Ecological Mitigation, Enhancement and Management Plan

ACS Hillingdon School, 108 Vine Lane, Uxbridge, Middlesex, UB10 0BE

ACS International Schools

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Arbtech Consultant's Contact Details:
Beth Ellison-Perrett BSc (Hons) MSc
Consultant
Tel: 07874871277 **Email:** bethep@arbtech.co.uk
Arbtech Consulting Ltd
https://arbtech.co.uk

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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

Arbtech Consulting Limited was instructed by ACS International Schools to produce an Ecological Mitigation, Enhancement and Management Plan for ACS Hillingdon School, 108 Vine Lane, Uxbridge, Middlesex, UB10 0BE (hereafter referred to as "the site").

This plan is in relation to a Section 73 Minor-Material Amendment application. The report has been commissioned due to the original permission (2393/APP/2015/1146) having a pre-commencement condition requiring an ecological enhancement scheme. The original permission was for:

Creation of science laboratories above the existing West Wing, extension to existing hall/West Wing to create a multi-purpose hall, refurbishment of internal rooms, enclosure and refurbishment of the internal courtyard and alterations to manoeuvring yard and access road with associated landscape works.

The Multi-use hall (Project D) is the phase currently being progressed. This will be a two storey, flat roof building of masonry construction. The new building will incorporate a living wall (hereafter referred to as "the proposed development")

Condition 10 of 2393/APP/2015/1146 reads as follows:

Prior to the commencement of any external development works an ecological enhancement scheme shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall clearly detail measures to promote and enhance wildlife opportunities within the landscaping and the fabric of the buildings, including measure such as habitat walls, bird and bat boxes and nectar rich planting. The development must proceed in accordance with the approved scheme.

The current application seeks to vary the original permission, primarly focusing on a change to the Energy Strategy and the development of the Multi-Use Hall. In order to avoid Condition 10 being repeated on this application, this plan has been commissioned to provide full details of the ecological enhancements prior to the determination of the application, negating the need for a pre-commencement condition. 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 an eco-walkover (April 2023) and a Phase 1 habitat survey (December 2014) which was completed by Arbtech Consulting Ltd.

2.0 Site Context and Survey Information

2.1 Site Location and Landscape Context

The site is centred on National Grid Reference TQ 06847 83845 and has an area of approximately 4.04ha comprising several school buildings of a range of sizes, set amongst grass fields, ornamental shrubs and trees. The local area around the school is mainly suburban in character, with detached houses and gardens present in all directions. Hillingdon Court Park is adjacent to the East of the site and is a large amenity grass area with scattered trees. A small wood can be found ~300m away within this. The tree-lined course of the river Pinn passes ~360m to the West of the site and is the closest source of open water. It then runs alongside a golf course ~400m to the South-West of the survey site. Approximately 730m to the North of the site lies hedge lined arable fields. A site location plan is provided in Appendix 2.

2.2 Ecological Information

Below 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 an eco-walkover (Arbtech, April 2023).

No direct evidence of protected species was found onsite. All habitats onsite are widespread and common and no notable plant species were observed. There is no suitable habitat for protected amphibians or reptiles on site. There are no ponds or extensive foraging areas e.g. long grass or scrub on site or nearby. There are no logs or stone piles for refuge in the development area. There are also no ponds nearby than amphibians could commute to. Therefore, it is extremely unlikely that any protected amphibians or reptiles are present. No badger setts were found on site and no other badger evidence (e.g. latrines, footprints, hairs) found. However, badgers could use the site occasionally to forage within. All nine buildings have negligible habitat value for roosting bats due to a lack of suitable roosting features.

3.0 Ecological Mitigation, Enhancement and Enhancement Measures

3.1 Informative

The following tables detail the proposed mitigation, habitat creation and biodiversity enhancement measures for the development as well as management requirements to ensure the longevity of these measures.

3.2 Persons Responsible and Lines of Communication

It is recommended that a Development Biodiversity Champion is selected for the construction phase of the development. The Biodiversity Champion should be someone with significant influence during construction, such as the contract or project manager. The Development Biodiversity Champion is responsible for ensuring all actions outlined in this EMEMP are implemented including the provision of a toolbox talk prior to works commencing. Any queries with regards to the mitigation prescriptions should be addressed to the project ecologist and communication should be retained between the Development Biodiversity Champion and project ecologist or a suitably qualified Ecological Clerk of Works (ECoW) throughout the construction phase of the development where necessary to ensure the mitigation is applied and impacts to adjacent ecological receptors are effectively minimised. The project ecologist's contact details are located on the title page of this report. It is recommended that the Biodiversity Champion informs the project ecologist or ECoW of the commencement of construction works and provides updates where necessary.

3.3 Habitat Creation and Biodiversity Enhancement Measures

Table 1 details the habitat creation and biodiversity enhancement measures for the site. These are also illustrated in Appendix 3.

Table 1: Habitat Creation and Biodiversity Enhancement Measures

Works	Specification
Landscaping	Although many trees are being retained to help maintain ecological habitats and connectivity, the site will also be enhanced through new habitat creation on site. The landscaping scheme for the developed site includes the planting of new native trees and new grassland and introduced shrubs. New trees will comprise a mixture of fruit and flower bearing native species interspersed by ornamental species with value to wildlife. The following list of native tree, shrub and nectar rich species is therefore provided as guidance to inform the existing plan to maximise the use of native species within the site where practicable. **<u>New Tree & Hedgerow Planting</u>** Alder *Alnus glutinosa* — Burnet rose *Rosa pimpinelifolia* Hazel *Corylus avellana* — Spindle *Euonymus europaeus* Almond willow *Salix triandra* — Dog rose *Rosa canina*

	Amelanchier *Amelamchier ovalis*	Wayfarer tree *Viburnum lantana*
	Juniper *Juniperus communis*	Field maple *Acer campestre*
	Aspen *Populus tremula*	Wild cherry *Prunus avium*
	Osier *Salix viminalis*	Field rose *Rosa arvensis*
	Bay willow *Salix pentandra*	Wild pear *Pyrus pyraster*
	Pedunculate oak *Quercus robur*	Guelder rose *Viburnum opulus*
	Bird cherry *Prunus padus*	Yew *Taxus baccata*
	Silver birch *Betula pendula*	Hawthorn *Crataegus monogyna*
	Hornbeam Carpinus betulus	Honeysuckle *Lonicera periclymenum*

Habitat Wall

An ANS global system living wall will be incorporated into the new extension on the northern elevation of B7. The living wall will incorporate two bays of the northern elevation, covering approximately 32m^2. The living wall will hold at least 96 plants per square metre and therefore, approximately, 3070 new plants will be contained into the living wall onsite. The planting will include native species, where possible, to increase biodiversity, including spring bulbs, native species and pollinator planting to create habitats for bees and encourage natural colonisation.

Figure 1: an illustration of the living wall onsite

Lighting	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.
Bat Boxes	Two bat boxes are recommended to be installed on the retained trees, towards the southern boundary of the site. ***Bat boxes specification:*** • The recommended bat boxes will be constructed of woodcrete/ woodstone. Boxes of this construction are designed to require no maintenance and have a lifespan of 25 years plus. • 2x General Purpose Bat Boxes (or similar alternative brand) are recommended on the trees, as shown in **Figure 2**. • Bat boxes should be positioned 3-5m above ground level facing in a south, southeast, or southwest aspect with a clear flight path to and from the entrance, away from artificial light.

Figure 2: General Purpose Bat Box (image credit https://www.nhbs.com/convex-wood-concrete-bat-box)

Bird Boxes

Three bird boxes are recommended to be installed on site, upon mature trees towards the southern boundary of the site.

Bird box specification:

- The recommended bird boxes will be constructed of woodcrete/ woodstone. Boxes of this construction are designed to require no maintenance and a lifespan of 25 years plus.
- 2x Woodstone Nest Boxes (or a similar alternative brand) with 28mm entrance holes are proposed on the trees, as shown in **Figure 3**.
- Woodstone Nest Boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight.

Figure 3: Woodstone Nest Box (image credit arkwildlife.co.uk)

Insect Box	An insect box will be installed adjacent to the retained tree line on the southeast site boundary, facing the grassland (**Figure 4**). An insect box suitable for the site (or a similar alternative brand) can be found here: https://www.nhbs.com/national-trust-apex-insect-house  **Figure 4**: Insect box (image credit https://www.nhbs.com/national-trust-apex-insect-house)
Hedgehog House	A hedgehog house will be installed adjacent to the retained tree line on the southeast site boundary (**Figure 5**). A hedgehog house suitable for the site (or a similar alternative brand) can be found here: https://www.nhbs.com/hedgehog-house  **Figure 5**: Hedgehog house (image credit https://www.nhbs.com/hedgehog-house)

3.4 Management Requirements

Table 2 details the ecological management requirements for the site.

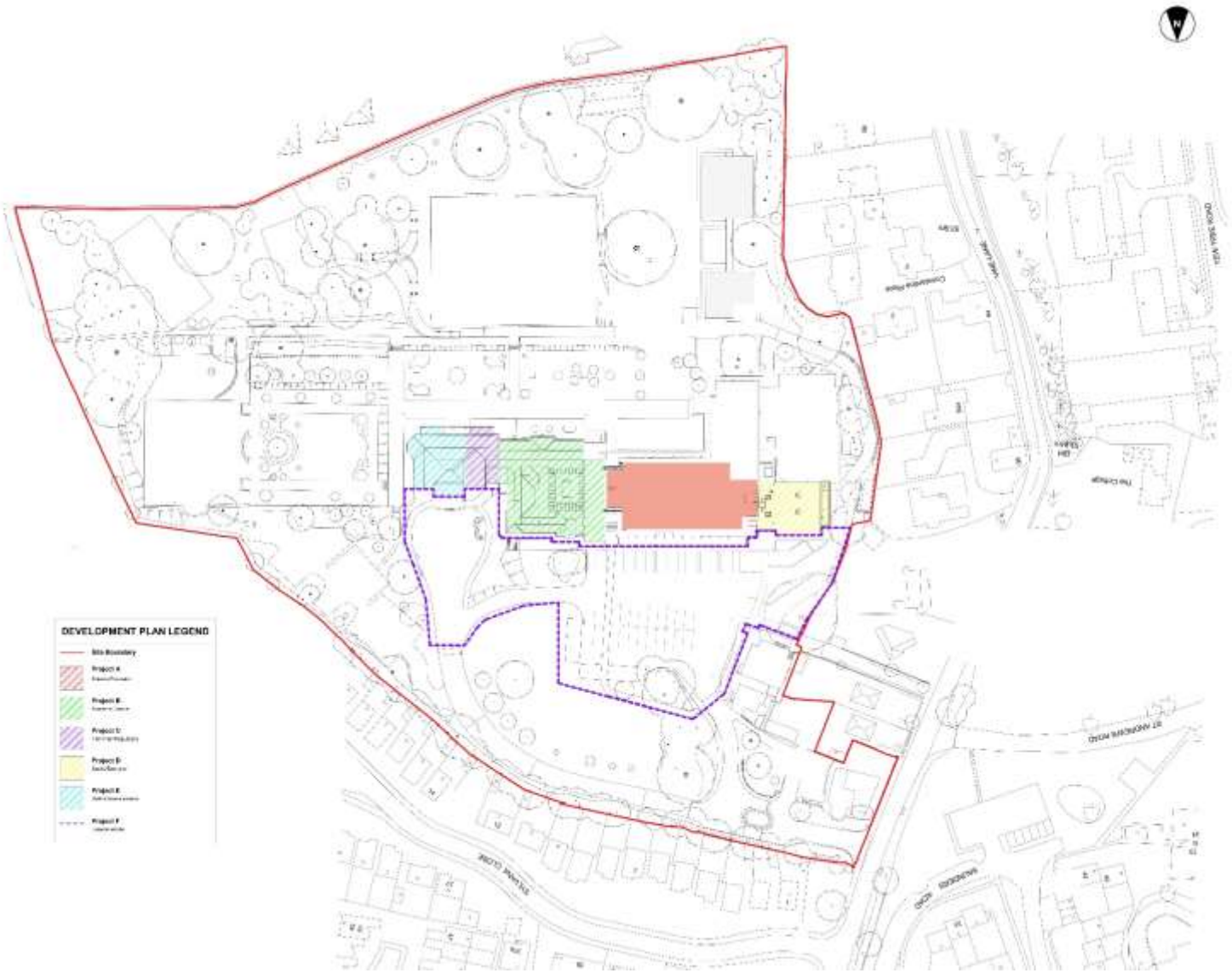
Table 2: Management Requirements

Activity	Year 1	Every Year for 30 Years
New tree planting	☐ Replace any tree failures with planting of the same species to prevent gaps from developing. ☐ Top of the mulch where necessary and water monthly or when dry.	☐ Any plants that die in the first 5 years will need to be replaced to prevent gaps developing.
Bat, bird and insect boxes and hedgehog houses	☐ Install the site's provision of habitat boxes for bats, birds, invertebrates and hedgehogs.	☐ Check annually and replace any boxes that are broken or fall down e.g. during storms.
Lighting	☐ The location and suitability of the external lighting will be checked by a bat licensed ecologist upon completion of the development. Recommendations for improvements will be made where applicable.	☐ Check lighting annually to maintain approved lighting levels across the developed site. No changes will be made until advice has been sought from a bat licensed ecologist.

4.0 Conclusion

Although, there was no evidence of protected species onsite and the habitats onsite are of low ecological value, with the exception of the mixed woodland to the south-east, the addition of these biodiversity enhancements and creation of new habitats will increase the likelihood of protected species utilising the site to seek shelter and forage within. Furthermore, this plan presented should be sufficient in covering all aspects within Condition 10 and therefore, should be approved as the chosen strategy can be implemented in full with the approval of the Section 73 application.

Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan

Appendix 3: Habitat Creation and Enhancement Plan