Green Infrastructure Statement

Darland Academy

Wrexham AFC

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1. Introduction

Wrexham AFC are undertaking a programme of improvement works at Darland High School to enhance the existing training facilities and ensure the site meets the requirements for EFL Category 3 Academy status. As part of these works, a new pitch drainage system and irrigation infrastructure is being installed within the area of the current school playing fields, to improve the quality and usability of the playing surfaces throughout the year.

Throughout the summer of 2025, the Club has undertaken the renovation of one full-size playing surface pitch, including the restoration of a structured drainage system and improved playing surface, to meet the requirements of the EFL Category 3 Academy status.

Along with these works, Wrexham AFC has already invested in new buildings within the main school site to provided needed facilities for players and staff and, through ongoing dialogue with the high school and the Council, has made improvements to travel arrangements and the condition of the site overall.

Further works will be undertaken to renovate the remaining playing surfaces and associated existing drainage system to ensure the facility is to the correct standard and can accommodate the required use for both the Club and the High School.

The purpose of this application is to gain planning approval for the engineering works required to necessitate the drainage and surface water attenuation, and to facilitate the installation of permanent structures required for the operation of the site, irrigation and maintenance.

2. Executive Summary

This Green Infrastructure Statement outlines Wrexham AFC's proposal to upgrade training facilities at Darland High School to achieve EFL Category 3 Academy standards. The project includes installing advanced pitch drainage and irrigation systems, creating attenuation basins to manage surface water, and relocating ancillary storage units, with permanent irrigation infrastructure proposed.

The site comprises modified grassland, native hedgerows, and a drainage ditch, and is bordered by school grounds, residential development, and agricultural land. Its proximity to designated ecological sites requires sensitive design and mitigation measures.

Ecological surveys identified habitats of local importance and potential for protected species such as bats and amphibians, making the retention and enhancement of hedgerows and woodland essential for biodiversity and connectivity. Mitigation measures include widening and reinforcing hedgerows with native species, establishing low-management grassland buffers, and implementing protective fencing during construction to safeguard ecological features. All works will comply with BS5837:2012 for tree protection, drainage licensing under the Land Drainage Act 1991, and Sustainable Drainage Approval Body requirements, while hedgerow management will follow UK and Welsh legislation.

Overall, the scheme integrates high-quality sports infrastructure with ecological enhancements, delivering a sustainable development that supports community use, biodiversity, and regulatory compliance.

3. Project Description

Full planning permission is sought for a development with the following description:

"*Full planning application for the undertaking of drainage engineering works, in addition to the erection of shipping containers, landscaping and other associated works.*"

The proposed works are summarised as follows:

- Installation of permanent irrigation tanks and pump housing;
- Provision of shipping container storage buildings;
- Construction of two swales (attenuation ponds) to attenuate surface water run-off from the site; and
- Hard and soft landscaping works involving reinforced hedgerows, low management grassland, permeable maintenance access routes, and stock fencing.

Note: This application seeks planning permission for the proposed works which are located within the red line boundary, to help facilitate the wider improvement works to the land drainage systems below the football pitches. A separate SuDS (Sustainable Drainage Systems) Approval Body (SAB) application is being submitted to deliver these wider works. Therefore, whilst the works to the football pitches are not technically being assessed as part of this application, they have been demonstrated on the site plan and the supporting documentation to show how the planning application relates to the wider improvement works.

4. Site Context

The site for the Wrexham AFC Under 16's Academy Facility is located to the rear of Darland High School and occupies the playing fields adjacent to Gamford Lane [Fig. 1], as well as some of the school grounds to the north of the existing ditch watercourse.

Around the perimeter, in addition to Gamford Lane running along the northeastern boundary, there is a ditch to the northwest between the site and the school, a new housing development to the west, and open agricultural fields to the south. This limits access to the site and controls the connections between the site and adjacent features, both physically and visually.

Fig 1 Location Plan



Bounded by a mature hedgerow the site is open grass land marked out for football pitches and training exercises. A newly refurbished playing surface occupies the southwest edge of the site with a newly laid central spine footpath and circulation road installed to control vehicles and pedestrians on the site.

Gamford Lane provides the primary access for maintenance and ground staff, as well as the access point for the construction works via Rosset Road. All other access for staff, players and parents is via the High School car park and adjacent public footpath. Visitors, staff and players will arrive at the school via the B5445 and park in the car park located to the northwest of the school. From here they will head towards the Academy site [Fig. 2].

Fig 2 Site Plan



5. Site Description

The proposed development site encompasses approximately 3.0 hectares of land comprising primarily modified grassland, with additional features including species-rich native hedgerows, a strip of broadleaved woodland, rural trees, and a drainage ditch. The surrounding landscape is characterised by agricultural and pastoral fields to the east, and south, with residential development to the west. The site lies within proximity to several designated ecological sites, including the River Dee and Bala Lake Special Area of Conservation (SAC) and RAMSAR site approximately 2.9 km to the east, and the Midland Meres & Mosses Phase 2 (Wales) RAMSAR site around 3.5 km to the southeast. Two local Wildlife Sites, Darland Wood and Coxwood, are located within 2 km of the site boundary.

Ecological surveys [Fig. 3] identified the site as being of local ecological importance, with habitats such as modified grassland supporting a range of common plant species, while the hedgerows and woodland provide valuable structural diversity and potential ecological connectivity. The hedgerows, although not formally assessed under the Hedgerow Regulations 1997, may qualify as habitats of principal importance due to their species richness and native composition. The woodland, comprising mature and semi-mature trees including ash, willow, oak, and sycamore, offers further ecological value, particularly for foraging and commuting fauna.

Fig 3 Ecological Survey Mapping, PEA, Tetra Tech.



The site has the potential to support several protected and notable species. These include bats, with five species recorded within 2 km and two trees identified as requiring further assessment for roosting potential. The hedgerows and woodland also provide low to moderate suitability for foraging and commuting bats. Badgers are potentially likely to use the site for foraging and movement, although no setts were identified during the survey. The hedgerows and woodland offer suitable nesting habitat for common bird species, while the modified grassland is considered unsuitable for ground-nesting birds due to regular disturbance. Amphibians, including great crested newts, may utilise the hedgerows and woodland for shelter and commuting, particularly given the presence of nearby waterbodies within 250 m. Reptiles, hedgehogs, and common invertebrates may also be present, particularly in less managed areas and boundary features. No invasive non-native species were recorded during the ecological survey.

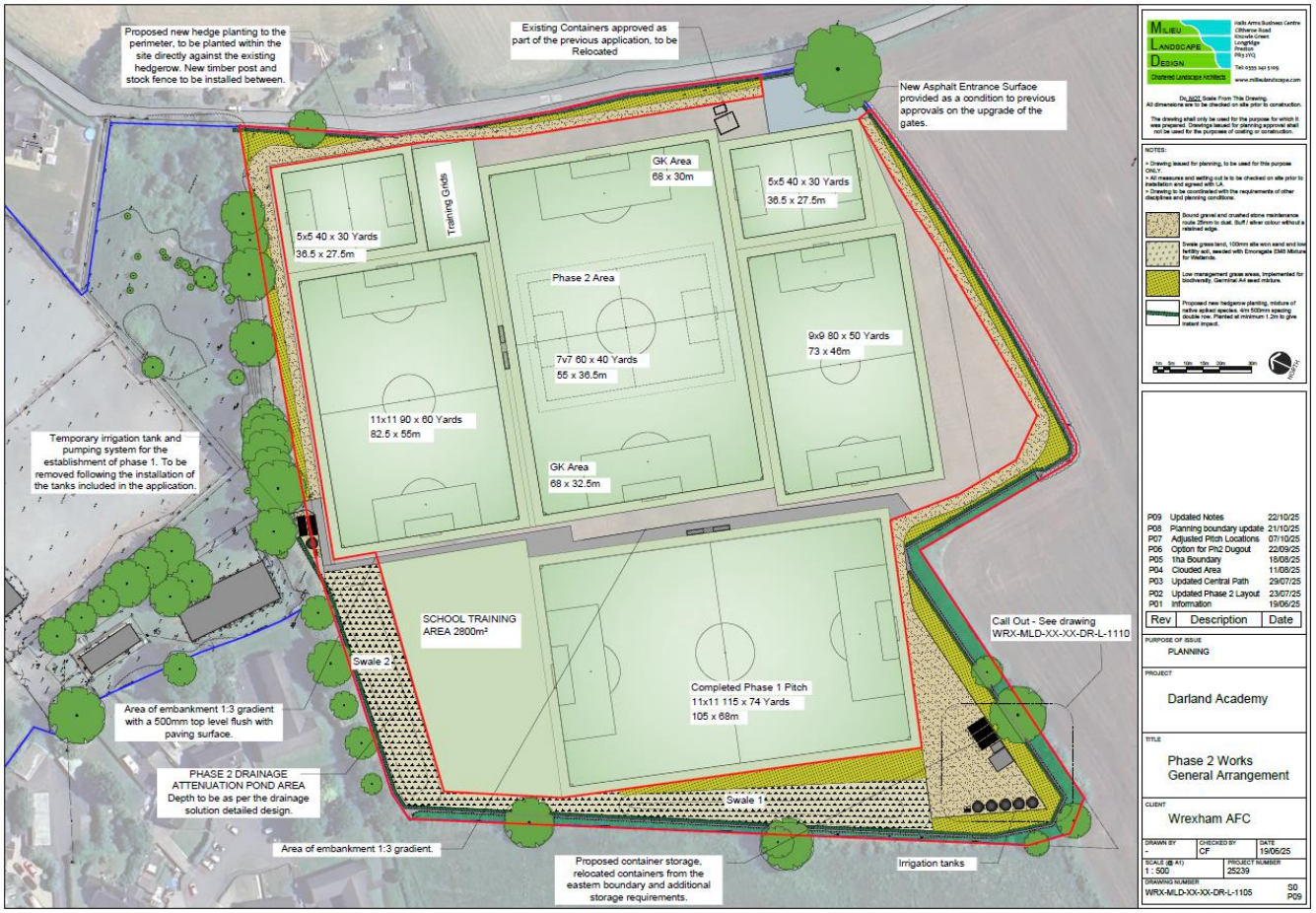
In summary, while the site is dominated by low-diversity grassland, the presence of structurally diverse habitats and proximity to designated sites and protected species records highlight the need for careful ecological consideration. The retention and protection of key features such as hedgerows, trees, and the drainage ditch, along with appropriate mitigation and enhancement measures, will be essential to ensure compliance with local and national biodiversity planning policies and to deliver a net gain for biodiversity.

6. Development Proposal

The Phase 2 [Fig. 4] works include the installation of a drainage attenuation basins designed to manage surface water runoff from the new sports pitches and associated areas. The basin is approximately 600 mm

deep and will be formed with embankments at a 1:3 gradient to ensure stability and safe integration with the surrounding landscape. The top level of the embankment will be flush with adjacent playing surfaces, providing a seamless transition and maintaining accessibility.

Fig 4 Site Masterplan



A temporary irrigation tank and pumping system has been provided for the establishment of Phase 1 works, with a permanent irrigation arrangement to be delivered as part of Phase 2. This system will ensure adequate water supply for the natural turf pitches, supporting their maintenance and growth during dry periods. Pumping equipment will be housed in small utility structures adjacent to the tanks for operational efficiency.

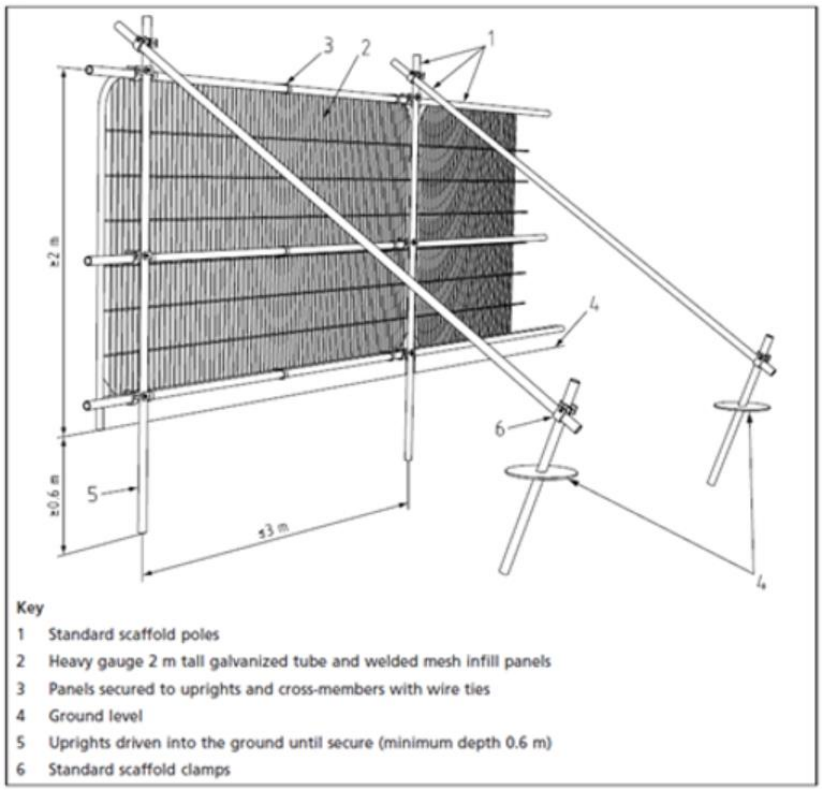
The proposal includes the relocation of existing containers to provide storage for maintenance and training equipment and materials. These ancillary units will support grounds maintenance and irrigation operations, ensuring the facility remains functional and well-serviced.

Additional works include the creation of embankments around the pitch plateau to manage and control flood waters during extreme weather events. This will be minimal height but provide necessary control to limit and manage over ground water flow and ensure the ditch is not overwhelmed.

7. Protection Plan

All existing ecological features within and adjacent to the site, including hedgerows, trees, and the drainage ditch, will be safeguarded throughout the construction phase. Protective measures will be implemented in accordance with British Standard BS5837:2012, specifically following the default specification for protective barriers outlined in Figure 2 [Fig. 5]. This involves erecting robust, high visibility fencing around the Root Protection Areas (RPAs) of trees and along the margins of hedgerows and the ditch to prevent accidental damage from machinery or material storage. These barriers will remain in place for the duration of the works and will only be removed upon completion and inspection.

Fig 5 Tree Protection Fencing to BS5837:2012



A formal Section 23 licence under the Land Drainage Act 1991 will be sought for any works involving discharge into the existing ditch. This ensures compliance with statutory requirements and mitigates potential impacts on local watercourses and habitats.

All drainage works, including the installation of attenuation basins and associated infrastructure, will be fully coordinated with the Sustainable Drainage Approval Body (SAB) application process. Consultation with the Lead Local Flood Authority (LLFA) will be undertaken to confirm design compliance and environmental safeguards, ensuring that surface water management aligns with best practice and regulatory standards.

8. Mitigation and enhancement

The internal circulation path and service road define the boundary between these the playing surface and the site margins. Beyond this perimeter route, the landscape softens into a more naturalistic character, designed both to reduce maintenance demands and to provide ecological value. Low-management grassland

establishes an attractive, subtly textured setting that contrasts with the precision of the sports surfaces. Forming the outermost edge of the site, the existing hedgerows are to be widened, restocked, and reinforced with a mix of UK native species. This enhancement creates a strong, continuous green boundary that frames the site while improving security and improving ecological connectivity across the wider landscape. The thickened hedgerow provides enhanced ecology, improved security for the site, acts as a natural windbreak, and contributes to carbon storage and microclimate regulation. Together, the hedgerow and low-management grass areas form an ecologically functional perimeter that complements the intensively maintained sports core, integrating the pitches sensitively within their setting.

Low-management grass areas situated between sports pitches and naturalised native hedgerows provide valuable ecological benefits by acting as transitional habitats that connect intensively used and more natural spaces. Allowing the grass to grow longer and incorporating a mix of native species encourages a diverse structure that supports insects, pollinators, and small mammals, which in turn attract birds and other wildlife. This mosaic of vegetation strengthens local biodiversity and forms an important ecological corridor linking the hedgerows with adjacent green spaces. Reduced mowing and the absence of fertilisers or pesticides improve soil health by allowing organic matter to accumulate, enhancing microbial activity, and preventing compaction. The deeper root systems of the low-management grass help to retain moisture, improve water infiltration, and reduce surface runoff from the sports pitches. These areas also contribute to carbon capture through increased root biomass and lower maintenance emissions, while helping to moderate local temperatures by reducing heat build-up from surrounding short-mown turf. Overall, the low-management grass provides a visually soft and ecologically rich buffer that enhances habitat connectivity, supports soil and water health, and strengthens the resilience of the wider landscape.

Enhancing an existing UK native hedgerow by thickening and widening it with additional native species greatly increases its biodiversity and ecological value. A well-structured, species-rich hedge provides vital habitat, food, and shelter for a wide range of wildlife, including birds, small mammals, invertebrates, and pollinators. By diversifying the planting with native shrubs and trees such as hawthorn, blackthorn, and dog rose, the hedge offers a continuous supply of nectar, berries, and nuts across the seasons, supporting wildlife throughout the year. A wider, denser hedge improves its function as an ecological corridor, enabling safe movement of species between habitats and linking fragmented green spaces. The deep root systems of native plants stabilise soil, reduce erosion, and improve water infiltration, while the leaf litter and shaded ground layer enhance soil structure and microbial activity. In addition, the hedge contributes to local climate regulation by capturing carbon, providing windbreaks, and moderating microclimates around adjacent open areas.

Overall, strengthening the hedge with native planting creates a resilient, multi-layered habitat that enriches biodiversity, improves ecosystem connectivity, and reinforces the ecological framework of the surrounding landscape.

9. Maintenance Plan

The aim of this management approach is to maintain and enhance biodiversity within areas of low-management grassland and native UK hedgerows. These habitats play a vital role in supporting pollinators, birds, and small mammals, while also contributing to ecological connectivity and the wider landscape character. The strategy focuses on minimal intervention, promoting natural processes and species diversity.

Low-management grassland: should be managed to retain a mix of native grasses and wildflowers, which provide essential resources for invertebrates and other wildlife. Cutting should be limited to one or two occasions per year, with the primary cut scheduled between late July and September, after flowering and seed set. An optional second cut may be undertaken in early spring if growth becomes excessive. All arisings should be removed to prevent nutrient enrichment, which would otherwise favour competitive species and

reduce diversity. Fertilizers and pesticides must not be applied, and invasive non-native species such as Himalayan balsam should be controlled through manual removal or spot treatment.

Native hedgerows should be maintained to preserve their structural integrity and ecological value. Species such as hawthorn, blackthorn, hazel, field maple, and dog rose should dominate, with occasional standard trees like oak or ash retained for habitat diversity. Cutting should occur every two to three years, ideally in late winter (January to February) to avoid the bird nesting season and allow flowering and berry production. Traditional hedge-laying or sympathetic trimming methods should be used to maintain density and connectivity. Gaps should be replanted with locally sourced native whips, and chemical herbicides avoided. A buffer strip of at least one to two metres should be left uncultivated alongside hedgerows to encourage wildflowers and invertebrates.

Management practices must comply with relevant UK and Welsh legislation. The Hedgerows Regulations 1997 provide statutory protection for "important" hedgerows, restricting removal without prior notification to the local planning authority. In England, the Management of Hedgerows Regulations 2024 introduced baseline rules, including a cutting ban from 1 March to 31 August and a mandatory 2-metre buffer strip where cultivation and chemical applications are prohibited. In Wales, hedgerows are recognised as a priority habitat under the Environment (Wales) Act 2016, and their conservation aligns with the Well-being of Future Generations Act 2015 and the Agriculture (Wales) Act 2023. These frameworks emphasise sustainable management to address biodiversity loss and climate resilience. Compliance with these regulations ensures legal protection while supporting ecological objectives.

Monitoring is essential to ensure the success of this management plan. Annual checks should assess species diversity, hedge health, and the presence of invasive species. Management practices should be adapted as necessary based on ecological indicators such as pollinator activity and nesting bird populations. This approach will help sustain a resilient and biodiverse landscape while keeping intervention and maintenance costs low.

10. Conclusion

The proposed development at Darland High School represents a balanced approach to delivering high-quality sports infrastructure while safeguarding and enhancing the ecological value of the site. Through careful planning and adherence to best practice standards, the scheme integrates sustainable drainage solutions, biodiversity enhancements, and long-term maintenance strategies that align with national and local policy objectives. By retaining and reinforcing existing natural features such as hedgerows and woodland, and introducing low-management grassland areas, the project promotes ecological connectivity and resilience. Compliance with statutory requirements, including tree protection, drainage licensing, and hedgerow management regulations, ensures that environmental risks are mitigated and a net gain in biodiversity is achieved.

Overall, the development will provide a modern, functional academy facility that supports community engagement and sporting excellence, while contributing positively to the wider landscape and ecological network.