Green Infrastructure Statement

Site Address:	Ysgol I.D. Hooson, Heol Caradoc, Rhosllanerchrugog, Wrexham LL14 2DS
Client Name:	Wrexham County Borough Council (Education
Reference:	Green Infrastructure Statement
Date:	10/04/2025

Background

Arbtech Consulting Limited was instructed by Haven Leisure Ltd to undertake a Green Infrastructure Statement (GIS) Assessment at Ysgol I.D. Hooson, Heol Caradoc, Rhosllanerchrugog, Wrexham LL14 2DS (hereafter referred to as "the site"). The assessment was required to inform a planning application for *"the proposed extension and refurbishment of the existing Ysgol I.D. Hooson building with external hard play relocation and possible car park expansion"* (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 and Preliminary Roost Assessment (PEAPRA) report for this site (Arbtech, 2024).

Site Location and Landscape Context

The survey site is centred on National Grid Reference SJ 28761 46057 and has an area of approximately 2.8ha. The site comprises a primary school, with associated recreational field, scattered trees and onsite concrete car park. It is situated within the town of Rhosllanerchrugog in Wrexham. There are scattered trees within the site and extending into the local garden landscape. Aerial imagery shows the local landscape to be residential to the south, north and east of the site, with agricultural fields to the west. Water bodies can be found nearby, such as Stryt Las Park (lake) located ~1.09km to the east. Such features likely enhance the area for a variety of species, including bats, amphibians and reptiles. 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 **(~2.8 ha)**, comprises:

- Developed land (u1b) (UK Habitat Classification: 2.0) (**~0.921ha**)
- Modified grassland (g4) (UK Habitat Classification: 2.0) (**~1.078ha**)
- Other neutral grassland (g3c) (UK Habitat Classification: 2.0) (**~0.533ha**)
- Other standing water – pond (r1g) (UK Habitat Classification: 2.0) (**~0.003ha**)
- Bramble scrub (h3d) (UK Habitat Classification: 2.0) **(~0.015ha)**
- Buildings (u1b5) (UK Habitat Classification: 2.0) (**~0.25ha**)
- Non-native ornamental hedgerows (h2b) (UK Habitat Classification: 2.0) (**~50m**)
- Line of Trees (33) (UK Habitat Classification: 2.0) (**~170m**)

Green Infrastructure (adjacent)

The site sits within the outskirts to the west of the town of Rhosllanerchrugog. The wider context of the site is consists of fields to the west and the north and residential development to the east and the south of the site. The site is immediately surrounded to the west, south and east by dense scrub which consists of common pant species composition such as bramble and nettle. The metal fencing around the site does not disconnect the site from these further habitats. The management regime of the site is regular with the use of mowing due to the use of the site as a school, the immediate habitats to site are not regularly managed.

Green Infrastructure Assessment

Prior to the proposed development, the site has ~**1.078ha** of modified grassland, ~**0.921ha** of developed land sealed surface, **~0.25ha** of buildings, and **~0.533ha** of other neutral grassland, **~0.015ha** of bramble scrub, **~0.003ha** of other standing water (ponds) (*Table 1*). Post the development the site will have ~**0.883ha** of modified grassland, **~1.027ha** of developed land sealed surface, **~0.36ha** of buildings and **~0.533ha** of other neutral grassland. Other standing water, bramble scrub, lines of trees and hedgerows remain unchanged by the proposed development. The development will also include the loss of ~12 trees, of which are majority young trees. This will result in a **~21.9% decrease** in grassland on-site, a **~15.2% increase** in other developed land, and ~**30.3% increase** in buildings. 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 (Ha)	Pre-works	Percentage area (%)	Post-works	Percentage area (%)	Percentage increase/decrease of habitat (%)
Developed Land Sealed	0.921	32.9	1.063	37.9	+15.2
Buildings	0.25	8.9	0.324	11.6	+30.3
Modified Grassland	1.078	38.5	0.883	31.5	-18
Other neutral grassland	0.533	19	0.512	18.3	-3.9
Bramble Scrub	0.015	0.5	0.015	0.5	0
Other standing water	0.003	0.2	0.003	0.2	0
Non-native ornamental hedgerow (m)	*~50m*	-	*~50m*	-	*0*
Line of Trees (m)	*~170m*	-	*~170m*	-	*0*
Total site area	2.8	100.00	2.8	100.00	

Green Infrastructure Recommendations (Net Biodiversity Benefit)

Due to the use of the site as a school, the site is regularly disturbed and furthermore, is subject to regular mowing and management regime. The other neutral grassland on the site is subject to a less intense management regime and therefore the grass species present here is at a longer sward than the remainder of the site, however, this grassland is sparse with sections of bare ground and presence of young saplings and small trees towards the school.

The proposed development is largely proposed to impact developed land sealed surface of the playground and surrounding paths and roads. Small sections of grassland largely modified grassland is to be removed and is considered to be inconsequential due to its low value and offsite high value habitats nearby, such as the scrub and fields.

The following green infrastructure is included within the plans onsite to improve on-site biodiversity with higher quality habitats and increase connectivity to greenspace in the wider landscape for wildlife:

- Planting of 8 Hornbeam trees (*Carpinus betulus*) within the modified grassland on site, which provides habitats for nesting birds and ecological niches for invertebrates. Furthermore, a 50m length of new stand trees will be planted to the western boundary of the site which species will include Sessile Oak (*Quercus petraea*), Downy Birch (*Betula pubescens*) and Scots Pine (*Pinus Sylvestris*). A further 30 new trees will be planted within the offsite woodland to the east, species including Common Hawthorn (*Crataegus monogyna*) and Holly (*Ilex aquifolium*).
- Two rain gardens will be implemented to the south of the new building extensions. The rain gardens will help reduce risk of flooding due to excess rainwater and will also provide native pollinator friendly plant species that will support local invertebrate populations.
- The installation of at least two bat and two bird boxes to support these species on-site. Bird boxes will be placed on trees within the naturalised section of the site to the west. Bat boxes will be incorporated into the southern elevation of the new extension. 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'.
- Hibernacula/brash piles to the west of the site, within the section of proposed planted trees will be provided to provide refugia for invertebrates, amphibians and reptiles.
- Sections of modified grassland to the west of the site will be subject to a relaxed mowing regime and managed to increase wildflower diversity. This will further support invertebrates.

Author

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Appendix 1: Proposed Development Plan




(Insert)
Soft Landscape Planting Plan (Scale 1/500 @ A3)
Soft Landscape Features
Linear Woodland Feature (offsite)
(To be augmented with native species)
Existing Site Trees
Existing Trees and Shrubs removed
Proposed Standard Tree Planting
Existing Amenity Grass Areas Managed to Promote Greater Plant and Wildflower Diversity
Grassed Areas and Playing Field
Naturalised Learning and Play Area
New Rain Gardens
Hibernacula/ Brash Piles.
Hibernacula/ Brash Piles.
Re-use heavy timber section and brash from trees removed from site and a small amount of inert site won material (ie. bricks/ concrete) to create refuge for amphibians and hedgehogs.
Bird Boxes
Schwegler Type 1b Nest Box
Bat Boxes to building as Architects drawings
Bicycle and Scooter Parking
Children's Bicycle and Scooter Parking
Visitor Bicycle and Scooter Parking
The following new trees to be planted with the existing woodland (offsite).
20no. Crataegus monogyna
10no. Ilex aquifolium
Rain Garden
2no. Betula pubescens
1no. Pinus sylvestris
2no. Quercus petraea
4no. Hibernacula/ Brash piles
1no. Betula pubescens
1no. Quercus petraea
Continued..
Existing grassland to slope (surrounding new tree planting area) to have reduced mowing regime and managed to promote wildflower species diversity
8no. Carpinus betulus 'Frans Fontaine'
Continued.. (See Insert (left))
Scale Bar
Project:
Ysgol ID Hooson.
(Project no: 121.01)
Drawing Title:
Soft Landscape GA Plan, Ecological Enhancements and Bike Storage
Scale:
A3: 1:500
Date:
04/04/2025
Status:
Planning
Drawn:
ES
Checked:
TS
Drawing Number:
IDH-AZO-03-ZZ-D-L-0002
Revision:
-
above zero
Landscape Design
Landscape Planning
Landscape Management
Public Realm & Green Space



Appendix 2a: Site Location Plan



Appendix 3: Habitat Plan – prior to works



Appendix 4: Habitat Plan – post works



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Appendix 5 – Net Biodiversity Benefit

