

Green Infrastructure Statement

Site Address: Bersham Hall, Bersham Road, Bersham, Wrexham LL14 4HS

Client Name: Bersham School Ltd

Reference: Green Infrastructure Statement (GIS)

Date: 09/10/2024

Background

Arbtech Consulting Limited was instructed by Bersham School Ltd to undertake a Green Infrastructure Assessment (GIA) Assessment at Bersham Hall, Bersham Road, Bersham, Wrexham LL14 4HS (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of additional car parking on site (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

This report should be read in conjunction with the following documents:

- Preliminary Ecological Appraisal (PEA) report for this site (Sensible Ecological Survey Solutions, 2023).

Site Location and Landscape Context

The rectangular survey site is centred on National Grid Reference SJ 31283 49303 and has an area of approximately 1.7ha. The site consists of multiple educational buildings, playing fields, lawns and concrete paths and carpark. The playing fields consist of heavily managed grassland, scattered trees and a small allotment to the northeastern corner of site. The southern section of the site consists of developed land sealed surface roads and parking with scattered trees and lawns. The red line survey boundary consists of modified grassland, introduced shrubs and scattered trees. The blue line boundary consists of the remainder of the school site with further grassland, hedgerows, trees and buildings. The area of land that is to be impacted by the works is a small section of modified grassland to the east of the survey boundary.

A site location plan is provided in Appendix 2.

Habitat Area/Length

The area or length of each habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of a similar composition and condition. Distinctions were made between habitats to be retained (i.e., left as found in baseline), enhanced (i.e., improved condition) or lost (i.e., destroyed by proposed development). Prior and post development plans can be found in Appendix 3 and 4.

Green Infrastructure (on-site)

The site (**~0.834 ha**), comprises:

- Modified grassland (g4) (UK Habitat Classification: 2.0) (**~0.598ha**)
- Developed land, sealed surface (u1b6) (UK Habitat Classification: 2.0) (**~0.143ha**)
- Buildings (u1b5) (UK Habitat Classification: 2.0) (**~0.072ha**)
- Built Up Area and Gardens (allotment) (u1) (UK Habitat Classification: 2.0) (**~0.021ha**)
- Lines of Trees (w1,33) (UK Habitat Classification: 2.0) (**~382m**)

Green Infrastructure (adjacent)

The remainder of the site is predominantly urban buildings, consisting of educational buildings, modified grassland as the playgrounds and hardstanding surface for car parking and roads.

There is further trees and hedgerows throughout site as described within the PEA (Sensible Ecological Survey Solutions, 2023) and an area of scrub to the north of the site, outside the survey boundary.

Green Infrastructure Assessment

Prior to the proposed development, the site has **~0.598ha** of modified grassland, **~0.072ha** of buildings, **~0.021ha** of allotments and **~0.143ha** of developed land, sealed surface (*Table 1*). Post the development the site will have **~0.51ha** of modified grassland, **~0.072ha** of buildings, **~0.021ha** of allotments and **~0.231ha** of developed land, sealed surface consisting of the new car parking and access road. The new carpark will consist of 'grass geocell' In place of hardstanding, however, is considered as developed land. This will result in a **~14.7% loss** in modified grassland on-site and a **~61.5% increase** in developed land, sealed surface on-site. In summary, under the current plans, **more on-site green infrastructure will be lost than gained**.

Table 1. Changes to habitat sizes as part of the proposed works.

Habitats on-site	Pre-works	Percentage area (%)	Post-works	Percentage area (%)	Percentage increase/decrease of habitat (%)
Modified grassland (ha)	0.598	71.7	0.51	61.2	-14.7
Developed land, sealed surface (ha)	0.143	17.1	0.231 (0.086 grass geocell)	27.7	+61.5
Buildings (ha)	0.072	8.6	0.072	8.6	0
Allotment (ha)	0.021	2.6	0.021	2.5	0
Lines of Trees (m)	382	-	382	-	0
Total site area	0.834	100.00	0.834	100.00	

The habitats on site to be removed is a small section of modified grassland and is of low ecological value, therefore, the loss is not considered significant. The following green infrastructure is to be added to the site to improve on-site biodiversity with higher quality habitats and increase site connectivity to greenspace in the wider landscape for wildlife:

- Using species-rich native seed mixes that incorporate pollinator-friendly plant species to increase invertebrate populations on-site and increase foraging opportunities for bats. This is to be incorporated into the allotment section of the site.
- Planting of native shrubs along the western section of the proposed carpark (e.g., spindle, *Euonymus europaeus* or beech *Fagus sp.*,) to improve site connectivity to other green corridors in the nearby vicinity.
- Planting of 1-2 native fruit trees within the allotment of the site, suggested species crab apple (*Malus sylvestris*), or wild cherry (*Prunus avium*).
- Planters to include native pollinator friendly wildflowers or native shrubs to provide habitat to support invertebrates.
- The installation of one bat and one bird boxes to support these species on-site. Recommended location on the southern facing elevation of the onsite dwelling or on retained on site trees. Recommended bird box brand includes '1B Schwegler Bird Box' or '2M Schwegler Nest Box'. Recommended bat box brands include 'Isabella Bat Box' or '2FN Schwegler Bat Box'.
- Compost heaps, rubble or log piles also will provide habitats for reptiles, amphibians and mammals and recommended within the allotment section of the site.

Author

Kayleigh Davies BSc (Hons) MSc

Graduate Ecologist

Reviewer

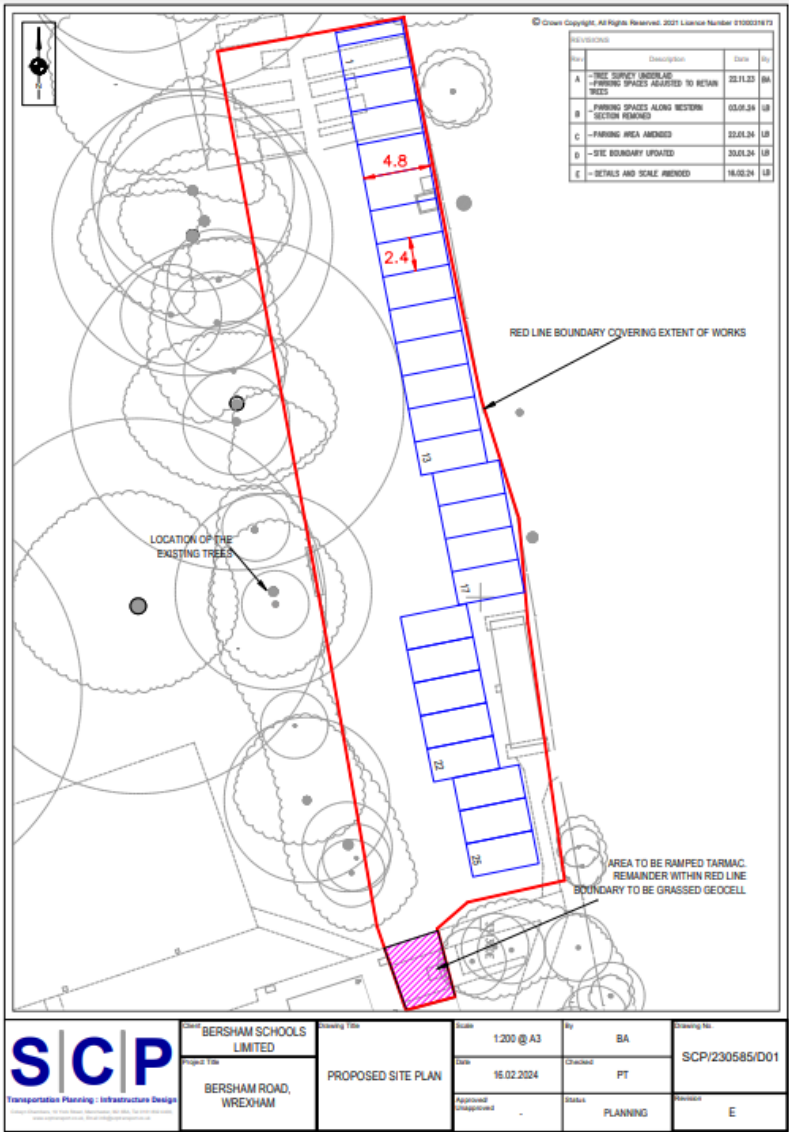
Mel Reid BSc (Hons) MRes MRSB, Senior Consultant

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Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Habitat Plan – prior to works



Appendix 4: Habitat Plan – post works



Appendix 5 – Recommended Enhancements

