present at this vegetation level to disperse. Where vegetation is already at 200-300mm or below, such as is likely for the amenity grassland on site, then the vegetation will be subject to a finger-tip search for great crested newts and other common amphibians immediately prior to being cut to ground level. The systematic vegetation cutting will be applied to both cutting phases (where required) and will comprise cutting systematically towards areas of retained suitable habitat within the north of the site in an attempt to encourage any individual amphibians to retreat to retained habitat unharmed. This method also prevents the

creation of habitat islands during the second cutting phase which has potential to trap individuals in isolated pockets of habitat and thus increase the potential for injury or death during works. Two suitable systematic cutting techniques are shown below on **Figure 1**. Once the sensitive vegetation clearance has been completed, this area will then be managed as bare ground or very short grassland (<100mm) which is unsuitable to support great crested newts for prolonged periods and is likely prevent individuals from recolonising this section of the site prior to construction works. All vegetation arisings created from the cutting will be removed from the area; the arisings will be used to create new hibernacula within the retained habitat sections on site (see below). This will enhance the retained habitats for great crested newts and other amphibian species whilst ensuring the cleared sections of the site remain unsuitable to support this species during construction

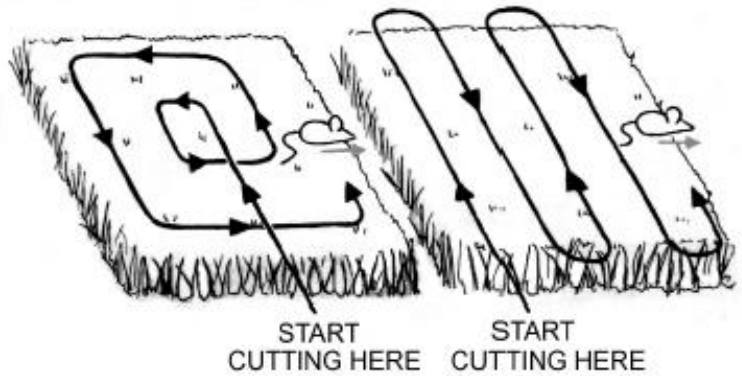


Figure 1: A schematic representation of vegetation cutting patterns as best to eliminate terrestrial opportunities for great crested newts.

Displacement of common amphibian species

As above, should any great crested newts be encountered development works must stop immediately until further instruction from the EcOW. Should any common amphibian species be found during the works such as common frog *Rana temporaria,* common toad *Bufo bufo,* smooth newt *Lissotriton vulgaris,* and palmate newt *Lissotriton helveticus,* works can continue so long as individuals will be carefully removed from the impacted area by the EcOW and placed within suitable retained habitat adjacent to the north of the site.

Removal of debris and storage of building materials

	Once the above RAMs have been completed and the site has been suitably prepared for development activity, demolition and construction activity can commence in the absence of an EcOW. However, in order to prevent the creation of large debris piles resulting from demolition works that could in turn become suitable refuge hibernacula for amphibians, all debris will be removed from site immediately and stored over hardstanding or within a skip. Furthermore, the storage of building materials should also be located over hardstanding or bare ground and located on a pallet to prevent providing refuge value to amphibians.
Hibernacula creation	One hibernaculum will be created using natural materials such as logs collected from the site, stone, vegetation arisings, and earth (see **Figure 2**) to enhance the site for great crested newts and other amphibians post-development. The hibernaculum will be installed adjacent to the north site boundary which has suitable connectivity to nearby ponds and a small woodland stand in the wider landscape.

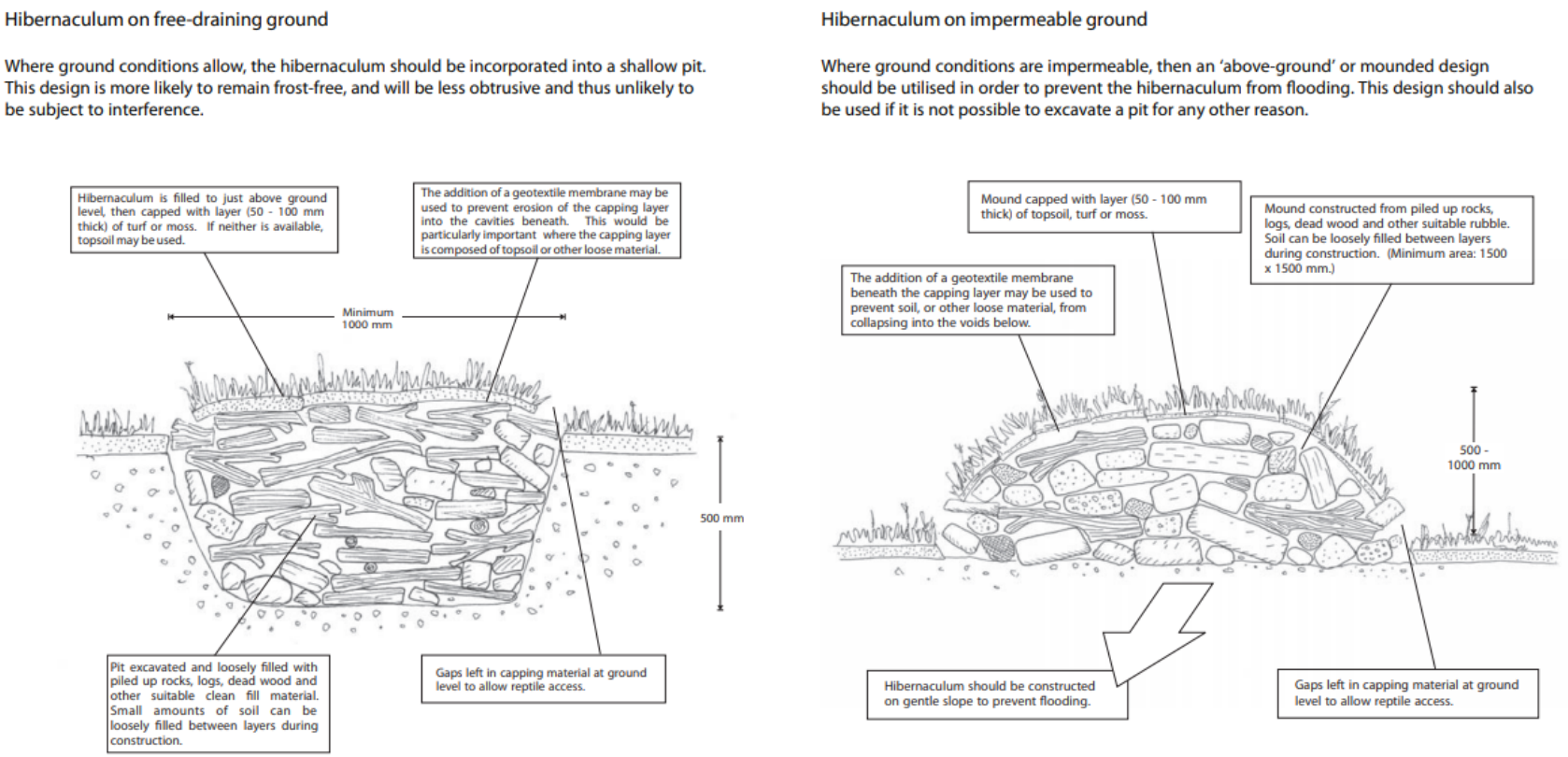


Figure 2: A schematic representation of a man-made hibernaculum.

5.0 Ecological Mitigation Plan

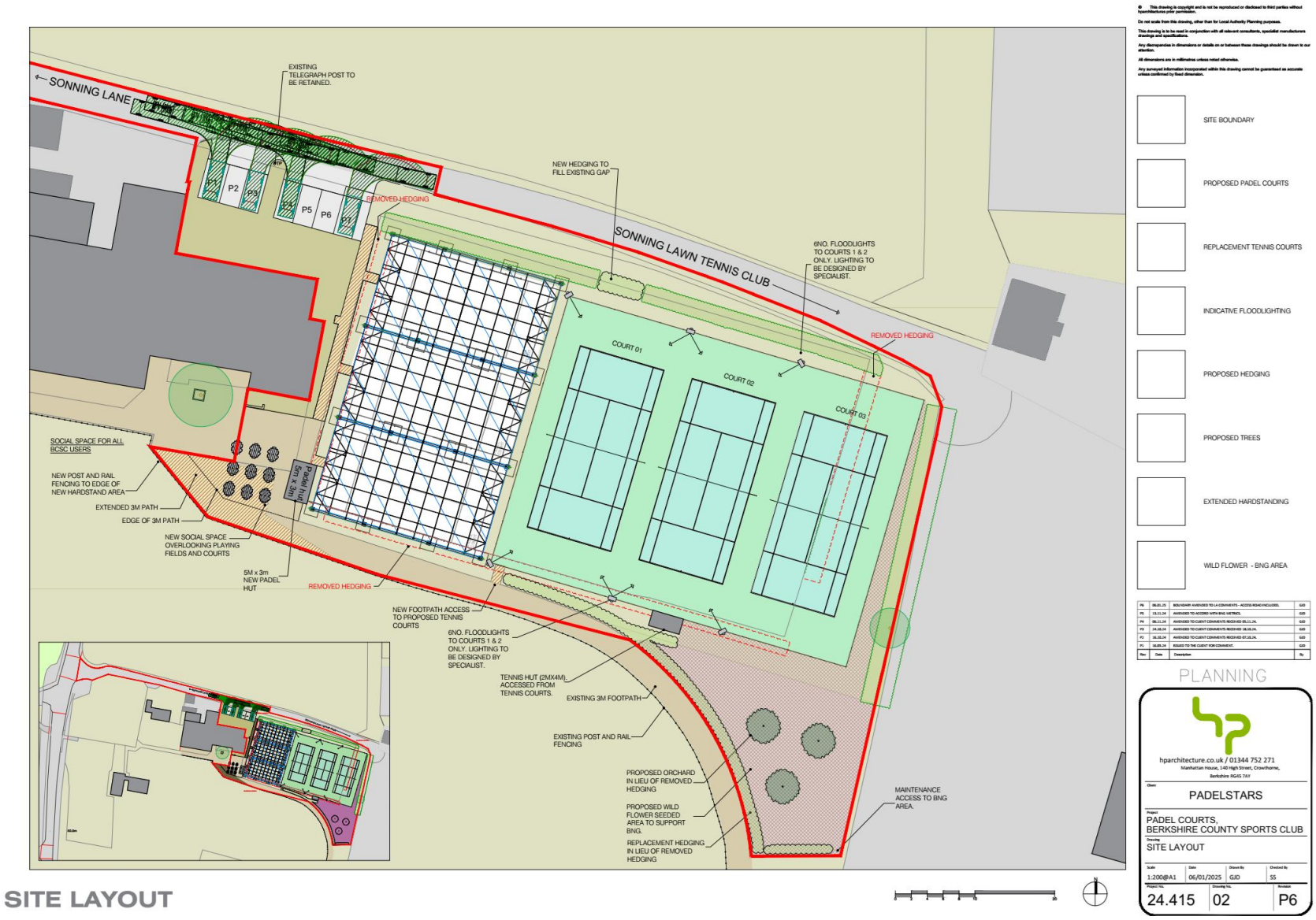
Table 6 below details the mitigation measures for the site as to prevent impacts to protected species as a result of the proposed development.

Table 6: Mitigation Measures

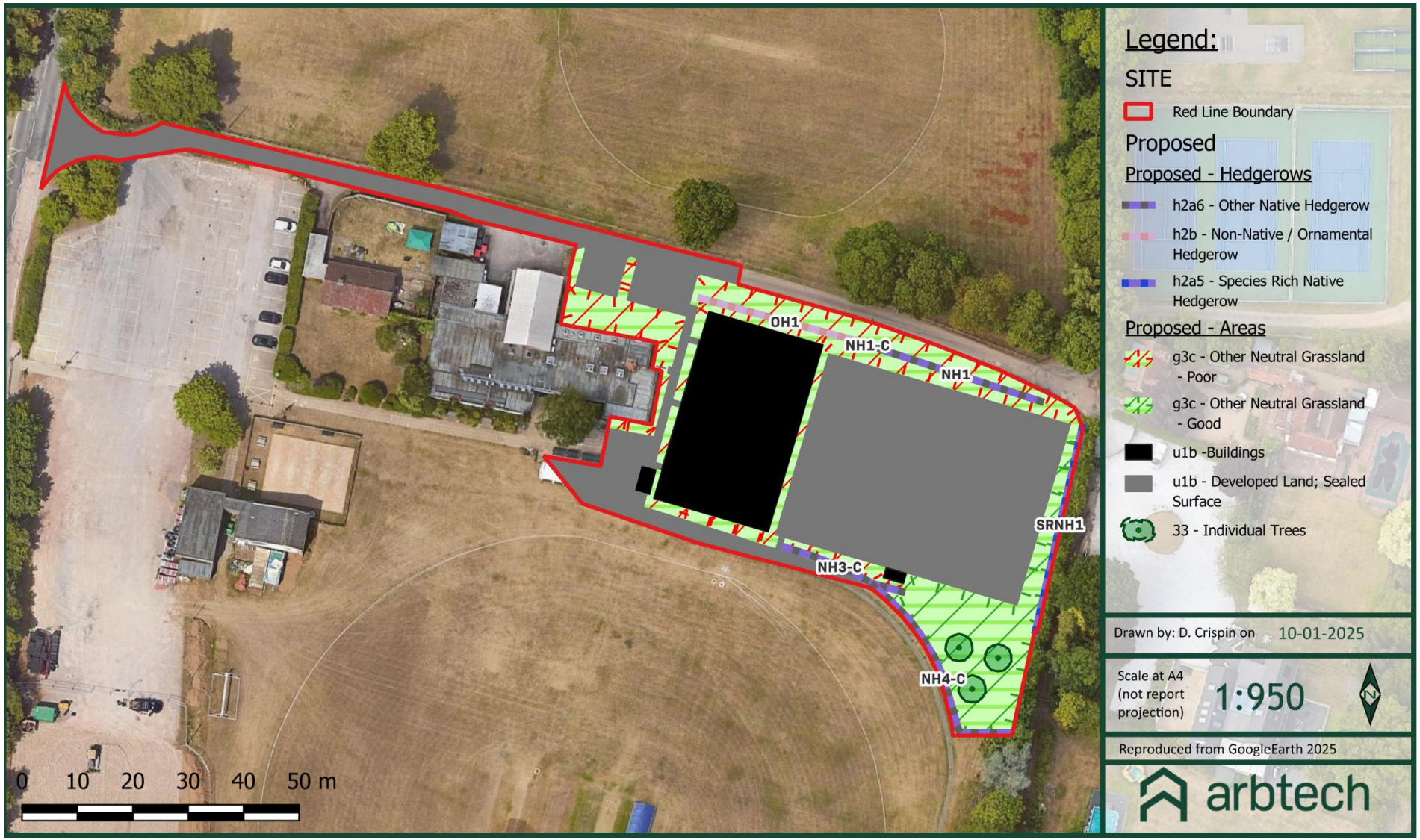
Works	Specification
Timing of Works	Construction activities will be restricted to the normal working day (7am-7pm).
General Construction Activities	Heras fencing (or similar) will be installed around the perimeter of the construction zone to prevent any vehicle or construction encroachment onto habitats / species of ecological value. Any machinery used should be made safe or temporarily fenced off when not in use. Storage of construction materials will be kept to a minimum. Where materials must be stored, they will be restricted to inert objects and located on hardstanding away from hedgerows, ponds, badger sett. Materials will be stored on pallets to discourage animals from using them as shelter. Skip or similar containers may also be used in place of piles on the ground. Trenches or open excavations will be covered at the end of each working day, or include a means of escape such as a sloping ramp for any animals that may fall in. Any temporarily exposed open pipe systems or ducts will be capped at the end of each working day in such a way as to prevent animals from gaining access.
Lighting	The use of the floodlighting will be 07.00-22.00 Monday – Sunday, including bank holidays. In order for lighting to be compliant with the BCT guidance, the following points should be adopted: • All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used. • A warm white spectrum should be adopted to reduce blue light components. • Luminaire should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012). • Only luminaires with an upward light ratio of 0% and with good optical control should be used. • Luminaires should always be mounted on the horizontal, i.e. no upward lift.

Birds	Vegetation clearance should be undertaken outside the core nesting period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken, by the project ecologist or ECoW, within 48 hours prior to the commencement of work. All active nests will need to be retained with a species-appropriate buffer until the young have fledged (species specific but typically 4-6 weeks).
Badgers	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which badgers could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • In the unlikely event that a badger sett is identified, works must cease and advise must be sought from a suitably qualified ecologist.
Hedgehogs	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.

Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan

Appendix 3: Baseline Habitat Plan

Appendix 4: Post Development Habitat Plan